

CENTRAL UNIVERSITY OF TAMIL NADU

DEPARTMENT OF ECONOMICS

Course Work for Ph. D in ECONOMICS

Course work Credits: 14 Credits

Course Outline

Semester I		
Course Code	Course Title	Credits
ECOD101	Research Methodology	4
ECOD102	Applied Econometrics with Computer Application	4
CPE-RPE	Research and Publication Ethics	2
ECOD104	Area Paper*	4
Total Credits		14

*Scholar specific, course content will be devised by the respective research supervisor.

Syllabus for Area Paper		
Course Code	Course Title	Credits
ECOD104A	Industrial Economics	4
ECOD104B	Environment and Health Economics	
ECOD104C	Women Workers and the Care Economy in India	
ECOD104D	Tourism and Economic Development	
ECOD104E	Development Economics	
ECOD104F	International Economics	
ECOD104G	Agricultural Economics	
ECOD104H	Financial Economics	
ECOD104I	Health Economics	
ECOD104J	Labour Economics	
ECOD104K	Environmental Economics	

Course Code: ECOD101
Course Title: RESEARCH METHODOLOGY
Course Credits: 4

Course Objective

The primary objective of this course is to develop a research orientation among the scholars and to acquaint them with fundamentals of research methods. Specifically, the course aims at introducing them to the basic concepts used in research and to scientific social research methods and their approach. It includes Review of Literature, discussions on sampling techniques, research designs and techniques of analysis and scholarly writing.

Learning Outcome

The course will provide orientation to research, various approaches to research and research methods. It will help scholars to appreciate the frame work of research process and design, techniques for data collection and analysis and research writing.

Syllabus:

Module 1: Introduction of Research Problems:

Research Methodology: An Introduction-Meaning, Objectives. Types and significance of Social Science Research-Economic Research-Criteria of Good Research- Typology and Research Design- Structure of Research Thesis. Review of Literature, Research Problem-Identifying the research Problem in Economics – Formulating Objectives of the Study-Concept of Hypothesis –Role and Formulation of Hypothesis –Testing of Hypothesis and Verification of Hypothesis-Use of Statistics in Economic Research.

Module2: Research Methods and Designing:

Historical Method-Scientific Method-Stages of scientific Method- Limitations of Scientific Method-Logic and Scientific Method –Deductive and Inductive Method-Hypothetic Deductive Method- Case Study Method-Observation Method-Scaling Techniques.

Module3: Survey Methods and Data Collection

Census and Sample Survey – Relative Utility-Organization and Planning of Survey-Steps in sampling Design-Sample Size and its Determination-sampling Methods and Techniques – Collection of Primary data-Use of Questionnaire and schedule-Personal Interview Vs. Mailed Connection-Sampling and Non Sampling Error. Data Base of Indian Economy-CSO-RBI-CMIE-Census-NSSO-CMFRI-International Database – World Bank. WHO, U.N.O.etc., Agricultural Census-Economic Survey-National Family Health Survey.

Module4: Analysis of Data and Interpretation:

Statistical Methods – Probability Theory: Concept and Laws/Theorems of Probability Distribution-Expectation-Special Distribution Binomial, Poisson, Normal,t,Chi Square Distribution-Statistical Inferences: Sampling Distributions – Estimation-Properties of Estimates and testing of Hypothesis-Analysis of Variance(ANOVA) Multivariable Analysis-Factor Analysis-Role of Concepts in Data analysis-Interpretation.

Module5: Academic writing:

Essential of academic writing, Structure and Components of research report, Preliminaries, Contents of Report, References, Bibliography, Appendices, Criteria for the evaluation of the Research Report, writing a research paper.

References:

1. Lawrence. A. Boland. (1982). The Foundation of economic method, gorged allen and Unwin. London
2. Lawrence. A. Boland (1989) the Methodology of Model Building, Rutledge, London.
3. Homa katouzia. (1980) Ideology and Methods in Economics, Mcmiian London.
4. Spiegel.M.R.Theory and problems of statistics, Schaum's Outline series.Mc Graw Hill 1992.
5. Liptohz.Probability, (1992) Schaum'outline series, Mc Graw Hill.
6. Croxton E.and Gowden, (1965) Applied and General Statistics, Prentice Hall
7. Kurien C.T.Guide to research in Economics.
8. Goode W.S. and Hatt P.K (1992), Methods in Social Research M.C. Grew Hill
9. Murthy M.N.Survey Methods
10. Michale S. Lewis beck and Alan Bryman and Tim Futing Liao (2004), "Encyclopedia of social science research methods", sage Publications
11. David Kaplan (2004), The Sage hand book of Quantitative methodology for the social sciences, Sage publications

Course Code: ECOD102

Course Title: APPLIED ECONOMETRICS WITH COMPUTER APPLICATIONS

Course Credits: 4

Course Objective

This course attempts to provide an overview of Econometric tools and their applications in research. The main objective of the course is to equip students to quantify and validate relevant relationships that explain economic phenomenon through the estimation and testing of an econometric model fitted to the available data. The course provides an overview of classical linear regression model, Qualitative Response Models, Basics of Time series and Panel Data Models.

Learning Outcome

At the end of the study of this paper, students will be able to understand the concepts, theory and application of tools of Econometrics. Further they will be able to make applications of these methods for economic decisions and research.

