

Relevant Coursework

First, a complete list of my coursework in Economics, Mathematics, Statistics and Econometrics is presented. The grade column indicates the grade in the 20-point scale used by Peruvian universities and the equivalent alphabetic grade according to [Scholaro Inc.](#) Then, a detailed description (professor, topics) of the most advanced courses is provided. This material is only complementary to the official transcripts. It is important to say that in Peruvian universities there are no perfect scores (20/20) and only in exceptional cases students obtain final scores superior to 16.00.

The following acronyms are used:

UP Universidad del Pacífico
MS. Ec. M.Sc. in Economics
BS. Ec B.Sc. in Economics

Economics

(All courses in Economics were received at Universidad del Pacífico, except from E11 to E13, which were received at Maastricht University)

N.	Level	Course Title	Grade	Textbooks
E1	Grad. MS. Ec.	Household Economics	20 (A)	* <i>Several papers</i>
E2	Grad. MS. Ec.	International Economics	18 (A)	* <i>Several papers</i>
E3	Grad. MS. Ec.	Urban Economics	19 (A)	* <i>Several papers</i>
E4	Grad. MS. Ec.	Institutions, Human Capital and Development	19 (A)	* <i>Several papers</i>
E5	Grad. MS. Ec.	Financial Crisis	18 (A)	* <i>Several papers</i>
E6	Grad. MS. Ec.	Endogenous Growth	18 (A)	* <i>Several papers</i>
E7	Grad. MS. Ec.	Advanced Microeconomics II	19 (A)	-Mas-Collel, A., Whinston, D. and Green, J., <i>Microeconomic Theory</i> -Fudenberg, D. and Tirole, J., <i>Game Theory</i> -Myerson, R., <i>Game Theory: Analysis of Conflict</i>

E8	Grad. MS. Ec.	Advanced Microeconomics I	19 (A)	-Mas-Collel, A., Whinston, D. and Green, J., <i>Microeconomic Theory</i>
E9	Grad. MS. Ec.	Advanced Macroeconomics II	18 (A)	*Several papers -Walsh, C., <i>Monetary Theory and Policy</i> -Chugh, S., <i>A Short Course in Representative-Agent Macroeconomics</i> Pissarides, C. <i>Equilibrium Unemployment Theory.</i>
E10	Grad. MS. Ec.	Advanced Macroeconomics I	16 (A)	*Several papers -Blanchard, O. and Fischer, S., <i>Lectures in Macroeconomics</i> -Romer, D., <i>Advanced Macroeconomics</i>
E11	Underg. BS. Ec	Institutions, Behaviour and Welfare	8/10 (A)	*Several papers -Furubotn, E.G., and R. Richter, <i>Institutions and Economic Theory: The Contributions of the New Institutional Economics</i> -Groenewegen, J., A. Spithoven, and A. van den Berg, <i>Institutional Economics: An Introduction</i>
E12	Underg. BS. Ec	Design of Tax Systems	8/10 (A)	-Rosen HS, Gayer T, 2014., <i>Public Finance</i>
E13	Underg. BS. Ec	International Competition Policy	8.5/10 (A)	-Motta, M. (2004), <i>Competition Policy: Theory and Practice</i>
E14	Underg. BS. Ec	Theory of Economic Development	17 (A)	-Kahn, <i>World Economic Development</i> ; -Maddison, <i>The World Economy</i>
E15	Underg. BS. Ec	Economic Policy	18 (A)	*Several Papers
E16	Underg. BS. Ec	Public Economics	18 (A)	*No Textbooks
E17	Underg. BS. Ec	Organization of Markets	16 (A)	-Tirole, J., <i>The Theory of Industrial Organization</i>
E18	Underg. BS. Ec	Macroeconomics III	14 (A)	*Several papers -Mishkin, F., <i>The Economics of Money, Banking and Financial Markets</i> -Barro, R., <i>Economic Growth</i>

E19	Underg. BS. Ec	Macroeconomics II	15 (A)	-Walsh, C., <i>Monetary Theory and Policy</i> -Obstfeld, M and Rogoff, K., <i>Foundations of International Macroeconomics</i>
E20	Underg. BS. Ec	Macroeconomics I	13 (B)	-De Gregorio, J., <i>Macroeconomía: Teoría y Política</i> -Doepke, M., Lehnert, A., and Sallaren, A., <i>Macroeconomics</i>
E21	Underg. BS. Ec	Theory of International Trade	15 (A)	-Obstfeld, M and Rogoff, K., <i>Foundations of International Macroeconomics</i>
E22	Underg. BS. Ec	Microeconomics II	12 (B)	-Hal, V., <i>Intermediate Microeconomics</i> -Gravelle, H. and Rees, R., <i>Microeconomics</i>
E23	Underg. BS. Ec	Microeconomics I	11 (C)	-Gravelle, H. and Rees, R., <i>Microeconomics</i>
E24	Underg. BS. Ec	Introduction to Macroeconomics	15 (A)	-De Gregorio, J., <i>Macroeconomía: Teoría y Política</i> -Parkin, M., <i>Macroeconomics</i>
E25	Underg. BS. Ec	Introduction to Microeconomics	14 (A)	-Mankiw, G., <i>Principles of Economics</i>

