SEMESTERS–IV

DEPARTMENT OF ECONOMICS
Category-I
(B.A. Honours in Economics in three years)

STRUCTURE OF FOURTH SEMESTER

DISCIPLINE SPECIFIC CORE COURSE -10 (DSC-10): Intermediate Microeconomics II: Market, Government and Welfare

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Intermediate Microeconomics II: Market, Government and Welfare - ECON010	**4**	**3**	**1**	**0**	**Class 12th with Mathematics**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course introduces students to analysis of multi-commodity markets.
- The efficiency results, known as welfare theorems, are central to understanding of market economy.
- The course also discusses inefficiencies coming from market concentration and externalities.
- It further would discuss the role of government to deal with the inefficiencies and resultant welfare outcomes.

Learning outcomes

The Learning outcomes of this course are as follows:

- This course helps the students to understand efficiency of markets and the environment where the standard market mechanism fails to generate the desirable outcomes in simple general equilibrium settings.
- The issues of market imperfection and market failures lead students to the economics of policy design. The students will learn the efficacy of government interventions for the improved welfare.

Syllabus

UNIT I: Monopoly (9 hours)
Monopoly pricing, Inefficiency, Price discrimination, Regulation

UNIT II: General equilibrium (9 hours)
Exchange economy, Robinson Crusoe economy, Pareto optimality, Welfare theorems, Welfare and social choice

UNIT III: Models of Monopolistic Competition (9 hours)
Firms with differentiated products, mark-up, short-run and long-run equilibrium

UNIT IV: Externalities (9 hours)
Market inefficiency under externalities, Pigou tax, Coase theorem, Market creation and other solutions

UNIT V: Public Good (9 hours)
Inefficiency of market equilibrium, Optimal public good provision, Free rider problem, Lindahl taxes

Recommended readings

- Serrano, Roberto and Feldman, Alan (2012), *A short course in intermediate Microeconomics with Calculus*, Cambridge University Press
- Espinola-Arredondo, Ana and Munoz-Garaia, Felix (2020), *Intermediate Microeconomic Theory*, MITPress
- Munoz-Garaia, Felix (2017) *Practice Exercises for Advanced Microeconomic Theory*, MIT Press.
- Dunaway, Eric; Strandholm, John C., Espinola-Arredondo, Ana and Munoz-Garcia, Felix (2020) *Practice Exercises for Intermediate Microeconomic Theory*, MIT press

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

DISCIPLINE SPECIFIC CORE COURSE -11 (DSC-11): Intermediate Macroeconomics II: Policy Issues

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Intermediate Macroeconomics II: Policy Issues – ECON011	**4**	**3**	**1**	**0**	**Class 12th with Mathematics**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course trains the students in policy issues faced by macroeconomists in the real world.
- It discusses issues in monetary and fiscal policies as well as exchange rate dynamics.
- It also introduces the students to the financial system and dynamics of financial crises.
- The students are introduced to macroeconomic concepts in the context of open economies and the policy issues therein.

Learning outcomes

The Learning outcomes of this course are as follows:

- This course enables students to analyse the functioning of macroeconomic policies in the real world in both closed and open economies, understand the dilemmas faced by the policymakers both in the domestic economy and in the globalised world.

Syllabus

UNIT I: Fiscal and monetary policies (15 hours)
Active or passive monetary policies; time inconsistency, monetary policy objectives and targets; rules versus discretion, IS-PC-MR model, fiscal policy, the government budget constraint; government debt and Ricardian equivalence.

UNIT II: Financial markets and crisis (15 hours)
Introduction to financial markets, Financial crises and liquidity trap

UNIT III: Issues in open economy (15 hours)
Short-run open economy models; Mundell-Fleming model, Exchange rate determination; purchasing power parity, asset market approach, Dornbusch's overshooting model; monetary approach to balance of payments, International financial markets.

Recommended readings

- Blanchard,O.(2006).*Macroeconomics*,4th,6thand7thed.PearsonEducation.
- Salvatore, D. (2007), *International Economics*, Wiley.
- Dornbusch,R., Fischer,S.(1994).*Macroeconomics*,6thed.McGraw-Hill.
- Mishkin, Frederic(2012).*Macroeconomics:Policy & Practice*, Pearson.
- Jones, C. (2016). *Macroeconomics*, 4th ed. W. W.Norton.
- Carlin, Wendy and Soskice, David (2015) *Macroeconomics: Institutions, Instability and the Financial System*. Oxford University Press.

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DISCIPLINE SPECIFIC CORE COURSE -12 (DSC-12): Introductory Econometrics

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Introductory Econometrics – ECON012	**4**	**3**	**0**	**1**	**Class 12th with Mathematics**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course introduces a basic set of the econometric methods to conduct empirical analysis in economics and social sciences.
- The course is designed to provide the students with the basic quantitative techniques needed to undertake applied research projects.
- It also provides the base for more advanced optional courses in econometrics.
- The tools of econometrics will be useful to establish relationships among economic variables.
- This course will be taught as a combination of theory and practicals.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students will be able to estimate linear models using the method of ordinary least squares and make inferences about population parameters.
- They will also understand the issues of estimation arising due to misspecification of models and violations of assumptions.
- Students will also gain hands-on-experience of applying the concepts learnt to a wide range of problems using econometric software.

Syllabus

UNIT I: Linear Regression Model (9 hours)
OLS method of Estimation and Properties of estimators, Measures of Fit, Testing of Hypotheses, Prediction, Introduction to econometric software and practical application using econometric software (GRETL/EViews/ R/Stata/EXCELetc.)

UNIT II: Multiple Regression Model (9 hours)
OLS method of estimation and Properties of OLS estimators, Testing of Hypotheses, Measures of fit, practical application using econometric software (GRETL/EViews/ R/Stata/EXCEL etc.)

UNIT III: Functional Forms and Qualitative independent variables (9 hours)
Nonlinear Models and Transformations of Variables, Dummy variables, practical application using econometric software (GRETL/EViews/ R/Stata/EXCEL etc.)

UNIT IV: Violations of Assumptions (9 hours)
Consequences, Detection, and Remedies: Multicollinearity, Heteroscedasticity, Serial Correlation, practical application using econometric software (GRETL/EViews/R/Stata/EXCEL etc.)

UNIT V: Specification Bias (9 hours)

Model selection criteria, types of specification errors, omitted variable bias, inclusion of irrelevant variables, incorrect functional form, errors of measurement, practical application using econometric software (GRETL/EViews/ R/Stata/EXCEL etc.)

Recommended readings

- James H. Stock and Mark W.Watson (2019) *Introduction to Econometrics*, Fourth Edition,Pearsons.
- Wooldridge, J. M. (2019). *Introductory econometrics: A modern approach.* 7th edition, C engage learning.

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Category II

Economics Courses for Undergraduate Programme of study with Economics as one of the Core Disciplines

(B.A. Programmes with Economics as Major discipline)

DISCIPLINE SPECIFIC CORE COURSE -7 (DSC-7):Intermediate Macroeconomics I: Foundations of Aggregate Income Determination

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Intermediate Macroeconomics I: Foundations of Aggregate Income Determination–ECON008	**4**	**3**	**1**	**0**	**Class 12th**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course builds upon the basic concepts of macroeconomics. It introduces labour markets and the aggregate supply (AS) curve.
- Aggregate Demand (AD) and Aggregate Supply (AS) are brought together to determine equilibrium prices and output examine the policy impacts.
- The course discusses Phillips curve and the alleged trade-off between inflation and unemployment. Both adaptive and rational expectations are introduced.
- A flavour of micro-foundations is introduced with respect to consumption and investment.

Learning outcomes

The Learning outcomes of this course are as follows:

- This course enables students to analyse the interaction of aggregate demand and supply and the effects of fiscal and monetary policy, trade-off between inflation and unemployment, and consumption and investment behaviour of the households.

Syllabus

UNIT I: Short-run and medium-run equilibrium (15 hours)
The labour market, Wage determination; wages, prices, and unemployment; natural rate of unemployment; from employment to output, Derivation of aggregate supply curve, Interaction of aggregate demand and supply to determine equilibrium output, price level and employment.

UNIT II: Philips Curve and Theory of Expectations (15 hours)
Inflation, unemployment and expectations, Phillips Curve; adaptive and rational expectations; policy ineffectiveness debate.

UNIT III: Microeconomic foundations of macroeconomic behaviours (15 hours)
Consumption: Keynesian consumption function; Fisher's theory of optimal intertemporal choice; life-cycle and permanent income hypotheses; other theories of consumption expenditure.

Investment: determinants of business fixed investment; residential investment and inventory investment.

Recommended readings

- Blanchard,O.(2006).*Macroeconomics*,4thed.PearsonEducation.
- C.L.F. Attfield, D.Demery and N.W. Duck (1991). *Rational Expectations in Macroeconomics: an introduction to theory and evidence*2nd Ed.
- Sheffrin, Steve(1996). *Rational Expectations.* 2nd ed., Cambridge University Press.
- Dornbusch,R., Fischer,S.(1994).*Macroeconomics*,6thed.,McGraw-Hill.
- Branson,W.(2013).*Macroeconomics:Theoryandpolicy*,3rded,EastWestPress.
- Carlin, W and D Soskice (2007), *Macroeconomics: Imperfections, Institutions and Policies*, Indian Edition,OUP.

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DISCIPLINE SPECIFIC CORE COURSE -8 (DSC-8): Basic Econometrics

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Basic Econometrics – ECON024	**4**	**3**	**1**	**0**	**Class 12th**	**Basic Statistics for Economics (ECON022)**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course introduces students to the econometric methods used to conduct empirical analysis based on the basic statistics.
- It offers the basic quantitative techniques needed to undertake applied research projects to establish the relationship between variables of interests across wide variety of disciplines.

Learning outcomes

The Learning outcomes of this course are as follows:

- Students will learn to estimate simple estimation and inferences about population parameters, to formulate empirical models and analyze data.
- An expertise in econometrics increases the job prospect of the students significantly.

Syllabus

UNIT I: Regression Models (15 hours)
OLS estimators, hypothesis Testing using software and practical application; multi- ple Regression Model - estimation, Testing and practical application using software like GRETL/EViews/ R/Stata/EXCEL etc.

UNIT II: Qualitative variables and Estimation (15 hours)
Application of qualitative variables, Nonlinear Models, Applications of dummy variables

UNIT III: Issues with Classical Assumptions (15 hours)
Violation of normal distribution, Collinearity with independent variables, heteroscedasticity, autocorrelation, practical application

Recommended readings

- Christopher Dougherty, *Introduction to Econometrics*, 4th edition, OUP, Indian edition.
- Damodar Gujarati, *Econometrics by Example*, 2nd edition, Palgrave Macmillan, 2014.
- Gujarati,D.,Porter,D.(2010).*Essentials of Econometrics*,4thed.McGraw-Hill.

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Category III

Economics Courses for Undergraduate Programme of study with Economics as one of the Core Disciplines

(B.A. Programmes with Economics as non-Major or Minor discipline)

DISCIPLINE SPECIFIC CORE COURSE -4 (DSC-4):Intermediate Macroeconomics I: Foundations of Aggregate Income

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Intermediate Macroeconomics I: Foundations of Aggregate Income Determination– ECON008	**4**	**3**	**1**	**0**	**Class 12th**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course builds upon the basic concepts of macroeconomics. It introduces labour markets and the aggregate supply (AS) curve.
- Aggregate Demand (AD) and Aggregate Supply (AS) are brought together to determine equilibrium prices and output examine the policy impacts.
- The course discusses Phillips curve and the alleged trade-off between inflation and unemployment. Both adaptive and rational expectations are introduced.
- A flavour of micro-foundations is introduced with respect to consumption and investment.

Learning outcomes

The Learning outcomes of this course are as follows:

- This course enables students to analyse the interaction of aggregate demand and supply and the effects of fiscal and monetary policy, trade-off between inflation and unemployment, and consumption and investment behaviour of the households.

Syllabus

UNIT I: Short-run and medium-run equilibrium (15 hours)
The labour market, Wage determination; wages, prices, and unemployment; natural rate of unemployment; from employment to output, Derivation of aggregate supply curve, Interaction of aggregate demand and supply to determine equilibrium output, price level and employment.

UNIT II: Philips Curve and Theory of Expectations (15 hours)
Inflation, unemployment and expectations, Phillips Curve; adaptive and rational expectations; policy ineffectiveness debate.

UNIT III: Microeconomic foundations of macroeconomic behaviours (15 hours)
Consumption: Keynesian consumption function; Fisher's theory of optimal intertemporal choice; life-cycle and permanent income hypotheses; other theories of consumption expenditure.

Investment: determinants of business fixed investment; residential investment and inventory investment.

Recommended readings

- Blanchard,O.(2006).*Macroeconomics*,4thed.PearsonEducation.
- C.L.F. Attfield, D.Demery and N.W. Duck (1991). *Rational Expectations in Macroeconomics: an introduction to theory and evidence*2nd Ed.
- Sheffrin,Steve(1996). *Rational Expectations.* 2nd ed.,Cambridge University Press.
- Dornbusch,R.,Fischer,S.(1994).*Macroeconomics*,6thed.,McGraw-Hill.
- Branson,W.(2013).*Macroeconomics:Theoryandpolicy*,3rded,EastWestPress.
- Carlin, W and D Soskice (2007), *Macroeconomics: Imperfections, Institutions and Policies*, Indian Edition, OUP.

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Semester-V

DEPARTMENT OF ECONOMICS

Category I

(B.A. Honours in Economics in three years)

DISCIPLINE SPECIFIC CORE COURSE -13 (DSC-13): Game Theory and Strategic Interactions

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Game Theory and Strategic Interactions – ECON013	**4**	**3**	**1**	**0**	**Class 12th with Mathematics**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course introduces students to formal analysis of game theory and its applications on the micro-economic issues.
- Game theory will be used to analyse market power, commitment problem, coordination problem and various modern market design tools like contract and auction.

Learning outcomes

The Learning outcomes of this course are as follows:

- This course helps the students to understand strategic interactions and importance of information in strategic situations.
- The concepts and tools developed in this course will enable the students to analyse various strategic relations seen in various disciplines, like in economics, management and other social sciences.

Syllabus

UNIT I: Complete information simultaneous move game, Dominance, Nash equilibrium, Mixed strategy Nash equilibrium (9 hours)

UNIT II: Complete information extensive form game (9 hours)
Sequential rationality and subgame perfection

UNIT III: Topics from Industrial Organization (9 hours)

UNIT IV: Incomplete information (9 hours)
Bayes Nash equilibrium, Auction, Moral Hazard, Contract

UNIT V: Communicating information (9 hours)
Perfect Bayesian equilibrium, Job market signaling and reputation

Recommended readings

- Watson, J. (2002). *Strategy: an introduction to game theory*. New York: WW Norton.
- Muñoz-Garcia,F.(2017).*Advancedmicroeconomictheory:anintuitiveapproach with Final Examinationples*. MITPress.
- Muñoz-Garcia,F.(2017).*PracticeExercisesforAdvancedMicroeconomicTheory*. MITPress.
- Dunaway, E., Strandholm, J. C., Espinola-Arredondo, A., & Munoz-Garcia, F. (2020). *Practice Exercises for Intermediate Microeconomic Theory*. MITPress.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

DISCIPLINE SPECIFIC CORE COURSE -14 (DSC-14):Economic Growth and Business Cycles

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Economic Growth and Business Cycles – ECON014	**4**	**3**	**1**	**0**	**Class 12th with Mathematics**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course introduces the students to the models of economic growth and business cycles.
- The literature on the differences in the growth rates across economies is discussed.
- Further, the student is exposed to the preliminaries of macroeconomic modelling through different growth models.
- It introduces business cycles through the Real Business Cycle and the New Keynesian approaches.

Learning outcomes

The Learning outcomes of this course are as follows:

- The student would understand the basic drivers of economic growth that are developed through the different approaches using exogenous, semi-endogenous and endogenous models.
- The student will be able to apprise and analyse better the business cycles and familiarise with the debates between the schools of macroeconomic thoughts like Real Business Cycles and New Keynesian Economics.

Syllabus

UNIT I: Introduction to Economic Growth (15 hours)
Introduction to economic growth, data on economic growth, stylised facts of economic growth. Economic growth and economic development, economic growth and income difference, absolute and conditional convergence.

UNIT II: Models of Economic Growth (15 hours)
Solow model and the steady state. Solow model with technology, growth accounting, Economics of ideas and innovation, Romer model, Growth through creative destruction, Growth and technology transfer, institutions, Simple endogenous growth model.

UNIT III: Business Cycles (15 hours)
Real business cycle model, productivity shocks and business cycle fluctuations, New Keynesian models, new Keynesian Short-run AS Phillips curve and dynamics IS curve. Comparison between business cycle models. Introduction to dynamic general equilibrium models.

Recommended readings

- Jones,CharlesIandVollrath,Dietrich(2013)*IntroductiontoEconomicGrowth*.
- W. W. Norton & Co.
- Aghion, Philippe and Howitt, Peter (2010) *The Economics of Growth*. Prentice Hall. Eastern EconomyEdition.
- Mishkin,FredericS(2017)*Macroeconomics:PolicyandPractice*.Pearson.
- Jones, Charles I (2018) *Macroeconomics*. W W Norton &Co.

- Sorenson,PeterBandWhitta-Jacobson,HansJorgen(2010)*IntroducingAdvanced Macroeconomics: Growth and Business Cycles*. McGraw HillEducation
- Barro, R, Chu, A and Cozzie, G (2017), *Intermediate macroeconomics*, First Edn. Cengage Learning.
- Weil,DavidN(2014)*EconomicGrowth*.Routledge.
- Gordon,RobertJ(2015)*Macroeconomics*.Pearson

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DISCIPLINE SPECIFIC CORE COURSE -15 (DSC-15): Introductory Development Economics

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Introductory Development Economics – ECON015	**4**	**3**	**1**	**0**	**Class 12th with Mathematics**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course discusses the basic concept of growth and further links it up with alternative conceptions of development.
- It then proceeds to examine the aspects of poverty and inequality, not just in terms of income and wealth, but in terms of capabilities too.
- The axiomatic basis for inequality measurement is used to develop measures of inequality and poverty.
- It further explores the connections between growth and inequality.
- The course ends by linking political institutions to growth and inequality by discussing the role of the state in economic development and the informational and incentive problems that affect state governance.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students would distinguish between growth and development and get an idea about the factors affecting the level of development as well as the process of economic development.
- Further, they comprehend and analyse various concepts and measures of underdevelopment including poverty and inequality.

Syllabus

UNIT I: Introducing Economic Development: Global Perspective (12 hours)
Conceptions of Economic Growth and Development; Concepts of economic growth and linking it up with alternative measures of development, including human development, documenting the international variation in these measures, comparing development trajectories across nations and within them.

UNIT II: Theories of Economic Development (12 hours)
Classic Theories of Economic Growth and Development - four approaches (linear- stages theories, structural change models, international dependence, neoclassical

UNIT III: The Strategy of Economic Development: Institutional Pathways (9 hours)
Balanced and Unbalanced growth, interlinkages, big-push and the role of markets and state, alternative institutional trajectories and their relationship with economic performance

UNIT IV: Poverty and Inequality (12 hours)
Definitions, Measures and Mechanisms, Inequality axioms and principles; a com- parison of commonly used diagrammatic and mathematical inequality measures, their deficiencies and usage; connections between

inequality and development; inequality trends at international level; conceptualisation of the poverty lines at domestic and international levels; poverty measurement; characteristics of the poor; capability approach to poverty; mechanisms that generate poverty traps and path dependence of growth processes.

Recommended readings

- Partha Dasgupa (2007), *Economics: A Very Short Introduction*, (AVSI), Oxford UniversityPress.
- Perkins, D. H., Radelet, S. C., Lindauer, D. L., & Block, S. A. (2013). *Economics of Development*. 7th Edition, New York: WW Norton &Company.
- Todaro, M. P., & Smith, S. C. (2020). *Economic Development*. PearsonUK.
- Elinor Ostrom(1990),*Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge University Press.
- Gustav Ranis et.al, Economic Growth and Human Development (2000), *World Development* Vol. 28, No. 2, Elsevier Science Ltd.
- Pranab Bardhan(2010),*AwakeningGiants,FeetofClay:AssessingtheEconomic Rise of China and India*,OUP.
- Thomas Dietz, Elinor Ostrom and Paul C. Stern, 'The Struggle to Govern the Commons',*Science*,vol.302,No.5652(Dec.12,2003),pp.1907-1912.
- Mancur Olson, Jr. (1996), 'Big Bills Left on the Sidewalk: Why Some Nations are Rich,andOthersPoor',*JournalofEconomicPerspectives*,vol.10,no.2,pp3-24.
- Albert O. Hirschman, *Rival Views of Market Society and Other Essays*, Ch. 3: 'Linkages in EconomicDevelopment'.
- Nurkse, Ragnar (1961). *Problems of Capital Formation in Underdeveloped Countries*. New York: Oxford University Press. Chapter3.
- Rodenstein Rodan, PN (1943) Problems of Industrialization of eastern and south easternEurope,*Economic Journal*,volLIII,p202-11.
- Dani Rodrik (2009), One Economics, *Many Recipies: Globalization, Institutions and Economic Growth*, Princeton UniversityPress.
- Andre Shleifer and Robert W. Vishny (1993), 'Corruption', *Quarterly Journal of Economics*, 108(3), pp599-617.

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Category II

Economics Courses for Undergraduate Programme of study with Economics as one of the Core Disciplines

(B.A. Programmes with Economics as Major discipline)

DISCIPLINE SPECIFIC CORE COURSE -9 (DSC-9): Intermediate Microeconomics II: Market, Government and Welfare

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Intermediate Microeconomics II: Market, Government and Welfare - ECON010	**4**	**3**	**1**	**0**	**Class 12th**	**Introductory/Principles of Microeconomics**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course introduces students to analysis of multi-commodity markets.
- The efficiency results, known as welfare theorems, are central to understanding of market economy.
- The course also discusses inefficiencies coming from market concentration and externalities.
- It further would discuss the role of government to deal with the inefficiencies and resultant welfare outcomes.