Syllabus:

Module 1: Overview Classical Regression Model and regression Problems:

Assumptions of OLS method –Simple and Multiple regression models-Ordinary least square methods of estimation and properties –hypotheses testing on regression parameters-interpretation of regression results-problems in single equation models: heteroscedasticity. Autocorrelation, multicollinearity-errors in variables –stochastic regressors.

Module 2: Qualitative Response Models

Introduction to binary and limited dependent variable, Limitation of the linear probability model (LPM), Method of maximum likelihood estimation and its properties (including consistency), Logit, Probit and Tobit models- Estimation and inference, Multinomial models, ordinal models.

Module 3: Univariate Time Series Models

Concept of time series –stationary and non-stationary stochastic process-different types of non-stationary process-the concept of unit roots-testing for unit roots-various specifications of ARIMA models – identification, estimation, and diagnosing model adequacy-forecasting through univariate time series modelling. The concept of high frequency time series data-modeling high frequency data-testing for ARCH effect-ARCH/GARCH models –asymmetric ARCH/GARCH models-markov switching models.

Module 4: Vector Auto regression and Co-integration:

The Vector Auto Regression (VAR) models-interpreting impulse response function and variance decomposition-structural VAR models-Impulse response and Variance Decomposition -Testing for causality and block exogeneity in VAR models-the problem of spurious regression- the concept of Cointegration-testing for Cointegration (Engle-Granger methodology and Johanson methodology)-Vector Error Correction Models.

Module 5: Panel Data Models:

Fixed effect model and random effect model, Pooled or population average model, estimation of coefficient, specification test, FGLS, dynamic panel data models. Application with real world cross country data

References:

1. Arellano, M. (2003) *Panel Data Econometrics*, Oxford University Press
2. Baltagi, B. H. (2008) *Econometric Analysis of Panel Data* (fourth ed.) Chichester, UK :Wiley
3. Hamilton, JD (1994) *Time series econometrics*, Princeton university press.
4. Wooldridge, J.M., (2002), *Econometric Analysis of Cross Section and Panel Data*, MIT Press Cambridge MA: MIT press.
5. Walter Enders. 2014, *Applied Econometric Time Series*, 4th Edition ,Wiley
6. Cameron,A.C and P.K Trivedi . 2010, *Microeconometrics using Stata*. Texas, stata press publication
7. William H Greene (2006)' *Econometric Analysis*', Pearson.
8. Chris Brooks, *Introductory Econometrics for Finance* 3rd Edition, Kindle Edition, Cambridge University Press; 3 edition, 2014

Course Code: CPE-RPE
Course Title: Research and Publication Ethics
Course Credit: 2

About the Course:

This course has total 6 units focusing on basics of Philosophy of sciences and ethics, research integrity, publication ethics. Hands-on-sessions are designed to identify research misconduct and predatory publications. Indexing and citation databases, open access publications, research metrics (Citations, h-index, Impact factor, etc.) and plagiarism tools will be introduced in this course.

Module 1: PHILOSOPHY AND ETHICS

1. Introduction to philosophy: definition, nature and scope, concept, branches.
2. Ethics: definition, moral philosophy, nature of moral judgements and reactions.

Module 2: SCIENTIFIC CONDUCT

1. Ethics with respect to science and research
2. Intellectual honesty and research integrity
3. Scientific misconduct: Falsification, Fabrication, and Plagiarism (FTP)
4. Redundant publications: duplicate and overlapping publications, salami slicing
5. Selective reporting and misrepresentation of data

Module 3: PUBLICATION ETHICS

1. Publication ethics: definition, introduction and importance
2. Best practices/ standards setting initiatives and guidelines: COPE, WAME, etc.
3. Conflicts of interest.
4. Publication misconduct: definition, concept, problems that leads to unethical behaviour and Vice versa, types.
5. Violation of publication ethics, authorship and contributorship
6. Identification of publication misconduct, complaints and appeals
7. Predatory publishers and journals

PRACTICE

Module 4: OPEN ACCESS PUBLISHING

1. Open access publications and initiatives
2. SHERPA / RoMEO online resource to check publisher copyright & self-archiving policies
3. Software tool to identify predatory publications developed by SPPU
4. Journals finder / Journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal suggester, etc.

Module 5: PUBLICATION MISCONDUCT

A. Group Discussion

1. Subject specific ethical issues, FFP, authorship
2. Conflicts of interest
3. Complaints and appeals: examples and fraud from India and abroad

B. Software tools

Use of plagiarism software like Turnitin, Urkund and other open source software tools

Module 6: DATABASES AND RESEARCH METRICS

A. Databases

1. Indexing databases
2. Citation databases: Web of science, Scopus, etc.

B. Research Metrics

1. Impact Factor of journals as per Journal Citation Report, SNIP, IPP, Cite score
2. Metrics: h-index, g-index, i10 index, altmetrics

References:

1. Shamoo Adil E, Resnik David B. "Responsible Conduct of Research" Oxford University Press, 2003
2. Salzano Francisco M, Hurtado A. Magdalena "Lost Paradises and the Ethics of Research and Publication" Oxford University Press, 2004
3. CUP, Publishing Ethics: Academic Research, Cambridge University Press, 2019
4. Wiley, Best Practice Guidelines on Publishing Ethics, A Publisher's Perspective, Second Edition, Wiley 2014.
5. Elsevier, Ethics in Research & Publication, Elsevier 2019.