Mathematics, Statistics and Econometrics

(All courses in Mathematics, Statistics and Econometrics were received at Universidad del Pacífico, except for M5, which was received at Maastricht University)

N.	Level	Course Title	Grade	Textbooks and/or Topics
M1	Grad. MS. Ec.	Advanced Mathematics (Real Analysis)	20 (A)	-De la Fuente, A., <i>Mathematical Methods and Models for Economists</i> -Ok, E., <i>Real Analysis with Economic Applications</i>
M2	Grad. MS. Ec.	Topics in Advanced Econometrics	18 (A)	-Hayashi A., <i>Econometrics</i> -Hamilton, J., <i>Time Series Analysis</i>
M3	Grad. MS. Ec.	Fundamentals of Advanced Econometrics	20 (A)	-Cameron, A.C. and Trivedi, P.K., <i>Microeconometrics: Methods and Applications</i> -Hayashi A., <i>Econometrics</i> -Wooldridge, J., <i>Econometric Analysis of Cross-Section and Panel Data</i> -Arellano, M., <i>Panel Data Econometrics</i>
M4	Grad. MS. Ec.	Bayesian Econometrics	15 (A)	*Several Papers -Koop, G., Poirier, J. and Tobias, J., <i>Bayesian Econometrics</i>
M5	Underg. BS. Ec	Econometric Methods	9/10 (A)	-Greene W., <i>Econometric Methods</i>
M6	Underg. BS. Ec	Econometrics II	14 (A)	Topics: <i>stationarity and time series models, unit root tests, cointegration, panel data, LDV</i> Texts: -Enders, W. <i>Applied Econometric Time Series</i> -Wooldridge, J. <i>Econometric Analysis of Cross Section and Panel Data.</i>
M7	Underg. BS. Ec	Econometrics I	14 (A)	Topics: <i>The general linear model, ordinary least squares, maximum likelihood inference, prediction, heteroscedasticity, structural break, endogeneity, instrumental variables, SUR and simultaneous equations</i> Texts: -Greene, W. <i>Econometric Analysis</i> -Stock, J. and Watson, M. <i>Introduction to Econometrics</i>
M8	Underg. BS. Ec	Informatics for Economists	18 (A)	Topics: <i>Eviews, Stata and Visual Basic</i>

M9	Underg. BS. Ec	Applied Statistics II	14 (A)	<p>Topics: <i>Multivariate Distributions, sampling distributions, inference, non-parametric statistics, correlation analysis and regressions.</i></p> <p>Texts: -Anderson, Sweeney and Williams. <i>Statistics for Administration and Economics</i></p>
M10	Underg. BS. Ec	Applied Statistics I	11 (C)	<p>Topics: <i>Discrete and continuous random variables, expectation, point and interval estimation, hypothesis testing and probabilities.</i></p> <p>Texts: -Anderson, Sweeney and Williams. <i>Statistics for Administration and Economics</i></p>
M11	Underg. BS. Ec	Mathematics IV	16 (A)	<p>Topics: <i>Differential equations and dynamic optimization</i></p> <p>Texts: -Chiang, A. <i>Elements of Dynamic Optimization</i></p> <p>-Sydsaeter and Hammond. <i>Mathematics for Economic Analysis</i></p>
M12	Underg. BS. Ec	Mathematics III	14 (A)	<p>Topics: <i>Linear Algebra, static and constrained optimization, difference equations, implicit differentiation and topology</i></p> <p>Texts: -Simon and Blume. <i>Mathematics for Economists</i></p>
M13	Underg. BS. Ec	Mathematical Analysis (Mathematics II)	13 (B)	<p>Topics: <i>Multivariate Calculus, linear algebra and static optimization.</i></p> <p>Texts: -Edwards and David. <i>Calculus: Early Transcendentals</i>, among others</p>
M14	Underg. BS. Ec	Basic Mathematics (Mathematics I)	13 (B)	<p>Topics: <i>Inequalities, analytic geometry, matrix algebra, geometric representation. and functions</i></p>

Description of Selected Courses

A detail description of main courses is provided. It includes grade, textbook, professor and topics.

Economics

E.1 Household Economics **Grade: 20 (A)**

Program: Master in Economics (Universidad del Pacífico, after degree completion).

Professor: Frederic Vermeulen, Ph.D. Economics, University of Leuven

Papers and Textbooks:

- Banks, J., R. Blundell and A. Lewbel (1997), “Quadratic Engel curves and consumer demand”, *Review of Economics and Statistics*, 79, 527-539.
- Blundell, R., P.-A. Chiappori and C. Meghir (2005), “Collective labor supply with children”, *Journal of Political Economy*, 113, 1277-1306.
- Browning, M. and P.-A. Chiappori (1998), “Efficient intra-household allocations: a general characterization and empirical tests”, *Econometrica*, 66, 1241-1278
- Browning, M., P.-A. Chiappori and Y. Weiss (2014), *Economics of the Family*, Cambridge University Press.
- Cherchye, L., T. Demuyne, B. De Rock and F. Vermeulen (2017), “Household consumption when the marriage is stable”, *American Economic Review*, 107, 1507-1534.
- Cherchye, L., B. De Rock, A. Lewbel and F. Vermeulen (2015), “Sharing rule identification for general collective consumption models”, *Econometrica*, 83, 2001-2041.
- Cherchye, L., B. De Rock and F. Vermeulen (2007), “The collective model of household consumption: a nonparametric characterization”, *Econometrica*, 75, 553-574.
- Cherchye, L., B. De Rock and F. Vermeulen (2011), “The revealed preference approach to collective consumption behavior: testing and sharing rule recovery”, *Review of Economic Studies*, 78, 176-198.
- Cherchye, L., B. De Rock and F. Vermeulen (2012), “Married with children: a collective labor supply model with detailed time use and intrahousehold expenditure information”, *American Economic Review*, 102, 3377-3405.
- Chiappori, P.-A. (1988), “Rational household labor supply”, *Econometrica*, 56, 63-89.
- Chiappori, P.-A. (1992), “Collective labor supply and welfare”, *Journal of Political Economy*, 100, 437-467.

