



MASTER OF RESEARCH IN ECONOMICS, FINANCE AND MANAGEMENT

TOPICS IN ECONOMIC THEORY I

32074

COURSE

3 ECTS	TERM 1	OPTATIVE	WORKLOAD: 75H
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This information is for the 2026/27 session.

Professor

Prof. Jose Apesteguia

Teaching guide

Introduction

[This class may be taken on its own or as part of one of the tracks described below under 'Tracks'.]

Traditional models of decision-making in economics are being substantially revised in light of recent developments in psychology, behavioral economics, and neuroscience. In this course, we cover some of the key theoretical developments in modeling nonstandard decision-making.

This course is designed both for students interested in the theoretical, empirical, or experimental study of individual decision-making and for students interested in applying behavioral decision-making models to various economic settings.

This course is intended to be taken alongside Topics in Economic Theory II: Behavioral Decision Theory – Part II, taught by Larbi Alaoui.



The Contents section below briefly introduces each of the course's four blocks. A reading list, organized by section, is provided in the separate Readings section that follows. In addition to the papers listed there, I will make key recent papers available in the course Box folder. These are the latest papers currently being presented at leading conferences and seminars, and they represent the state of the art in the field.

Teaching methodology

The teaching methodology will consist of lectures, class discussions, and presentations of key recent papers.

Students will select a paper to present in class, either from the reading list below or from the papers posted in the course Box folder.

Assessment for Parts I and II of Topics in Economic Theory will be based primarily on a single research project. Students will present the project at the end of the course and submit it in writing. The project should develop an original idea that could become a research paper. It may be theoretical, empirical, experimental, or combine these approaches. Each student must meet with both instructors during the term to obtain approval for their chosen topic. Students may submit the paper in the second term, specifically on January 30, and may request an extension if they need additional time to develop the project.

The presentations will take place during the week of December 8 and will be held in person. All students are required to attend all presentations.

Class participation is also an important and highly valued component of the course.

Attendance is a compulsory requirement for this course. In the event of an absence, students must communicate it to the professor(s) and provide an appropriate justification. Unjustified absences may ultimately imply that a student cannot be evaluated for the course.

Contents

1. Review of the classical foundations for decision-making under certainty and uncertainty.

We begin with a very brief review of the seminal model of decision-making under certainty. We will discuss the setting, the behavioral assumptions and the main rationalizability result. Students who are not familiar with the foundations of the standard model should consult the corresponding references in the Readings section.



2. Bounded Rationality.

The focus of this section is on the revealed preference theory of bounded rationality. We will present some of the most influential models of bounded rationality and discuss the implications of bounded rationality for welfare analysis and the measurement of rationality.

3. Reference-Dependent Behavior.

In this section, we adopt a more applied approach and focus on one of the most influential contributions to the literatures on bounded rationality and behavioral economics: reference-dependent behavior. We present the foundations of reference-dependent models and emphasize their applications in finance, labor, insurance, and other settings.

4. Stochastic Choice.

There is renewed interest in understanding choice as the outcome of a random process. Stochastic choice models provide a stylized treatment of choice variability, thereby facilitating the incorporation of behavioral considerations. We review the classic contributions from psychology and economics and then introduce recent developments. We also establish connections between stochastic choice and microeconometrics.

Readings

1. Review of the classical foundations for decision-making under certainty and uncertainty.

Readings:

Chambers, C. and F. Echenique. *Revealed Preference Theory*, Cambridge University Press 2016.

Kreps, D. *Notes on the Theory of Choice*, *Underground Classics in Economics* 1988.

Mas-Colell, A., M. Whinston and J. Green, *Microeconomic Theory*. Oxford University Press, Oxford 1995. Chapter 1, 2 and 3.

Rubinstein, A. *Lecture Notes in Microeconomic Theory*. Princeton NJ: Princeton University Press 2006. Lectures 1-6.

2. Bounded Rationality.

Main readings:

de Clippel, G. and K. Rozen (2024), "Bounded Rationality in Choice Theory: A Survey," *Journal of Economic Literature*, 62(3):995-1039.



Bernheim, B.D. and A. Rangel (2009), "Beyond Revealed Preference: Choice-Theoretic Foundations for Behavioral Welfare Economics" *Quarterly Journal of Economics*, 124:51-104.