Course Code: ECOD104A
Course Title: Industrial Economics
Course credit: 4

Course Objectives:

- 1.To familiarise the students with the various concepts and frame works of the study of industrial economics.
- 2.The students would understand the meaning of firm and industry and measure industrial efficiency.
- 3.To measure industrial productivity numerically using mathematical and econometric techniques.

Learning Outcomes:

- 1.Evaluate the legal framework and instruments of industrial regulations.
- 2.Knowledge of various issues in Indian industry and develop research skills in industrial economics.
3. Students can take decisions on investment and understand the legal framework based on numerical measurements.

Module 1: Foundations of Industrial Economics

Basic concepts and scope of Industrial Economics – Firm, Industry and Market – Objectives of firms – Applications of Industrial Economics – Standard forms of market structure – Perfect competition – Monopoly – Monopolistic competition – Oligopoly – Market concentration: concepts and determinants – Theories of market concentration – Structure–Conduct–Performance (SCP) paradigm – Efficient Structure Hypothesis – Chicago School approach – Measurement of market concentration – Concentration ratios – Herfindahl–Hirschman Index – entropy index -Monopoly power – Measurement of monopoly power – Lerner Index – Bain’s measure – Price-cost margin.

Module 2: Growth of the Firm

Growth of the firm – Need for growth -Determinants of firm growth – Internal and external growth strategies – Mergers and acquisitions – Diversification and expansion – Conceptual framework for growth – Theories of firm growth – Penrose theory of firm growth – Marris model of managerial enterprise – Downie competitive growth theory- Baumol sale maximisation model- Firm growth and market structure.

Module 3: Industrial Location Analysis

Industrial location – Determinants of industrial location – Transport cost – Labour cost – Market access – Agglomeration economies – Industrial clustering – Regional distribution of industries – Theories of industrial location – Alfred Weber Least Cost Theory – August Lösch Profit Maximization Theory –Industrial location and firm performance.

Module4: Industrial Efficiency and Technological Innovation

Concept of efficiency – Determinants of efficiency – Measurement of efficiency – Efficiency and decision making – Efficiency and firm performance.

Process of innovation – Determinants of innovation – Theories of technological innovation – Joseph Schumpeter theory of innovation – Kenneth Arrow learning-by-doing theory – Innovation and market structure – Innovation and firm competitiveness.

Module 5: Industrial Development and Competition Policy in India

Evolution of industries in India – Industrial growth and structural transformation – Competition policy in India – Monopolies and Restrictive Trade Practices Act, 1969 – Competition Act, 2002 – Role of Competition Commission of India – Anti-trust regulation and market competition – Growth of electronics industry in India – Government initiatives for electronic industry development – Make in India – Production Linked Incentive (PLI) Scheme – Electronic manufacturing clusters in India – Industrial policy and competitiveness.

References:

1. Edith Penrose (1959). The Theory of the Growth of the Firm, Oxford University Press, Oxford.
2. Robin Marris (1964). The Economic Theory of Managerial Capitalism, Macmillan, London.
3. William J. Baumol (1959). Business Behaviour, Value and Growth, Macmillan, New York.
4. R. R. Barthwal (2007). Industrial Economics: An Introductory Text Book, New Age International, New Delhi.
5. D. M. Mithani (2005). Industrial Economics, Himalaya Publishing House, Mumbai
6. S. C. Kuchhal (2010). Industrial Economy of India, Chaitanya Publishing House, Allahabad.

Course Code: ECOD104B
Course Title: Environment and Health Economics
Course credit: 4

Course Objective

The broad objective of the course is to understand the theoretical and analytical framework of environment and health economics. The course covers the topics related to environmental accounting, valuation of health, environmental effects on health, and health and environmental policies.

Course Outcome

The course helps in understanding the following.

1. Theoretical and analytical framework of environment and health economics
2. The economic perspective of the environment
3. The evaluation of health care expenditure
4. The environmental effects on health
5. The health and environmental policy

Module 1: Theoretical framework on environment and health economics

Environment Kuznets curve hypothesis – theory and empirical evidence; Economic framework for environmental health behaviour - Household production of environmental health; Impact valuation; Market failure – Pigouvian vs. Coasian solution; Happy Planet Index. Neoclassical vs. Ecological perspectives.

Module 2: Economic perspectives on the environment

National income and environmental accounting; economy – environment interactions; sustainable development; environmental valuation- cost benefit analysis, revealed preference approaches; environmental regulation; global climate change; alternatives to conventional economic growth. Limits to growth and environmental hazards.

Module 3: Valuation of health care

Social determinants of health; health care financing; effects of health care expenditure, Health indicators –The effect of life expectancy on economic growth, causal effect of health on labour market-outcomes - human capital, and development; market failure in the provision of health care.

Module 4: Environmental effects on health

Environmental hazards on health; Environmental and social production of health – the health production function, effects of air pollution and water pollution on children and adults: effects of climate variability and climate change on mortality and morbidity; municipal, industrial and hazardous waste – health implications; susceptible populations.

Module 5- Health and environmental policy – Inter-linkages

Global policy initiatives: Earth Summit – climate-resilient health systems; Health and Environment Linkages Initiative (HELI)- National environmental and health action plans – Viksit Bharat by 2047 and environmental sustainability.