- Chiappori, P.-A., B. Fortin and G. Lacroix (2002), “Marriage market, divorce legislation and household labor supply”, *Journal of Political Economy*, 110, 37-72.
- Chiappori, P.-A., M. Costa Dias and C. Meghir (2015), “The marriage market, labor supply and education choice”, *Journal of Political Economy*, forthcoming
- Dunbar, G., A. Lewbel and K. Pendakur (2013), “Children’s resources in collective households: Identification, estimation and an application to child poverty in Malawi”, *American Economic Review*, 103, 438-471.
- Goussé, M., N. Jacquemet and J.-M. Robin (2017), “Marriage, labor supply and home production”, *Econometrica*, 85, 1873-1919.
- Varian, H. (1982), “The nonparametric approach to demand analysis”, *Econometrica*, 50, 945-972.
- Vermeulen, F. (2002), “Collective household models: Principles and main results”, *Journal of Economic Surveys*, 16, 533-564.

Topics:

- Review of the unitary model. The unitary model for household consumption and for labor supply. Bringing the unitary model to the data: structural econometrics.
- A simple collective labor supply model. The simple model with distributional factors. Empirical evidence.
- A general collective consumption model. Some identified general models. Empirical illustrations.
- The revealed preferences approach. The unitary model. The collective model with known public and private goods. The general collective model. Marriage market and the collective approach.

E.2 International Economics Grade:18 (A)

Program: Master in Economics (Universidad del Pacífico).

Professor: Juan Felipe Bernal, Economics, Toulouse University

Papers and Textbooks:

- Dornbusch, R., Fischer, S., Samuelson, P.A. (1977). "Comparative Advantage, Trade and Payments in a Ricardian Model with a Continuum of Goods," *American Economic Review*, 47, 823-839.
- Eaton, J. Kortum, S. (2002). "Technology, Geography and Trade", *Econometrica*, 70, 1741-1779.
- Krugman, P. (1981). "Trade, Accumulation and Uneven Development," *Journal of Development Economics*, 8, 141-169

- Debaere, P. (2003). "Relative factor abundance and trade," *Journal of Political Economy*, 111, 589-610.
- Grossman, G. Rossi-Hansberg, E. (2008). "Trading Tasks: A Simple Theory of Offshoring," *American Economic Review*, 98, 1978-1997.
- Treffer, D. (1993). "International Factor Price Differences: Leontief Was Right!", *Journal of Political Economy*, 101, 961-987.
- Treffer, D. (1995). "The Case of the Missing Trade and Other Mysteries," *American Economic Review*, 85, 1029-1046.
- Krugman, P. (1979). "Increasing Returns Monopolistic Competition, and International Trade," *Journal of International Economics*, 9, 469-479.
- Krugman, P. (1980). "Scale Economies, Product Differentiation, and the Pattern of Trade," *American Economic Review*, 70, 950-959.
- Anderson, J. van Wincoop, E. (2003). "Gravity and Gravititas: A Solution to the Border Puzzle," *American Economic Review*, 93, 170-192.
- Behrens, K. Murata, Y. (2007) "General equilibrium models of monopolistic competition: A new approach," *Journal of Economic Theory*, 136, 776-787.
- Mayer, T. Melitz, M.J. Ottaviano, G. (2011). "Market size, Competition, and the Product Mix of Exporters", NBER Working Papers 16959.
- Alesina, A. Spolaore, E. (1997). "On the Number and the Size of Nations", *Quarterly Journal of Economics*, 112, 1027-56.
- Desmet, K. Le Breton, M., Ortuño, I., Weber, S. (2011). "The Stability and Breakup of Nations: A Quantitative Analysis", *Journal of Economic Growth*, 16, 183-213.
- Spolaore, E. Wacziarg, R. (2005). "Boders and Growth", *Journal of Economic Growth*, 10, 331-386.
- Goldberg P.K. Maggi, G. (1999) "Protection for Sale: An empirical investigation", *American Economic Review*, 89, 1135-1155.
- Grossman G.M. Helpman, E. (1994). "Protectin for Sale", *American Economic Review*, 84, 833-850.
- Nunn, N. Treffer, D. (2010). "The Structure of Tariffs and Long-Term Growth", *American Economic Journal: Macroeconomics*, 2, 158-94.
- And several other papers.