Manzini, P. and M. Mariotti (2007), "Sequentially Rationalizable Choice," *American Economic Review*, 97:1824-1839.

Masatlioglu, Y., D. Nakajima and E.Y. Ozbay (2012), "Revealed Attention," *American Economic Review*, 102:2183-2205.

Suggested additional readings:

Abeler, J., D. Huffman and C. Raymond (2025), "Incentive Complexity, Bounded Rationality, and Effort Provision," *American Economic Review*, 115(12):4404-4437.

Allcott, H., D. Cohen, W. Morrison and D. Taubinsky (2025), "When Do 'Nudges' Increase Welfare?" *American Economic Review*, 115(5):1555-1596.

Ambuehl, S., B.D. Bernheim, and A. Ockenfels (2021), "What Motivates Paternalism? An Experimental Study," *American Economic Review*, 111(3):787-830.

Angeletos, G.-M. and K.A. Sastry (2025), "Inattentive Economies," *Journal of Political Economy*, 133(7):2265-2319.

Apesteguia, J and M.A. Ballester (2015), "A Measure of Rationality and Welfare," *Journal of Political Economy*, 123(6):1278-1310.

Augenblick, N., E. Lazarus and M. Thaler (2025), "Overinference from Weak Signals and Underinference from Strong Signals," *Quarterly Journal of Economics*, 140(1):335-401.

Azeredo da Silveira, R., Y. Sung and M. Woodford (2024), "Optimally Imprecise Memory and Biased Forecasts," *American Economic Review*, 114(10):3075-3118.

Benkert, J-M and N. Netzer (2018), "Informational Requirements of Nudging," *Journal of Political Economy*, 126(6):2323-2355.

Bianchi, F., C. Ilut and H. Saijo (2026), "Smooth Diagnostic Expectations," *Review of Economic Studies*, forthcoming.

Bordalo, P., Conlon, J. J., Gennaioli, N., Kwon, S. Y., & Shleifer, A. (2023). Memory and probability. *The Quarterly Journal of Economics*, 138(1), 265-311.

Bordalo, P., J. Conlon, N. Gennaioli, S.Y. Kwon and A. Shleifer (2026), "How People Use Statistics," *Review of Economic Studies*, 93(1):250-285.



Bordalo, P., N. Gennaioli, G. Lanzani and A. Shleifer (2026), "A Cognitive Theory of Reasoning and Choice," *Quarterly Journal of Economics*, 141(3):1921-1963.

Brandon, A., P.J. Ferraro, J.A. List, R.D. Metcalfe, M.K. Price and F. Rundhammer (2026), "Do The Effects of Nudges Persist? Theory and Evidence from 38 Natural Field Experiments," *Review of Economic Studies*, forthcoming.

Bronchetti, E.T., J.B. Kessler, E.B. Magenheimer, D. Taubinsky and E. Zwick (2023), "Is Attention Produced Optimally? Theory and Evidence From Experiments With Bandwidth Enhancements," *Econometrica*, 91(2):669-707.

Brown, Z.Y. and J. Jeon (2024), "Endogenous Information and Simplifying Insurance Choice," *Econometrica*, 92(3):881-911.

Caplin, A., Dean, M., & Leahy, J. (2022). Rationally inattentive behavior: Characterizing and generalizing Shannon entropy. *Journal of Political Economy*, 130(6), 1676-1715.

Caplin, A., M. Dean and D. Martin (2011), "Search and Satisficing," *American Economic Review*, 101(7):2899-2922.

Choi, S., S. Kariv, W. Müller and D. Silverman (2014), "Who Is (More) Rational?" *American Economic Review*, 104(6):1518-1550.

Dean, M. and D. Martin (2016), "Measuring Rationality with the Minimum Cost of Revealed Preference Violations," *Review of Economics and Statistics*, 98(3):524-534.

Dean, M. and N. Neligh (2023), "Experimental Tests of Rational Inattention," *Journal of Political Economy*, 131(12):3415-3461.

Echenique, F., Imai, T., & Saito, K. (2023). "Approximate expected utility rationalization," *Journal of the European Economic Association*, 21(5), 1821-1864.