Learning outcomes

The Learning outcomes of this course are as follows:

- This course helps the students to understand efficiency of markets and the environment where the standard market mechanism fails to generate the desirable outcomes in simple general equilibrium settings.
- The issues of market imperfection and market failures lead students to the economics of policy design. The students will learn the efficacy of government interventions for the improved welfare.

Syllabus

UNIT I: Monopoly (9 hours)
Monopoly pricing, Inefficiency, Price discrimination, Regulation

UNIT II: General equilibrium (9 hours)
Exchange economy, Robinson Crusoe economy, Pareto optimality, Welfare theorems, Welfare and social choice

UNIT III: Models of Monopolistic Competition (9 hours)
Firms with differentiated products, mark-up, short-run and long-run equilibrium

UNIT IV: Externalities (9 hours)
Market inefficiency under externalities, Pigou tax, Coase theorem, Market creation and other solutions

UNIT V: Public Good (9 hours)
Inefficiency of market equilibrium, Optimal public good provision, Free rider problem, Lindahl taxes

Recommended readings

- Serrano, Roberto and Feldman, Alan (2012), *A short course in intermediate Microeconomics with Calculus*, Cambridge UniversityPress
- Espinola-Arredondo, Ana and Munoz-Garaia, Felix (2020), *Intermediate Microeconomic Theory*,MITPress
- Munoz-Garaia, Felix (2017) *Practice Exercises for Advanced Microeconomic Theory*, MITPress.
- Dunaway, Eric; Strandholm, John C., Espinola-Arredondo, Ana and Munoz-Garcia, Felix (2020) *Practice Exercises for Intermediate Microeconomic Theory*, MIT press

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DISCIPLINE SPECIFIC CORE COURSE -10 (DSC-10): Introductory Development Economics

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Introductory Development Economics – ECON015	**4**	**3**	**1**	**0**	**Class 12th**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course discusses the basic concept of growth and further links it up with alternative conceptions of development.
- It then proceeds to examine the aspects of poverty and inequality, not just in terms of income and wealth, but in terms of capabilities too.
- The axiomatic basis for inequality measurement is used to develop measures of inequality and poverty.
- It further explores the connections between growth and inequality.
- The course ends by linking political institutions to growth and inequality by discussing the role of the state in economic development and the informational and incentive problems that affect state governance.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students would distinguish between growth and development and get an idea about the factors affecting the level of development as well as the process of economic development.
- Further, they comprehend and analyse various conceptsandmeasuresofunderdevelopmentincludingpovertyandinequality.

Syllabus

UNIT I: Introducing Economic Development: Global Perspective (12 hours)
Conceptions of Economic Growth and Development; Concepts of economic growth and linking it up with alternative measures of development, including human development, documenting the international variation in these measures, comparing development trajectories across nations and within them.

UNIT II: Theories of Economic Development (12 hours)
Classic Theories of Economic Growth and Development - four approaches (linear- stages theories, structural change models, international dependence, neoclassical

UNIT III: The Strategy of Economic Development: Institutional Pathways (9 hours)
Balanced and Unbalanced growth, interlinkages, big-push and the role of markets and state, alternative institutional trajectories and their relationship with economic performance

UNIT IV: Poverty and Inequality (12 hours)
Definitions, Measures and Mechanisms, Inequality axioms and principles; a com- parison of commonly used diagrammatic and mathematical inequality measures, their deficiencies and usage; connections between inequality and development; inequality trends at international level; conceptualisation of the poverty lines at

domestic and international levels; poverty measurement; characteristics of the poor; capability approach to poverty; mechanisms that generate poverty traps and path dependence of growth processes.

Recommended readings

- Partha Dasgupa (2007), *Economics: A Very Short Introduction*, (AVSI), Oxford UniversityPress.
- Perkins, D. H., Radelet, S. C., Lindauer, D. L., & Block, S. A. (2013). *Economics of Development*. 7th Edition, New York: WW Norton &Company.
- Todaro, M. P., & Smith, S. C. (2020). *Economic Development*. PearsonUK.
- Elinor Ostrom(1990), *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge University Press.
- Gustav Ranis et.al, Economic Growth and Human Development (2000), *World Development*Vol. 28, No. 2, Elsevier Science Ltd.
- PranabBardhan(2010),*AwakeningGiants,FeetofClay:AssessingtheEconomic RiseofChinaandIndia*,OUP.
- Thomas Dietz, Elinor Ostrom and Paul C. Stern, 'The Struggle to Govern the Commons',*Science*,vol.302,No.5652(Dec.12,2003),pp.1907-1912.
- Mancur Olson, Jr. (1996), 'Big Bills Left on the Sidewalk: Why Some Nations are Rich,and Others Poor',*JournalofEconomicPerspectives*,vol.10,no.2,pp3-24.
- Albert O. Hirschman, *Rival Views of Market Society and Other Essays*, Ch. 3: 'Linkages in EconomicDevelopment'.
- Nurkse, Ragnar (1961). *Problems of Capital Formation in Underdeveloped Coun- tries*. New York: Oxford University Press. Chapter3.
- Rodenstein Rodan, PN (1943) Problems of Industrialization of eastern and south easternEurope,*EconomicJournal*,volLIII,p202-11.
- Dani Rodrik (2009), One Economics, *Many Recipies: Globalization, Institutions and Economic Growth*, Princeton UniversityPress.
- Andre Shleifer and Robert W. Vishny (1993), 'Corruption', *Quarterly Journal of Economics*, 108(3), pp599-617.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Category III

Economics Courses for Undergraduate Programme of study with Economics as one of the Core Disciplines

(B.A. Programmes with Economics as non-Major or Minor discipline)

DISCIPLINE SPECIFIC CORE COURSE -5 (DSC-5): Introductory Development Economics

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Introductory Development Economics – ECON015	**4**	**3**	**1**	**0**	**Class 12th**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course discusses the basic concept of growth and further links it up with alternative conceptions of development.
- It then proceeds to examine the aspects of poverty and inequality, not just in terms of income and wealth, but in terms of capabilities too.
- The axiomatic basis for inequality measurement is used to develop measures of inequality and poverty.
- It further explores the connections between growth and inequality.
- The course ends by linking political institutions to growth and inequality by discussing the role of the state in economic development and the informational and incentive problems that affect state governance.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students would distinguish between growth and development and get an idea about the factors affecting the level of development as well as the process of economic development.
- Further, they comprehend and analyse various conceptsandmeasuresofunderdevelopmentincludingpovertyandinequality.

Syllabus

UNIT I: Introducing Economic Development: Global Perspective (12 hours)
Conceptions of Economic Growth and Development; Concepts of economic growth and linking it up with alternative measures of development, including human development, documenting the international variation in these measures, comparing development trajectories across nations and within them.

UNIT II: Theories of Economic Development (12 hours)
Classic Theories of Economic Growth and Development - four approaches (linear- stages theories, structural change models, international dependence, neoclassical

UNIT III: The Strategy of Economic Development: Institutional Pathways (9 hours)

Balanced and Unbalanced growth, interlinkages, big-push and the role of markets and state, alternative institutional trajectories and their relationship with economic performance

UNIT IV: Poverty and Inequality (12 hours)
Definitions, Measures and Mechanisms, Inequality axioms and principles; a com- parison of commonly used diagrammatic and mathematical inequality measures, their deficiencies and usage; connections between inequality and development; inequality trends at international level; conceptualisation of the poverty lines at domestic and international levels; poverty measurement; characteristics of the poor; capability approach to poverty; mechanisms that generate poverty traps and path dependence of growth processes.

Recommended readings

- Partha Dasgupa (2007), *Economics: A Very Short Introduction*, (AVSI), Oxford UniversityPress.
- Perkins, D. H., Radelet, S. C., Lindauer, D. L., & Block, S. A. (2013). *Economics of Development*. 7th Edition, New York: WW Norton &Company.
- Todaro, M. P., & Smith, S. C. (2020). *Economic Development*. PearsonUK.
- ElinorOstrom(1990),*GoverningtheCommons:TheEvolutionofInstitutionsfor CollectiveAction*,CambridgeUniversityPress.
- Gustav Ranis et.al, Economic Growth and Human Development (2000), *World Development*Vol. 28, No. 2, Elsevier Science Ltd.
- PranabBardhan(2010),*AwakeningGiants,FeetofClay:AssessingtheEconomic RiseofChinaandIndia*,OUP.
- Thomas Dietz, Elinor Ostrom and Paul C. Stern, 'The Struggle to Govern the Commons',*Science*,vol.302,No.5652(Dec.12,2003),pp.1907-1912.
- Mancur Olson, Jr. (1996), 'Big Bills Left on the Sidewalk: Why Some Nations are Rich,andOthersPoor',*JournalofEconomicPerspectives*,vol.10,no.2,pp3-24.
- Albert O. Hirschman, *Rival Views of Market Society and Other Essays*, Ch. 3: 'Linkages in EconomicDevelopment'.
- Nurkse, Ragnar (1961). *Problems of Capital Formation in Underdeveloped Coun- tries*. New York: Oxford University Press. Chapter3.
- Rodenstein Rodan, PN (1943) Problems of Industrialization of eastern and south easternEurope,*EconomicJournal*,volLIII,p202-11.
- Dani Rodrik (2009), One Economics, *Many Recipies: Globalization, Institutions and Economic Growth*, Princeton UniversityPress.
- Andre Shleifer and Robert W. Vishny (1993), 'Corruption', *Quarterly Journal of Economics*, 108(3), pp599-617.

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SEMESTERS–VI

DEPARTMENT OF ECONOMICS

Category I

(B.A. Honours in Economics in three years)

DISCIPLINE SPECIFIC CORE COURSE -16 (DSC-16): International Trade

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical / Practice		
International Trade – ECON016	4	3	1	0	Class 12th with Mathematics	Introductory/Principles of Microeconomics

Learning Objectives

The Learning Objectives of this course are as follows:

- This course introduces the basics of international trade theory and examines the effects of trade policies for domestic and world welfare. It covers bother classical and new trade theories.
- This course develops a systematic exposition of models that try to explain the composition, direction, and consequences of international trade.
- Apart from the introduction to theoretical models, students will also be exposed to real-world examples and casestudies.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students would be able to understand the main theoretical and empirical concepts in international trade that equip them with a thorough analytical grasp of trade theories, ranging from Ricardian comparative advantage to intra-industry trade.
- It familiarises students with the main issues in trade policy and with the basic features of theinternationaltradingregime.

Syllabus

UNIT I: Neoclassical Trade Theories (15 hours)
Ricardian trade theory of comparative advantage. Gains from trade. Comparative advantage with many goods; Specific factor model; income distribution and trade policy, international factor mobility models; Standard Trade Model, economic growth, immiserizing growth and intertemporal trade; Heckscher-Ohlin theory; factor price equalisation, Rybczynski and Stolper-Samuelson theorems, Heckscher- Ohlin-Vanek Model, Offercurve.

UNIT II: New trade theories and firms in the global economy (15 hours)
External Economies of Scale, learning curve, intra-industry trade, monopolistic competition and firm responses to trade; international Location of Production, horizontal and vertical multinationals; Gravity model, Firms in the global economy. Global value chain and offshoring of goods and services.

UNIT III: International Trade Policy Concerns (15 hours)
Instruments of trade policy, static welfare analysis of tariffs, quotas and subsidies. Equivalence of tariffs and quotas. Effective rate of protection. Export subsidies and countervailing duties; Oligopoly and International trade. Strategic tradepol-icy; International Agreements: Trade, Labour and Environment Multilateralism, WTO, RegionalTradeAgreementsandNewProtectionism

Recommended readings

- Feenstra, R., Taylor, A. (2014). *International Trade*, 3rd ed. Worth Publishers. (Abbreviation used:FT)
- Krugman, P., Obstfeld, M., Melitz, M. (2018). *International Economics - Theory and Policy*, 11th ed. Pearson Education. (Abbreviation used: KOM)
- Gandolfo, G. (2014), *International Trade Theory and Policy (with contribution fromFedericoTrionfetti*)2nded.,Springer.

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DISCIPLINE SPECIFIC CORE COURSE -17 (DSC-17): Development Theory and Experience

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Development Theory and Experience – ECON017	**4**	**3**	**1**	**0**	**Class 12th with Mathematics**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- It highlights the dynamic interconnections between the social and economic aspects of the development process.
- In particular, the course deals with the macro and micro aspects of demography, fertility choices and gender bias.
- It also discusses the process of migration through elaborate models highlighting the rural-urban sectoral interrelationships.
- It describes the peculiar characteristics of rural institutions which shape contracts across labour, land and credit markets in the rural economy.
- It discusses the efficiency of such contracts even while they deviate from the traditional competitive marketcontracts.

Learning outcomes

The Learning outcomes of this course are as follows:

- This course updates the students the unprecedented progress that has been made in many parts of the developing world—but fully confronts the enormous problems and challenges experienced during the recent decades.
- The student would understand the wide diversity of development approaches adopted across the developing world, and the differing positions in the global economy held by developing countries.
- This will help them understand better the economic development policy and programmesacrossemployedbyWorldBankandnationaleconomies.

Syllabus

UNIT I: Demography, Gender and Development (12 hours)
Demographic concepts; birth and death rates, age structure, fertility and mortality; demographic transitions during the process of development; gender bias in preferences and outcomes and evidence on unequal treatment within households; connections between income, mortality, fertility choices and the impact of intra-household gender inequality (in allocation of resources) and labour markets as genderedinstitutions.

UNIT II: Migration and Development (9 hours)
Models of migration, sectoral dynamics and the relationship between rural and urban sectors.

UNIT III: Land, Labour and Credit Markets (12 hours)
The distribution of land ownership; land reform and its effects on productivity; contractual relationships between tenants and landlords; land acquisition; nutrition and labor productivity; informational problems and credit contracts; micro-finance; inter-linkages between rural factor markets.

UNIT IV: Institutions and coordination (12 hours)
The determinants of democracy; alternative institutional trajectories and their relationship with economic performance; within-country differences in the functioning of state institutions; state ownership and regulation; government failures and corruption.

Recommended readings

- Acemoglu, D., & Robinson, J. A. (2006). *Economic origins of dictatorship and democracy*. Cambridge UniversityPress.
- Robinson, J. A., & Acemoglu, D. (2012). *Why nations fail: The origins of power, prosperity and poverty*. London:Profile.
- Perkins, D. H., Radelet, S. C., Lindauer, D. L., & Block, S. A. (2013). *Economics of Development*. 7th Edition, New York: WW Norton &Company.
- Todaro, M. P., & Smith, S. C. (2020). *Economic Development*. PearsonUK.
- Debraj Ray (2009), *Development Economics*, Oxford University P r e s s
- RobertT.Jensen(2010),*EconomicOpportunitiesandDifferencesinHumanCapital:ExperimentalEvidenceforIndia*,NBERWorkingPaperNo.16021.
- Pitt, Mark, Mark Rosenzweig and Nazmul Hassan. (1990). "Productivity, Health and Inequality in the Intrahousehold Distribution of Food in Low- income Countries."*AmericanEconomicReview*,80(5):1130-1156.
- Elson, Diane (1999) Labour markets as gendered institutions: Equality, Efficiency andEmpowermentIssues,*WorldDevelopment*,vol27(3),p611-627.

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DISCIPLINE SPECIFIC CORE COURSE -18 (DSC-18): Indian Growth and Development

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Indian Growth and Development	**4**	**3**	**1**	**0**	**Class 12th with Mathematics**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- Using appropriate analytical frameworks, this course reviews major trends in economic indicators of macro and development issues and policy debates in India in the post-Independence period, with particular emphasis on paradigm shifts and turning points.
- This course intends to give an introduction to students as to how they could explore problems related to the Indian economy by familiarizing them with the research studies on areas relating to economic development and policy in India with an emphasis on contemporary debates.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students should be able to understand the development paradigm adopted in India since independence and evaluate its impact on economic as well as social indicators of progress.
- The students will acquire ability to explore current policy debates and contribute to policy making in an informed way using relevantdatabases.

Syllabus

UNIT I: Economic Growth since Independence (12 hours)
Major features of the economy at independence; growth under different policy regimes—goals, constraints, institutions and policy framework; an assessment of performance—sustainability and regional contrasts; structural change, savings and investment

UNIT II: Sectoral Performances and Concerns (12 hours)
Issuesinagriculture,industryandservices.

UNIT III: Inclusive Growth - trends and patterns, Distributional Issues and Policies Demography, Poverty and Unemployment (9 hours)

UNIT IV: Economic Policies and their Impact (12 hours)
Evolution of macroeconomic framework applied in Indian economy and its impact, fiscal policy; financial and monetary policies; trade and investment policy, five-year plans

Recommended readings

- Ahluwalia,M.S.(2019),"India'seconomicreforms:AchievementsandNextSteps", *Asian Economic Policy Review*, 14(1), 46-62.
- Bosworth, B., Collins, S. M., & Virmani, A. (2007). *Sources of growth in the Indian economy*. Working Paper no. 12901,NBER.

- Pulapre Balakrishnan, (2007), "The Recovery of India: Economic Growth in the Nehru Era", *Economic and Political Weekly*, November 10-23, 2007.
- Krishnamurty, K. (2002), Macroeconometric Models for India: Past, Present and Prospects *Economic and Political Weekly*, October 19, 2002.
- Arvind Subramanian and Josh Felman (2021) India's Stalled Rise-How the State HasStifledGrowth,*ForeignAffairs*on14.12.2021.
- Acharya, S. and Mehrotra, S. (2020), The Agricultural Market Reforms: Is there a trade-off between efficiency and equality? Working Paper Series, Institute of HumanDevelopment.
- Shah, Mihir (2007), Rural Credit in 20th Century India: Overview of History and Perspectives,*EconomicandPoliticalWeekly*,Vol.42,IssueNo.15,14April2007.
- NagarajR(2013),India'sDreamRunUnderstandingtheBoomandItsAftermath,
- *Economic and Political Weekly* Vol 48, No. 20,May 18, 2013.
- Chanda, R. (2019), India's Services Sector; trends, opportunities and challenges,in Uma Kapila(ed.), *Indian economy-2: Macroeconomic policies, Sectoral Develop- ments andPerformance*.
- Dipak Mazumdar and Sandip Sarkar (2009) "The Employment Problem in India and the Phenomenon of the 'Missing Middle' *The Indian Journal of Labour Eco- nomics*, Vol. 52, No. 1,2009
- Chakraborty, Achin, (2015), Reforming Labour Markets in States: Revisiting the FutilityThesis,*EconomicandPoliticalWeekly*,May16.
- Thomas, J. J. (2020). 'Labour Market Changes in India, 2005–18', *Economic and Political Weekly*, 55(34),57.
- James, K.S., &Srinivas Goli (2016), "Demographic Changes in India: Is the Coun- try Prepared for the Challenge?" *Brown Journal of World Affairs*, Fall/Winter 2016, Volume XXIII, IssueI.
- Desai, S. (2015), "Demographic deposit, dividend and debt", *The Indian Journal of Labour Economics*, 58, 217-232.
- Drèze,JandKhera,R.,2016,'RecentSocialSecurityInitiativesinIndia'Available athttp://dx.doi.org/10.2139/ssrn.2800699.
- Vijay Joshi, (2016), *India's Long Road: The Search for Prosperity*, Allen Lane, Gurgaon, Ch2.
- Rakesh Mohan, (2019), *Moving India to a new Growth Trajectory: Need for a ComprehensiveBigPush*,BrookingsIndia,Section1and2,9-30.
- Jagdish Bhagwati and Arvind Panagariya, (2012), *India's Tryst with Destiny*, CollinsBusiness,Noida,pp.4-5,32-38.
- PanagariyaA(2020),*IndiaUnlimited:ReclaimingtheLostGlory*,Chapter2.
- Jean Dreze and Amartya Sen, (2013), *India: An Uncertain Glory*, Allen Lane, chapters 2, 3 (pp. 72-80only).
- Kumar, R., & Patibandla, M. (2009). *Institutional dynamics and the evolution of the Indian economy*,Springer.
- McCartney,M.(2019).*TheIndianEconomy*.AgendaPublishingLimited.
- Goyal, A. (Ed.). (2019). *A Concise Handbook of the Indian Economy in the 21st Century*.OxfordUniversityPress.

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COMMON POOL OF DISCIPLINE SPECIFIC ELECTIVE (DSE) COURSES
FOR semester-IV/V/VI

Discipline Specific Elective 6 (DSE-6): Advanced Econometrics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
V/VII	Advanced Econometrics – ECON036	4	3	1	0	Class 12th with Mathematics	Basic Econometrics (ECON024)

Learning Objectives

The Learning Objectives of this course are as follows:

- A prerequisite for this course is the knowledge of concepts in the Basic Econometrics course.
- It builds on the compulsory Basic Econometrics course and teaches students a broad set of commonly used econometric methods.
- These include estimating models with limited dependent variables, the use of instrumental variables to estimate models with endogenous regressors, as also estimation methods for time series and panel data sets.

Learning outcomes

The Learning Outcomes of this course are as follows:
Students will learn the theoretical and practical basis for techniques widely used in empirical research and consider their application in a wide range of estimation problems.

Syllabus

UNIT I: Stages in empirical econometric research (3 hours)

UNIT II: The linear regression model: The matrix approach, Review of model specification, estimation and testing (6 hours)

UNIT III: Limited dependent variables: Logit and Probit models for binary responses, Tobit models for truncated data. (9 hours)

UNIT IV: Selected Topics: Instrumental variable estimation, Simultaneous equation models, Experiments and Quasi-Experiments. (9 hours)

UNIT V: Dynamic econometric models: distributed lag models, autoregressive models; Panel data models and estimation techniques (9 hours)

UNIT VI: Introduction to econometric software (R/GRETL/EViews/Stata: ANY ONE); publicly available data sets and software will be used to estimate models and apply the techniques learnt. (9 hours)

Recommended readings

- Wooldridge, J. (2014). Introduction to econometrics: A modern approach, 5th ed. Cengage Learning.
- Asteriou, D and Hall, Stephen G, Applied Econometrics, 4th Edition, 2021, Pal- grave Macmillan.
- James Stock and Mark Watson, Introduction to Econometrics, 4th Edition, 2019, Pearson.
- Gujarati, D., Porter, D. (2012). Basic econometrics, 5th ed. McGraw-Hill.
- Gujarati, D. (2014). Econometrics by Final Examinationple, 2nd ed. Palgrave Macmillan.
- G.S. Maddala and Kajal Lahiri, Introduction to Econometrics, 4th Edition, 2012, Wiley.
- Badi H. Baltagi, Econometrics, 5th Edition, 2011, Springer.
- J. Johnston and J. DiNardo (2001), Econometric Methods, Fourth Edition, Irwin Mcgraw Hill

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Discipline Specific Elective 8 (DSE-8): Economics of Health

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
V/VII	Economics of Health– ECON038	4	3	1	0	Class 12th Pass	Introductory/Principles of Microeconomics

Learning Objectives

The Learning Objectives of this course are as follows:

- Health is important not only for human well-being but also for economic growth. This course provides a framework to understand the need for the study of health economics and the relationship of health with the GDP of a nation.
- The course also looks at the determinants of health, the demand for health and the need for government intervention in provision of health care. Economic evaluation / health technology assessment is also covered in the course.

