Design of economic and political methods (axiomatic theory)

Level: Master, 1st year (M1)
Cursus: Master Political Engineering
Teaching hours: 16h (CM)
Teachers : Federica CERON, Stéphane GONZALEZ, Philippe SOLAL
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Course's objectives:

This is an introductory course in economic design, with a particular focus in the axiomatic methodology.
The course comprises three two-lecture long parts. The first part (P. SOLAL) is an introduction to the axiomatic method in economic design. The second part (F. CERON) applies it to a fundamental result in the theory of choice. The third part (S. GONZALEZ) shows how this method can be used to design normative objects in economics such as intertemporal decision rules, voting, inequality measures, matching methods or centrality indices in a social network. The theme of this third part may vary from year to year.

Skills at the end of the course:

Students learn the methodological and technical aspects of the economic modeling of individual and collective behavior. They will understand the usefulness of the axiomatic method for designing tools that combine efficiency and ethical aspects for decision making.

Evaluation: Final exam: 2 hours

Prerequisites: A basic understanding of logical and mathematical reasoning is required.

Bibliography:

- Quasi-Transitivity, Rational Choice and Collective Decisions, by Amartya Sen (Review of Economic Studies, 1969)
- Choice functions and revealed preference, by Amartya Sen (Review of Economic Studies, 1971)
- Let's talk about economic design by W. Thomson, 2019. University of Rochester.
- Aggregating infinite utility streams with intergenerational equity: the impossibility of being Paretian, by Basu, K., & Mitra, T. (Econometrica, 2003).
- *An introduction to allocation rules, by* Hougaard, J. L. (2009). Springer Science & Business Media.
- Axiomatic Characterization of the Gini Coefficient and Lorenz Curve Orderings, by Rolf Aaberge (Journal of Economic Theory, 2001)