Echenique, F, S. Lee, and M. Shum (2011), "The Money Pump as a Measure of Revealed Preference Violations," *Journal of Political Economy*, 119:1201-1223.

Ellis, A. and D.J. Freeman (2024), "Revealing Choice Bracketing," *American Economic Review*, 114(9):2668-2700.

Enke, B. and T. Graeber (2023), "Cognitive Uncertainty," *Quarterly Journal of Economics*, 138(4):2021-2067.



Enke, B., T. Graeber and R. Oprea (2023), "Confidence, Self-Selection, and Bias in the Aggregate," *American Economic Review*, 113(7):1933-1966.

Exley, C.L. and K. Nielsen (2024), "The Gender Gap in Confidence: Expected but Not Accounted For," *American Economic Review*, 114(3):851-885.

Fan, T.Q., Y. Liang and C. Peng (2026), "The Inference-Forecast Gap in Belief Updating," *Econometrica*, 94(4):1279-1312.

Frick, M., R. Iijima and Y. Ishii (2024), "Welfare Comparisons for Biased Learning," *American Economic Review*, 114(6):1612-1649.

Fudenberg, D., G. Lanzani and P. Strack (2024), "Selective-Memory Equilibrium," *Journal of Political Economy*, 132(12):3978-4020.

Goldin, J. and D. Reck (2020), "Revealed-Preference Analysis with Framing Effects," *Journal of Political Economy*, 128(7):2759-2795.

Gonçalves, D., J. Libgober and J. Willis (2026), "Retractions: Updating from Complex Information," *Review of Economic Studies*, 93(1):476-516.

Graeber, T., C. Roth and F. Zimmermann (2024), "Stories, Statistics, and Memory," *Quarterly Journal of Economics*, 139(4):2181-2225.

Graeber, T., S. Noy and C. Roth (2026), "The Transmission of Reliable and Unreliable Information," *Quarterly Journal of Economics*, forthcoming.

Halevy, Y. and G. Mayraz (2024), "Identifying Rule-Based Rationality," *Review of Economics and Statistics*, 106(5):1369-1380.

Halevy, Y., D. Persitz and L. Zrill (2018), "Parametric Recoverability of Preferences," *Journal of Political Economy*, 126(4):1558-1593.

Ilut, C. and R. Valchev (2023), "Economic Agents as Imperfect Problem Solvers," *Quarterly Journal of Economics*, 138(1):313-362.

Jakobsen, A.M. (2026), "Coarse Bayesian Updating," *Review of Economic Studies*, forthcoming.

Jiang, Z., H. Liu, C. Peng and H. Yan (2025), "Investor Memory and Biased Beliefs: Evidence from the Field," *Quarterly Journal of Economics*, 140(4):2749-2804.

Kim, H.B., S. Choi, B. Kim and C. Pop-Eleches (2018). "The Role of Education Interventions in Improving Economic Rationality." *Science*, 362:83–86.



Kőszegi, B. and F. Matějka (2020), "Choice Simplification: A Theory of Mental Budgeting and Naive Diversification," *Quarterly Journal of Economics*, 135(2):1153-1207.

Manzini, P., M. Mariotti and L. Ülkü (2025), "Choice and Opportunity Costs," *Review of Economic Studies*, forthcoming.

Nielsen, K. and J. Rehbeck (2022), "When Choices Are Mistakes," *American Economic Review*, 112(7):2237-2268.

Rubinstein, A. and Y. Salant (2012), "Eliciting Welfare Preferences from Behavioural Data Sets," *Review of Economic Studies*, 79(1):375-387.

Salant, Y. and A. Rubinstein (2008), "(A,f): Choice with Frames," *Review of Economic Studies*, 75: 1287-1296.

Salant, Y. and J.L. Spenkuch (2026), "Complexity and Satisficing: Theory with Evidence from Chess," *Review of Economic Studies*, 93(2):1296-1322.

Spiegler, R. (2016). "Bayesian networks and boundedly rational expectations," *The Quarterly Journal of Economics*, 131(3), 1243-1290.

Weinrabe, A., H.-K. Chung, A. Tymula, J. Tran and I.B. Hickie (2020), "Economic Rationality in Youth With Emerging Mood Disorders," *Journal of Neuroscience, Psychology, and Economics*, 13(3):164-177.