Learning outcomes

The Learning Outcomes of this course are as follows:

- The students will learn the economic dimensions of health, determinants of health and microeconomic tools for the study of health care and expenditure.
- The course will enable the students to apply the theory to understand the various policies and market mechanisms in the field of health care. They will also be equipped with the fundamental techniques of economic evaluation of health interventions.

Syllabus

UNIT I: Health Economics (12 hours)
Significance and linkages with the economy:
The need for health economics as a discipline of study, importance of health in the development of an economy and its relationship with macroeconomic performance

UNIT II: Theoretical foundations of Health Economics (12 hours)
Demand for health and health care services, determinants of health, market failure and rationale for public intervention; and health insurance

UNIT III: Economic Evaluation of Health Sector (12 hours)
Cost-effective Analysis, cost-benefit analysis, cost-utility analysis

UNIT IV: Health Systems (9 hours)
An overview of international health systems and Indian experiences, and healthcare financing

Recommended readings

- Phelps, C. E. (2017). Health economics. Routledge
- Jay Bhattacharya Timothy Hyde Peter Tu (2014), Health Economics, Palgrave Macmillan
- William, Jack. (1999) Principles of Health Economics for Developing Countries, World Bank

Institute Development Studies.
- Glied, S., & Smith, P. C. (Eds.). (2013). The Oxford Handbook of Health Eco- nomics. Oxford University Press.
- Situational Analysis: Backdrop to the National Health Policy 2017, Ministry of Health and Family Welfare, Government of India
- Mills, A., & Hsu, J. (2014), "Health services in low-and middle-income countries: financing, payment, and provision", Encyclopedia of Health Economics, pp 422- 434

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Discipline Specific Elective 9 (DSE-9): Environmental Economics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
V/VII	Environmental Economics– ECON039	4	3	1	0	Class 12th Pass	Introductory/Principles of Microeconomics

Learning Objectives

The Learning Objectives of this course are as follows:

- This course provides basic knowledge of environmental economics, its relationship with microeconomics and welfare economics, to present and explains the significance and application in the present environmental challenges.
- It aims to describe and comprehend various environmental policies by deploying various policy instruments and to understand and measure the various market and non-market benefits of environmental policies.
- The course addresses the problems related to climate change, transboundary environmental problems, and challenges related to trade and the environment also.

Learning outcomes

The Learning Outcomes of this course are as follows:
The students will learn the trade-offs of economy and environment, and related challenges. They will comprehend the role of state and institutions to minimise the trade-offs.

Syllabus

UNIT I: Introduction to Environment Economics (9 hours)
What is environmental economics? review of microeconomics and welfare eco- nomics; Overview of environmental problems in India

UNIT II: Design and Implementation of Environmental Policy (12 hours)
Overview; Pigouvian taxes and effluent fees; tradable permits; choice between taxes and quotas under uncertainty; implementation of environmental policy.

UNIT III: Measuring the Benefits of Environmental Improvements (12 hours)
Non-market values and measurement methods; risk assessment and perception.

UNIT IV: International Environmental Problems (12 hours)
Transboundary environmental problems; economics of climate change; trade and environment.

Recommended readings

- Charles Kolstad. Intermediate Environmental Economics, Oxford University Press, 2nd edition (2012).
- Roger Perman, Yue Ma, James McGilvray and Michael Common. Natural Resource and Environmental Economics, Pearson Education/Addison Wesley, 4th edition (2011).
- Robert N. Stavins (ed.). Economics of the Environment: Selected Readings, W.W. Norton, 6th edition (2012).

- Don Fullerton and Robert Stavins (1998). “How Economists See the Environment.” Nature, Vol. 395, Oct 1, 1998, pp. 433-434.
- State of Environment Report: India 2009 (Ministry of Environment and Forests, Government of India, 2009): Chapter 2 (State and Trends of the Environment): Land. Air, Water, Biodiversity (p. 9 to 71).
- Schmalensee, Richard and Robert N. Stavins (2017). “The design of environmental markets: What have we learned from experience with cap and trade?” Oxford Review of Economic Policy, Vol. 33, No. 4, pp. 572-588.
- Blackman, Allen, Li, Z., and Liu, A. A. (2018). “Efficacy of command-and-control and market-based environmental regulation in developing countries,” Annual Review of Resource Economics, Vol. 10, pp. 381-404.
- Jonathan Harris and Brian Roach (2018). Environmental and Natural Resource Economics: A Contemporary Approach, Routledge.
- Nordhaus, William D. (2013). Climate Casino: Risk, Uncertainty, and Economics for a Warming World, Yale University Press.
- Richard Newell, William Pizer and Daniel Raimi (2013). “Carbon markets 15 years after Kyoto: Lessons learned, new challenges,” Journal of Economic Perspectives, Vol. 27, No. 1, pp. 123-46.
- Stern,N.(2008) The economics of climate change, American Economic Review, 98(2): 1–37.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Discipline Specific Elective 10 (DSE-10): Gender and Development

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
V/VII	Gender and Development– ECON040	4	3	1	0	Class 12th Pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:

- This course aims to deepen students' understanding on the main theoretical approaches used in gender analysis of development issues, and understanding of the differential impacts of development interventions on women and men.
- The course aims to enable students to become familiar with the gender theories, use of these theories to Final Examination in detail issues of production (formal and informal work), reproduction (health, child survival, and fertility), the family/household nexus (where production and reproduction meet), and gender biases and inequality in terms of health, education, labour and inheritance.

Learning outcomes

The Learning Outcomes of this course are as follows:
The course aims at making students to be aware about the issues and concepts of gender and development, importance of mainstreaming gender, gender and work relations and gender bias and inequality.

Syllabus

UNIT I: Conceptualising and theorizing gender and development (12 hours)
Concepts in gender and development studies: Distinction between gender and sex, patriarchy and matriarchy; women in development (WID) and women and development (WAD)

UNIT II: Mainstreaming gender (12 hours)
Institutionalization of gender in growth and development, gender and bureaucracy, intra-household bargaining, changing gender relations and gender budgeting.

UNIT III: Work and Gender Relations (Inside/Outside the House) (12 hours)
Gender dynamics within a household, bargaining models, balance of productive and reproductive roles of women, agency, inheritance, unpaid work, marriage, and bride price.

UNIT IV: Gender and Inequality (9 hours)
Gender bias and gender inequality in terms of opportunities available: health and education, occupational segregation and gender wage gap.

Recommended readings

- Anderson, S. (2007). The economics of dowry and brideprice. Journal of Economic Perspectives, 21(4), 151-174.
- Aizer, A. (2010). The gender wage gap and domestic violence. American Economic Review, 100(4), 1847-59.
- Heath, R. (2014). Women's access to labor market opportunities, control of household resources, and domestic violence: Evidence from Bangladesh. World Development, 57, 32-46.
- Goel, P. A., & Barua, R. (2021). Female education, marital assortative mating, and dowry: Theory and evidence from districts of India. Journal of Demographic Economics, 1-27.
- Rai, S. M., Brown, B. D., & Ruwanpura, K. N. (2019). SDG 8: Decent work and economic growth–A gendered analysis. World Development, 113, 368-380.
- Kantor, P. (2003). Women's empowerment through home–based work: Evidence from India. Development and Change, 34(3), 425-445
- Neetha, N. (2018). Migration, gender and care economy. Routledge India
- Boeri, N. (2018). Challenging the gendered entrepreneurial subject: Gender, development, and the informal economy in India. Gender & Society, 32(2), 157-179.
- World Bank. (2011). World development report 2012: Gender equality and development. The World Bank.
- Kabeer, N. (2003). Gender Mainstreaming in Poverty Eradication and the Millennium Development Goals: A handbook for policy-makers and other stakeholders. Commonwealth Secretariat.
- Coles, A., Gray, L., &Momsen, J. (Eds.). (2015). The Routledge handbook of gender and development. Routledge.
- Blakemore, J. E. O., Berenbaum, S. A., & Liben, L. S. (2013). Gender Development. Psychology Press.
- Momsen, Janet (2020). Gender and Development. Routledge. 3rd Edition
- Moser, C. (2012). Gender Planning and Development (pp. 63-87). Routledge.
- Andrea Cornwall et al (eds): Feminisms in Development: Contradictions, Contestations and Challenges (Zed 2007).
- Cecile Jackson & Ruth Pearson (eds.): Feminist Visions of Development: Gender Analysis and Policy (Routledge, 1998)
- Agenor, P. R., & Canuto, O. (2015). Gender equality and economic growth in Brazil: a long-run analysis. Journal of Macroeconomics, 43, 155-172.
- Nilsson, P. (2013). Gender and development: The challenge of mainstream. Consilience, (10), 125-135.
- Cornwall, A., Harrison, E., & Whitehead, A. (2007). Gender myths and feminist fables: The struggle for interpretive power in gender and development. Development and Change, 38(1), 1-20.
- Agarwal, B. (1997). "Bargaining" and gender relations: Within and beyond the household. Feminist economics, 3(1), 1-51.
- Doss, C. (2013). Intrahousehold bargaining and resource allocation in developing countries. The World Bank Research Observer, 28(1), 52-78.
- Kabeer, N. (2005). Gender equality and women's empowerment: A critical analysis of the third millennium development goal. Gender & Development, 13(1), 13-24.
- Folbre, N. (2006). Measuring care: Gender, empowerment, and the care economy. Journal of Human Development, 7(2), 183-199.
- Jayachandran, S. (2015). The roots of gender inequality in developing countries, Economics, 7(1), 63-88.
- Mitra, A., Bang, J. T., & Biswas, A. (2015). Gender equality and economic growth: Is it equality of opportunity or equality of outcomes? Feminist Economics, 21(1), 110-135.
- Dercon, S., & Singh, A. (2013). From nutrition to aspirations and self-efficacy: gender bias over time among children in four countries. World Development, 45, 31-50.
- Azam, M., & Kingdon, G. G. (2013). Are girls the fairer sex in India? Revisiting intra-household allocation of education expenditure. World Development, 42, 143- 164.
- Nguyen, C. P. (2021). Gender equality and economic complexity. Economic Systems, 45(4), 100921.
- Jayachandran, S., & Pande, R. (2017). Why are Indian children so short? The role of birth order and son preference. American Economic Review, 107(9), 2600-2629.

- Barcellos, S. H., Carvalho, L. S., & Lleras-Muney, A. (2014). Child gender and parental investments in India: Are boys and girls treated differently?. American Economic Journal: Applied Economics, 6(1), 157-89.
- Joy, L. (2000). Do colleges shortchange women? Gender differences in the transition from college to work. American Economic Review, 90(2), 471-475.
- Mbaye, L. M., & Wagner, N. (2017). Bride price and fertility decisions: Evidence from rural Senegal. The Journal of Development Studies, 53(6), 891-910.
- Babcock, L., Recalde, M. P., Vesterlund, L., & Weingart, L. (2017). Gender differences in accepting and receiving requests for tasks with low promotability. American Economic Review, 107(3), 714-47.
- Pande, R. (2015). 'I arranged my own marriage': arranged marriages and post-colonial feminism. Gender, Place & Culture, 22(2), 172-187.
- Bertrand, M., & Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. American economic review, 94(4), 991-1013.
- Duraisamy, M., & Duraisamy, P. (2016). Gender wage gap across the wage distribution in different segments of the Indian labour market, 1983–2012: exploring the glass ceiling or sticky floor phenomenon. Applied Economics, 48(43), 4098-4111.
- LEE, Jong-Wha; Wie, Dainn (2017). Wage Structure and Gender Earnings Differentials in China and India. World Development, 97, 313–329

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Discipline Specific Elective 11 (DSE-11): Law and Economics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
V/VII	Law and Economics – ECON041	4	3	1	0	Class 12th Pass	Intermediate Microeconomics II: Market, Government and Welfare - ECON010

Learning Objectives

The Learning Objectives of this course are as follows:

- Law and Economics is an interdisciplinary course, devoted to understanding laws and legal institutions using the tools of economic theory.
- This is essentially an economic analysis of the laws.
- Topics include an introduction to legal institutions and legal analysis, application of economic concepts to the law of property, contracts, torts and criminal law and anti-trust law.

Learning outcomes

The Learning Outcomes of this course are as follows:
This course is designed to gain familiarity with basic facts and application of economic principles to analyse a wide range of legal issues, and better understanding the economic consequences of laws and regulations.

Syllabus

UNIT I: Concepts of Law and uses of foundations of Economics (6 hours)
Tools for Law and Economics: Efficiency criteria in Welfare Economics; Coase theorem; Prisoners' Dilemma

UNIT II: Economics of Tort (Accident) Law/ Liability Rules (6 hours)
Liability for accidents and harms; product liability; efficiency of liability rules; efficiency-compensation trade-off.

UNIT III: Economics of Property Law (6 hours)
Property rights and their role in resource allocation; Coase theorem; Legal remedies for breach of property rights and their economic effects, Eminent Domain (Market and non-market mechanism for land transfer)

UNIT IV: Intellectual Property Rights (IPRs) (6 hours)
Patents, Copyright and Trademarks. Cost and benefits of private IPRs; Individual rights vs common good

UNIT V: Economics of Contract Law (6 hours)
Legal contract; Role of Contracts for functioning of markets; Incomplete contracts; Efficient contracts; Damages measures and their efficiency properties.

UNIT VI: Economics of Criminal Law (6 hours)
Economics of Crime and Law Enforcement; Crime Vs Tort; Repeat Offenders; Death Penalty

UNIT VII: Anti-trust laws, Competition Policy (3 hours)

UNIT VIII: Legal Process (6 hours)
Litigation – its causes and consequences; Benefits of legal certainty

Recommended readings

- Miceli, Thomas J. , "The Economic Approach to Law" 3rd Edition Stanford University Press, 2017 (Indian edition, MPP House, 2020)
- Cooter, Robert and Thomas Ulen, Law and Economics, Sixth Edition, Addison Wesley 2013, ISBN 9780132540650. Free here Law and Economics, 6th edition (jku.at)
- Pal, Malabika, Economic Analysis of Tort Law - The Negligence Determination. Routledge, 2020.
- Bag, Sugata, Economic Analysis of Contract Law: Incomplete Contracts and Asymmetric Information. Springer/Palgrave, 2018.
- Basu, Kaushik, The Republic of Beliefs: A New Approach to Law and Economics, Princeton University Press, 2018
- Singh, Ram (2021) Land for Development: Market Versus Non-Market Mechanisms in S.Mani and C.G. Iyer (eds.) India's Economy and Society, Springer, pp.187-204.
- Bhattacharjea, Aditya. "Competition policy: India and the WTO." Economic and Political Weekly (2001): 4710-4713.
- Competition Commission of India, Competition Act of India 2002, https : //www.cci.gov.in/sites/

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Discipline Specific Elective 12 (DSE-12): Open Economy

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
V/VII	Open Economy Macroeconomics – ECON042	4	3	1	0	Class 12th Pass	Intermediate Macroeconomics II (ECON011)

Learning Objectives

The Learning Objectives of this course are as follows:

- The course is designed with the objective of introducing the students to the standard macroeconomic issues in an open economy framework using the Mundell-Fleming model and the exchange rate overshooting model.
- It further exposes them to the models of banking and currency crises which try to make sense of the risks and vulnerabilities in an interdependent economy.
- The course would give an exposure to contemporary concerns in the global economy and the challenges it poses to policy making.

Learning outcomes

The Learning Outcomes of this course are as follows:

- The student would get a good exposure towards the process of macroeconomic policy- making in an open economy and the challenges involved.
- The course would facilitate learning the art of building macro-models in an open economy context. It would also enable the student to relate it to the contemporary issues.
- The student would learn to appreciate contemporary issues by relating the real world data to the theory in this regard.

Syllabus

UNIT I: Introduction to Open Economy Macroeconomics (10 hours)
Intertemporal long run budget constraint, how much can a country borrow, external wealth, external assets and liabilities, net international investment position, financial flows and valuation effects, Feldstein Horioka Puzzle, Harberger-Laursen- Metzler effect, Foreign Exchange Market. An overview of the spot and forward markets, swaps, options and derivatives. Uncovered and Covered Interest Parity. Covered Interest Arbitrage.

UNIT II: Macro-modelling of the Open Economy (20 hours)
Mundell-Fleming model (with Flexible Prices). Dornbusch's exchange rate overshooting model with stability conditions. Monetary Approach to Balance of Payments. PPP and long run monetary approach, Balassa –Samuleson effect and non-tradables, Fisher effect. Portfolio and macroeconomic equilibrium in an open economy. 3 equation model for the open economy. Currency crises (first, second and third generation models). Optimum currency areas and monetary union.

UNIT III: International Monetary System and Policy Co-ordination (15 hours)
Classic specie price flow mechanism and the Gold Standard. Fixed exchange rate system under Bretton Woods. Triffin dilemma and the collapse of the Bretton Woods, SDRs, international consistency condition. Financial trilemma. International liquidity and demand for international reserves. Government policies to- wards capital market, exchange and capital controls. Central bank intervention, sterilization.

Prospects of Macroeconomic policy co-ordination in an open economy, Policy reaction function, Hamada diagram

Recommended readings

- Feenstra, Robert and Taylor, Alan (2020) International Macroeconomics, 3rd ed., Worth Publishers
- Feenstra, Robert and Taylor, Alan (2014) International Economics, 3rd ed., Worth Publishers
- Pugel, T International Economics, 16th ed., McGraw-Hill Education
- Gandolfo, Giancarlo (2016) International Finance and Open Economy Macroeconomics, Springer.
- Krugman, P., Obstfeld, M. and Melitz (2018) International Economics - Theory and Policy, 11th ed., Pearson Education.
- Carlin, Wendy and Soskice, David (2015) Macroeconomics: Institutions, Instability and the Financial System
- Wickens, Michael(2012) Macroeconomic Theory. Princeton University Press.
- Sorenson, Peter B and Whitta-Jacobson, Hans Jorgen(2010) Introducing Advanced Macroeconomics: Growth and Business Cycles. McGraw Hill Education

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Discipline Specific Elective 13 (DSE-13): Modern Political Economy

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
V/VII	Modern Political Economy – ECON043	4	3	1	0	Class 12th Pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:

- This course will use the methodology and tools of economics to study the implications of various political institutions and processes that determine the quantum, scope, and nature of the state's intervention in the economy.
- Political actors are assumed to be goal-oriented and political outcomes are explained by the interaction between these actors within their institutional environment.
- This course will complement the Public Economics course as its focus will be on the positive implications of the state's interventions rather than the normative aspects.

Learning outcomes

The Learning Outcomes of this course are as follows:

- The students will learn to apply the economic paradigm to the study of political action and policy formation, and how economic and political forces may shape the incentives and constraints of policymakers and other political actors.
- They will understand the role of political institutions in shaping the actions of the state and the resulting outcomes.

Syllabus

UNIT I: Collective choice and redistribution (12 hours)
Insurance motive; public good motive; fairness motive; allocative efficiency; determination of redistribution, Majority voting and direct democracy; unanimity rule; Con- direct cycles; one dimensional median voter theorem; multidimensional issues and median voter theorem; agenda manipulation; simple variations of majority voting such as the Borda rule and approval voting

UNIT II: Representative democracy: two-party competition; and multi-party competition (12 hours)
Downsian model; deterministic voting; cycles and median voter theorems; competition in a constrained policy space; uncovered set and valence values; model with probabilistic voting model and an application to taxation, proportionality, and electoral rules; goals of multiple parties; coalition formation with one-dimensional issue space; coalition formation with multi-dimensional issue space; strategic voting.

UNIT III: Rent-seeking; Tariffs and Political economy of taxation (12 hours)
Basic model of rent-seeking and variations; rent-seeking via regulation; effects of tariffs, quotas, and voluntary export restraints; corruption, Distortions, and Diamond-Mirrlees production efficiency theorem.

UNIT IV: Dictatorship; origins and Lobbying (9 hours)
Model of public goods provisioning; Win- Trobe's model, Interest groups, lobbying, and collective action; Olsonian model of collective action; Downsian models

Recommended readings

- K. Shepsle and M. Bonchek (1997), *Analyzing Politics: Rationality, Behavior, and Institutions*, W. W. Norton
- D. Mueller (2003), *Public Choice III*, Cambridge University Press.
- K. Arrow (1963), *Social Choice and Individual Values*, Yale University Press.
- H. Demsetz (1968), Why regulate utilities? *Journal of Law and Economics* XI: 55-66.
- A. Dixit (1996), *The Making of Economic Policy*, MIT Press.
- A. Downs (1957), *An Economic Theory of Democracy*, Harper and Row.
- A. Krueger (1974), The political economy of a rent-seeking society, *American Economic Review* LXIV: 291-303.
- M. Olson (1965), *The Logic of Collective Action*, Harvard University Press.
- W. Niskanen (1995), *Bureaucracy and Public Economics*, Edward Elgar.
- D. North (1990), *Institutions, Institutional Change and Economic Performance*, Cambridge University Press.
- A. Shleifer (2005), Understanding Regulation, *European Financial Management* 11 (4); 439-451.
- A. Shleifer and R. Vishny (1993), Corruption, *Quarterly Journal of Economics* 108 (3): 599-617.
- Kiser, E., &Karceski, S. M. (2017). Political economy of taxation. *Annual review of political science*, 20, 75-92.
- Acemoglu, D., Golosov, M., &Tsyvinski, A. (2010). Dynamic Mirrlees taxation under political economy constraints. *The Review of Economic Studies*, 77(3), 841- 881.

