Course Title: Special Field of Economic Research I

Type of course: Optional (Credit 4)

Course code: DI702

Intended for: Phd (Economics), CITD, SIS, JNU

Objectives: The objective of this course is to provide PhD students with sound theoretical foundation in special fields of Economics in which they intend to pursue their research. The course is organized around several modules and a PhD student will be required to choose and complete one module, depending on her/his research interest. Brief outline of these modules, along with the recommended readings is provided below.

Course Learning Outcomes: After pursuing this course, students will be able to

- acquire thorough theoretical knowledge in their area of interest
- equip themselves with the issues and methods pertaining to their field of interest
- streamline research interest around a particular area of interest

Course content:

1. **Economics of Labor Markets & Education:** This course will cover theoretical and empirical topics in labor economics and economics of education. Students will also be introduced to some recent empirical approaches in labor economics including randomized controlled trial and natural experiments. The course will expose students to important theoretical and applied topics in such areas as labor supply theory, labor demand, human capital (education and training), wage differentials, discrimination in labor markets, earnings inequality, female labor force participation, signaling approach to education and the education production function. Illustrative readings include:*Cahuc, Pierre and Andre Zylberberg (2004), Labor Economics, MIT Press; Angrist and Pischke (2009), Mostly Harmless Econometrics, Princeton University Press; Blundell and MaCurdy, "Labor Supply: A Review of Alternative Approaches"Handbook of Labor Economics, Vol. 3A, Chapter 27; Angrist, J. D. and W. N. Evans (1998), "Children and Their Parents' Labour Supply: Evidence from Exogenous Variation in Family Size", The American Economic Review, 88(3), pp. 450-77*

2. **Topics in Financial Econometrics:** This course provides a detailed description of theoretical aspects of econometric models in finance. The objective of the course is to expose students to econometric methods used in empirical finance. The focus will be on econometrics of financial markets. The course, will enable students to analyze financial time series data, critically review empirical works that use financial time series, conduct empirical research on issues of financial markets. The course assumes prior knowledge in probability, statistics and econometrics. Familiarity with econometric software will be essential as assignments will have to be carried out using standard packages such as Stata, Eviews, R etc. Suggested readings include (a) R. S. Tsay, 2005, *Analysis of Financial Time Series,* Wiley Series in Probability and Statistics, 2nd edition; (b) J. Y. Campbell, A. W. Lo, and A. C. MacKinlay, 1997, *The Econometrics of Financial Markets,* Princeton University Press; (c) T. C. Mills and R. N. Markellos, *The Econometric Modelling of Financial Time Series,* 2008, Cambridge University Press; (d) J. D. Hamilton, 1994, *Time Series Analysis*, Princeton University Press

3. **Banking and Financial Markets:** This module provides PhD students an exposure to theoretical, institutional and empirical aspects of banking, financial markets, financial regulation, and financial systems in several blocks. It also covers topics of development finance and financial risk.The objectives of this special module are –(i) to build theoretical and empirical foundations for research in financial economics; (ii) to enable students to understand and critically review research articles in the area of financial economics; (iii) to enable students to understand various financial systems through quantitative measures and qualitative analysis.Suggested topics include: (1) Theory of banks as a firm; (2) Development Finance and Financial Inclusion; (3) Financial Markets; (4) Financial Regulation; (5) Financial Systems. Suggested readings: Select chapters from (a) *Xavier Freixas and Jean-Charles Rochet (2008), Microeconomics of Banking (Second Edition), The MIT Press, Cambridge; (b) Armendariz, B. and J. Morduch (2005), The Economics of Microfinance, The MIT Press, Cambridge; (c) Hendrik S. Houthakker and Peter J. Williams (1996), The Economics of Financial Markets, Oxford University Press; (d) John C. Hull (2015),*

Options, Futures and Other Derivatives (9th Edition), Pearson; Additionally, journal articles will be provided in class as extra reading materials.