References:

1. Blumenthal, D. S., and Ruttenber, A. J. (1995). *Introduction to environmental health*. Second Edition. New York: Springer.
2. Kaplan, R. M. (2025). Medical care, health economics, and health policy. In N. Schneiderman & T. W. Smith (Eds.), *APA handbooks in psychology® series*. American Psychological Association. <https://psycnet.apa.org/record/2025-07948-002>
3. Landrigan, P. J., & Fuller, R. (Eds.). (2021). *Toward environmental justice: The impact of environmental hazards on human health*. Oxford University Press.
4. UNDP. (2025). *Human Development Report 2025: New pathways for sustainable development*. <https://hdr.undp.org>.
5. World Economic Forum. (2025). *Building economic resilience to the health impacts of climate change: 2025-2050*. https://reports.weforum.org/docs/WEF_Building_Economic_Resilience_to_the_Health_Impacts_of_Climate_Change_2025.pdf
6. Balbus, J. M., & Malig, B. J. (Eds.). (2022). *The built environment, climate, and health*. Springer.
7. Baumol, W.J. and W.E. Oates (1998), *The theory of Environmental Policy*, Cambridge University Press.
8. Gute, D. M., & Levine, S. C. (2024). *Journal of Environmental Research and Public Health*.
9. IPCC (climate impacts relevant to health) Intergovernmental Panel on Climate Change. (2022). *Climate change 2022: Impacts, adaptation and vulnerability*. Cambridge University Press. <https://www.ipcc.ch/report/ar6/wg2/>
10. Jonathan M. Harris, Houghton-Mifflin (2006) *Environmental and Natural Resource Economics: A Contemporary Approach*, Second Edition.
11. UNDP reports.

Course Code: ECO104C

Course Title: Women Workers and the Care Economy in India

Course Credits: 4

Course objectives:

To critically analyse the disproportionate burden of unpaid domestic and care work on women, understand how it limits female labour force participation, and explore policies to recognize, reduce, and redistribute this labour.

Learning Outcomes:

1. To Analyze household and care work in formal economic terms, differentiating between productive (market) and reproductive (domestic) work.
2. To recognize how societal norms and expectations disproportionately place the unpaid care burden on women

Unit 1: Informal Sector and Women's Work in India

Informal sector: meaning, definitions, and characteristics – measurement and growth of informal employment in India – concept and features of platform-based work – types of platform work (platform and non-platform) – platform work in India – interlinkages between informal employment and platform work – labour flexibility and precarity – policy framework (Code on Social Security, 2020).

Unit 2: Theoretical Perspectives on Labour, Gender, and Care

Time Allocation Theory (Becker) – Labour Supply Theory (Mincer) – household production framework – Structural Transformation Theory (Lewis and Kuznets) – Feminist Economics: critique of neoclassical approaches, valuation of unpaid work, gender norms and power relations.

Unit 3: Female Labour Force Participation and U-Shaped Hypothesis

Concept and measurement of female labour force participation (FLFP) – U-shaped hypothesis – determinants of FLFP (education, income, social norms) – role of unpaid care work – platform work and women's participation – empirical evidence from India and global context.

Unit 4: Unpaid Care Work and Gender Dimensions

Concept and nature of unpaid care work – measurement through time-use surveys – gender division of labour – intra-household allocation of time – care economy and its economic significance – unpaid care work and labour market participation – constraints on women's employment.

Unit 5: Work Conditions, Labour Outcomes, and Policy Issues

Job Demand–Control Model – Effort–Reward Imbalance Theory – working conditions in platform economy – work stress and work-life balance – gendered labour outcomes – social protection for platform workers – policies for reducing unpaid care burden – gender-sensitive labour policies.

References:

1. Antonopoulos, R. (2009). *The unpaid care work–paid work connection* (Working Paper No. 541). Levy Economics Institute.
2. Becker, G. S. (1965). A theory of the allocation of time. *The Economic Journal*, 75(299), 493–517.
3. Berg, J., Furrer, M., Harmon, E., Rani, U., & Silberman, M. S. (2018). *Digital labour platforms and the future of work*. International Labour Organization.
4. Boserup, E. (1970). *Woman's role in economic development*. Earthscan.
5. Budlender, D. (2008). *The statistical evidence on care and non-care work across six countries*. UNRISD.
6. De Stefano, V. (2016). The rise of the “just-in-time workforce”: On-demand work, crowd work, and labour protection. *Comparative Labor Law & Policy Journal*, 37(3), 471–504.
7. Desai, S., & Joshi, O. (2019). The paradox of declining female work participation in India. *Indian Journal of Labour Economics*, 62(1), 55–71.
8. Elson, D. (1999). Labor markets as gendered institutions: Equality, efficiency, and empowerment issues. *World Development*, 27(3), 611–627.
9. Folbre, N. (2001). *The invisible heart: Economics and family values*. New Press.
10. Folbre, N. (2006). Measuring care: Gender, empowerment, and the care economy. *Journal of Human Development*, 7(2), 183–199.
11. Fraser, N. (2016). Contradictions of capital and care. *New Left Review*, 100, 99–117.
12. Ghosh, J., Mehrotra, S., & Manda, D. K. (2021). *Women workers in the gig economy in India: An exploratory study*. Institute of Social Studies Trust.

Course Code: ECOD104D
Course Title: Tourism and Economic Development
Course Credits: 4

Course Objective:

The course "Tourism and Economic Development" explores how travel and tourism act as powerful engines for economic growth, employment, and infrastructure. It equips students to evaluate the financial, social, and environmental impacts of tourism on local, regional, and national levels.