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Discipline Specific Elective 14 (DSE-14): Public Economics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
V/VII	Public Economics – ECON045	4	3	1	0	Class 12th Pass	Intermediate Microeconomics II (ECON010)

Learning Objectives

The Learning Objectives of this course are as follows:

- Public economics is the study of government policy from the points of view of economic efficiency and equity.
- The course deals with the nature of government intervention and its implications for allocation, distribution and stabilization problems.
- Inherently, this study involves a formal analysis of government taxation and expenditures.
- The subject encompasses a host of topics including public goods, market failures and externalities.
- The course is divided into two sections, one dealing with the theory of public economics and the other with the Indian public finances.

Learning outcomes

The Learning Outcomes of this course are as follows:

- The course aims to introduce students to the main theoretical and empirical concepts in public economics, equip students with a thorough analytical grasp of implications of government intervention for allocation, distribution and stabilization, and familiarise students with the main issues in government revenues and expenditure.
- At the end, the students should be able to demonstrate their understanding of the public economics.

Syllabus

UNIT I: Public Economic Theory (30 hours)

- Role of Public Sector - Justification of the Public Sector; Public Sector Growth; Excessive Government
- Political Economy of Public Sector - Public Mechanisms for allocation; Market and Non-Market Mechanism; Theory of Rent Seeking
- Taxation - Economic Effects of Tax; Tax incidence; Dead Weight Loss and Distortion; Efficiency and Equity Considerations; Optimal taxation; Commodity tax; Ramsey rule.

UNIT II: Indian Public Finances (15 hours)

- Tax System – Indian Tax system; Structure and Reforms. Budget, Deficits and Public debt

Recommended readings

- Cullis, J., Jones, P. (1998). Public finance and public choice, 2nd ed. Oxford University Press.
- Hindriks, J., Myles, G. (2013). Intermediate public economics, 2nd ed. MIT Press.
- Stiglitz, J. E. and Rosengard J. K. (2015). Economics of the Public Sector, 4th ed., W. W. Norton.
- Rao, M. Govinda and Sudhanshu Kumar (2017). "Envisioning Tax Policy for Accelerated Development in India," Working Paper No. 190, National Institute of Public Finance and Policy (NIPFP).

- Srivastava, D K et al. (2021), Taxing Petroleum Products: Sharing Revenue Space between Centre and States, Economic and Political Weekly, Vol. 56, Issue No. 9, 27 Feb, 2021.
- Bajaj & Dutt (2020), "Financing of fiscal response to COVID-19: a pragmatic Alternative", Indian Economic Review, Vol. 55. (Suppl 1): S149 - S160, Budget at Glance 2021-22.
- Chakraborty, Lekha (2021), Union Budget 2021-22: The Macroeconomic Frame- work, Economic and Political Weekly, Vol. 56, Issue No. 9, 27 Feb, 2021.
- Latest Economic Survey and Budget Documents.
- Other recent contributions in literature.

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Discipline Specific Elective 15 (DSE-15): Research Methodology for Economics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VI/VII	Research Methodology for Economics – ECON044	4	3	1	0	Class 12th Pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:

- The course offers the conceptual and methodological issues in details that go into successful conduction of a scientific research.
- That includes the theoretical and methodological approaches in measurement, proposing and testing hypotheses, scientific communication and the ethical issues in the practice of science.

Learning outcomes

The Learning Outcomes of this course are as follows:

- The students will lean framing research problems, identifying gaps in literature and scientific approaches to conduct both theoretical and empirical research.
- This course will build the capacity to conduct research in the fourth year at the undergraduate level.

Syllabus

UNIT I: Starting a Research Paper (9 hours)
Forming an economic hypotheses; Components of a Research Paper

UNIT II: Sources of Data and Literature (9 hours)
Familiarizing students with a wealth of Secondary Datasets that are available;
Exposing students to the basics of compiling data from Websites; outlets and search engines to study the literature

UNIT III: Creating New Data (9 hours)
Surveys and Experiments

UNIT IV: Analyzing Data (9 hours)
Data Discovery; Causal Inference; Big Data

UNIT V: Writing a Research Paper (9 hours)
Style of writing a Research Paper and Communicating the Results

Recommended readings

- Jacobson, M., Neugeboren, R. H. (2005). Writing Economics. United States: Harvard University. (link)
- Pinker, S. (2014). The Sense of Style: The Thinking Person's Guide to Writing in the 21st Century. United Kingdom: Penguin Publishing Group.

- Greenlaw, S. A. (2005). Doing economics : a guide to understanding and carrying out economic research. Boston: Cengage Learning.
- Thomson, W. (2001). A Guide for the Young Economist. United States: MIT Press.
- Glewwe, Paul; Todd, Petra. 2022. Impact Evaluation in International Development : Theory, Methods and Practice. Washington, DC: World Bank. (link)
- John A. Rice (2007). Mathematical Statistics and Data Analysis, 3rd ed. Thomson Brooks/Cole.
- Deaton, Angus. The analysis of household surveys (reissue edition with a new preface): A microeconometric approach to development policy. World Bank Publications, 2019.
- Haaland, Ingar, Christopher Roth, and Johannes Wohlfart. "Designing information provision experiments." JEL forthcoming
- Duflo, Esther, and Abhijit Banerjee, eds. Handbook of field experiments. Volumes 1& 2. Elsevier, 2017
- List, John A."Why Economists Should Conduct Field Experiments and 14 Tips for Pulling One Off." The Journal of Economic Perspectives, vol. 25, no. 3, American Economic Association, 2011, pp. 3-15,(link).
- Huntington-Klein, N. (2021). The effect: An introduction to research design and causality. Chapman and Hall/CRC.
- John Cochrane's Writing Group Webpage (link)

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Discipline Specific Elective 16 (DSE-16): Financial Economics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical / Practice		
IV/VI/VIII	Financial Economics – ECON046	4	3	0	1	Class XII with Mathematics	Introductory Mathematical Methods for Economics/ Basic Statistics

Learning Objectives

- To equip students with essentials tools for understanding Finance at undergraduate level.
- To enable students to use modelling techniques to solve Financial Economics concepts.
- To develop necessary skill and knowledge for financial problem solving

Learning outcomes

- After studying this course, students would be able to understand the basic concepts of finance and financial variables.
- They would develop an understanding of basics of finance including interest rates, annuity, and cash flow.
- The analytical approach adopted in this paper will strengthen and channelise their skills for more advance approaches in finance.

SYLLABUS OF DSE: FINANCIAL ECONOMICS

Unit 1. Deterministic cash-flow streams (12 Hours)
Basic theory of interest; discounting and present value; internal rate of return; evaluation criteria; fixed-income securities; bond prices and yields; interest rate sensitivity and duration; immunisation; the term structure of interest rates; yield curves; spot rates and forward rates.
Berk, DeMarzo
Chapter 4: Time Value of Money (all sections)
Chapter 6: Valuing Bonds (all sections)
Chapter 7: Investment Decision Rules (all sections)
Brealey, Richard A., Myers, Stewart, C., Allen, Franklin:
Chapter 5: Net Present Value and Other Investment Criteria (Section 5.3, pages 107-115)
Bodie, Kane, Marcus
Chapter 14: Bond Prices and Yields (Section 14.1-14.3, Pages 445-460,
Chapter 15: Term Structure of Interest Rate (Section 15.1-15.5, Pages 487-504)
Chapter 16: Managing Bond Portfolios (Section 16.1, 16.3, Pages 515 – 525, 535 – 543)

Unit 2. Single-period random cash flows (12 Hours)
Random asset returns; portfolios of assets; portfolio mean and variance; feasible combinations of mean and variance; mean – variance portfolio analysis; the Markowitz model; risk-free assets
Bodie, Kane, Marcus
Chapter 7: Optimal Risky Portfolio (Section 7.1 – 7.3, 7.4 Pages 205-218 till Example 7.3, 220 – 228)

Berk, DeMarzo
Chapter 11: Optimal Portfolio Choice and CAPM: (Sections 11.1 – 11.6, pages 351 – 378)

Unit 3. Capital Asset Pricing Model (CAPM) (12 Hours)
The capital market line; the capital asset pricing model; the beta of an asset and of a portfolio; security market line; use of the CAPM model in investment analysis and as a pricing formula. Arbitrage pricing theory(APT) and multi-factor model of risk and return.
Bodie, Kane, Marcus
Chapter 9: Capital Asset Pricing Model (Section 9.1, Pages 291-300)
Chapter 10: Arbitrage pricing theory(APT) and multi-factor model of risk and return.
Berk, DeMarzo
Chapter 11: Optimal Portfolio Choice and CAPM: (Sections 11.7 – 11.8 , pages 379 - 399)
Brealey, Richard A., Myers, Stewart, C., Allen, Franklin
Chapter 8: Portfolio Theory and the Capital Asset Pricing Model (Section 8.4, pages 199-203)
David G. Luenberger:
Chapter 7: The Capital Asset Pricing Model (Section 7.3 & 7.7, Pages 177 – 179, 187 - 190)

Unit 4. Market Efficiency & Behavioural Finance(09 Hours)
Bodie, Kane, Marcus
Chapter 11: Efficient Market Hypothesis (Sections 11.1-11.2, 11.4, Pages 349 – 357, 362-63)
Chapter 12: Behavioural Finance & Technical Analysis
Brealey, Richard A., Myers, Stewart, C., Allen, Franklin
Chapter 13: Efficient Markets &Behavioral Finance (Sections 13.2, 13.5, Pages 314 – 318, 329-333)

Practical Component (30Hours)

1. Present Value and Net Present Value
2. Internal Rate of Return and Loan Tables \
3. Multiple Internal Rates of Return
4. Future Values and Applications
5. Continuous Compounding
6. Analyzing the Cash Flows by NPV or IRR
7. Portfolio Models
8. Calculating Efficient Portfolios When There Are No Short-Sale Restrictions

Reference for Practical:
Simon Benninga, Financial Modelling, MIT Press, Third Edition, 2008:
Chapter 1: Basic Financial Calculations (Sections: 1.2, 1.3, 1.4, 1.6, 1.8)
Chapter 7: The Financial Analysis of Leveraged Leases(Sections: 7.1, 7.2, 7.3)
Chapter 8: Portfolio Models
Chapter 9: Calculating Efficient Portfolios When There Are No Short-Sale Restrictions

Essential/recommended readings
Bodie, Kane & Marcus, Investments McGraw Hill 10th Edition, 2014
Berk, DeMarzo, Corporate Finance, Pearson, 3rd Edition, 2014
Brealey, Richard A., Myers, Stewart, C., Allen, Franklin, Principles of Corporate Finance, McGraw Hill 10th Edition, 2011
David G. Luenberger, Investment Science, Oxford Press, 1998
Simon Benninga, Financial Modelling, MIT Press, Third Edition, 2008

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Discipline Specific Elective 17 (DSE-17): Money and Financial Markets

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
IV/VI/VIII	Money and Financial Markets – ECON047	4	3	1	0	Class 12th Pass	Introductory Macroeconomics

Learning Objectives

The Learning Objectives of this course are as follows:

- This course exposes the theory and functioning of the monetary and financial sectors of the economy. It highlights the organization, structure, and role of financial markets and institutions.
- It also discusses interest rates, monetary management, and instruments of monetary control.
- Financial and banking sector reforms and monetary policy with special reference to India are also covered.

Learning outcomes

The Learning Outcomes of this course are as follows:
This allows students to understand current monetary policies and financial market out- comes. It also enables them to critically evaluate policies and role of the central bank.

Syllabus

UNIT I: Money (9 hours)
Understanding concept and functions of money, Measurement of money supply, Analytics and methodology of computation of money supply, Theories of money supply determination

UNIT II: Financial markets: an Introduction (12 hours)
Role of financial markets and institutions, Money and Capital markets: Pricing and other analytical issues, Financial derivatives: Futures, Options and Swaps, Financial markets in India: Organization, Structure and Reforms in India

UNIT III: Interest Rates (12 hours)
Determination of interest rates, Sources of interest rates differentials and risk, Theories of term structure of interest rates, Interest rates in India

UNIT IV: Central Banking and Monetary policy (12 hours)
Central Bank: Functions and Balance Sheet, Monetary Policy: Targets and instruments, Monetary management in an open economy, Monetary Policy Framework in India: Evolution and current scenario, critical evaluation, Emerging issues in Monetary policy- Changing payment mechanism, Cryptocurrency and others

Recommended readings

- F J Fabozzi et al: Foundations of Financial Markets and Institutions Pearson
- F S Mishkin , S G Eakins, T Jayakumar, R K Pattnaik : Financial Markets and Institutions Pearson
- N Jadhav: Monetary Policy, Financial stability and Central Banking in IndiaMacmilla

- Report of the Working Group: Money Supply Analytics and Methodology of Compilation, 1998 Annual Report; Master Circular - Prudential Norms on Capital Adequacy - Basel I Framework - 2011; RBI Bulletin; Report of Currency and Finance (latest).
- Dua, P., "Monetary Policy Framework in India", Indian Economic Review, Vol. 55, Issue 1, June 2022
- Ghate, C., &Kletzer, K. M. (Eds.). (2016). Monetary policy in India: A modern macroeconomic perspective. Springer.
- Various publications of RBI and other agencies / institutions

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Discipline Specific Elective 19 (DSE-19): Behavioural Economics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VI/VIII	Behavioural Economics – ECON049	4	3	1	0	Class 12th Pass	Game Theory and Strategic Interactions (ECON013)

Learning Objectives

The Learning Objectives of this course are as follows:

- This course introduces departure in behaviour predicted by standard economic theories to provide insights into the new and evolving area of Behavioural Economics.
- First, it outlines the common ideas and theories of Behavioural Economics using the basic mathematical techniques and standard concepts of microeconomics. The empirical basis for the theories of Behavioural Economics is discussed briefly with particular emphasis on the role and nature of experiments.
- The last segment of the course discusses the policy implications of these experiments and policy lessons that have been implemented as a result of empirical support to the theories of behavioural economics.
- The course explains the origin of Behavioural Economics in terms of anomalies in be- haviour that deviate from predicted rational behaviour. It introduces the common ideas and theories of Behavioural Economics. It further familiarise the student with the different types of experiments used for empirical studies.
- The students would demonstrate the policy lessons derived from theories of Behavioural Economics.

Learning outcomes

The Learning Outcomes of this course are as follows:

- This course equips students to contrast the outcomes of standard classical microeconomic theories with real outcomes, to apply the theories that explain anomalies/deviations from rational predicted behaviour.
- It communicate the basic theories of behavioural economics cogently and critically Final Examination in the findings from experiments in terms of their applicability to public policy settings.

Syllabus

UNIT I: Biases/Anomalies and Overview (15 hours)
Some Common Anomalies from Benchmark Theories; Overview of Behavioural Economics

UNIT II: Common Ideas and Theories (15 hours)
Heuristic Thinking; Risk Preferences and Reference-Dependent Preferences; Time Preferences; Social Preferences; Probabilistic Reasoning and Beliefs; Limited Attention; Limited Rationality

UNIT III: Empirical Applications and Policy Suggestions (15 hours)

Methods: Natural experiments, Lab experiments, Field experiments, Survey; Empirical Applications and Policy Suggestions

Recommended readings

- Bernheim, B. Douglas, Stefano DellaVigna, and David Laibson. Handbook of Behavioral Economics-Foundations and Applications. Volumes 1 & 2. Elsevier, 2019.
- Dhami, Sanjit. The Foundations of Behavioral Economic Analysis. Oxford University Press, 2016.
- Angner, Erik. A Course in Behavioral Economics. Bloomsbury Publishing, 2020.
- Thaler, Richard H.. Misbehaving: The Making of Behavioral Economics. New York: WW Norton, 2015.
- Thaler, Richard H., and Cass R. Sunstein. Nudge: Improving Decisions about Health, Wealth, and Happiness. Yale University Press, 2008

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Discipline Specific Elective 20 (DSE-20): Comparative Economic Development

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VI/VIII	Comparative Economic Development – ECON050	4	3	1	0	Class 12th Pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:

- This course investigates selected issues in industrialization and development experiences and debates in comparative historical perspective.
- The course focuses on a set of countries (Britain, Japan and East Asian economies) which followed diverse trajectories of growth to achieve their industrial transition.
- It compares the outcomes of these diverse trajectories on sectoral change, intersectoral relations, labour processes and industrial relations.
- It also compares the role of the state in facilitating the respective trajectories.

Learning outcomes

The Learning Outcomes of this course are as follows:
The students will be able to learn critical factors affected economic development in a historical perspective and assimilate materials from diverse narratives. It will help them to think in an interdisciplinary manner.

Syllabus

UNIT I: Introduction (6 hours)
Theoretical issues and comparative historical background.

UNIT II: Agricultural transformation and its role in industrialization (6 hours)
Agrarian and land relations, production and productivity, agrarian surplus in industrial development. Case studies: Britain, Japan and East Asia.

UNIT III: The industrialization process of Britain, Japan and East Asia (6 hours)

UNIT IV: East Asian Development (9 hours)
A Theoretical Debates (Is it a miracle or not? Is it market or the state? Flying Geese Model? Can we have an "East Asian Model"? Lessons for the other countries.)

UNIT V: The factory system and making of the industrial working class. Case studies: Britain, Japan and EastAsia (6 hours)

UNIT VI: The role of the state in industrial and developmental transitions. Case studies: Britain, Japan and East Asia. (6 hours)

UNIT VII: Export Oriented Development in East Asian Countries? Trade and Industry. (Export-Oriented Industrialization (EOI) vs Import-substitution Industrialization (ISI) - International Context and Domestic Requirements. Importance of trade for underdevelopment vs development.) (6 hours)

Recommended readings

- Hughes, J., Cain, L. (1994). American Economic History, 4th ed. HarperCollins College Publishers.
- Hayami, Y. (1975). A century of agricultural growth in pre-war Japan: Its relevance to Asian development. University of Minnesota Press.
- Hobsbawm, E. (1968). Industry and empire: An economic history of Britain since 1750. Weidenfeld & Nicholson.
- Hobsbawm, E. (1984). Worlds of labour: Further studies in the history of labour. Weidenfeld & Nicolson.
- Johnson, C. (1982). MITI and the Japanese miracle: The growth of industrial policy 1925-1975. Stanford University Press.
- Macpherson, W. (1995). The economic development of Japan 1868-1941. Cam- bridge University Press.
- Norman, E. (2007). Japan's emergence as a modern state: Political and economic problems of the Meiji period. University of British Columbia Press.
- Okochi, K., Karsh, B., Levine, S. (1974). Workers and employees in Japan: The Japanese employment relations system. Princeton University Press.
- Maddison, Angus (2001). The World Economy, Vol. 1: A Millennial Perspective. OECD.
- G.M. Walton and H. Rock-off History of the American Economy, Eleventh Edition. Harcourt Brace Jovanovich.
- Sven Beckert (2015), Empire of Cotton- A Global History, Vintage.
- Michael Merrill, "Cash is Good to Eat: Self-Sufficiency and Exchange in the Rural Economy of the U.S.," Radical History Review, (Winter 1976-77), 42-71.
- Allan Kulikoff, "The Transition to Capitalism in Rural America," William and Mary Quarterly 46 (1989): 120-44.
- Paul David, "Technology, History, and Growth," in Paul David, Technical Choice, Innovation and Economic Growth (Cambridge, 1975).
- Gordon, Edwards, and Reich, Segmented Work, Divided Workers, ch. 4
- Naomi Lamoreaux, The Great Merger Movement in American Business, 1895-1904.
- Lipset, "Radicalism or Reformism: The Sources of Working-Class Politics," American Political Science Review 77:1 (Mar. 1983), 1-18.
- Sheila Collins and Gertrude Goldberg, When Government Helped: Learning from the Successes and Failures of the New Deal. Oxford, Oxford University Press: 2013.
- Morton Horwitz, The Transformation of American Law, 1870-1960 (New York, 1992).
- Edward Baptist, The Half has Never Been Told: Slavery and the Making of American Capitalism. New York, Basic Books, 2014.
- Myers, R.H., 1991. How did the modern Chinese economy develop? - a review article. The Journal of Asian Studies, 50(3), pp.604-628.
- World Bank 1993. The East Asian Miracle, New York, Oxford University Press.
- Rodrik, D, 1994, 'King Kong Meets Godzilla' in A.Fishlow et al., Miracle or Design? - Lessons from the East Asian Experience, Washington, D.C., Overseas Development Council.
- Cheng, T, Haggard, S and Kang, D, 1998, 'Institutions and Growth in Korea and Taiwan: The Bureaucracy', Journal of Development Studies, vol. 34, no. 6.
- Best, M, 1990, New Competition, Cambridge, Polity Press.
- Amsden, A, 1992. Asia's Next Giant: South Korea and Late Industrialization, OUP
- Amsden, A, 1985, 'The State and Taiwan's Economic Development' in P. Evans, D. Rueschemeyer and T. Skocpol, 1985, eds., Bringing the State Back In, Cambridge, Cambridge University Press.
- Chang, H.J., 2006. The East Asian development experience: The miracle, the crisis and the future. Zed Books.
- Morrissey, O. and Nelson, D., 1998. East Asian economic performance: miracle or just a pleasant surprise?. World Economy, 21(7), pp.855-879.
- Crafts, N., 1999. East Asian growth before and after the crisis. IMF Staff Papers, 46(2), pp.139-166.
- Waldron, S., Brown, C. and Longworth, J., 2006. State Sector Reform and Agri- culture in China. The China Quarterly, (186), p.277.
- Krugman, Paul (1994), "The Myth of Asia's Miracle," Foreign Affairs, Vol.73 Issue 6.