3. Reference-Dependent Behavior.

Main readings:

Dhami, S. (2016), "The Foundations of Behavioral Economic Analysis," Oxford University Press.

Kahneman, D., and A. Tversky (1979), "Prospect Theory: An Analysis of Decision Under Risk", *Econometrica*, 47: 263-291.

Kőszegi, B. and M. Rabin (2006), "A Model of Reference-Dependent Preferences," *Quarterly Journal of Economics*, 121(4):1133-1165.

Masatlioglu, Y. and E. Ok (2005), "Rational Choice with Status Quo Bias," *Journal of Economic Theory*, 121, No. 1, 1-29.

Wakker, P. (2010), "Prospect Theory: For Risk and Ambiguity," Cambridge University Press.



Suggested additional readings:

Andersen, S., C. Badarinza, L. Liu, J. Marx and T. Ramadorai (2022), "Reference Dependence in the Housing Market," *American Economic Review*, 112(10):3398-3440.

Auster, S., Y.-K. Che and K. Mierendorff (2024), "Prolonged Learning and Hasty Stopping: The Wald Problem with Ambiguity," *American Economic Review*, 114(2):426-461.

Baillon, A., H. Bleichrodt and V. Spinu (2020), "Searching for the Reference Point," *Management Science*, 66(1):93-112.

Bernheim, B.D. and C. Sprenger (2020), "On the Empirical Validity of Cumulative Prospect Theory: Experimental Evidence of Rank-Independent Probability Weighting", *Econometrica*, 88(4):1363-1409.

Bleichrodt, H., S. Grant and J. Yang (2023), "Testing Hurwicz Expected Utility," *Econometrica*, 91(4):1393-1416.

Campos-Mercade, P., L. Goette, T. Graeber, A. Kellogg and C. Sprenger (2026), "De Gustibus and Disputes about Reference Dependence," *Review of Economic Studies*, forthcoming.

Cerreia-Vioglio, S., D. Dillenberger and P. Ortoleva (2024), "Caution and Reference Effects," *Econometrica*, 92(6):2069-2103.

Cerreia-Vioglio, S., L.P. Hansen, F. Maccheroni and M. Marinacci (2026), "Making Decisions Under Model Misspecification," *Review of Economic Studies*, 93(2):892-925.

Chapman, J., E. Snowberg, S.W. Wang and C. Camerer (2025), "Looming Large or Seeming Small? Attitudes Towards Losses in a Representative Sample," *Review of Economic Studies*, 92(5):2893-2922.

Dembo, A., S. Kariv, M. Polisson and J.K.-H. Quah (2026), "Ever since Allais," *Journal of Political Economy*, 134(6):1846-1889.

Ellis, A. and Y. Masatlioglu (2022), "Choice with Endogenous Categorization," *Review of Economic Studies*, 89(1):240-278.

Esponda, I. and E. Vespa (2024), "Contingent Thinking and the Sure-Thing Principle: Revisiting Classic Anomalies in the Laboratory," *Review of Economic Studies*, 91(5):2806-2831.

Gruber, J., M. Lin, H. Liu and J. Yi (2026), "How You Pay Drives What You Choose: Mental Accounting in Health Insurance Plan Choice," *Review of Economic Studies*, forthcoming.



Hartzmark, S.M., S.D. Hirshman and A. Imas (2021), "Ownership, Learning, and Beliefs," *Quarterly Journal of Economics*, 136(3):1665–1717.

Heimer, R., Z. Iliewa, A. Imas and M. Weber (2025), "Dynamic Inconsistency in Risky Choice: Evidence from the Lab and Field," *American Economic Review*, 115(1):330-363.

Lockwood, B.B., H. Allcott, D. Taubinsky and A. Sial (2025), "What Drives Demand for State-Run Lotteries? Evidence and Welfare Implications," *Review of Economic Studies*, 92(4):2578-2623.

McGranaghan, C., K. Nielsen, T. O'Donoghue, J. Somerville and C.D. Sprenger (2026), "Connecting Common Ratio and Common Consequence Preferences," *Journal of Political Economy*, published online.