Topics:

- A simple Ricardian Model. Comparative and Absolute Advantages. Ricardian Model with a continuum of goods. Non-tradable goods: tariffs and transportation costs. Monetary considerations. Ricardian Model with a continuum of goods and a undetermined number of countries.
- A simple Heckscher-Olin Model. Stolper-Samuelson Effect. Rybcynski effect. Leontief Paradox. Heckscher-Ohlin-Vanek Model (HOV). Leamer Theorem. Partial tests of HOV theorem. Full tests of HOV theorem. Technological differences between countries. Treffer theorems. Other empirical tests of HOV model.
- Monopolistic competition. Internal and External Scale Economics and Trade. Grubel and Lloyd Index. Treffer (1995) Model. TLC Canadá-USA. Gravity equations: empirical applications. Border effects. Home-market effect. Empirical tests of the home-market effect.
- Heterogeneous firms. Trade in Intermediate Inputs: a simple model. Estimation of the relative demand of skill-biased labor.

E.3 Urban Economics Grade:19 (A)

Course name in transcripts: Applied Microeconomics

Program: Master in Economics (Universidad del Pacífico).

Professors: Diego Puga, Ph.D. Economics, London School of Economics; and Jorge de la Roca, Ph.D. Economics, CEMFI.

Papers and Textbooks:

- Duranton, G. and Puga, D. (2014). The growth of cities. In Philippe Aghion and Steven N. Durlauf (eds) Handbook of Economic Growth, volume 2B. Amsterdam: NorthHolland, 781-853.
- Duranton, G. and Puga, D. (2015). Urban land use. In Gilles Duranton, Vernon Henderson, and William Strange (eds.) Handbook of Regional and Urban Economics, volume 5. Amsterdam: NorthHolland, 467-560.
- Duranton, G. Turner, M.A. (2011). The fundamental law of road congestion: Evidence from US cities. American Economic Review 101(6): 2616-2652.
- Ottaviano, G. and Peri, G. (2006) The economic value of cultural diversity: evidence from US cities. Journal of Economic Geography 6(1): 9-44.
- Desmet, K. and Rossi-Hansberg, E. (2013). Urban accounting and welfare. American Economic Review 103(6): 2296-2327.
- Duncan, B. and Henderson J.V. (1999). A theory of urban growth. Journal of Political Economy 107(2): 252-284.

- Gabaix, X. (1999). Zipf's law for cities: An explanation. *Quarterly Journal of Economics* 114(3): 739-767.
- Eeckhout, J. (2004). Gibrat's law for (All) cities. *American Economic Review* 94(5): 1429-1451.
- Duranton, G. and Puga, D. (2004). Microfoundations of urban agglomeration economics. In Vernon Henderson and Jacques-Francois Thisse (eds.) *Handbook of Regional and Urban Economics*, volume 4. Amsterdam: NorthHolland, 2063-2117.
- Combes, PP. and Gobillon, L. (2015). The empirics of agglomeration economics. In Gilles Duranton, Vernon Henderson, and William Strange (eds.) *Handbook of Regional and Urban Economics*, volume 5. Amsterdam: NorthHolland, 247-348.
- Puga, D. (2010). The magnitude and causes of agglomeration economies. *Journal of Regional Science* 50(1):203-219.
- Duranton, G. and Overman, H.G. (2005). Testing for localization using microgeographic data. *Review of Economic Studies* 72(4): 1077-1106.
- Ciccone, A. and Hall, R.E. (1996). Productivity and the density of economic activity. *American Economic Review* 86(1):54-70.
- Greenstone, M., Hornbeck, R., and Moretti, E. (2010) Identifying agglomeration spillovers: Evidence from winners and losers of large plant openings. *Journal of Political Economy* 118(3): 536-598.
- Rosenthal, S. and Strange, W.C. (2001). The determinants of agglomeration. *Journal of Urban Economics* 50(2): 191-229.
- Ellison, G., Glaeser, E., and Kerr, W. (2010). What causes industry agglomeration? Evidence from coagglomeration patterns. *American Economic Review* 100(3): 1195-1213.
- Moretti, E. (2004). Workers' education, spillovers and productivity: Evidence from Plant-Level Production Functions. *American Economic Review* 94(3): 656-690.
- Glaeser, E. and Maré, D.C. (2001). Cities and skills. *Journal of Labor Economics* 19(2): 316-342.
- De la Roca, J. and Puga, D. 2012. Learning by working in big cities. *Review of Economic Studies* 84(1): 106-242.
- Saiz, A. (2010) The geographic determinants of housing supply. *Quarterly Journal of Economics* 125(3): 1253-1296.
- And several other papers.