- Hau, Shiping (2017), "Introduction: East Asian Development Model,"
- Kuznets, Paul (1988), "An East Asian Model of Economic Development: Japan, Taiwan, and South Korea," Economic Development and Cultural Change, Vol.36 No.3.
- Cline, William (1982), "Can the East Asian Model of Development be Generalized?"
- World Development, Vol.10 Issue 2.
- Aoki, Masahiko (2013), "Historical Sources of Institutional Trajectories in Eco- nomic Development: China, Japan and Korea Compared."
- Lawrence & Weinstein (2001), "Trade and Growth: Import Led or Export Led? Evidence from Japan and Korea" in Stiglitz &Yusurf.
- Weiss, John (2005), Export and Industrial Policy: Lessons from East Asian Miracle Experience
- Dregger, Christian and Herzer, Dierk (2013), "A Further Final Examination of the Export-Led Growth Hypothesis," Empirical Economics Vol.45 Issue 1.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Discipline Specific Elective 21 (DSE-21): Corporate Finance and Governance

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VI/VIII	Corporate Finance and Governance – ECON051	4	3	1	0	Class 12th Pass	Game Theory and Strategic Interactions (ECON013)

Learning Objectives

The Learning Objectives of this course are as follows:

- The field of corporate finance has undergone a tremendous mutation in the past three decades, specially after the global financial crisis. A substantial and important body of empirical work has provided a clearer picture of patterns of corporate financing and governance, and of their impact for firm behavior and macroeconomic activity.
- This course aims to introduce the conceptual foundation of those issues. It will introduce firm'sbehavour of finance choice in the presence of tax distortions, transaction costs, informational asymmetries etc.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students will understand the variety of institutions running corporate business in present day world and will be familiar with the strategies to govern them effectively.

Syllabus

UNIT I: An economic overview of corporate institutions (9 hours)

UNIT II: Corporate Governance (9 hours)
Separation of ownership and control, managerial incentives, investor's activism, takeover, leverage buyout

UNIT III: Corporate Financing and Agency Costs Outside Financing Capacity (6 hours)

UNIT IV: Determination of borrowingcapacity (6 hours)

UNIT V: Corporate financing under asymmetric information (9 hours)

UNIT VI: Exit and voice: Passive and active monitoring (6 hours)

Recommended readings

- Tirole, J. (2010). The theory of corporate finance. Princeton universitypress.
- Vernimmen, P., Quiry, P., & Le Fur, Y. (2022). Corporate finance: theory and practice. John Wiley &Sons.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Discipline Specific Elective 22 (DSE-22): Economics of Education

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VI/VIII	Economics of Education – ECON052	4	3	1	0	Class 12th Pass	Introductory /Principles of Microeconomics

Learning Objectives

The Learning Objectives of this course are as follows:

- This course discusses the economic aspects of current issues in education, using both economic theory and econometric tools.
- Topics include discussion of basic human capital theory, production of education, costing and finance of education, the growing impact of education on earnings and earnings inequality, the labour market for teachers, implications of the introduction of technology (computers) on education, the effectiveness of mid-career training for adult workers, the roles of school choice, and educational outcomes and inequality in demand for education and educational outcomes.

Learning outcomes

The Learning outcomes of this course are as follows:

- This course will develop skills amongst the students to conduct research and analysis in the field of economics of education.

Syllabus

UNIT I: The Role of Education in Human Development (12 hours)
Macro issues in education, human capital theory, returns to education, signalling theory, education and labour market outcomes, costs and benefits of education, education production analysis and early childhood education.

UNIT II: Analysis of School Education (12 hours)
Challenges, educational interventions and attainments, financing, accountability and standards

UNIT III: Higher Education and Training (9 hours)
Issues of higher education in India, role of internship and apprenticeship in improving labour market outcomes

UNIT IV: Education and Inequality (12 hours)
Inequality in uptake and outcomes, and the role of affirmative action.

Recommended readings

- Bradley, S., & Green, C. (Eds.). (2020). The Economics of Education: A Com- prehensiveOverview.
- Lovenheim, M., &Turner, S. E. (2017). Economics of education. Macmillan Higher Education.
- Altinok, Nadir, and Geeta Kingdon. "Newevidence on class size effects: A pupil fixed effects approach." Oxford Bulletin of Economics and Statistics 74, no. 2 (2012):203-234.

- Angrist, Joshua D., and Victor Lavy. ”UsingMaimonides’ rule to estimate the effect of class size on scholastic achievement.” The Quarterly Journal of Economics 114, no. 2 (1999):533-575
- Abhijit Banerjee, Shawn Cole, Esther Duflo, Leigh Linden. “Remedying Education: Evidence from Two Randomized Experiments in India”, QuarterlyJournalofEconomics,122,No.3,Aug2007,Pages1235–1264.
- Hanushek, Eric A. ”Assessingthe effects of school resources on student performance: An update.” Educational evaluation and policy analysis 19, no. 2 (1997a): 141-164.
- Hanushek, Eric A. ”Outcomes, incentives, and beliefs: Reflections on analysis of the economics of schools.” Educational Evaluation and Policy Analysis 19, no. 4 (1997b):301-308.
- Hattie, John. ”Theparadox of reducing class size and improving learning out-comes.”Internationaljournalofeducationalresearch43,no.6(2005):387-425.
- Hanushek, E. A., Machin, S. J., &Woessmann, L. (Eds.). (2016). Handbook of theeconomicsofeducation.Elsevier.
- Ronald G., Ehrenberg and Robert S., Smith. Modern Labor Economics: Theory and Public Policy, 11th edition, Addison Wesley
- Hanushek, Eric A., 2005, Economic Outcomes and School Quality, International AcademyofEducationandInternationalInstituteforEducationalPlanning.
- Majumdar, M. (2017). Access, success, and excess: Debating shadow education in India. In Routledge Handbook of Education in India (pp. 273-284). Routledge India.
- Blatchford, P., & Mortimore, P. (1994). The issue of class size for young children in schools: What can we learn from research?. Oxford review of education, 20(4), 411-428.
- Kingdon, G. G., &Teal, F. (2007). Does performance related pay for teachers improve student performance? Some evidence from India. Economics of Education Review, 26(4),473-486.
- Kingdon, G. G. (2020). The private schooling phenomenon in India: A review. TheJournalofDevelopmentStudies,56(10),1795-1817.
- Varughese, A. R., &Bairagya, I. (2021). Interstate variation in household spending on education in India: Does it influence educational status?. Structural Change andEconomicDynamics,59,405-415.
- Haveman, R., & Smeeding, T. (2006). The role of higher education in social mobility. The Future of children,125-150.
- Afridi, F., Barooah, B., & Somanathan, R. (2020). Designing effective transfers: Lessons from India’s school meal program. Review of Development Economics, 24(1),45-61.
- Singh, A., Park, A., &Dercon, S. (2014). School meals as a safety net: an evaluation of the midday meal scheme in India. Economic Development and Cultural Change, 62(2),275-306.
- Afridi, F., Barooah, B., & Somanathan, R. (2020). Improving learning outcomes throughinformationprovision:ExperimentalevidencefromIndianvillages.Journalof Development Economics, 146, 102276.
- Banerjee, A. V., Cole, S., Duflo, E., & Linden, L. (2007). Remedying education: Evidence from two randomized experiments in India. The Quarterly Journal of Economics, 122(3),1235-1264.
- Coate, Stephen, and Glenn C. Loury (1993) ‘Will Affirmative Action Policies EliminateNegativeStereotypes.’AmericanEconomicReview83(5),1220–1240
- Cullen, Julie Berry, Brian A Jacob, and Steven Levitt (2006) ‘The effect of school choice on participants: Evidence from randomized lotteries.’ Econometrica 74(5), 1191–1230
- Kingdon, G. G. (2007). The progress of school education in India. Oxford Review ofEconomicPolicy,23(2),168-195
- Borooah, V. K. (2012). Social identity and educational attainment: the role of caste and religion in explaining differences between children in India. Journal of Development Studies, 48(7),887-903.
- Chin, A. (2005). Can redistributing teachers across schools raise educational attainment? Evidence from Operation Blackboard in India. Journal of development Economics, 78(2),384-405.
- Ghosh, P., &Bray, M. (2018). Credentialism and demand forprivate supplementary tutoring: A comparative study of students following two Examination boards in India. International Journal of Comparative Education and Development.
- Gandhi Kingdon, G. (2002). The gender gap in educational attainment in India: Howmuchcanbeexplained?.JournalofDevelopmentStudies,39(2),25-53.
- Azam, M., & Kingdon, G. G. (2013). Are girls the fairer sex in India? Revisiting intra-household allocation of education expenditure. World Development, 42, 143- 164.

- Asadullah, M. N. (2005). The effect of class size on student achievement: Evidence from Bangladesh. Applied Economics Letters, 12(4),217-221.
- Tholen, G., Brown, P., Power, S., &Allouch, A. (2013). The role of networks and connections in educational elites' labour market entrance. Research in Social Stratification and Mobility, 34,142-154.
- Silva, P., Lopes, B., Costa, M., Melo, A. I., Dias, G. P., Brito, E., & Seabra, D. (2018). The million-dollar question: can internships boost employment?.StudiesinHigher Education, 43(1),2-21.
- Wright, E., &Mulvey, B. (2021). Internships and the graduate labour market: how upper-middle-class students 'get ahead'. British Journal of Sociology of Education, 42(3),339-356.
- Deshpande, A. (2005). Affirmative action in India and the UnitedStates.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Discipline Specific Elective 23 (DSE-23): Forecasting Methods for Economics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VI/VIII	Forecasting Methods for Economics – ECON053	4	3	1	0	Class 12th Pass	Basic Econometrics (ECON024)

Learning Objectives

The Learning Objectives of this course are as follows:

- This course builds on the compulsory Basic Econometrics course and teaches students a broad set of commonly used econometric methods for forecasting econometric variables.
- These include both quantitative and qualitative Forecasting Techniques including VAR, VECM, ARIMA etc.

Learning outcomes

The Learning outcomes of this course are as follows:

- Students will learn the theoretical and practical basis for forecasting techniques widely used in empirical research and consider their application in a wide range of problems.

Syllabus

UNIT I: Basics of Forecasting (6 hours)
Tools for forecasting, forecasting methods and applications, forecast horizon

UNIT II: Quantitative Forecasting Techniques (9 hours)
Definition,TimeSeries-Naïve,Average, Simple Moving Average, Weighted Moving Average, Exponential Smoothing; Fore- cast Errors Accuracy, Trend Projection, Seasonal Indexes, Holt's, winter's Model, Linear Regression. Smoothing Techniques, Exponential smoothing methods, Decomposition methods.

UNIT III: Box-Jenkins Methodology: Unit roots; Autoregressive models, moving average models, mixed autoregressive and moving average models; Identification, estimation, diagnostic checking and Forecasting (9 hours)

UNIT IV: Forecasting with Multiple Regression Models (6 hours)

UNIT V: Cointegration, Granger Causality, Error Correction (6 hours)

UNIT VI: Qualitative Forecasting Techniques (9 hours)
Definition, Delphi, Precautions in administering Delphi, Sales force composite, Consumer Panel Survey, Nominal group, and their Drawbacks.

Recommended readings

- Spyros G. Makridakis, Steven C. Wheelwright, Rob J Hyndman (2008), Forecast- ing: Methods and Applications, WileyPublications.

- Dimitrios Asteriou and Stephen G. Hall, 4th edition, Applied Econometrics, 2021, PalgraveMacmillan.
- Hyndman, R.J., & Athanasopoulos, G. (2021) Forecasting: principles and practice, 3rd edition, OTexts: Melbourne, Australia.OTexts.com/fpp3.
- Asteriou, D and Hall, Stephen G, Applied Econometrics, 4th Edition, 2021, Palgrave Macmillan.
- James Stock and Mark Watson, Introduction to Econometrics, 4th Edition, 2019, Pearson.
- Wooldridge, J. (2014). Introduction to econometrics: A modern approach, 5th ed. Cengage Learning.
- Gujarati, D., Porter, D. (2012). Basic econometrics, 5th ed.McGraw-Hill.
- Badi H. Baltagi, Econometrics, 5th Edition, 2011,Springer.
- J. Johnston and J. DiNardo (2001), Econometric Methods, Fourth Edition, Irwin McgrawHill
- G.S. Maddala and Kajal Lahiri, Introduction to Econometrics, 4th Edition, 2012, Wiley.
- Diebold, F.X. (2017), Forecasting, Department of Economics, University of Pennsylvania.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Discipline Specific Elective 24 (DSE-24): History of Economic Thought

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VI/VIII	History of Economic Thought – ECON054	4	3	1	0	Class 12th Pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:

- This course intends to acquaint students to an evolution of the history of economic thought from its initial thinkers to ideas of institutionalism and the reinvention of liberalism.
- The course will discuss selected authors on economic theory to understand them within the framework of intellectual debate and change.
- The idea is to expose students to the milestones in economic theory and provide a more holistic understanding of the evolution of contemporary economics.
- The course attempts to fulfil the need to integrate thehistoryofeconomicswiththeteachingoftheprinciplesofeconomics.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students will develop an understanding of the historical antecedents and methodological premises of the theories in economics.
- They will also have a grounding in the set of ideas that inform academic debates and the making of policies related to the economyinthecontemporaryworld.

Syllabus

UNIT I: Introduction (9 hours)
Why study economic thought; history of economic thought or his- tories of economic thought.

UNIT II: The surplus approach and the rise of political economy (9 hours)
Value, Price, Money, Income Distribution, Macroeconomic Setting, Growth and Trade: Reading Adam Smith, David Ricardo and Karl Marx.

UNIT III: Marginalism and Keynesianism (9 hours)
Utility, technology and price : Jevons, Menger, Walras and Marshall. Keynes, Kalecki and the principle of effective demand.

UNIT IV: Institutionalism and Evolutionary Economics (9 hours)
Industrial and Pecuniary employments in Thorstein Veblen; labour as an overhead cost: competition and Knowledge – perfect, imperfect and Rivalrous; Schumpeter: creative destruction, innovation and business cycle.

UNIT V: Neoliberalism and Post-Keynesianism Theory, policy, critique and prospects. Milton Friedman (9

hours)

Recommended readings

- Munday, S. C. (1996). A Brief History of Economic Thought. In Current Developments in Economics (pp. 15-32). Palgrave,London.
- Roncaglia, Alessandro (2017). *A Brief History of Economic Thought*. Cambridge UniversityPress
- Sandelin, B., Trautwein, H. M., &Wundrak, R. (2014). A short history of economic thought.Routledge.
- Medema, S. G., & Samuels, W. J. (2013). The history of economic thought: a reader. Routledge.
- Backhouse, R.E., 1987. A history of modern economic analysis. BasilBlackwell.
- Schumpeter, Joseph A: "The Development of Economics as a Science" in Economic Doctrine and Method. New York, OUP. 1954, Chapter 1, pp 9-44
- Kaul, Nitasha: Imagining Economics Otherwise, Encounters With Identity/Difference. Firstpublishedin2008,Reprint2009.Routledge,NewDelhi,pp73-79
- Foley, D. 2009. Adam's Fallacy: A Guide to Economic Theology. Cambridge, MA andLondon,England:HarvardUniversityPress.
- Galbraith, J.K., 1987. A history of economics: The past as the present. London: H. Hamilton.
- Foley, D. 2009. Adam's Fallacy: A Guide to Economic Theology. Cambridge, MA andLondon,England:HarvardUniversityPress.
- Hunt, E.K. and Lautzenheiser, M., 2015. History of economic thought: A critical perspective. Routledge.
- Martins, N.O., 2013. The Cambridge revival of political economy. Routledge.
- Mazzucato, M., 2018. The value of everything: Making and taking in the global economy. HachetteUK.
- Medema, S.G. and Samuels, W.J., 2013. The history of economic thought: a reader. Routledge
- Screpanti, E. and Zamagni, S., 2005. An outline of the history of economic thought. OUPOxford.
- Temin, P. and Vines, D., 2014. Keynes: useful economics for the world economy. MITPress.
- Vaggi, G. and Groenewegen, P., 2016. A concise history of economic thought: Frommercantilismtomonetarism.Springer.
- Gustafsson, B., Knudsen, C. and Uskali, M. eds., 1993. Rationality, institutionsand economic methodology.Routledge.
- Veblen, T B: The Engineers and the Price System. New York, Augustus M Kelley, 1965. Pp27-51
- Commons, J R: Institutional Economics. AER, Volume 21 1931, pp648-657
- Clark, J M: Studies in the Economics of Overhead Costs. University of Chicago Press, 1923. Pp357-385
- Stigler: Perfect Competition, "Historically Contemplated", in JPE, vol. 65, Number 1, February 1957, pp 1-17
- Kirzner, I: Competition Regulation and the Market Process: An Austrian Perspective. (Link to beprovided).
- Friedman, M: " Neo Liberalism and its Prospects", from The Collected Works of MiltonFriedmanpp89-93
- Chernomas, Robert and Hudson, Ian: The Profit Doctrine. Pluto Press. Chapter Title: 'Milton Friedman: The Godfather of the Age of Instability andInequality.
- Bo Sandelin, Hans-Michael Trautwein, Richard WundrakA Short History of Eco- nomic Thought. Routledge. Third Edition.2014.
- Daron Acemoglu, Francisco A. Gallego, and James A. Robinson Institutions, Human Capital and Development. NBER Working Paper No. 19933. February2014.
- Daron Acemoglu, Simon Johnson, and James Robinson. Institutions as the Fundamental Cause of Long-Run Growth. NBER Working Paper No. 10481. May 2004
- Heilbroner,R.L.(1986).*TheWorldlyPhilosophers*.NewYork,Simon&Schuster.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Discipline Specific Elective 25 (DSE-25): Industrial Organisation

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VI/VIII	Industrial Organisation – ECON055	4	3	1	0	Class 12th Pass	Game Theory and Strategic Interactions (ECON013)

Learning Objectives

The Learning Objectives of this course are as follows:

- The course assumes knowledge of intermediate microeconomics and game theoretical tools. The students should also be comfortable with applications of calculus.
- This course studies imperfectly competitive market and primarily focuses on firms' strategies in oligopolistic market environments.
- This is the foundation course which aims to prepare the students for further study and research.
- Along with classical models of industrial organisation, the course also covers some contemporary topics like mergers and acquisitions, patents, advertising and networks.
- The learning from this course would be useful to understand and analyse different anti-competitive practices of the firms and theneedfordesigningbettercompetitionpolicyforregulatingthemarket.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students will be able to learn classical models in imperfectly competitive market, understand why regulation of firms is necessary.
- They willbeabletorelatemodernissuesofindustrialorganisation

Syllabus

UNIT I: Imperfectly Competitive Market Product Differentiation, Bertrand, Cournot, Hotelling, Salop, Monopolistic Competition (6 hours)

UNIT II: Dynamic Models of Oligopoly, Cartels, Collusion and Entry Deterrence, Anti-trust (9 hours)

UNIT III: VerticalRelationandVerticalRestraint;DoubleMarginalization,SuccessiveOligopoly, Raising Rival's Cost, Resale Price Maintenance (RPM), Exclusive Dealing (6 hours)

UNIT IV: Mergers and Acquisitions, Horizontal and Vertical Integration (6 hours)

UNIT V: Technology, Innovation, R&D; Market structure and innovation, R&D, Patents, Technology Transfer (6 hours)

UNIT VI: Networks; network Effects, Markets for a Single Network Good and Several Net- workgoods (6 hours)

UNIT VII: Advertisement; Social Costs and Benefits of Advertising, Market Structure, Advertising as Barrier to Entry, Product Differentiation and Competition (6 hours)

Recommended readings

- Cabral, L. M. B. (2017), *Introduction to Industrial Organization*. Second edition, Cambridge, Mass: MITPress.
- Church, J. R., and Roger Ware, (2000), *Industrial Organization: A Strategic Ap- proach.*Boston: Irwin McGraw Hill.
- Shy,O.,(1995),*IndustrialOrganization-TheoryandApplications*,MITPress.
- Watson, J., (2013) *Strategy: An Introduction to Game Theory*, W. W Norton &Company.
- Waldman,D.andJansenE.,(2013),*IndustrialOrganization:MarketsandStrategies* (second edition),Pearson.
- Belleflamme,P.,andPeitz,M.(2010),*Industrialorganization:marketsandstrategies*.Cambridge,UK,CambridgeUniversityPress.
- Tirole , J. (1988), *The theory of industrial organization*, Cambridge, MA: MIT Press.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Discipline Specific Elective 26 (DSE-26): Introduction to Causal Inference

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VI/VIII	Introduction toCausal Inference–ECON056	4	3	2	0	Class 12th Pass	Basic Econometrics (ECON024)

Learning Objectives

The Learning Objectives of this course are as follows:

- This course intends to provide students with the essential econometric tools required for causal inference analysis.
- The course will give an overview about potential outcomes framework,datadesignandanalysis.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students will be able to understand, design and implement various techniques of causal inference for data analysis as a tool for research.
- The students will be able to do anindependentresearchprojectbasedonthetechniquestheywilllearninthiscourse.

Syllabus

UNIT I: Potential Outcomes Framework (9 hours)
Causal Inference and Potential Outcomes Framework

UNIT II: Research Design (9 hours)
Observational data and experimental data; sample selection

UNIT III: Methods of Analysis (9 hours)
Overview: Ordinary Least Squares (OLS) and Limited Dependent Variables (LDV) Models, Instrumental Variables

UNIT IV: Panel Data (including Difference-in-Difference) (9 hours)
Regression Discontinuity Design (RDD); Introduction to Matching

UNIT V: Hands-on Training (9 hours)
Project work using econometric software (EViews/ R/Stata/EXCEL/SPSS/Julia)

Recommended readings

- Huntington-Klein, N. (2021). The effect: An introduction to research design and causality. Chapman andHall/CRC.
- Imbens, G. W., & Rubin, D. B. (2015). Causal inference in statistics, social, and biomedical sciences. Cambridge UniversityPress.
- Stock, J. H., &Watson, M. W. (2015). Introduction to econometrics (3rd updated edition).
- Rosenbaum, P. (2018). Observation and experiment. Harvard UniversityPress.

