2018 / 2019

MASTER Economics
Risk and incentives

Contacts	Description	Information
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CONTENT

The main objective of this course is to provide the students with a theoretical synthetic framework so that they can face the difficulties of the study of economic decisions under uncertainty. Two main general topics will be dealt with : (1) the theory of decision under uncertainty, and (2) the moral hazard issues between several economic agents.

Course outline :

Chapter 1 : Risk, uncertainty and strategies

- Introduction of the main concepts (risk, uncertainty, probability, moral hazard, adverse selection)
- Probabilistic framework (space of states, random variables)
- Numerical decision criteria (preferences, representation by a numerical criteria)
- Game theory, Principal-Agent model

Chapter 2 : Expected Utility

- The virtues of the expected utility (Saint-Petersburg paradox)
- The axiomatics of the expected utility (objective and subjective expected utility)
- The limits of the expected utility (Allais paradox, Ellsberg paradox)
- Generalisations of the expected utility (rank-dependent expected utility, Choquet expected utility)

Chapter 3 : Risk Aversion and Risk Measures

- Qualitative approach (certainty equivalent, risk premium, risk attitude)
- Quantitative approach (local measures of risk aversion)
- Stochastic dominance (first and second order)

Chapter 4 : Introduction to moral hazard issues

- Risk sharing and sharecropping contracts
- Credit with risk aversion of the borrower

Chapter 5 : Other applications

- Risky saving
- Application of the expected utility to static portfolio choice

PROFESSIONAL SKILLS

- Knowledge of concepts in the area of risk and uncertainty
- Mastering of the standard criterion of the expected utility (theory and applications)
- Knowledge of the limits of the standard model of the expected utility
- Introduction to the models of moral hazard (theory and applications)

BIBLIOGRAPHY

- Eeckhoudt, L., C. Gollier and H. Schlesinger. Economic and Financial Decisions under Risk. Princeton University Press, 2005.
- Ferrari J.-B. Économie du risque - Applications à la finance et à l'assurance.
- Ferrari J.-B. Économie de la prévention et de l'assurance.
- Gayant, J.-P. Risque et décision.
- Geweke, J. (Ed.), Decision Making under Risk and Uncertainty. Kluwer Academic Publishers, 1992.
- Gollier, C. The Economics of Risk and Time. MIT Press, 2001.
- Henriet D. et Rochet J.-C. Microéconomie de l'assurance.
- Jacquillat, B., Solnik, B., Pérignon, C. Marchés financiers – Gestion de portefeuille et des risques.
- Kast, R. La théorie de la décision.
- Laffont, J.-J., Cours de Théorie Microéconomique. Volume II : Économie de l'Incertain et de l'Information, Economica, 1991.
- Quittard-Pinon, F. Marchés des capitaux et théorie financière.

ORGANISATION

Professoral theoretical lecture and application. Written final exam.

FUNDAMENTAL PREREQUISITES

Probability theory, consumer economics.

RECOMMENDED PREREQUISITES

Mathematic of optimisation.

VOLUME OF TEACHINGS

- Lectures: 24 hours

TRAININGS

Master's degree: Economics

- Empirical and theoretical economics
- Economic policy analysis
- Econometrics, big data, statistics
- Quantitative finance and insurance