

Economics of Collapse

Course title - Intitulé du cours	Economics of Collapse
Level / Semester - Niveau / semestre	L3P4 : Eco, EM, ED
School - Composante	Ecole d'Economie de Toulouse
Teacher - Enseignant responsable	Philippe Alby & Loïc Batté
Lecture Hours - Volume Horaire CM+TD	31,5
Course Language - Langue du cours	English ¹
TA and/or TP Language - Langue des TD et/ou TP	English

Teaching staff contacts – Coordonnées de l'équipe pédagogique :

Philippe Alby (T230) : Philippe.alby@tse-fr.eu

Loïc Batté (T231) : loic.batte@tse-fr.eu

Course Objectives – Objectifs du cours :

This course is the last part of the yearlong macroeconomics course for third-year undergraduates. It is focused on the study of the economy in the very long run. Throughout the course, the economy is studied as a dynamic system. We will make explicit use of microeconomic foundations to get aggregate economic behavior, which will be determined in a general equilibrium setting.

More precisely, this course is an exploration of the dynamics of natural resources when human activity interferes with the natural rate of renewal of this resource through harvesting. As a first pass, the level of human population is assumed to be constant.

Then, we introduce a full-fledged integrated model (the Easter Island model) where human population and natural resources co-evolve over time. We focus explicitly on the possibility of collapse (both in economic and ecological terms).

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

- Provide a detailed account of the main forces and constraints that shape the evolution of the aggregate economy in the very long run
- Solve quantitative models of the aggregate economy using the tools and techniques studied in class
- Provide an economic interpretation of the mathematical results obtained once the model is solved
- Discuss the main assumptions behind the models used in modern macroeconomics

Prerequisites – Pré requis :

- Mathematics: differential equation; real analysis; constrained optimization.
- Microeconomics: producer theory, consumer theory, general equilibrium (undergrad level); basics of welfare analysis.
- Macroeconomics: national accounts; AS-AD model; notions of business cycle analysis and macroeconomic policy.
- English: B2 level.

¹ As the lecturers are French native speaker, students should feel free to interact in French whenever English becomes a serious obstacle to comprehension, provided it does not prevent non-French speakers from following the lectures.

Practical information about the sessions – Modalités pratiques de gestion du cours :

Attending courses is mandatory. The use of electronic devices with Internet connection is allowed provided they are used for class purposes (taking notes, downloading and editing the handouts...). The teaching staff reserves the right to establish additional rules to foster good working conditions in class.

Grading system – Modalités d'évaluation :

To complete the class, students will have to answer two written exams:

- A mid-term exam (1h) that accounts for 40% of the final grade. In-class evaluations can also be incorporated into this grade.
- A final exam (1h30) that accounts for 60% of the final grade.

Bibliography/references – Bibliographie/références :

- Daron Acemoglu: "Introduction to modern economic growth"
- Philippe Aghion & Peter Howitt: "Economic Growth"
- Garin, Lester & Sims: "Intermediary Macroeconomics" (available [online for free](#)).
- Pablo Kurlat: "A Course in Modern Macroeconomics" (available [online for a small fee](#)).

Session planning – Planification des séances

- Resource economics (4 weeks)
- The economics of collapse: the Easter Island model (3 weeks)

Distance learning – Enseignement à distance :

If necessary, remote learning solutions will be provided.