- Angrist, J. D., & Pischke, J. S. (2014). *Mastering metrics: The path from cause toeffect*.Princetonuniversitypress.
- Imai, K. (2018). Quantitative social science: An introduction. Princeton UniversityPress.
- Cunningham, S. (2018). Causal inference: The mixtape (V. 1.7)
- Gertler, Paul J.; Martinez, Sebastian; Premand, Patrick; Rawlings, Laura B.; Vermeersch, Christel M. J.. (2016). *Impact Evaluation in Practice, Second Edition. Washington*,DC:Inter-AmericanDevelopmentBankandWorldBank.
- White, H., Raitzer, D. A. (2017). Impact Evaluation of Development Interventions: A Practical Guide. Philippines: Asian DevelopmentBank.
- Glewwe, P., &Todd, P. (2022). Impact Evaluation in InternationalDevelopment.
- Carolina Arteaga,The effect of human capital on earnings: Evidence from a reform at Colombia's top university, Journal of Public Economics, Volume 157, 2018, 212- 225
- Bertrand, M., & Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. AmericanEconomicReview,94(4),991-1013.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Discipline Specific Elective 27 (DSE-27): Introduction to Macroeconomic Dynamics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VI/VIII	Introduction to Macroeconomic Dynamics – ECON057	4	3	1	0	Class 12th with Mathematics	Advanced Mathematical Methods for Economics (ECON009) And Intermediate Macroeconomics

Learning Objectives

The Learning Objectives of this course are as follows:

- This is a course which introduces the student to the basics of macroeconomic modelling through dynamic optimization.
- This includes Bellman equation, Euler's equation, Hamiltonian techniques and optimal control approaches.

Learning outcomes

The Learning outcomes of this course are as follows:

- The student gets insights about the construction of abstract macroeconomic models.
- This enables appreciation of a good body of macroeconomic literature in different spheres.
- The course would prove to particularly useful for those interested in pursuing macroeconomicsasafieldofresearchandinquiry.

Syllabus

UNIT I: Dynamic Optimization (15 hours)
Difference equations; differential equations; phase plane analysis; dynamic optimization

UNIT II: Infinite Horizon and Overlapping Generations model (15 hours)
Optimal growth, Ramsey Cass Koopmans model; overlapping generations model, Diamond Dybvig Model

UNIT III: Optimal Control Theory (15 hours)

Recommended readings

- Hoy,Livernois,McKenna,Rees,Stengos(2011),*MathematicsforEconomics*,Addison- Wesley.
- Chiang,AlphaC(1992),*ElementsofDynamicOptimization*,McGrawHill.
- Romer, David (2019) *Advanced Macroeconomics.* McGrawHillIndia.
- Barro,RobertandSalaiMartin,Xavier(2004)*EconomicGrowth*.SecondEdition
- Blanchard, Olivier and Fischer, Stanley (1996), *Lectures on Macroeconomics*, Pren- tice Hall. Eastern EconomyEdition.

- Turnovsky, Stephen(1995) *Methods of macroeconomic dynamics* Prentice Hall In- dia. Eastern EconomyEdition.
- Heijdra, Ben (2017) *Foundations of Modern Macroeconomics*. Oxford.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Discipline Specific Elective 28 (DSE-28): Labour Economics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VI/VIII	Labour Economics– ECON058	4	3	1	0	Class 12th Pass	Introductory /Principles of Microeconomics

Learning Objectives

The Learning Objectives of this course are as follows:

- The curriculum is an introduction to labor economics, with an emphasis on applied microeconomic theory and empirical methods critical to microeconomic analysis, as well as the link between research and public policy.
- This course particularly focuses on some of the core theories on labor economics e.g.labor supply, labor demand, role of human capital, incentives, agency, efficiency wages, wage differential and discrimination. The main objective of this course is to enlighten students with some core topics in labor economics with some of the important empirical methods.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students will be able to understand basic theories of labor markets, issues of un- employment, and forms of employment.
- They will learn to critically analyse labour markets in diverse settings including in the macroeconomic context.
- This course will enable the students to evaluate the government policies on labor market critically.

Syllabus

UNIT I: Labor Supply (Static and Intertemporal) (9 hours)
Measuring the Labor Force, Basic Facts about Labor Supply, The Worker's Preferences, The Budget Constraint, The Hours of Work Decision, To Work or Not to Work? The Labor Supply Curve, Estimates of the Labor Supply Elasticity, Labor Supply of Women, Labor Supply over the Life Cycle, Policy Application: Welfare Programs and Work Incentives, Policy Application: The Earned Income Tax Credit, Policy Application: The Decline in Work Attachment among Older Workers.

UNIT II: Labor Demand (9 hours)
The Production Function, The Employment Decision in the Short Run, The Employment Decision in the Long Run, The Long-Run Demand Curve for Labor, The Elasticity of Substitution, Marshall's Rules of Derived Demand, Factor Demand with Many Inputs, Overview of Labor Market Equilibrium, Adjustment Costs and Labor Demand, Trade and Labor Demand, Policy Application: Affirmative Action and Production Costs, Policy Application: The Employment Effects of Minimum Wages Application: Rosie the Riveter as

an InstrumentalVariable

UNIT III: Human Capital (6 hours)
Education in the Labor Market: Some Stylized Facts, The Schooling Model, Education and Earnings, Estimating the Rate of Return to Schooling, Do Workers Maximize Lifetime Earnings? Schooling as a Signal, Post school Human Capital Investments, On-the-Job Training, On-the-Job Training and the Age-Earnings Profile, Policy Application: School Construction in Indonesia, Policy Application: School Quality and Earnings, Policy Application: Evaluating Government Training Programs

UNIT IV: Incentives, Agency and Efficiency Wages (6 hours)
Moral Hazard, Moral Hazard with Limited Liability, Multitasking, Career Concerns, and Applications, Efficiency Wage Models

UNIT V: Wage Differential and Wage Structure (9 hours)
The Market for Risky Jobs, The Hedonic Wage Function, Compensating Differentials and Job Amenities, The Earning Distribution, Measuring Inequality, The Wage Structure: Basic Facts, Inequality across generations. Policy Application: How much is a life worth? Policy Application: Safety and Health Regulations, Policy Application: Health Insurance and the Labor Market, Policy Application: Why did wage inequalityincrease?

UNIT VI: Discrimination (Race and Gender) (6 hours)
Race and Gender in the Labor Market, The Discrimination Coefficient, Employer Discrimination, Employee Discrimination, Customer Discrimination, Statistical Discrimination, Experimental Evidence on Discrimination, Measuring Discrimination, Discrimination against Other Groups, Policy Application: Determinants of the Black–White Wage Ratio, Policy Application: Determinants of the Fe- male–Male Wage Ratio.

Recommended readings

- GeorgeJ.Borjas,*LaborEconomics*,McGrawHill(7thEdition)
- P.Cahuch,StéphaneCarcillo,andAndréZylberberg.*LaborEconomics*,SecondEdition. MIT Press,2014
- Lectures in Labor Economics By Daron Acemoglu and DavidAutor
- Acemoglu, D., D. Autor and D. Lyle, "Women, Warand Wages: The Effect of Female Labor Supply on the Wage Structure at Mid-century," *Journal of Political Economy* (2004) 112:497-551.
- Angrist, J. D., & Pischke, J. S. (2008). *Mostly harmless econometrics*. Princeton universitypress.
- Angrist, J. D., Caldwell, S., & Hall, J. V. (2021). Uber versus taxi: A driver's eye view. *American Economic Journal: Applied Economics*, 13(3),272-308.
- Ashenfelter, O., K. Doran, and B. Schaller, "A Shred of Credible Evidence on the Long-runElasticityofLabourSupply,"*Economica*(2010),77:637
- Bertrand, M. and S. Mullainathan, "AreEmily and Greg More Employable Than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination," *AmericanEconomicReview*94(2004):991-1013(PrimaryReading)
- Cappelli, Peter and Keith Chauvin (1991) "An Interplant Test of the Efficiency Wage Hypothesis." *Quarterly Journal of Economics*, 106(3), 769 – 787.
- Card, David and A. B. Krueger, "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania," *American Economic Review*(1994)84:772-793.
- Carl Shapiro and Joseph Stiglitz (1984) "Equilibrium Unemployment as Worker DisciplineDevice,"*AmericanEconomicReview*,vol.74(3),pages433-44,June.
- Cesarini,D.,Lindqvist,E.,Notowidigdo,M.J.,&Östling,R.(2017).Theeffectof wealth on individual and household labor supply: evidence from Swedish lotteries. *American Economic Review*, 107(12),3917-46.
- Charles, K.K. and J. Guryan, "Prejudice and Wages: An Empirical Assessment of Becker's The Economics of Discrimination," *Journal of Political Economy* (2008), 16(5):773-809.
- D. Acemoglu, and J-S. Pischke (1999). "Beyond Becker: Training in Imperfect LaborMarkets,"*EconomicJournal*vol109February1999,ppF112-142.
- D. Autor, (2001) "Why Do Temporary Help Firms Provide Free General Skills Training?",*QuarterlyJournalofEconomics*,Vol.116,No.3,pp.1409-1448.(M)

- D. Card, ”UsingRegional Variation to Measure the Effect of the Federal Minimum Wage,” *Industrial and Labor Relations Review*, October1992.
- D. Card, “Estimating the Return to Schooling: Progress on Some Persistent Econometric Problems.” *Econometrica*69 (September2001).
- Fehr, E. and L. Goette, ”DoWorkers Work More if Wages are High? Evidence from aRandomizedFieldExperiment,”*AmericanEconomicReview*(2007),1:298-317.
- Goldin, C., and C.Rouse, ”Orchestrating Impartiality: The Impact of ”Blind” Auditions on Female Musicians,” *American Economic Review* (2000), 90 (4):715-741.
- Imbens, D. Rubin, and B. Sacerdote, “Estimating the Effect of Unearned Income on Labor Supply: Evidence from a Survey of Lottery Players,” *American Economic Review* 91(2001).
- J. Tyler, Richard J. Murnane and John Willett, “Estimating the Labor Market SignalingvalueoftheGED,”*QuarterlyJournalofEconomics*,May2000.(M)
- J.D. Angrist and A. Krueger, ”DoesCompulsory Schooling Attendance Affect SchoolingandEarnings?”*QuarterlyJournalofEconomics*,106[4],Nov1991,979- 1014.
- Krueger, Alan B, and Lawrence H. Summers (1988) “Efficiency Wages and the Inter-IndustryWageStructure,”*Econometrica*,56(2)259-93.
- Maiti, D., & Mukherjee, A. (2013). Trade cost reduction, subcontracting and unionised wage. *Labour Economics*, 21,103-110.
- P. Martorell and D. Clark, “The SignalingValue of a High School Diploma,” *Journal ofPoliticalEconomy*,122[2],April2014.
- Saha, B., Sen, K., & Maiti, D. (2013). Trade openness, labour institutions and flexibilisation:TheoryandevidencefromIndia.*Laboureconomics*,24,180-195.
- T. MaCurdy, ”AnEmpirical Model of Labor Supply in a Life-Cycle Setting,” *Journal of Political Economy*, 89[6], December 1981, 1059-1085.
- Weber, A. and E. Del Bono “Do Wages Compensate for Anticipated Working Time Restrictions? Evidence from Seasonal Employment in Austria”, *Journal of Labor Economics*, 26(1), 181-221,2008.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Discipline Specific Elective 29 (DSE-29): Sectoral Issues in Indian Economy

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VI/VIII	Sectoral Issue in Indian Economy – ECON059	4	3	1	0	Class 12th Pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:
The course imparts in-depth knowledge on the issues relating to the agricultural and industrial economy of India, with the focus on the evolutionary path undertaken and the resultant concerns. This will cover issues of MSMEs and small farms to in form the problems industrialisation as well asincreasedproductivityofagriculture.

Learning outcomes

The Learning outcomes of this course are as follows:
This course will familiarize students with the problems, issues,currentdebates,andpolicyinterventionsforlong-termsustainability,efficiency,and resilience. The students will be able to understand, comprehend and critically analyse the issues and policies and would be able to form a well-informed and well- articulated opinionoftheirown.

Syllabus

UNIT I: Agricultural Performance since Independence: (6 hours)
Output and productivity growth Agricultural Performance since Independence in the context of land andlabour

UNIT II: The Policy Environment: Food security and nutritional concerns, MSPs, Agricultural price policy, subsidies/cash transfers, The public distribution system; Capital formation (9 hours)

UNIT III: Current Issues in Indian Agriculture (selected topics) (15 hours)
Resource Use Efficiency-Fertiliser, Water, Other inputs; Diversification for future Growth and enhanced farm income; Sustainable agricultural growth—concepts and constraints; Prospects for dryland/organic/zero budget farming; trade and competitiveness;useofnewtechnologyandartificialintelligence;Marketing/infrastructure; Crop insurance/agriculturalfinance

UNIT IV: Industry (15 hours)
Overview of the Industrial Scene in India- Trends in growth and productivity; Competitiveness and changes in Policy Regimes- domestic competitiveness and export; Issues relating to Indian Industry (selected topics); Scale and ownership, MSMEs and large industries, Public and Private Sector, Employment growth, labour and capital (domestic and foreign), formal and informal sectors, Infrastructural bottle- necks, research and development.

Recommended readings

- SukhamoyChakravarty (1984) Aspects of India's Development Strategy for 1980s? EPW vol 19 no20-21
- J. Bhagwati (1993), India in Transition: Freeing the Economy, Clarendon Oxford 1993
- K. V. Ramaswamy (2015) Labour, Employment and Economic Growth in India CambridgeUniversityPress
- Isher Judge Ahluwalia (1985) Industrial Growth in India: Stagnation Since the Mid-sixties,OxfordUniversityPress
- R. Nagaraj (2015) Can the Public Sector Revive the Economy? Review of the Evidence and a Policy Suggestion EPW vol 50 no5
- S N Rajesh Raj, Kunal Sen (2020) The 'Missing Middle' Problem in Indian Manufacturing. What Role Do Institutions Play? EPW April 18, 2020 vol 55 no16
- Indian Industrialisation, ICSSR Research and Surveys and Explorations in Eco- nomics vol.1 (2015)-C P Chandrasekhar (ed), Oxford University Press,Delhi
- Sabyasachi Mitra, Abhijit Sen Gupta, and Atul Sanganeria (2020) Drivers and Benefits of Enhancing Participation in Global Value Chains: Lessons for India, ADB South Asia Working Paper No. 79
- Raghuram Rajan (2015) Make in India, largely for India, Indian Journal of Indus- trial Relations, Vol. 50, No. 3 (January 2015), pp.361-372
- Vaidyanathan, A. (1994), "Performance of Indian Agriculture since Independence" in Kaushik Basu (ed.), Agrarian Questions Oxford UniversityPress.
- Mahendra Dev (2016) Water Management and Resilience in Agriculture vol 51, No 8 EPW Economic & Political Weekly
- Ramesh Chand (2012) Development Policies and Agricultural Markets EPW DE- CEMBER 29, 2012 vol 47 no52
- Yoginder K Alagh (2021) Globalisation and the Indian Farmer EPW vol 56 no 28
- Chatterjee, S., Kapur, D. (2017). Six puzzles in Indian agriculture. India Policy Forum 2016, Vol. 17.
- NABARD Foundation Day, Paper on enhancing Farmers' income by K J S Satyasai and Nirupam Mehrotra. 12 July 2016
- Acharya, S.S. (2007) "Agribusiness in India: Facts and Emerging Issues", AgriculturalEconomicsResearchReview,Vol. 20,ConferenceIssue,pp.409-424
- Mohan, R., (2006) Agricultural Credit in India: Status, Issues and Future Agenda, EconomicandPoliticalWeekly,March18,2006,pp1013-1021.
- Mishra S.N. and Chand, R., (1995) Public and Private Capital Formation in Indian Agriculture: Comments on Complementarily Hypothesis, Economic and Political Weekly, June 24th,1995
- GOI (2007), Report of The Working Group on Risk Management in Agriculture for the Eleventh Five Year Plan (2007-2012), GOI, NewDelhi
- Indian Agriculture Towards 2030-Pathways for Enhancing Farmers' Income, Nutritional Security and Sustainable Food and Farm Systems (2021) An open-access Springerpublication.
- Government of India (2017) "Report of the Committee on Doubling Farmers' In- come". Ministry of Agriculture and Farmers' Welfare, Government ofIndia
- PRS Legislative Research (2017), Swaminathan Report: National Commission on Farmers, at Swaminathan Report: National Commission on Farmers, PRSIndia
- Acharya SS and NL Agarwal (2016), Agricultural Marketing in India, New Delhi: CBS Publishers andDistributors
- Expert Committee Report on Marketing Infrastructure & Agricultural Marketing Reforms (2000) Government of India, Department of Agricultural & Cooperation Krishi Bhavan, NewDelhi

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Discipline Specific Elective 30 (DSE-30): Topics in Game Theory

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VI/VIII	Topics in Game Theory – ECON060	4	3	1	0	Class 12th with Mathematics	Game Theory and Strategic Interactions (ECON013)

Learning Objectives

The Learning Objectives of this course are as follows:

- This course deals with extensive form games. Students learn the concepts of subgame- perfect equilibrium, Bayesian and Perfect Bayesian equilibrium in static and dynamic forms.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students will learn how to model multi-person decision making in an interactive setting.
- They will understand how to formulate different real-life situations as games and learn to predict the optimal strategies of players and how the players can exploit strategicsituationsfortheirownbenefit.

Syllabus

UNIT I: Extensive form games with perfect information (9 hours)
Extensive games with perfect information; strategies and outcomes; Nash equilibrium; subgame perfect equilibrium; backward induction in finite games; commitment; bargaining; Stackelberg's model of duopoly; a race; other illustrations

UNIT II: Simultaneous move games (9 hours)
Entry into a monopolized industry; electoral competition with strategic voters; committee decision-making; exit from a declining industry

UNIT III: Bayesian games (9 hours)
Strategies; Bayesian Nash equilibrium; Cournot's duopoly game with imperfect information; providing a public good; auctions; juries; other applications.

UNIT IV: Extensive form games with imperfect information (9 hours)
Strategies; Nash equilibrium; beliefs and sequential equilibrium; perfect Bayesian equilibrium; signaling games; applications.

UNIT V: Repeated Games (9 hours)
Payoffs, strategies, Nash equilibrium and subgame perfect equilibrium of repeated games

Recommended readings

- Martin J. Osborne, *An Introduction to Game Theory*, Oxford University Press, New Delhi,2004.

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DISCIPLINE SPECIFIC ELECTIVE COURSE 31(DSE-31) : FINANCIAL DERIVATIVES

Credit distribution, Eligibility and Pre-requisites of the Course

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical / Practice		
VI/VIII	Financial Derivatives ECON077	4	3	1	0	Class XII with Mathematics	Introductory Mathematical Methods for Economics ECON002

Learning Objectives

- To equip students with essentials tools for understanding Finance at undergraduate level.
- To provide analytical knowledge to understand complex financial Derivatives.
- To provide advance skills for pricing and formulating trading strategies using Derivative products

Learning outcomes

- After studying this course, students would be able to understand the core concepts of financial derivates. The course would develop an analytical knowledge for understanding the mechanics and characteristics of derivative products such as Future, Options and SWAP agreements.
- After studying this course, students would be able to understand and formulate complex trading strategies adopted using financial derivate products.

SYLLABUS OF DSE: FINANCIAL DERIVATIVES

Unit 1: Futures Contract & SWAP (15 Hours)
Part I: Futures/Forward Contracts: Properties, Pricing and Hedging
a) Introduction to derivatives and options; forward and futures contracts; options; other derivatives
Hull Chapter - 2: Mechanics of Futures Markets (Sections 2.1 - 2.4 & 2.11)

b) Forward and future prices
Hull Chapter-5: Determination of Forward & Futures Prices (Sections 5.1 - 5.5, 5.9, 5.11 & 5.12)

c) Stock index futures & the use of futures for hedging
Hull Chapter - 3: Hedging Strategies using Futures

Part II: Interest Rate Futures
d) Interest rate futures & duration-based hedging strategies
Hull Chapter - 6: Interest rate futures (6.1 to 6.4) [exclude page-158 & 159]

Part III: SWAP & FRA
e) Forward Rate, Forward Rate Agreement and SWAP
Hull Chapter - 4: Interest rate (4.1 to 4.3, 4.6 and 4.7)
Kolb Chapter – 37: Forward Rate Agreements (Page 575- 577)
Hull Chapter - 7: Swaps (7.1 to 7.4)

Kolb Chapter – 1: Swap Contracts (Page 11-13); Chapter - 28: Pricing and Valuation of SWAP (page 407-410)

Unit 2: Options Contract (30 Hours)
Part I: Introduction and Properties of Option Contracts
f) Option markets; call and put options; factors affecting option prices; put-call parity
Hull Chapter - 10: Mechanics of options markets (10.1 to 10.7);
Hull Chapter -11: Properties of stock options (Full Chapter)

Part II: Option Strategies
g) Option trading strategies: spreads; straddles; strips and straps; strangles
Hull Chapter -12: Trading strategies involving options (Full Chapter)

Part III: Pricing of Options, BSM and Greek letters
h) The principle of arbitrage; discrete processes and the binomial tree model; risk neutral valuation, Black Scholes Merton (BSM) Model, Greek letters
Hull Chapter - 13: Binomial trees. Sections 13.1-13.4, 13.6 - 13.9 & Appendix (Derivation of BSM)
Hull Chapter - 14: Section 14.6 ITOˆ ’S Lemma
Hull Chapter - 15: The Black–Scholes–Merton Model: Sections 15.3, 15.4, 15.5, 15.6, 15.8,15.11
Hull Chapter - 19: The Greek Letters

Recommended readings

Hull, John C.,Options, Futures and Other Derivatives, Pearson Education, Inc, 9th Edition (Global Edition), 2018.

Robert W. Kolb, James A. Overdahl, Financial Derivatives: Pricing and Risk Management, John Wiley & Sons, 2010

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Discipline Specific Elective 32 (DSE-32): Political Economy and Globalisation

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
IV/VI/VIII	**Political Economy and Globalisation – ECON078**	**4**	**3**	**1**	**0**	**Class 12th Pass**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- To explore some of the fundamental structural changes and dynamics of the advanced capitalist system since the early twentieth century to the contemporary period.
- To analyse the changes in the organization of production, labour market institutions as well as shifts in corporate, managerial, fiscal, financial and inter-firm governance structures.
- To analyse the role of state in the era of globalization. It also integrates contemporary issues of gender and environment in a political economy framework.