Learning Outcomes:

To explore how the travel sector drives financial growth, shapes regional infrastructure, and impacts local communities. Key learning outcomes include mastering the tourism multiplier effect, analysing foreign exchange earnings, and designing sustainable tourism policies to alleviate poverty and boost employment

Unit-1: Theories of Economic Development

Concepts of Economic growth and Development - Economics growth models: Harrod-Domar and Solow model – Human Development and Capability approach – Standard theory of labour market – Structuralism, Development Growth Model and Strategies – Flexible Labour Market and Alternative Approach

Unit-2: Tourism, Regional Development and Sustainability

Objectives and Roles of Tourism Organization – Tourism and Regional Development – Concept of Tourism and Sustainability Growth - Sustainable Tourism Development- Environmental Impact on Tourism

Unit-3: Economics of Tourism

Tourism models – Consumer behaviour in tourism – Infrastructure and logistic facilities in tourism sector – Tourist Demand and Supply and Pricing models in tourism sector - Cost Benefit Analysis of Tourism Development

Unit-4: Tourism and Economic Impacts

Tourism contribution to GDP - Multiplier Effects of Tourism – Tourism and Employment Generation —Impact of Tourism on Economy in India – Tourism development policies in India

Unit-5: Gender and Tourism

Tourism and Gender Inclusion - Women Entrepreneurship - Role of women in Tourism sector - Social and Cultural Tourism Impact on Women - Role of Tourism in Women Empowerment - Factors affecting women participation in tourism sector - Wage differential in female activities – Determination of wage differential in tourism industry – Government Role in Women led Tourism

References:

1. Blau, F. D., & Ferber, M. A. (2010). *The economics of women, men and work (6th ed.)*. Prentice Hall.
2. Todaro, M. P., & Smith, S. C. (2020). *Economic development (13th ed.)*. Pearson Education.
3. Tribe, J. (2011). *The economics of recreation, leisure and tourism (4th ed.)*. Elsevier/Butterworth-Heinemann.
4. United Nations World Tourism Organization. (2019). *Global report on women in tourism (2nd ed.)*. UNWTO. <https://doi.org/10.18111/9789284420384>
5. United Nations World Tourism Organization. (2023). *Tourism highlights: 2023 edition*. UNWTO. <https://www.unwto.org/tourism-statistics/tourism-highlights>

Course Code: ECOD104E
Course Title: Development Economics
Course Credits: 4

Course Objective:

The objective of the course is to elaborate on the concepts and theories in development and growth. It aims to highlight various development issues in terms of poverty, human resources, environment and health.

Learning Outcome

The course will provide an understanding of the development and enable the students to operationalize the important development concepts.

1. Theories of Economic Development

Classical theories – Karl Marx- Schumpeter Lewis model of surplus labour, Fei rains model, Rostow's stages in economic growth. Balanced and Unbalanced growth - 'big push'-Myrdal on economic growth. Dualism.

2. Poverty and Inequality Development Gap-poverty

Different approaches-money metric-tools of measurement- Capability Approach-HDI and HPI- Inequality-Horizontal and Vertical-tools of measuring inequality - Gini Index.

3. Human Resources and Labour Markets Population as a challenge-

Malthusian Notion-Simon's Challenge-demographic indicators. Demographic Dividend-New Challenges-Changing Demographic structure; segmented labour markets, unemployment (Harris-Todaro model, labour turnover model, efficiency wage hypothesis).

4. Theories of Economic Growth: Harrod

Domar, Solow, Robinson, Kaldor and L.pasinetti – Technological progress - Kuznets's characteristics of Growth Endogenous Growth Theories. Money and Growth- James Tobin and H.G. Johnson

5. Environment, Health and Development:

linkages between poverty, and environmental degradation. Concepts and measures of sustainability and sustainable development. Management of natural resources -. Economics of Health and Education. Measurement of well-being - linkage between education and health. Healthcare service delivery - historical inequalities of health and education. Environment evaluation and policy impact. The estimation of treatment effects in randomized experiments and in observational data.

References:

1. Banerjee, A. and Somanathan, R. (2007): The Political Economy of Public Goods: Some Evidence from India." Journal of Development Economics, 82(2), 542-559.
2. Y.Hayami, (2001) Development Economics: From Poverty to the Wealth of Nations, 2nd Edition, OUP Alain De Janvry and Elisabeth Sadoulet (2016), Development Economics: Theory and Practice, Routledge.
3. H.G. Jones, "An Introduction to Modern Theories of Economic Growth" McGraw-Hill Book Company \
4. K.Basu, (1997) Analytical Development Economics, MIT Press Additional Readings
5. Debraj Ray, (1999) Development Economics, Oxford University Press\
6. Perkins, Radelet, Lindauer and Block, Economics of Development (seventh edition), W.W.Norton& Company, 2012
7. Thirlwall, 2006, Growth and development with special reference to developing countries, Palgrave Macmillan.
8. Angus Deaton (2013): The Great Escape: Health, Wealth and the Origins of Inequality, Princeton University Press.\
9. Robert Fogel (2004): \Health, nutrition and economic growth." Economic Development and Cultural Change, 52(3), 643-658

Course Code: ECOD104F
Course Title: International Economics
Course Credits: 4

Course Objectives

1. To provide an understanding of theories of international trade and trade policies,
2. To provide an idea about exchange rates and Balance of payments,
3. Delivers the functions of international institutions and economic integration among the trading partners

Learning Outcome

1. Understanding international trade theories and policies.
2. Idea about exchange rate markets, capital flows and Balance of payments.
3. Role of Economic Integration among Nations in international trade policies

1. Introduction to Trade

Adam Smith and Absolute Advantage, Labor Productivity and Comparative Advantage: The Ricardian comparative advantage model. Trade, Growth, and Economic Interrelatedness, Trade and National Characteristics, the Structure of Trade, Gains from trade with homogenous and heterogeneous agents, Offer curves: derivation; properties, related elasticities; Equilibrium Terms of Trade.