Oprea, R. (2024), "Decisions under Risk Are Decisions under Complexity," *American Economic Review*, 114(12):3789-3811.

Prelec, D. (1998), "The Probability Weighting Function," *Econometrica*, 66(3):497-527.

Schmidt, K.M. and J. von Wangenheim (2026), "Organizational Change and Reference-Dependent Preferences," *Review of Economic Studies*, forthcoming.

4. Stochastic Choice.

Main readings:

Block, H.D. and J. Marschak (1960), "Random Orderings and Stochastic Theories of Responses," In: *Contributions to Probability and Statistics: Essays in Honor of Harold Hotelling*, ed. by I. Olkin, S.G. Ghurye, W. Hoeffding, W.G. Madow and H.B. Mann. Stanford, CA: Stanford University Press. pp. 97-132.

Luce, R.D. (1959), *Individual Choice Behavior: A Theoretical Analysis*. New York: John Wiley & Sons.

Strzalecki, T. (2025), *Stochastic Choice Theory*. Econometric Society Monographs. Cambridge: Cambridge University Press.

Suggested additional readings:

Agranov, M. and P. Ortoleva (2017), "Stochastic Choice and Preferences for Randomization," *Journal of Political Economy*, 125(1):40–68.

Aguiar, V.H. and N. Kashaev (2021), "Stochastic Revealed Preferences with Measurement Error," *Review of Economic Studies*, 88(4):2042-2093.



Alós-Ferrer C., E. Fehr and N. Netzer (2021), "Time Will Tell: Recovering Preferences when Choices Are Noisy," *Journal of Political Economy*, 129(6):1828-1877.

Apesteguia, J and M.A. Ballester (2018), "Monotone Stochastic Choice Models: The Case of Risk and Time Preferences", *Journal of Political Economy*, 126(1):74-106.

Apesteguia, J and M.A. Ballester (2021), "Separating Predicted Randomness from Residual Behavior," *Journal of the European Economic Association*, 19(2):1041-1076.

Apesteguia, J, M.A. Ballester and J. Lu (2017), "Single-Crossing Random Utility Models," *Econometrica*, 85(2):661-674.

Barseghyan, L., F. Molinari, and M. Thirkettle (2021), "Discrete Choice under Risk with Limited Consideration," *American Economic Review*, 111(6):1972-2006.

Barseghyan, L., M. Coughlin, F. Molinari and J.C. Teitelbaum (2021), "Heterogeneous Choice Sets and Preferences," *Econometrica*, 89(5):2015-2048.

Bussemeyer, J. R. and J. T. Townsend (1993), "Decision Field Theory: A Dynamic-Cognitive Approach to Decision Making in an Uncertain Environment," *Psychological Review*, 100.3:432– 459.

Caplin, A. and M. Dean (2015), "Revealed Preference, Rational Inattention, and Costly Information Acquisition," *American Economic Review*, 105(7):2183-2203.

Cattaneo M.D., X. Ma, Y. Masatlioglu and E. Suleymanov (2020), "A Random Attention Model," *Journal of Political Economy*, 128(7):2796-2836.

Cerreia-Vioglio, S., D. Dillenberger, P. Ortoleva and G. Riella (2019), "Deliberately Stochastic," *American Economic Review*, 109(7):2425-2445.

Cerreia-Vioglio, S., Maccheroni, F., Marinacci, M., & Rustichini, A. (2023). Multinomial logit processes and preference discovery: inside and outside the black box. *Review of Economic Studies*, 90(3), 1155-1194.

Chambers, C.P., Y. Masatlioglu, P. Natenzon and C. Raymond (2025), "Weighted Linear Discrete Choice," *American Economic Review*, 115(4):1226-1257.

Dardanoni, V., Manzini, P., Mariotti, M., Petri, H., & Tyson, C. J. (2023). Mixture choice data: revealing preferences and cognition. *Journal of Political Economy*, 131(3), 687-715.



Dardanoni, V., P. Manzini, M. Mariotti and C.J. Tyson (2020), "Inferring Cognitive Heterogeneity from Aggregate Choices," *Econometrica*, 88(3):1269-1296.