Topics:

- The Monocentric city model. The Marshallian approach. The bid-rent approach. The Alonso-Muth condition. The dual approach. A closed city. A open city. Data and methodological issues in the estimation of gradients. Heterogeneous residents. Introducing commuting cost differences. Endogenizing firm location. Ogawa and Fujita (1980) and Imai (1992).
- Agglomeration and system of cities. Introducing agglomeration economics in the monocentric model. Equilibrium under self-organization. City with large agents. City sizes and developers. The fundamental trade-off of urban economics. Estimating optimal city sizes.
- Urban amenities and mobility. Incorporating amenities into urban framework. Empirical analysis of the supply of amenities explanation. Amenities in a system of cities framework. Empirical analysis of the value of amenities. Separating production and consumption amenities.
- The motives of agglomeration. Sharing, matching and learning. Sharing: indivisible goods and facilities, the gains from variety, the gains from individual specialization, and risk. Matching: improving the quality of matches, and improving the chances of matching. Learning: Knowledge generation, and the transmission of skills and ideas.
- Quantifying agglomeration economies. Evidence and magnitude of agglomeration economies. Measuring localization. Dealing with the endogeneity of size/density: IV, panel data, quasi-experiments. Structural estimation of models with agglomeration economies. A nested model of selection and agglomeration.
- Wages, learning and urban sorting. The earnings premium of bigger cities. A model of wage determination. Are the benefits of agglomeration only static or also dynamic. Heterogeneous dynamic advantages of bigger cities. A structural take on sorting within a structural model.
- Urban growth and city sizes. Zipf's law. Adding a lower bound. The economics of Zipf's law: Eeckhout (2004), Galalx (1999), Duranton (2006), Duranton (2007). Systematic growth models. Intermediate production and human capital accumulation. Gilbrat's law and Zipf's law. The distribution of actual sizes of actual cities. Static and dynamic agglomeration economies.
- Housing and zoning. Introducing durable housing. Housing Supply. Affordability. Hedonic approach. Affordability over time. Zoning. Types of Zoning. Use zoning without externalities. Use zoning in presence of externalities. Fiscal zoning. Design zoning. Growth Controls. Policies to limit urban growth.

E.4 Institutions, Human Capital and Development Grade:19 (A)

Course name in transcripts: Topics in Economic Theory

Program: Master in Economics (Universidad del Pacífico).

Professor: Francisco Gallego, Ph.D. Economics, MIT;

and José Carlos Orihuela, Ph.D. Sustainable Development, Columbia University

Papers and Textbooks:

- Acemoglu, D., Jonhson, S., and Robinson, J. (2006). "Institutions as the Fundamental Cause of Long-Run Growth-2. Handbook of Economic Growth.
- Acemoglu, D., Jonhson, S., and Robinson, J. (2001). "The Colonial Origins of Comparative Development: An Empirical Investigation". American Economic Review.
- Acemoglu, D., Jonhson, S., and Robinson, J. (2002). "Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution". Quarterly Journal of Economics.
- Glaeser, E., La Porta, R., Lopes-de-Silanes, F., and Shleifer, A. (2004). "Do Institutions Cause Growth?" Journal of Economic Growth.
- Acemoglu, D. (2003). "Why Not a Political Coase Theorem? Social Conflict, Commitment, and Politics". Journal of Comparative Economics.
- Acemoglu, D., and Jonhson, S, J. (2006). "Unbundling Institutions". Journal of Political Economy.
- Acemoglu, D., Gallego, F. and Robinson, J. (2014). "Institutions, Human Capital, and Development", Annual Review of Economics.
- Acemoglu, D. and Dell, M. (2009). "Productivity Differences Between and Within Countries". American Economic Journal: Macroeconomics.
- Gennaioli, N., La Porta, R., Lopez-de-Silanes, F., and Shleifer, A. (2013). "Human Capital and Regional Development". Quarterly Journal of Economics.
- Glaeser, E. and Shleifer, A. (2002). "Legal Origins". Quarterly Journal of Economics.
- Gallego, F. (2010). "Historical Origins of Schooling: The Role of Democracy and Political Decentralization". The Review of Economics and Statistics.
- Dell, M. (2011). "The Persistent Effects of Peru's Mining Mita", Econometrica.
- Bruhn, M. and Gallego, F. (2011): "Good, Bad, and Ugly Colonial Activities: Do They Matter for Economic Development?". The Review of Economic and Statistics.
- Michalopoulos, S. and Papaioannou, E. (2013). "Pre-Colonial Ethnic Institutions and Contemporary African Development," Econometrica.

- Michalopoulos, S. and Papaioannou, E. (2014). "National Institutions and Subnational Development in Africa", *The Quarterly Journal of Economics*.
- Nunn, N. (2007) "Historical Legacies: A Model Linking Africa's Past to its Current Underdevelopment". *Journal of Development Economics*.
- Banerjee, A. and Dufflo, E. (2011). *Poor Economics*. Chapter 11.
- North, D.C. (1992). "Institutions, institutional change and economic performance. Cambridge, MA: Cambridge University Press. Chapters 1-4.
- Coatsworth, J.H. (2005). "Structures, Endowments, and Institutions in the Economic History of Latin America." *Latin American Research Review*.
- Menard, C. and Shirley, M.M. (2014). "The Future of New Institutional Economics: From Early Intuitions to a New Paradigm?" *Journal of Institutional Economics*.
- Coase, R. H. (1998). "The New Institutional Economics", *American Economic Review*.
- Rodrik, D. (2000). "Institutions for High-Quality Growth: What They Are and How to Acquire Them." *Studies in Comparative International Development*.
- Rodrik, D., Subramanian, A., and Trebbi, F. (2004). "Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development". *Journal of Economic Growth*.
- Polanyi, K. (1944). *The great transformation*. New York: Rinehart & Co., Inc.
- Ostrom, E. (2007). "Challenges and Growth: The Development of the Interdisciplinary Field of Institutional Analysis". *Journal of Institutional Economics*.
- Orihuela, J.C. (2014). "Converging Divergence: The Diffusion of the Green State in Latin America". *Studies in Comparative International Development*.
- Orihuela, J.C. (2013). "How do Mineral-States Learn? Path-Dependence, Networks and Policy Change in the Development of Economic Institutions." *World Development*.
- Among several other papers.