Learning outcomes

After completion of the course the learners will be able to:

- Do critical analysis in an integrated and broader political economy framework.
- Analyze some of the most contemporary trends and developments at the global level and evaluate them.
- Analyze the issues studied in the compulsory courses on the Indian Economy and Development Economics.

Syllabus

UNIT I: Changing Dynamics of Capitalist Production, Organisational Form and Labour Process (9 hours)
Historical Overview; changing dynamics of the organisation of production, markets and labour process; Evolution of the multinational corporations and their economic logic; changing nature of employment, job security and labour rights.

UNIT II: The State and the Economy (9 hours)
State and the economy; political economy of macroeconomic policy; state in the international political economy - globalisation and imperialism.

UNIT III: Neoclassical political economy (9 hours)
State and rent seeking; market failure; government failure and decentralized development; institutions and economic development; theory of political transitions.

UNIT IV: Political economy of fiscal consolidation and financialization (9 hours)
Principles of Political economy of Taxation; changing role of finance and the shifts in corporate governance structures: financialization – its nature and consequences.

UNIT V: Broader Perspectives (Gender and Environment) (9 hours)
Dimensions of Gender in work, accumulation and globalization; political economic issues in environment, sustainability and inequality.

Recommended readings

- Acemoglu, D and J. A. Robinson (2001). "A Theory of Political Transitions", *The AmericanEconomicReview*,Vol. 91,No. 4(September),pp. 938-963
- Acemoglu, D., & Robinson, J. A. (1999). On the political economy of institutions and development. *American Economic Review*, 91(4), 938-63.
- Acemoglu, D., Golosov, M., &Tsyvinski, A. (2007). Political economy and the structure of taxation. MIT mimeo.
- Bardhan, Pranab (1996)Decentraliseddevelopment. *Indian EconomicReview*, 1996.
- Beaud, Michel (2001). A History of Capitalism, 1500-2000, translated by Tom Dickman and Anny Lefebvre, New York: Monthly Review Press.
- Boyce, J. K. (2002). *The Political Economy of the Environment*, Edward Elgar.
- Chang, D. (2009). "Informalising Labour in Asia's Global Factory" *Journal of Contemporary Asia*, 39:2, 161-179.
- Datta-chaudhuri, Mrinal (1990) Market failure and Government Failure. *JournalofEconomicPerspectives*.Volume4,Number3—Summer1990—Pages25–39.
- Di John, J. (2006). The political economy of taxation and tax reform in developing countries (No. 2006/74). WIDER research paper.
- Dore, Ronald (2008). "Financialization of the Global Economy", *Industrial and Corporate Change*, Volume 17, Number 6, pp. 1097-1112.
- Gandini, Alessandro (2019). "Labour Process Theory and the Gig Economy",*Human Relations*, Vol. 72(6). [Particularly pages 1044-1051. The sections of"The point of production in the gig economy", "Emotional labour and gig work",and "Control"].
- Gereffi, G, J. Humphrey and T. Sturgeon (2005): "The Governance of Global Value Chains", *Review of International Political Economy*, Volume 12, pp. 78-104.
- Gottfried, Heidi (2013). *Gender, Work and Economy - Unpacking the Global Economy, Polity*. [Chapter 10 "Gender, Global Labor Markets, Commodity Chains and Mobilities"]
- Hall, P. A. and D. Soskice (2001) 'An Introduction to Varieties of Capitalism' in Hall, P. A. and D. Soskice Varieties of Capitalism: the institutional foundation of comparative advantage, Oxford University Press, pp 1-68
- Huws, Ursula (2016). "A New Paradigm for work Organisation?", *Work Organisation, Labour & Globalisation*, Vol 10 No. 1 pp 7-26, Pluto Journals.
- Hymer, Stephen (1975). "The Multinational Corporation and the Law of Un-even Development", in H. Radice (ed.) *International Firms and Modern Imperialism*, Penguin Books.
- Kim, S. Y., & Spilker, G. (2019). Global value chains and the political economy of WTO disputes. *The Review of International Organizations*, 14(2), 239-260.
- Kiser, E., &Karceski, S. M. (2017). Political economy of taxation. *Annual review of political science*, 20, 75-92.
- Sen, Amartya K. (1990): "Gender and Cooperative Conflicts" in Irene Tinker (ed.)*Persistent Inequalities - Women and World Development*, OUP.
- Srinivasan T N (1985) Neoclassical political economy, the state and economic development. *Asian Development Review* Vol. 3.1985, 2, p. 38-58

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COMMON POOL OF GENERIC ELECTIVES (GE) COURSES

GENERIC ELECTIVES (GE-1): PRINCIPLES OF MICROECONOMICS I

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Semester	Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
			Lecture	Tutorial	Practical/ Practice		
I/III/V/VII	Principles of MicroeconomicsI ECON025	4	3	1	0	Class XII pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:

- This course discusses the basic principles in Microeconomics and their applications. It includes consumer's problem, demand estimation, production function, cost functions and market analysis. It illustrates how the concepts of microeconomics can be applied toanalyzereal-lifeeconomicsituations.

Learning outcomes

The Learning Outcomes of this course are as follows:

- Thestudentslearnsomebasicprinciplesofmicroeconomicsofconsumerandproducers,andinteractions of supply and demand, characteristics of perfect competition, efficiency and welfareoutcomes.

SYLLABUS OF GE-1

UNIT – I: Introduction (12 hours)
Problem of scarcity and choice: scarcity, choice and opportunity cost; production possibility frontier; economic systems. Demand and supply: law of demand, determinants of demand, shifts of demand versus movements along a demand curve, market demand, law of supply, determinants of supply, shifts of supply versus movements along a supply curve, market supply, market equilibrium. Applications of demand and supply: price rationing, price floors, consumer sur- plus, producer surplus. Elasticity: price elasticity of demand, calculating elasticity, determinants of price elasticity, other elasticities

UNIT – II: Consumer Theory (12 hours)
Budget constraint, concept of utility, diminishing marginal utility, Diamond-water paradox, income and substitution effects; consumer choice: indifference curves, derivation of demand curve from indifference curve and budget constraint

UNIT – III: Production and Costs (12 hours)

Production: behaviour of profit maximising firms, production process, production functions, law of variable proportions, choice of technology, isoquant and isocostlines, cost minimizing equilibrium condition
Costs: costs in the short run, costs in the long run, revenue and profit maximization, minimizing losses, short run industry supply curve, economies and dis- economies of scale, long run adjustments

UNIT – IV: Perfect Competition (09 hours)

Assumptions: theory of a firm under perfect competition, demand and revenue; equilibrium of the firm in the short run and long run; Long run industry supply curve: increasing, decreasing and constant cost industries.
Welfare: allocative efficiency under perfect competition.

Practical component (if any) - NIL

Essential/recommended readings

- Mankiw,N.G.(2018).*PrinciplesofMicroeconomics*8thed.
- Frank, R. H., & Cartwright, E. (2010). *Microeconomics and behavior*. New York: McGraw-Hill.
- Bernheim,B.,Whinston,M.(2009).*Microeconomics*.TataMcGraw-Hill.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

GENERIC ELECTIVES (GE-2): BASIC DEVELOPMENT ECONOMICS

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Semester	Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
			Lecture	Tutorial	Practical/ Practice		
I/III/V/VII	**Basic DevelopmentEconomics ECON029**	**4**	**3**	**1**	**0**	**Class XII Pass**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course exposes students to some of the key ideas and concepts in the areas of economic growth, human development and globalisation building on the concept of growth and further links it up with alternative conceptions of development.

Learning outcomes

The Learning Outcomes of this course are as follows:

- Students will develop a critical understanding of the contemporary issues in economic growth and development and their paths. Students will thus be better prepared to face the professional world and can use this knowledge base in a variety of jobs, including in the corporate, civil service and NGOsectors.

SYLLABUS OF GE-2

UNIT – I: Development and underdevelopment (12 hours)
Growth vs Development; Classic Approaches of Development; Contemporary theories of Development and Underdevelopment

UNIT – II: Development goals and indicators, measures of underdevelopment
Various concepts and measures of poverty and inequality, poverty lines using various national and international criteria. (12 hours)

UNIT – III: Capabilities, human development and sustainable development (12 hours)

UNIT – IV: Globalisation and development (9 hours)

Practical component (if any) - NIL

Essential/recommended readings

- DebrajRay,*DevelopmentEconomics*,(DE),PrincetonUniversityPress,1998.
- Robinson, J. A., & Acemoglu, D. (2012). *Why nations fail: The origins of power, prosperity and poverty* (pp. 45-47). London: Profile.
- Abhijit Banerjee, Roland Benabou and Dilip Mookerjee (eds), *UnderstandingPoverty* (UP), Oxford University Press, 2006.

- Angus Deaton, *The Great Escape: Health, Wealth and the Origins of Inequality*, PrincetonUniversityPress,2013.
- Gustav Ranis et.al, Economic Growth and Human Development, *World Development* Vol. 28, No. 2, Elsevier Science Ltd.,2000
- Amartya Sen, *Development as Freedom*, OUP,2000
- Thomas Piketty and Emmanuel Saez, 'Inequality in the Long Run', Science, 344 (838),2014
- Piketty,Thomas,2019,*CapitalandIdeology*,HarvardUniversityPress,
- SéverineDeneulinwithLilaShahani(ed.),*AnIntroductiontotheHuman DevelopmentandCapabilityApproach:FreedomandAgency*,Roultedge,2009

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

GENERIC ELECTIVES (GE-3): ESSENTIALS OF ECONOMICS

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Semester	Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
			Lecture	Tutorial	Practical/ Practice		
I/III/V/VII	**Essentials of Economics ECON076**	**4**	**3**	**1**	**0**	**Class XII pass**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course will introduce the fundamental concepts of economics, the study of how people manage resources. It contains basic principles of microeconomics (the behaviour of consumers, firms and companies), macroeconomics (national production, employment, inflation and interest rates) and international economics (balance of payment, exchange rate and trade) with graphical illustration and contemporary examples.

Learning outcomes

The Learning Outcomes of this course are as follows:

- By studying this course, the students will learn to think like an economist and understand how a modern market economy function. They will learn about the factors that determine long-run growth and short-term fluctuations and role of government and financial institutions, so they can better understand how economics applies to the everyday life.

SYLLABUS OF GE-3

UNIT – I: Microeconomic Foundations (15 hours)
Foundations of economics, how market works, firms and market structures, markets for factor of production, role of government

UNIT – II: Macroeconomic Foundations (15 hours)
GDP (measuring total production, income and economic growth), unemployment and inflation; aggregate demand and aggregate supply analysis; monetary and fiscal policies

UNIT – III: Foundation of International Economics (15 hours)
Comparative advantage and the gains from trade, macroeconomics in an open economy

Practical component (if any) - NIL

Essential/recommended readings

– Hubbard, G., Garnett, A., & Lewis, P. (2019). Essentials of economics. 5th edition, Pearson Higher Education AU.

– Sloman, J., & Garratt, D. (2016). Essentials of Economics, 7th edition, Pearson

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GENERIC ELECTIVES (GE-4): PRINCIPLES OF MACROECONOMICS I

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Semester	Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
			Lecture	Tutorial	Practical/ Practice		
II/IV/VI/VIII	**Principles of MacroeconomicsI ECON026**	**4**	**3**	**1**	**0**	**Class XII pass**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course introduces the basic concepts in Macroeconomics both in closed and open economy. It deals with the behaviour and characteristics of aggregate economy.
- This course introduces the definition, measurement of the macroeconomic variables like GDP, consumption, savings, investment and balance of payments.
- The course also discusses various theories and approaches of determining GDP.

Learning outcomes

The Learning Outcomes of this course are as follows:

- The students will learn the broad understanding of macroeconomic variables and their measurement issues like GDP, inflation, money supply, interest rate and their inter- linkages.
- It will also allow them to critically evaluate various macroeconomic policies and their effects on output and interest rate in theeconomy.

SYLLABUS OF GE-4

UNIT – I: Introduction (9 hours)
What is macroeconomics? Macroeconomic issues in an economy

UNIT – II: National Income Accounting (9 hours)
Concepts of GDP and National Income; measurement of national income and re-
lated aggregates; nominal and real income; limitations of the GDP concept

UNIT – III: Determination of GDP (9 hours)
Actual and potential GDP; aggregate expenditure; consumption function; invest-
ment function; equilibrium GDP; concepts of MPS, APS, MPC, APC; autonomous expenditure; Concept of multiplier

UNIT – IV: National Income Determination in an Open Economy with Government (9 hours)
Income determination; Fiscal Policy: impact of changes in government expenditure and taxes; net exports function; net exports and equilibrium national income.

UNIT – V: Money in a Modern Economy (9 hours)

Concept of money in a modern economy; monetary aggregates; demand for money; quantity theory of money; liquidity preference and rate of interest; money supply and credit creation; monetary policy.

Practical component (if any) - NIL

Recommendedreadings

- Andrew Abel, Ben Bernanke and Dean Croushore (2011). *Macroeconomics* (7th edition). Pearson
- Richard T. Froyen(2013). *Macroeconomics: Theories and Policies* (10th ed.), Pearson.
- Blanchard,O.(2018).*Macroeconomics*(7thedition).Pearson
- Blanchard,O.(2006).*Macroeconomics*(6thedition).Pearson
- Dornbusch, R., and S. Fischer. (1994). *Macroeconomics* (6th edition). McGraw- Hill
- R. Dornbusch, S. Fischer and R. Startz. (2018). *Macroeconomics* (12th edition). McGraw-Hill

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

GENERIC ELECTIVES (GE-5): BASIC STATISTICS FOR ECONOMICS

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Semester	Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
			Lecture	Tutorial	Practical/ Practice		
II/IV/VI/VIII	**Basic Statistics forEconomics ECON022**	**4**	**3**	**1**	**0**	**Class XII pass**	**Knowledge of Class XII standard Mathematics**

Learning Objectives

The Learning Objectives of this course are as follows:

- The course teaches students the basics of probability theory and statistical inference based on simple technical rigor.
- It includes introductory probability theories, sample distribution and hypothesis testing that set a necessary foundation for the econometrics course taught as a General Elective.

Learning outcomes

The Learning Outcomes of this course are as follows:

- The student will be able to analyse the data using basic statistical concepts.
- They will understand sampling characteristics, estimation as well as examining the hypotheses using discrete and continuous distributions.

SYLLABUS OF GE- 5

UNIT – I: Introduction and overview (12 hours)

Populations and samples; sample statistics; Descriptive Statistics.

UNIT – II: Basic concepts of probability(12 hours)

Spaces and events; probability concepts, conditional probabilities

UNIT – III: Probability distributions and Sampling (12 hours)

Random variables – discrete and continuous, various probability distributions - functions and characteristics; Commonly used distributions - uniform, binomial, exponential, Poisson, hypergeometric and Normal random variables. Jointly distributions- conditional distributions and expectations, covariance and correlation

Unit – IV: Estimation and Hypothesis testing (9 hours)

Estimation of population parameters - methods of moments and maximum likelihood procedures; properties of estimators; confidence intervals; Defining statistical hypotheses; distributions of test statistics; testing hypotheses related to population parameters; Type I and Type II errors; power of a test

Practical component (if any) - NIL

Recommendedreadings

- Larsen, R., Marx, M. (2011). *An Introduction to Mathematical Statistics and its Applications*, PrenticeHall.
- James McClave, P. George Benson, Terry Sincich (2017), *Statistics for Business and Economics*, PearsonsPublication.
- Anderson D. R, Sweeney D.J. et. al (2019), Statistics for Business & Economics, 13th ed. CengageLearning.
- SheldonRoss(2017),IntroductoryStatistics,4thEdition,AcademicPress

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

GENERIC ELECTIVES (GE-6):INDIAN ECONOMY

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Semester	Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
			Lecture	Tutorial	Practical/ Practice		
II/IV/VI/VIII	**IndianEconomy ECON030**	**4**	**3**	**1**	**0**	**Class XII pass**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course introduces the economic problems related to the Indian economy by familiarizing them with the research studies on areas relating to economic development and policy in India with an emphasis on contemporary debates.

Learning outcomes

The Learning Outcomes of this course are as follows:

- The students will be able to learn the development paradigm adopted in India since independenceandevaluateitsimpactoneconomicaswellassocialindicatorsofprogress.
- Students will have the ability to explore current policy debates and contribute to policy making in an informed way using relevant databases.
- They will also learn how to conductindependentresearchintheseareas

SYLLABUS OF GE-3

Unit 1 : Historical and general overview of Indian economy since Independence (9 hours)

Unit 2 : Growth and structural change (9 hours)

Unit 3 : The Indian economy in a comparative perspective (9 hours)
Unit 4 : Key issues: poverty, inequality, education, health and gender (9 hours)
Unit 5 : Agriculture, industry, services and international trade (9 hours)

Practical component (if any) - NIL

Recommendedreadings

- Kumar, Dharma (2005) ed the article on The Indian Economy 1970 to 2003 in revised version of CEHI VolII
- Balakrishnan, Pulapre(2010) *Economic Growth in India: History and Prospect.* OUP.
- Rakshit, Mihir (2011) *Macroeconomics of Post-reformIndia.* OUP
- Rakshit, Mihir (2010) *Money and Finance in the Indian Economy*.OUP
- Goyal, Ashima(ed) (2015)*A Concise handbook of Indian Economy in the 21st Century*.OUP
- Ghate,Chetan(ed)(2012)*TheOxfordHandbookofIndianEconomy*.OUP.
- Bosworth, B., Collins, S. M., & Virmani, A. (2007). *Sources of growth in the Indian economy.*
- Goyal, A. (Ed.). (2019). *A Concise Handbook of the Indian Economy in the 21st*

Century.OxfordUniversityPress.

- Pulapre Balakrishnan, 2007, "The Recovery of India: Economic Growth in the Nehru Era", *Economic and Political Weekly*, November.
- RakeshMohan,2019,*MovingIndiatoanewGrowthTrajectory:NeedforaComprehensiveBigPush*,BrookingsIndia,Section1and2,9-30.
- Ahluwalia,M.S.,2019,"India'seconomicreforms: AchievementsandNextSteps", *Asian Economic Policy Review*, 14(1), 46-62.
  James, K.S., & Srinivas Goli, 2016, "Demographic Changes in India: Is the Country Prepared for the Challenge?" *Brown Journal of World Affairs*, Fall/Winter 2016, Volume XXIII, IssueI.
  Desai, S., 2015, "Demographic deposit, dividend and debt", *The Indian Journal of Labour Economics*, 58,217-232
  Arvind Subramanian and Josh Felman (2021) India's Stalled Rise-How the State Has Stifled Growth, *Foreign Affairs*on 14.12. 2021
  Executive Summary, 2014, Report of the Expert Group to Review the Methodology for Measurement of Poverty (Rangarajan Committee report), GOI,1-5
- Thomas, J. J. (2020). 'Labour Market Changes in India, 2005–18', *Economic and Political Weekly*, 55(34),57

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Generic Elective (GE-7): Theory of Public Finance

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
III/V/VII	Theory of Public Finance – ECON061	4	3	1	0	Class 12th Pass	Introductory /Principles of Microeconomics

Learning Objectives

The Learning Objectives of this course are as follows:

- This course will look into the efficiency and equity aspect of market mechanism of allocating resources and also the design and implications of public sector policies including taxation and monetary policies.
- It will deal with efficiency, equity, public goods, externalities, taxation, subsidies, fiscal multiplier, money supply, interest rate and their interlinkages.

Learning outcomes

The Learning Outcomes of this course are as follows:

- This course aims to develop the broad conceptual frameworks which will enable students to learn economic issues efficiency, equity, public goods, externalities, taxation, subsidies, fiscal multiplier, money supply, interest rate and their interlinkages.
- It will also allow them to critically evaluate various micro and macro aspects of government policies and their effects on output, distribution, and welfare in the economy.
- The course will be useful for students aiming towards careers in the government sector, policy analysis, business and journalism.

Syllabus

UNIT I: Theories of Public Sector and Market Mechanism (12 hours)
Overview of Fiscal Functions; Tools of Normative Analysis; Pareto Efficiency; General Equilibrium Framework; Equity and the Social Welfare

UNIT II: Market Failure (12 hours)
Sources of Market failures; Public Goods; and Externalities.

UNIT III: Theories of Taxation (12 hours)
Product and Factor tax; Tax Burden; Tax Distortions; Tax Design

UNIT IV: Working of Fiscal and Monetary Policies (9 hours)
Fiscal policy; Banking system and creation of Money; Monetary Instruments and Policies; Fiscal and Monetary Management in Indian Context.

Recommended readings

- R.A. Musgrave and P.B. Musgrave ,*Public Finance in Theory and Practice*, 5th Edition.
- Rosen,H.&Gayer,T.(2014).*Publicfinance*(10thed.).NewYork:McGraw-Hill.
- Stiglitz, J E & Rosengard J K (2015), *Economics of the Public Sector*, 4th ed, W.W. Norton.

- Jonathan Gruber, (2011), Public Finance and Public Policy, 3rd edition, Worth Publishers. (MainTextbook)
- Cullis, J., Jones, P. (1998). Public finance and public choice, 2nd ed. Oxford UniversityPress.
- Hindriks,J.,Myles,G.(2013).Intermediatepubliceconomics,2nded.MITPress.
- A. Bagchi (ed.): Readings in public finance. Oxford UniversityPress.
- Stiglitz, J. (2009). Economics of the public sector, 3rd ed. W. W.Norton.

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Generic Elective (GE-8): Money and Banking

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
III/V/VII	**Money and Banking – ECON062**	**4**	**3**	**1**	**0**	**Class 12th Pass**	**Introductory / Principles of Macroeconomics**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course exposes students to the theory and functioning of the monetary and financial sectors of the economy.
- It highlights the organization, structure, and role of financial markets and institutions. It also discusses interest rates, monetary management, and instruments of monetary control.
- Financial and banking sector reforms and monetary policy with special reference to India are also covered.

Learning outcomes

The Learning Outcomes of this course are as follows:
This allows students to understand current monetary policies and financial market out- comes. It also enables them to critically evaluate policies.