Filiz-Ozbay, E., & Masatlioglu, Y. (2023). Progressive random choice. *Journal of Political Economy*, 131(3), 716-750.

Frick, M., R. Iijima, and T. Strzalecki (2019), "Dynamic Random Utility," *Econometrica*, 87(6):1941-2002.

Fudenberg, D. and T. Strzalecki (2015), "Dynamic Logit with Choice Aversion," *Econometrica*, 83 (2): 651–691.

Fudenberg, D., Newey, W., Strack, P., & Strzalecki, T. (2020). Testing the drift-diffusion model. *Proceedings of the National Academy of Sciences*, 117(52), 33141-33148.

Gul, F. and W. Pesendorfer (2006), "Random Expected Utility," *Econometrica*, 74: 121-146.

Gul, F., P. Natenzon and W. Pesendorfer (2014)," Random Choice as Behavioral Optimization," *Econometrica*, 82: 1873-1912.

He, J. and P. Natenzon (2024), "Moderate Utility," *American Economic Review: Insights*, 6(2):176-195.

Jagelka, T. (2024), "Are Economists' Preferences Psychologists' Personality Traits? A Structural Approach," *Journal of Political Economy*, 132(3):910-970.

Kashaev, N., N. Lazzati and R. Xiao (2026), "Peer Effects in Consideration and Preferences," *Review of Economic Studies*, forthcoming.

Khaw, M.W., Z. Li and M. Woodford (2021), "Cognitive Imprecision and Small-Stakes Risk Aversion," *Review of Economic Studies*, 88(4):1979-2013.

Kono, H., K. Saito and A. Sandroni (2026), "Random Utility with Unobservable Alternatives," *American Economic Review*, 116(8):2850-2882.

Kovach, M. and G. Tserenjigmid (2022), "Behavioral Foundations of Nested Stochastic Choice and Nested Logit," *Journal of Political Economy*, 130(9):2411-2461.

Liu, S. and N. Netzer (2023), "Happy Times: Measuring Happiness Using Response Times," *American Economic Review*, 113(12):3289-3322.



Loomes, G. and R. Sugden (1995), "Incorporating a Stochastic Element Into Decision Theories," *European Economic Review*, 39:641-648.

Manzini, P. and M. Mariotti (2014), "Stochastic Choice and Consideration Sets," *Econometrica*, 82: 1153-1176.

Matějka, F. and A. McKay (2015), "Rational Inattention to Discrete Choices: A New Foundation for the Multinomial Logit Model," *American Economic Review*, 105(1):272-298.

McFadden, D. (2001), "Economic Choices," *American Economic Review*, 91: 351-378.

McKelvey, R.D. and T.R. Palfrey (1995), "Quantal Response Equilibria for Normal Form Games," *Games and Economic Behavior*, 10(1):6-38.

Natenzon, P. (2019). "Random Choice and Learning," *Journal of Political Economy*, 127(1):419-457.

Tversky, A. (1972), "Elimination By Aspects: A Theory of Choice," *Psychological Review*, 79: 281–299.

Woodford, M. (2014), "Stochastic Choice: An Optimizing Neuroeconomic Model," *American Economic Review*, 104(5):495-500.



Tracks

Track 1: Microeconomics

Fall term (September – December)

- Topics in Economic Theory: Behavioral Decision Theory (I and II taught by Larbi Alaoui, and Jose Apesteguia).
- Microeconomics Seminar (taught by Antonio Penta).

Winter term (January – March)

- Readings in Economic Theory (taught by Alex Frug).
- Topics in Industrial Organization (taught by Sandro Shelegia).
- Industrial Organization (taught by Rosa Ferrer).

Spring term (April – June)

- Advanced Industrial Organization (taught by Sandro Shelegia).

Track 2: Behavioral Economics and Decision-Making

Fall term (September – December)

- Topics in Economic Theory: Behavioral Decision Theory (I and II taught by Larbi Alaoui and Jose Apesteguia).

Winter term (January – March)

- Behavioral Decision Making I: Attention, Experience and Influence (taught by Gaël Le Mens).

Spring term (April – June)

- Behavioral Decision Making II: The Psychology of Economics Decisions (taught by Daniel Navarro-Martinez).
- Experimental Economics (taught by Rosemarie Nagel).