Topics:

- Part 1: Institutions, Human Capital and Development.
- The beginning of the empirical literature. Coase theorem. Efficient Institutions, Social Conflict, Ideology and Beliefs, and Incidental Institutions. Types of Institutions. Who controls the State? Institutional origins in Social Conflict theories.

- Towards a conceptual framework. Political institutions and distribution of resources. Fundamental causes of growth. Types of colonization. Settler's mortality rate. The Reversal of Fortune. Unbundling institutions. Commitment problems and Political Coase Theorem. Do institutions cause growth? Decentralization and Democracy. Against Political Economy.
- Within-country Evidence. Productivity differences between and within countries. Theoretical framework. A Lucas-Lucas Spatial Model of Regional and National Income. Institutions and Economic Development within Countries. Nationwide institutions and pre-colonial local institutions in Africa. Human Capital Persistence and Development. Culture-Institutions Interactions.
- Part 2: New Institutional Economics.
- Douglass North: Institutions as rules and as incentives. Formal and informal institutions. Institutional change.
- Coase and costs of coordination. Menard and transaction costs, property rights and contracts. Williamson: Four level of Social Analysis. Social embeddedness. Institutional Environment. Institutions of Governance. Neoclassical Theory.
- Ostrom: Public choice approach, tragedy of the commons, new institutional economics, behavioural game theory. Components of institutional analysis applied to complex public economies. Rodrik: Institutions for High-Quality Growth.
- Historical Institutionalism. Rational Choice Institutionalism. Sociological Institutionalism. How do Mineral-States Learn? Converging Divergence: the Diffusion of the Green State in Latin America.

E.5 Financial Crisis Grade: 18 (A)

Course name in transcripts: Topics in Macroeconomics

Program: Master in Economics (Universidad del Pacífico).

Professor: María Amparo Cruz-Saco, Ph.D. Latin American Studies, University of Pittsburgh

Papers:

- Several papers.

Topics:

- Determinants of currency and financial crisis. Exchange rate and balance of payments. Siegel's paradox. Types of crisis. Debt and growth.
- Episodes of crises. Stylized facts. Real state bubbles. Sovereign default and public debt. Financial fragility, vulnerability and contagion. Consequences of the crisis. Case study: Chile 1981-2, Latin America 1982-3, Mexico 1994, Asia 1997, Russia and Brazil 1998, Argentina 2001. Genesis and development of the global crisis of 2008.

- Responses of Economic Policy in the face of crises. Characterization of economic policies in the developed world and in emerging countries. Non-conventional instruments. Effects of the Quantitative Easing policy. The Peruvian monetary policy 2008-2011. The interaction between exchange rate policy and monetary policy.
- Lessons in Economic Policy. Implications of the crisis for the design of monetary policy. Stability of prices, inflation goals and financial stability. Costs and benefits of a low inflation target. The importance of financial intermediation. Macroeconomic consequences of financial regulation. Design of macroprudential instruments. The relative power of monetary policy against fiscal policy. Fiscal space and automatic stabilizers. The challenge of dollarization. How to deal with capital flows? International macroeconomic coordination.
- The crisis of the Euro and the World Economic Situation. The origin of the Euro zone. Trade unions versus monetary unions. The problem of sovereign debt. Greece, Italy and Spain. The Chinese slowdown. Unemployment in the United States: 2008-2013. Risks of monetary stimulus. Geopolitical risks.

E.6 Endogenous Growth Grade:18 (A)

Course name in transcripts: Economic Growth

Program: Master in Economics (Universidad del Pacífico).

Professor: Adrés Rosás, Ph.D. Economics, Brown University

Textbooks:

- Robert J.Barro and Sala-i Martin, *Economic Growth*, The MIT Press, Second Edition, 2003.
- Philippe Aghion and Peter W. Howitt, *The Economics of Growth*, The MIT Press, 2008.

Topics:

- Introduction to Endogenous Growth. The neoclassic model of Solow and Swan. Ramsey Model.
- Endogenous Growth Model: Introduction and AK. Public Spending. Learning by doing and knowledge spillovers. Human Capital. Ideas and technological progress. Models base on products expansion. Introduction to model of creative destruction.
- Models of creative destruction: capital, innovation and growth accounting. Financial sector and growth. Technological transference and convergence. Market size and directed technological change. Institutions and Poverty trap. Competition. Education. International Trade. Democracy.

E.7 Advanced Microeconomics II Grade:19 (A)

Program: Master in Economics (Universidad del Pacífico).

Professor: Hugo Vega, Ph.D. Economics, London School of Economics

Textbooks:

- A. Mas-Colell, D. Whinston y J. Green, *Microeconomic Theory*, Oxford University Press, 1995.
- D. Fudenberg y J. Tirole, *Game Theory*, The MIT Press, 1991.
- R. Myerson, *Game Theory: Analysis of Conflict*, Harvard University Press, 1997.