2. Trade Theories

Heckscher-Ohlin model, Stolper-Samuelson, Rybczynski theorem and factor-price equalization theorem, Leontief paradox, empirical validity, Specific-factor model as a short-run approximation

3. Strategic Trade Policy

Tariffs and welfare dynamics for small and large countries perspective:-; Tariffs versus quantitative restrictions; the optimum tariff; Empirical modelling of trade policy; Monopolistic competition models of trade, Tariff versus quota under monopoly. Voluntary import expansion and export restrictions. Export Quotas, Subsidy, Dumping -Forms of Dumping -Antidumping and International Price Discrimination. Metzler Paradox; Effective. Rate of protection

4. Balance of Payments and Macro Adjustment Mechanisms

Balance of Payments, Capital Flows, National Accounts Determinants and Foreign exchange Market Equilibrium, The Elasticity Approach, Marshall-Lerner Condition, Multipliers, Mundell-Fleming Model, Purchasing Power Parity, Fischer Effect, Monetary Approach, Overshooting, Monetary Policy and Fiscal Policy, Fixed and Flexible Exchange Rate Regimes, Sterilization, Monetary and Fiscal Intervention, Devaluation and BOP Crisis, Capital Flight

5. Economic Integration and International Institutions

Forms of Economic and regional Integration: Regional Agreements ASEAN, NAFTA, European Union, Customs Union-Partial Equilibrium Analysis of Customs Union Trade Creation and Trade Diversion. Objectives and functions of IMF, IBRD, WTO, Free trade areas.

References:

1. Krugman P. R. and Obsfeild M. (2006) International Economics-Theory and Policy, (5th Edition).
2. Addison Wesley Soderston, B. and Reed G. (1998) -International Economics, 3rd Edition, McMillan Press Ltd.,
3. London Carbaugh, R. J (1994) International Economics, (11th Edition). Thomson South Western, New Delhi
4. Salvatore, D (2000) International Economics, (8th Edition). Wiley India, New Delhi \
5. Keith Pilbeam (2001) International Finance, 3rd edition, \
6. Palgrave Feenstra. R., Advanced International Trade: Theory and Evidence, Princeton University Press, 2009.
7. Bhagwati, J., A. Panagariya, and T. Srinivasan. Lectures on International Trade (2ndedition), MIT Press, 1998
8. Van Marrewijk, C., International Economics, Oxford University Press, 2007.
9. Caves, R, R. Jones, and J. Frankel, World Trade and Payments: an Introduction, Addison-Wesley, 1993.
10. Paul R. Krugman & Maurice Obstfeld: International Economics, Pearson Education
Dornbusch: Open Economy Macro Economy, Basic Books, New York
11. Caves Frankel & Jones: World Trade & Payments: An Introduction, Pearson Education

Course Code: ECOD104G
Course Title: Agricultural Economics
Course Credits: 4

Course Objectives:

This course aims to familiarize the students with production economics, farm management, risks and Uncertainty in agriculture, climate change, agricultural policies and programmes in India.

Learning outcomes

This course is expected to enhance students learning about various aspects of agricultural economics, such as production economics, farm management, climate change and the Role of policies in agricultural sector development. Discussions on current issues about agricultural development and policies will add to the student's knowledge.

Unit 1: Production economics and farm management

Production process, economic principles of farm management, resource management and allocation, basic concepts- marginal returns, returns to scale, economies of scale, technology and input use, law of comparative advantage.

Unit 2: Risk and uncertainty in agriculture

Decision theory and elements of risk and uncertainty in agriculture, measurement of risk, adjustment to risk, types of risk, estimation of risk, management response to risk, linear programming.

Unit 3: Climate change and agricultural sustainability

Impact of climate change, weather pattern and monsoon on Indian agriculture, climate change adaptation and mitigation policies and practices, organic farming, sustainable agriculture and its initiatives in India.

Unit 4: Agricultural sector output, employment and capital formation

Role agriculture in Gross Domestic Product (GDP) and employment, growth in agricultural output and employment, capital formation in agriculture, agrarian changes in India

Unit 5: Agricultural policies and programmes in India

Agricultural policies towards subsidies, support prices, food security, climate change, insurances, marketing and storage.

References:

1. Cramer Gail L (2010) Agricultural Economics, Routledge.
2. Andrew Barkley and Paul W. Barkley, Principles of Agricultural Economics, Routledge.
3. Heady, Earl O and John L. Dillon, Agricultural Production Functions, Iowa State University Press.
4. Heady Earl O, Economics of Agricultural Production and use, Prentice Hall.
5. Michael P. Todaro & Stephen C. Smith, Economic Development, Pearson India.
6. S. Subba Reddy, P. Raghu Ram, T V Neelakanta Sastry and I. Bhavani Devi, Agricultural Economics, Oxford and IBH Publishing Co, Pvt.Ltd.

Course Code: ECOD104H
Course Title: Financial Economics
Course Credits: 4

Course Objective:

The objective of this course is to undertake a rigorous study of the theoretical and empirical foundations of financial economics.