4. **Economic Development:** This course provides an introduction to some selected critical issues in development economics. The course covers topics on new political economy aspects of development as well as the impact of international aid on development. For the application of cover topics, empirical evidence particularly from developing and underdeveloped economies will receivemore attention. Illustrative topics to be covered under this course are: Development traps (self-fulfilling prophecies and historical accidents), political economy of conflict and development, democracy and development, and foreign aid and development. Suggestive readings include: *Ray, D. (1998). Development Economics. Oxford University Press; Ray, D. and J. Esteban (2017). Conflict and development. Annual Review of Economics 9: 263-293; Bardhan, P (2016). State and development: The need for a reappraisal of the current literature. Journal of Economic Literature 54: 862-892; Wittman, D. (1989). Why democracies produce efficient results. Journal of Political Economy 97: 1395-1424;Riddell, R. C. (2007). Does Foreign Aid Really Work? Oxford University Press.*

5. **Economics of Technology and Development:** Technology has long been recognized to be crucially important for economic growth and prosperity of societies. The role of technology in driving the world economy has magnified manifolds over the last few decades, with the emergence of a new economic, institutional, and technological architecture steering us towards a truly knowledge driven economy and society. The concept of technology has attracted the scholarly attention of economists for over a century, mainly exploring what constitutes technological change, and its consequences for economic development. The objective of this course is to introduce students to this extensive scholarly (and technical) literature on the economics of technology especially from the perspective of developing countries. Illustrative topics include: markets for technology, innovation and market structure, diffusion and learning, IPR, public funded research and university-industry knowledge transfer. Illustrative readings include: *A.S. Ray Demystifying the Economics of Technology, 2024; B. Hall and N Rosenberg (eds.) Handbook of the Economics of Innovation, Vol Iand II, 2010; P. Stoneman (ed.), Handbook of Economics of Innovation and Technological Change, 1995; J.Schumpeter, Capitalism, Socialism and Democracy (Chapters 7 & 8), 1943; J.Tirole, The Theory of Industrial Organisation, 1988 (Chapter 10)* plus several articles from leading Economic journals.

6. **Public Economics:** This course will draw from the classic public economics literature on optimal taxation, public sector decision making and expenditure policies, the role of government in addressing market failures, and fiscal federalism. It will demonstrate how the basic tenets of public economic theory can be applied to study, analyze, evaluate, and design real life government policies. The course will highlight the distinction between various (often conflicting) objectives of government policies such as growth, efficiency, revenue generation, equity/redistribution, externality correction, public good provision etc. Illustrative topics covered include optimal commodity taxation and its extensions for correcting externalities, optimal non-linear income taxation, differences in taxation policies between developed and developing economies, optimal provision of clubs and local public goods, political economy and public sector, fiscal federalism and competition among subnational governments and fiscal outcomes. Illustrative readings include Auerbach, A., and M. Feldstein. *Handbook of Public Economics*. Vol 1, 2, 3, 4, North Holland, 1985, 1987, 2002, 2002, 2013; Institute for Fiscal Studies, *The Mirrlees Review*, Oxford University Press, 2010; Myles, G., *Public Economics.* Cambridge University Press, 1995; Saez, E., Using Elasticities to Derive Optimal Income Tax Rates, *Review of Economic Studies*, 68, 2001; Tuomala M., *Optimal Redistributive Taxation*, Oxford University Press, 2016; Dennis C. Mueller (2003) *Public Choice III*. Cambridge University Press; Jonathan Levin and Barry Nalebuff (1995). An Introduction to Vote-Counting Schemes. *Journal of Economic Perspective* 9: 3-26; Lucie Gadenne and Monica Singhal (2014). Decentralization in Developing Economies. *Annual Review of Economics* 6: 581-604; Richard Cornes and Todd Sandier (1996). *The Theory of Externalities, Public Goods, and Club Goods*. Cambridge University Press; Wallace Oates (1999). An Essay on Fiscal Federalism. *Journal of Economic Literature* 37: 1120-1149.