Topics:

- Choice under uncertainty: Expected utility theory, money lotteries and risk aversion, state-dependent utility.
- Basic elements in non-cooperative games: Normal form representation of a game, extensive form representation of a game, randomized choices.
- Static games of complete information: Dominate and dominated strategies, rationalizable strategies, Nash equilibrium, existence and properties of Nash equilibrium.
- Dynamic games of complete information: Sequential rationality, backward induction, and sub-game perfection, beliefs and sequential rationality.
- Static games of incomplete information: Bayesian Nash equilibrium, the possibility of mistakes: trembling-hand perfection.
- Dynamic games of incomplete information: Perfect Bayesian equilibrium, extensive-form refinements (sequential equilibrium), strategic form refinements (trembling-hand perfect equilibrium).
- Repeated games: The repeated prisoners dilemma, a general model of repeated games, stationary equilibrium of repeated games with complete information and discounting, one shot deviation principle.
- Information problems: Principal-agent problem and adverse selection.

E.8 Advanced Microeconomics I Grade:19 (A)

Program: Master in Economics (Universidad del Pacífico).

Professor: Miguel A. Carpio, Ph.D. Economics, Universitat Pompeu Fabra.

Textbooks:

- A. Mas-Colell, D. Whinston y J. Green, *Microeconomic Theory*, Oxford University Press, 1995.

Topics:

- Preference and Choice: Preference relations, choice rules, the relationship between preference relations and choice rule.

- Consumer choice: Commodities, the consumption set, competitive budgets, demand functions and comparative statistics, the weak axiom of revealed preference and the law of demand.
- Classical demand theory: Preference relations, preference and utility, the utility maximization problem, the expenditure minimization problem, duality, relationships between demand, indirect utility, and expenditure functions, welfare evaluations of economic changes.
- Aggregate demand: Aggregate demand and aggregate wealth, aggregate demand and weak axiom, aggregate demand and the existence of the representative consumer.
- Production: Production sets, profit maximization and cost minimization, aggregation.

E.9 Advanced Macroeconomics II Grade:18 (A)

Program: Master in Economics (Universidad del Pacífico).

Professor: Marco Ortiz, Ph.D. Economics, London School of Economics

Textbooks:

- Several Papers
- Walsh, C., *Monetary Theory and Policy*, MIT Press, 2010.
- Chugh, S., *A Short Course in Representative-Agent Macroeconomics*, under contract with MIT Press.

Topics:

- Topics in Monetary Theory. General Equilibrium models with money. Optimal monetary policies. Sticky prices. New keynesian canonical model with three equations with Phillips curve with sticky prices. Phillips curve with sticky information. New keynesian general equilibrium models.
- Credit and financial frictions. Real fluctuations models are extended to get into credit frictions and the financial accelerator. Capital flow models, sudden stops and financial crisis. Macro-prudential regulation. Financial crisis models and amplification through collateral prices. Balance sheet effect and currency mismatch risk. Default models.

E.10 Advanced Macroeconomics I Grade: 16 (A)

Program: Master in Economics (Universidad del Pacífico).

Professor: Juan Mendoza, Ph.D. Economics, Brown University.

Textbooks:

- Several papers.
- Blanchard, O., and S. Fischer. *Lectures on Macroeconomics*. Cambridge, MA: MIT Press, 1989.

- Romer, David. *Advanced Macroeconomics*. New York, McGrawHill, 2006.

Topics:

- Consumption and Saving: Keynes and the consumption function, the consumption/ saving decision, permanent income hypothesis, life cycle hypothesis, Ricardian equivalence, uncertainty of lifespan and consumption, precautionary savings, Euler equation, habits formation, inter-temporal consistency and hyperbolic discount, empirical evidence.
- Consumption/ Saving: Keynes and the consumption function, the consumption/ saving decision, permanent income hypothesis, life cycle hypothesis, Ricardian equivalence, uncertainty of lifespan and consumption, precautionary savings, Euler equation, habits formation, inter-temporal consistency and hyperbolic discount, empirical evidence.
- Economic growth: The Solow growth model, the Solow growth model with human capital, the Cass-Ramsey model, the overlapping generations model, growth in a small open economy, Ricardo-Malthus model, Kremer model, endogenous growth (AK, Spillovers, Human Capital, Research and Development).
- Asset Pricing: Asset prices in the CAPM model, the CAPM and consumption, Lucas asset-pricing model, international diversification.
- Investment: Adjustment costs, real state investment, asymmetric information and financial markets, Modigliani-Miller theorem, bank runs, irreversible investment.
- Unemployment and coordination failures: Efficiency wages, Negishi-Solow efficiency wages, Shapiro-Stiglitz Model, searching model, coordination failures.

Mathematics, Statistics and Econometrics

M.1 Advanced Mathematics - Real Analysis Grade: 20 (A)

Program: Master in Economics (Universidad del Pacífico).

Professor: Jesús Zapata, Ph.D. Mathematics, Institute for Pure and Applied Mathematics (IMPA), Brazil.

Papers and Textbooks:

- De la Fuente, A., *Mathematical Methods and Models for Economists*. Cambridge University Press, 2000.
- Ok, E., *Real Analysis with Economic Applications*. Princeton University Press, 2007.