Learning Outcomes:

The course will cover option pricing models, capital structure, Dividend policies, and market micro structure. The focus of this course will be on investment analysis and asset pricing, with the aim of conveying the practical applications of investment theory.

1. Nature and Scope of Financial Economics

Goals of Finance; Economics of capital Budgeting Investment Criteria, Estimation of project Cash Flows, Risk Analysis, Capital Budgeting, Computation of Cost of Capital, Capital Budgeting under Constraints

2. Future Contracts and Markets: Option Pricing Models

Forward and future contracts and markets; European and American options; pricing futures, swap and synthetic futures; bounds for option prices, put-call parity; derivation of option pricing formula-Binomial approach; Black-Scholes option pricing models, option to expand, valuation of a real option

3. Capital Structure Choice

The value of firm with tax, Modigliani-Miller irrelevance hypothesis, choices in financing-debt and equity, the financing mix: trade-offs and theory; signaling hypothesis; effect of agency cost on capital structure, cost of capital, empirical determinants of capital structure choice

4. Dividend Policy

Irrelevance of dividend policy without tax; valuation, growth and dividend policy, dividend policy with taxes; theory of optimal dividend policy; other issues-stock dividends and share repurchase empirical determinants of optimal dividend policy

5. Market Microstructure

Defining capital market efficiency, efficient capital market theory and empirical models. Order book in a double auction market, Limit orders and market orders. Adverse selection, Market impact and optimal execution. Roll and Kyle model.

References:

1. Copeland, T., Weston, F., and Shastri, K. (2004), Financial Theory and Corporate Policy, 4th Ed., New York: Addison-Wesley.
2. Ross, Stephen, Westerfield, Randolph, Jaffe, Jaffrey (2002), Corporate Finance, 6th Ed., McGraw-Hill Companies.
3. C.F. Huang and R. Litzenberger, (1988), Foundations for Financial Economics, Prentice Hall.
4. Hull, John C. (2014), Options, Futures and other Derivatives and Finance, 9th Ed., Pearson Prentice hall
5. Brealey, R.A., Myers, S.C. and Allen, F. (2003), Principles of Corporate Finance, 7th Ed,
6. McGrawHill. Panjer, H.H (1998). Financial Economics: with applications to Investments, Insurance and Pensions, Actuarial Foundation.
7. Charles-Albert Lehalle , and Sophie Laruelle (2013) "Market Microstructure in Practice", World Scientific Publishing.
8. Maureen O'Hara(1998) "Market Microstructure Theory" Wiley.
9. Houthakker, H.S. and P.J. Williamson, Economics of Financial Markets, Oxford University Press, 1996

Course Code: ECOD104I
Course Title: Health Economics
Course Credits: 4

Course Objectives:

The course aims to understand the healthcare from an economic perspective pertaining to efficiency, effectiveness, value and behaviour in the production and consumption. Accessibility and affordability of healthcare services also examined in detail.

Learning Outcomes:

To detail the practical and analytical skills students gain. Generally, they involve analysing how economic principles apply to healthcare markets. By the end of the course, students are typically able to evaluate health policies, conduct economic analyses, and understand the role of financing and equity in healthcare systems.

1. Markets, Demand for Health Care

Markets in health care, production of health, demand for health care, Welfare economics of medical care -equity, efficiency and the need, link between development and health, investing in health for economic development, health care infrastructure, public-private partnership and the role of state

2. Health Production Function

Nature of production function, different types of production function and their applications, national and international perspective, distributional inequities in opportunity and commercialization of medical and para-medical education, cost escalation in the health care system, easy access and availability to appropriate technology, need for regulation and control.

3. Health Care Incentives and Financing

Goals of health care provision and financing, competitive health insurance and risk adjustment, demand and supply of health insurance, asymmetric information and agency, market insurance, self-insurance and protection, employment based insurance, health insurance in India.

4. Measuring and Valuing Health Outcomes

Measurement of health state utilities, QALYs and its alternatives-different approaches of valuing health, multi-attribute utility instruments and their development.

5. Costs and Benefits of health services

Private benefits and costs of providing health services, the failure of the market to provide essential health services, the provision of health services by the government, application of cost benefit analysis to public health and family planning projects, benefits and costs (both private and social) of training to professional manpower in health sector, economic appraisal of health care programme.

References:

1. Anthony J. Culyer and Joseph P. (ed.) (2000), Handbook of Health Economics, Newhouse North-Holland, Elsevier Science
2. Clewar, Ann, and David Perkins. 1998. Economics of Health Care Management. London Prentice Hall.
3. Sherman Folland, Allen C. Goodman, and Miron Stano, (2004), The Economics of Health and Health Care, 4th Edition, Prentice Hall.
4. Folland, S., A.C. Goodman and M. Stano, Economics of Health and Health Care, fifth edition, Pearson Prentice Hall, 2006
5. CII-Mckinsey Report, Healthcare in India: The Road Ahead, 2004.
6. Culyer, A. J. and J.P. Newhouse (eds.), Handbook of Health Economics, Volumes 1A & B, North-Holland, 2000.
7. Deaton, Angus (2013). The Great Escape: Health, Wealth, and the Origins of Inequality. Princeton: Princeton University Press.
8. Zweifel, P., Health Economics, Oxford University Press, 1997.

Course Code: ECOD104J
Course Title: Labour Economics
Course Credits: 4

Course Objectives:

This course introduces the nature and nuances of labour market and functioning of the labour market.