Topics:

- Preliminaries: real sequences, \mathbb{R}^n space and properties, real functions.
- Metric spaces: Definition and properties of metric spaces, convergence of sequences, open and closed sets, continuity, completeness, fixed point theory, compactness and extreme value theorem, connectedness, intermediate value theorem.
- Vector spaces: Definition and properties of vector spaces, bases and dimension, linear transformations, linear mapping between normed spaces, normed vector spaces, Banach spaces.
- Correspondences theory: Definition and properties, continuity of correspondences, the maximum theorem, Kakutani's fixed point theorem, Michael's selection theorem.

M.2 Topics in Advanced Econometrics Grade: 18 (A)

Program: Master in Economics (Universidad del Pacífico).

Professor: Diego Winkelried, Ph.D. Economics, University of Cambridge.

Papers and Textbooks:

- Hayashi, A., *Econometrics*, Princeton University Press, 2000.
- Hamilton, J., *Time Series Analysis*, Princeton University Press, 1994.

Topics:

- Difference equations: Lag operators, dynamic multipliers, basic definitions.
- Stationarity and time series models: Wold's decomposition, moments, prediction.
- Estimation of stationary time series: Ergodicity and asymptotic theory, covariance function and its estimation, least squares, maximum likelihood, consistency and robust inference, super-consistency.

- Unit root econometrics: super consistency and deterministic trends, Beveridge-Nelson decomposition and integrated processes, Wiener process and the functional central limit theorem, Dickey-Fuller test and augmented Dickey-Fuller test.
- Cointegration: Cointegrated systems, representations, implications for estimation, ML with complete information (Johansen).
- Unobservable Components Models: Local level model, state space representation and Kalman filter, estimation, smoothing.

M.3 Fundamental of Advanced Econometrics Grade: 20 (A)

Program: Master in Economics (Universidad del Pacífico).

Professor: Pablo Lavado, Ph.D. Economics, CEMFI.

Papers and Textbooks:

- Cameron, A.C. and Trivedi, P.K., *Microeconometrics: Methods and Applications*, Cambridge University Press, 2005.
- Hayashi A., *Econometrics*, Princeton University Press, 2000
- Wooldridge, J., *Econometric Analysis of Cross-Section and Panel Data*, MIT Press, 2010.
- Arellano, M., *Panel Data Econometrics*, Oxford University Press, 2003.

Topics:

- Linear Models
 - Preliminaries: Matrix algebra, multivariate statistics, asymptotic theory.
 - Ordinary least squares (OLS) 1: Derivation, Frisch-Waugh-Lovell theorem, finite-sample properties, Gauss Markov theorem, hypothesis testing, restricted least squares, Lagrange multipliers tests.
 - OLS 2: Asymptotic properties, large sample inference, robust covariance matrix estimator (HAC estimator), specification problems.
 - Generalized least squares (GLS): Estimation principles and properties, feasible generalized least squares, heteroscedasticity, inference with clustered data, seemingly unrelated regressions.
 - Instrumental variables: Endogeneity problem, measurement error and instrumental variables estimator, under-identified and over-identified models, Hausman Test, Durbin-Wu-Hausman test, Hansens J test, Sargan test.
- Non-linear Models
 - Extremum estimators 1: Problem formulation, asymptotic normality and hypothesis testing (Wald, Lagrange multipliers), non-linear least squares, Gauss regressions.

- Extremum estimators 2: Maximum likelihood (ML) and properties, information matrix and Rao-Cramer bound, generalized linear model: binary models (logit, probit), exponential regressions, count data, etc.
- Panel Data Models
 - "Classical" panel estimators: Short panel and identifying assumptions, pooled estimator, between estimator, within estimator, generalized least squares, first difference estimator.
 - Instrumental variables estimation with panel data: Generalized method of moments for panel data, dynamic estimators for panel data (Arellano-Bond).

M.4 Bayesian Econometrics Grade: 15 (A)

Program: Master in Economics (Universidad del Pacífico).

Professor: Diego Winkelried, Ph.D. Economics, University of Cambridge

Papers and Textbooks:

- Several Papers.
- Gary Koop, Dale J.Poirier, and Justin L.Tobias(2007), *Bayesian Econometrics*, Volume 12 of Econometric Exercises Series, Cambridge University Press.

Topics:

- Introduction. Bayesian Inference, usual distribution functions, Monte Carlo integration methods, Gibbs and Metropolis-Hastings
- Regressions Models, introduction. Analysis with no informative priors. Comparison with classic inference (Helicopter Tour). First derivations of the analysis with conjugates priors. (Complement with Matlab programs)
- Regression Models, continuation. Analysis with conjugates priors. Mixed Estimation. Analysis with independent priors. Gibbs sampler and Metropolis-Hastings (Complement with Matlab programs)
- Regression Models, illustrations. Empirical applications under distinct priors. (Complement with Matlab programs)
- Regression Models, extensions. Treatment of more general cases. Sampler of Metropolis within Gibbs.(Complement with Matlab programs)
- Model Selection. Stochastic Search Variable Selection. Description of the method and derivation of the Sampler of Gibbs. Application to a regression of economic growth. (Complement with Matlab programs)
- Bayesian Model Averaging. Principles and implications of the multi-model inference. The MC³ algorithm. Application to a regression of economic growth.(Complement with Matlab programs)