Learning Outcomes:

To equip students with the analytical tools to understand workforce trends, wage determination, and employment dynamics. Key outcomes include the ability to evaluate labour market policies, analyse the impact of human capital on earnings, and critically assess issues like unemployment and discrimination

1. Labour Markets

Nature and Characteristics of Labour Market; Paradigms of Labour Market Analysis; How the Labor Market Works, Classical, Neo-Classical and Modern Analysis of Demand and Supply Forces; Demand for Labour in Relation to Size and Pattern of Investment; Supply of Labour in Relation to Growth of Labour Force.

2. Wage determination

Neo-Classical and Bargaining Theories of Wage Determination; Concepts of Minimum Wage, Living Wage and Fair Wage in Theory and Practice; Productivity and Wage Policy; Labor Demand Elasticities – own wage and cross-wage.

3. Life Cycle and Labor Supply

A Labor Supply Model That Incorporates Household Production; Joint Labor Supply Decisions within the Household; Do Both Partners Work for Pay? The Joint Decision and Interdependent Productivity; Life Cycle Aspects of Labor Supply -The Substitution Effect and When to Work over a Lifetime, Choice of Retirement Age, Policy Application: Child Care and Labor Supply.

4. Investment in Human Capital

The Concept of Present Value, Modeling the Human Capital Investment Decision, The Demand for a higher Education. Weighing the Costs and Benefits of College education; Education Earnings, and Post-Schooling Investments in Human Capital; Average Earnings and Educational Level, On-the-Job Training and the Concavity of Age/Earnings Profiles

5. Mobility of Workers

Migration, Immigration, and Turnover -The Determinants of Worker Mobility -Geographic Mobility The Direction of Migratory Flows, Personal Characteristics of Movers, the Role of Distance, The Earnings Distribution in Sending Countries and International Migration; The Returns to International and Domestic Migration; An Analysis of the Gainers and Losers; Do the Overall Gains from Immigration Exceed the Losses?

References:

1. Ronald G. Ehrenberg and Robert S. Smith (2011) Modern Labor Economics Theory and Public Policy, Eleventh Edition. Prentice Hall.
2. Datt. G. (1996): Bargaining Power, Wages and Employment: An Analysis of Agricultural Labour Markets in India, Sage Publications, New Delhi.
3. McConnell, C.R. and S.L. Brue: Contemporary Labour Economics, McGraw; Hill, New York.
4. Abraham, K.G. and R.B. Mckersie (edited), New Developments in Labour Market: Toward a New Institutional Paradigm, MIT Press.
5. Akerlof, G.A. and J.L. Yellen (edited), Efficiency Wage Models of the Labour Market, Cambridge University Press.
6. Ash Amin, (edited), Post-Fordism – A Reader, Blackwell, Oxford. Anil Verma et al (edited), Employment Relations in the Growing Asian Economics, Routledge.
7. Bagchi, A.K., (edited), New Technology and the Workers' Response, Sage Publications.
8. Becker, G.S., Human Capital (2nd Edition), NBER Cambridge Bowles, S.M. et al (edited), Democracy and Markets, Cambridge University Press.

Course Code: ECOD104K
Course Title: Environmental Economics
Course Credits: 4

Course objectives:

To develop understanding of the key concepts of environmental economics and relevance of economics to the environment Problem.

Learning outcomes:

Understand the nexus between environmental and how economics may hold many of the answers necessary to redress serious environmental damage

Unit 1: Foundation of Environmental Economics

Nature and Scope of Environmental Economics, Economy - Environment - Ecology Inter-linkage - Material Balance Model, Individual Choice verses Social Choice, Market Failure, Theory of Externality, Pigovian fees - single polluter and Multiple Polluters.

Unit 2: Resources Economics and Sustainable Development

Hotelling's Rule, Solow - Harwick's Rule, Market Structure and optimal extraction policy, resource scarcity: game theory and the common property Resources, tragedy of Commons, environmental Kuznet's Curve - Green GDP, limit to growth. Sustainable development

Unit 3: Environmental Valuation

Valuation of Environmental Benefits, Economic Value of Environment- Use value, non-use value, instrumental value and intrinsic value-Market and non-market valuation; Physical linkage methods; Revealed and stated preference methods

Unit 4: Regulation of Environmental

Regulation - Rationale for market solution, instrument - Command and control versus market mechanisms; Uncertainty and instrument choice; regulatory compliance and enforcement; Eco-taxes and other fiscal measures; Monitoring emissions and enforcement. India's environmental policy to protect environment.

Unit 5: Global Environmental Issues

Transboundary pollution, economics of global warming, impact of trade on environment and environment on trade, Porter's hypothesis, Pollution havens hypothesis, International Conventions, RIO Conventions. Climate change problems. Kyoto protocol, UNFCCC, Bali Action Plan, post 2015 agreements, Green Climate Fund.

References:

1. Kolstad, C., Environmental Economics, Oxford University Press, 2000 Baumol, W.J, and W.E. Oates, The Theory of Environmental Policy, Cambridge University Press, 1988
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3. Resources for the Future, 2003 Hanley, N., J.F. Shogren, and B. White, Environmental
4. Economics: In Theory and Practice, Macmillan India Ltd., 1997
5. Chopra C (2009) Handbook of Environmental Economics in India, Oxford India
6. Ram Prasad Sengupta (2001) Ecology and Economics, Oxford University Press
7. Rabinda Bhattachary N (2001) Environmental Economics - An Indian Perspective, oxford University Press, Delhi
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