Syllabus

UNIT I: Money (9 hours)
Understanding concept and functions of money, Measurement of money supply, Analytics and Methodology of computation of money supply, Theories of money supply determination

UNIT II: Financial markets: an Introduction (12 hours)
Role of financial markets and institutions; Problems of Asymmetric information, Financial Crises; Financial derivatives: Futures, Options and Swaps; Financial markets and Institutions in India: Organization, Structure and Reforms in India

UNIT III: Interest Rates (12 hours)
Determination of interest rates; Sources of interest rates differentials and risk; Theories of term structure of interest rates; Interest rates in India

UNIT IV: Central Banking and Monetary policy (12 hours)
Central Bank: Functions and Balance Sheet
Monetary Policy: Targets and instruments, Monetary management in an open economy
Monetary Policy Framework in India: Evolution and current scenario, critical evaluation
Digital currency: implications and emerging issues in Indian economy

Recommended readings

- F J Fabozzi et al: Foundations of Financial Markets and Institutions, Pearson
- F S Mishkin , S G Eakins, T Jayakumar, R K Pattnaik : Financial Markets and Institutions Pearson
- N Jadhav: Monetary Policy, Financial stability and Central Banking in IndiaMacmilla

- M.R. Baye and D.W. Jansen Money, Banking and Financial Markets AITBS, 1996
- Report of the Working Group: Money Supply Analytics and Methodology of Compilation, 1998 Annual Report; Master Circular - Prudential Norms on Capital Adequacy - Basel I Framework - 2011; RBI Bulletin; Report of Currency and Finance (latest).
- Dua, P., "Monetary Policy Framework in India", Indian Economic Review, Vol. 55, Issue 1, June 2020
- Ghate, C., &Kletzer, K. M. (Eds.). (2016). Monetary policy in India: A modern macroeconomic perspective. Springer.
- Various publications of RBI and other agencies / institutions

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Generic Elective (GE-9): Digitalisation and Development

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
III/V/VII	**Digitalisation and Development – ECON063**	**4**	**3**	**1**	**0**	**Class 12th Pass**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- The analysis of the impact of information and communication technologies (ICTs) on economies and societies is a growing field. Technology is an enabling factor. Technological developments become relevant to the extent that they are economically and socially meaningful.
- This course aims to offers an overview of the understanding of economics of digitalisation and its impact on the life and livelihood with an interdisciplinary approach.

Learning outcomes

The Learning Outcomes of this course are as follows:
The students would understand the functions information technology and its socio- economic impact, wellbeing and progress on the contemporary world.

Syllabus

UNIT I: Digital development - India and the World (12 hours)

UNIT II: The transformation of management practices; work and employment; social net- works, trust and social capital in the digital economy; cultural and motivational aspects (12 hours)

UNIT III: Unit ICTs, Digital Divide and the political economy of inequality (12 hours)

UNIT IV: Access to ICT and poverty and wellbeing, work-life balance (9 hours)

Recommended readings

- Goldfarb, A., Gans, J.,& Agrawal, A. (2019). The Economics of Artificial Intelligence: An Agenda. University of Chicago Press.
- Agrawal, A., Gans, J., & Goldfarb, A. (2018). Prediction machines: the simple economics of artificial intelligence. Harvard Business Press.
- Goldfarb, A., & Tucker, C. (2019). Digital economics. Journal of Economic Literature, 57(1), 3-43.
- Goldfarb, A., Greenstein, S. M., & Tucker, C. E. (Eds.). (2015). Economic analysis of the digital economy. University of Chicago Press.
- Maiti, D., & Awasthi, A. (2020). ICT exposure and the level of wellbeing and progress: A cross country analysis. Social Indicators Research, 147(1), 311-343.
- Acemoglu, D., & Restrepo, P. (2018). Artificial intelligence, automation, and work. In The economics of artificial intelligence: An agenda (pp. 197-236). University of Chicago Press.
- Acemoglu, D., & Restrepo, P. (2018). The race between man and machine: Im- plications of technology for growth, factor shares, and employment. American Economic Review, 108(6), 1488-1542.

- Varian, H. R. (2001). Economics of information technology. University of California, Berkeley.
- Maiti, D., Castellacci, F., & Melchior, A. (2020). Digitalisation and development: issues for India and beyond. In Digitalisation and Development (pp. 3-29). Springer, Singapore.
- Singh, N. (2016). Information technology and its role in India's economic development: A review. Development in India, 283-312.
- Castellacci, F., & Tveito, V. (2016). The Effects of ICTs on Well-being: A Survey and a Theoretical Framework (No. 20161004). Centre for Technology, Innovation and Culture, University of Oslo.
- Huyer, S., & Mitter, S. (2003). ICTs, globalisation and poverty reduction: Gender dimensions of the knowledge society. Kampala (Uganda): http://gab. wigsat. org/policy. htm.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Generic Elective (GE-10): Introduction to Comparative Economic Development

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
III/V/VII	**Introduction to Comparative Economic Development – ECON064**	**4**	**3**	**1**	**0**	**Class 12th Pass**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course investigates selected issues in industrialization and development in comparative historical perspective.
- The course focuses on a set of countries which followed diverse trajectories and patterns of growth to achieve their industrial transition and compares the outcomes of these diverse trajectories on sectoral change, intersectoral relations, labour processes and industrial relations and compares the role of the state in facilitating the respective trajectories.

Learning outcomes

The Learning Outcomes of this course are as follows:

- The students will be able to visualise economic development in a historical perspective and assimilate material from diverse narratives.
- It will help them to understand the diverse paths of economic development in the advanced economies.

Syllabus

UNIT I: Introduction (9 hours)
Theoretical issues and comparative historical background.

UNIT II: Agricultural transformation and its role in industrialization (9 hours)
Agrarian and land relations, production and productivity, agrarian surplus in industrial development. Case studies: Britain, Japan and U.S.S.R.

UNIT III: The industrialization process of Britain, Japan and U.S.S.R. (9 hours)

UNIT IV: The factory system and making of the industrial working class. Case studies: Britain and Japan (9 hours)

UNIT V: The role of the state in industrial and developmental transitions. Case studies: Britain, Japan and U.S.S.R. (9 hours)

Recommended readings

- Davies, R. (1998). Soviet economic development from Lenin to Khrushchev. Cam- bridge University Press.
- Dobb, M. (1966). Soviet economic development since 1917. Routledge.

- Hughes, J., Cain, L. (1994). American economic history, 4th ed. Harper Collins College Publishers.
- Hayami, Y. (1975). A century of agricultural growth in pre-war Japan: Its relevance to Asian development. University of Minnesota Press.
- Hobsbawm, E. (1968). Industry and empire: An economic history of Britain since 1750. Weidenfeld & Nicholson.
- Hobsbawm, E. (1984). Worlds of labour: Further studies in the history of labour. Weidenfeld & Nicolson.
- Johnson, C. (1982). MITI and the Japanese miracle: The growth of industrial policy 1925-1975. Stanford University Press.
- Macpherson, W. (1995). The economic development of Japan 1868-1941. Cam- bridge University Press.
- Norman, E. (2007). Japan's emergence as a modern state: Political and economic problems of the Meiji period. University of British Columbia Press.
- Okochi, K., Karsh, B., Levine, S. (1974). Workers and employees in Japan: The Japanese employment relations system. Princeton University Press.
- Paul, G., Robert, C. (1990). Soviet economic structure and performance, 3rd ed. Harper and Row.
- Tauger, M. (2004). Soviet peasants and collectivization 1930-39: resistance and adaptation. Journal of Peasant Studies, 31: 3-4. 427-456.
- Angus Maddison (2001). The World Economy, Vol. 1: A Millennial Perspective. OECD.

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Generic Elective (GE-11): Education and Development

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
III/V/VII	**Education and Development – ECON065**	**4**	**3**	**1**	**0**	**Class 12th Pass**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:
This course discusses the role of education in development and policy analysis and formulation in the context of development; the impact of the globalisation on, and the role of international agencies in, education for development; human capital theory and human resource development; education and aid; research and consultancy strategies and ethics. he emphasis in this course is laid on understanding the theoretical aspects of education and linking it with the issues of education in a developing country like India.

Learning outcomes

The Learning Outcomes of this course are as follows:
This course will develop skills amongst the students to role of education and strategies to expand education in highly unequal societies. This will further help to conduct research and analysis the role of institutions for the outcome of education.

Syllabus

UNIT I: Introduction (9 hours)
Defining the educational problem

UNIT II: Human capital theory (6 hours)
The basic economic perspective on education

UNIT III: Early childhood education: How important? When did earnings become so dependent on education? Do our regression estimates overestimate the impact of education on earnings? The case of ability bias. (9 hours)

UNIT IV: Education as a signal of skill (9 hours)
If the return to education is real, does it reflect skills learned or is it a signal? Why has the rate of return to education increased? What skills are now rewarded in the workplace?

UNIT V: Schooling and Achievement (6 hours)
Do smaller classes raise achievement? School vouchers and parental choice; School accountability, standards and testing; Teacher quality and teacher training; Can technology complement what teachers do?

UNIT VI: Higher Education (6 hours)
Basic issues and structure; Higher education policy

Recommended readings

- Borjas, George. Labor Economics. Boston, MA: McGraw-Hill, 2005
- Lovenheim, M., & Turner, S. E. (2017). Economics of education. Macmillan Higher Education.

- Feinstein, Leon. "Inequality in the Early Cognitive Development of British Children in the 1970 Cohort." Economica 70, no. 277 (2003): 73-97.
- Duflo, Esther. "Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence from an Unusual Policy Experiment." American Economic Review 91, no. 4 (2001): 795-800.
- Levy, Frank, and Richard J. Murnane. "Computers, Offshoring, and Skills." Working Paper. September 18, 2005..
- Hanushek, E. A., Machin, S. J., &Woessmann, L. (Eds.). (2016). Handbook of the economics of education. Elsevier.
- Bradley, S., & Green, C. (Eds.). (2020). The Economics of Education: A Com- prehensive Overview.
- Hanushek, Eric A., 2005, Economic Outcomes and School Quality, International Academy of Education and International Institute for Educational Planning.
- Goldin, C., & Katz, L. F. (2010). The race between education and technology. harvard university press.
- Haveman, R., & Smeeding, T. (2006). The role of higher education in social mobility. The Future of children, 125-150.
- Singh, A., Park, A., &Dercon, S. (2014). School meals as a safety net: an evaluation of the midday meal scheme in India. Economic Development and Cultural Change, 62(2), 275-306.
- Krueger, Alan B. "Experimental Estimates of Education Production Functions." Quarterly Journal of Economics 114, no. 2 (1999): 497-532.
- Loeb, Susanna, and Marianne E. Page. "Final Examinationining the Link between Teacher Wages and Student Outcomes: The Importance of Alternative Labor Market Opportunities and Non-pecuniary Variation." Review of Economics and Statis- tics 82, no. 3 (2000): 393-408.
- Winston, Gordon. "Subsidies, Hierarchy and Peers: The Awkward Economics of Higher Education." Journal of Economic Perspectives 13, no. 1 (1999): 13-36.
- Azam, M., & Kingdon, G. G. (2015). Assessing teacher quality in India. Journal of Development Economics, 117, 74-83.

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Generic Elective (GE-12): Basic Resource and Energy Economics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
III/V/VII	**Basic Resource and Energy Economics – ECON066**	**4**	**3**	**2**	**0**	**Class 12th with Mathematics**	**Introductory /Principles of Microeconomics**

Learning Objectives

The Learning Objectives of this course are as follows:
ThiscoursewillintroducethebasicsofResourceandEnergyeconomics.Theobjectiveofthis course is to provide theoretical and empirical topics on Resource economics, energy economics, energy transition, and energy security. This course introduces the conceptual and theoretical foundations of Resource Economics. In particular, the policies and potential sources are both renewable and non-renewable. The objective of thiscourseistoprovideknowledgeontheprinciplesofgoverningandmanagingnaturalresources.

Learning outcomes

The Learning outcomes of this course are as follows:
The students will learn some issues of resource economics relating to the basics of supply, demand, and prices, income elasticities, world oil markets, and depletable resources, pathways of energy transition from conventional to renewable energysources.

Syllabus

UNIT I: Resource Economics (Renewable and non-renewable sources) (15 hours)
Optimal extraction of a non-renewable resource, Optimal management of renewable resources -Fishery and Forestry, Tom Tietenberg and Lynne Lewis, Environment and Natural Resource Economics, 9th edition, Chapter 5,6,12 and13

UNIT II: Energy Economics (15 hours)
Types of energy sources, Introduction to Basics of supply, demand, and prices, energy supply and economics of depletable resources, world oil markets

UNIT III: Energy transition and energy security Pathways of energy transition from conventional to renewable energy sources, Policy instruments, Energy security, accessibility and 4 A definition, and Energy poverty (15 hours)

Recommended readings

- Tom Tietenberg and Lynne Lewis, Environment and Natural Resource Economics, 9thedition
- Review of the Basics of Supply, Demand and Price Formationin Competitive MarketsPindyckandRubinfeld.2005
- Fouquet, R. Historical energy transitions: speed, prices and system transformation. Energy Res. Soc. Sci. 22, 7–12 (2016).
- McGowan, J., and S. Conners. ”Windpower: A Turn of the Century Review.” AnnualReviewofEnergyandtheEnvironment25(2000):147-197.

- Chen, B., Xiong, R., Li, H., Sun, Q., &Yang, J. (2019). Pathways for sustainable energytransition.JournalofCleanerProduction,228,1564-1571.
- Palmer, K., and D. Bullaw. ”Cost-Effectiveness of Renewable Electricity Policies.” Energy Economics 27 (2005):873-894
- Deffeyes, K. Hubbert’s Peak: The Impending World of Oil Shortage. Princeton, NJ:PrincetonUniversityPress,2001,chapter1.ISBN:0691116253.
- Lynch M. ”ThePessimism About Petroleum Resources: Debunking the Hubbert Model (and Hubbert Modelers).” Minerals and Energy - Raw Materials Report 18, no. 1 (2003):1-18.
- Watkins, G. ”OilScarcity: What Have the Past Three Decades Revealed?” Energy Policy 34 (2006):508-514.
- Cherp, A., & Jewell, J. (2014). The concept of energy security: Beyond the four As. Energy policy, 75,415-421.
- Carley, S., &Konisky, D. M. (2020). The justice and equity implications of the cleanenergytransition.NatureEnergy,5(8),569-577.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Generic Elective (GE-13): Principles of Microeconomics II

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
III/V/VII	Principles of Microeconomics II – ECON027	4	3	1	0	Class 12th with Mathematics	Introductory Microeconomics (ECON001)/ Principles of Microeconomics I (ECON025)

Learning Objectives

The Learning Objectives of this course are as follows:

- This course covers imperfect markets and equilibrium analysis, consumer and producer theories under various markets and its failure, and international trade.

Learning outcomes

The Learning outcomes of this course are as follows:

- This course helps the students to understand different forms of market imperfections and market failures observed in real life situations.
- The students learn about the environment where the standard market mechanism fails to generate the desirable outcomes.
- They develop a sense of how the production is distributed among the different factors of production and the demand for inputs.
- Some preliminary concepts of international tradearealsocoveredinthiscourse.

Syllabus

UNIT I: Market Structures (12 hours)
Theory of a Monopoly Firm: Concept of imperfect competition; short run and long run price and output decisions of a monopoly firm; concept of a supply curve under monopoly; comparison of perfect competition and monopoly, social cost of monopoly, price discrimination; remedies for monopoly: Antitrust laws, natural monopoly
Imperfect Competition: Monopolistic competition: Assumptions, SR and LR price and output determinations under monopolistic competition, economic efficiency and resource allocation; oligopoly: assumptions, oligopoly models, game theory, contestable markets, role of government

UNIT II: Consumer and Producer Theory (12 hours)
Consumer and Producer Theory in Action: Externalities, marginal cost pricing, internalising externalities, public goods; imperfect information: adverse selection, moral hazard, social choice, government inefficiency.
Markets and Market Failure: Market adjustment to changes in demand, efficiency of perfect competition; sources of market failure: imperfect markets, public goods, externalities, imperfect information; evaluating the market mechanism.

UNIT III: Income Distribution and Factor pricing (12 hours)
Input markets: demand for inputs; labour markets, land markets, profit maximisation condition in input markets, input demand curves, distribution of Income.

UNIT IV: International Trade (9 hours)
Absolute advantage, comparative advantage, terms of trade, sources of comparative advantage, trade barriers, free trade/ protectionism.

Recommended readings

- Mankiw,N.G.(2018).*PrinciplesofMicroeconomics*8thed.
- Bernheim,B.,Whinston,M.(2009).*Microeconomics*.TataMcGraw-Hill.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Generic Elective (GE-14): Corporate Finance, Governance and Development

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
V/VII	Corporate Finance, Governance and Development – ECON067	4	3	2	0	Class 12th with Mathematics	Basic Statistics

Learning Objectives

The Learning Objectives of this course are as follows:

- This course covers the important financial decisions that face companies and corporate world in the modern economies.
- This will cover investment, financing and dividend decisions, together with the management of risk.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students will be able to under the risk and decisions taken by the corporate world in the present-daysituations.
- The student will learn the practical issues of assets formation in the share and equity markets.
- They will also learn the role of institution in regulating uncertain and risky behaviours of the corporate firms.

Syllabus

UNIT I: Investment decisions (12 hours)
Traditional methods of investment appraisal, Investment–consumption decision model, The discounted cash flow approach, Net present value and internal rate of return, Project cash flows, Capitalrationing

UNIT II: Risk analysis (12 hours)
Simple risk techniques, Risk and return, Portfolio theory, The capital asset pricing model, Option valuation, Interest rate risk

UNIT III: Financing decisions (12 hours)
Financial markets, the cost of capital, Weighted average cost of capital, Capital structure in a simple world, Capital structure in a complex world, Investment and financing interactions, The dividend decision

UNIT IV: International issues (9 hours)
Foreign exchange, Foreign exchange hedging, Foreign direct investment

Recommended readings

- Quiry, P., LeFur, Y., Vernimmen, P. (2022). Corporate finance:theoryandpractice. John Wiley &Sons.
- Lumby, S., & Jones, C. (2003). Corporate finance: Theory & practice. Cengage LearningEMEA.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Generic Elective (GE-15): Principles of Macroeconomics II

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
IV/VI/VIII	Principles of Macroeconomics II – ECON028	4	3	1	0	Class 12th with Mathematics	Introductory Macroeconomics/ Principles of Macroeconomics I

Learning Objectives

The Learning Objectives of this course are as follows:

- This course introduces labour markets and derives the aggregate supply (AS) curve.
- Then, it integrates with Aggregate Demand (AD) to determine equilibrium prices and output.
- The course discusses Phillips curve and the alleged trade-off between inflation andunemployment.
- Both adaptive and rational expectations are introduced.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students would learn an analytical framework to analyse the basic functioning of the aggregate macroeconomy under closed and open economy.
- It also enables them to analyse the functioning of the economies in term of the effects of fiscal and monetary policy and trade-off between inflation and unemployment.

Syllabus

UNIT I: IS-LM Analysis for income determination (12 hours)
Derivations of the IS and LM functions; IS-LM and aggregate demand; shifts in the ADcurve

UNIT II: GDP and Price Level in Short Run and Long Run (12 hours)
Aggregate demand and aggregate supply; multiplier analysis with AD curve and changes in price levels; aggregate supply in the SR and LR

UNIT III: Inflation and Unemployment (12 hours)
Concept of inflation; determinants of inflation; relationship between inflation and unemployment: Phillips Curve in short-run and long-run

UNIT IV: Balance of Payments and Exchange Rate (9 hours)
Balance of payments: current account and capital account; market for foreign exchange; determination of exchange rate

Recommended readings

- Blanchard,O.(2006).*Macroeconomics*,4thed.PearsonEducation.
- C.L.F. Attfield, D. Demery and N.W. Duck, *Rational Expectations in Macroeconomics:anintroductiontotheoryandevidence*(1991,2ndEd.).
- Sheffrin,Steve Rational Expectations. Cambridge University Press (1996, 2nd ed.).
- Dornbusch,R.,Fischer,S.(1994).*Macroeconomics*,6thed.McGraw-Hill.
- R. Dornbusch, S. Fischer and R. Startz. (2018). *Macroeconomics* (12th edition). McGraw-Hill.
- Branson,W.(2013).*Macroeconomics:Theoryandpolicy*,3rded,EastWestPress.

- Carlin, W and D Soskice (2007), *Macroeconomics: Imperfections, Institutions and Policies*, Indian Edition,OUP.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Generic Elective (GE-16): Basic Econometrics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
IV/VI/VIII	Basic Econometrics – ECON024	4	3	2	0	Class 12th Pass	Knowledge of Class XII standard Mathematics AND Basic Statistics

Learning Objectives

The Learning Objectives of this course are as follows:

- This course introduces students to the econometric methods used to conduct empirical analysis based on the basic statistics.
- It offers the basic quantitative techniques needed to undertake applied research projects to establish the relationship between variables of interestsacrosswidevarietyofdisciplines.

Learning outcomes

The Learning outcomes of this course are as follows:

- Students will learn to estimate simple estimation and inferences about population parameters, to formulate empirical models and analyze data.
- An expertise in econometrics increases the job prospect of the students significantly.

Syllabus

UNIT I: Regression Models (15 hours)
OLS estimators, hypothesis Testing using software and practical application; multi- ple Regression Model - estimation, Testing and practical application using software like GRETL/EViews/ R/Stata/EXCEL etc.

UNIT II: Qualitative variables and Estimation (15 hours)
Application of qualitative variables, Nonlinear Models, Applications of dummy variables

UNIT III: Issues with Classical Assumptions (15 hours)
Violation of normal distribution, Collinearity with independent variables, heteroscedasticity, autocorrelation, practical application

Recommended readings

- Christopher Dougherty, *Introduction to Econometrics*, 4th edition, OUP, Indian edition.
- Damodar Gujarati, *Econometrics by Example*, 2nd edition, Palgrave Macmillan, 2014.
- Gujarati,D.,Porter,D.(2010).*EssentialsofEconometrics*,4thed.McGraw-Hill.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Generic Elective (GE-17): Sectoral Issues in Indian Economy

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
IV/VI/VIII	Sectoral Issue in Indian Economy – ECON059	4	3	1	0	Class 12th Pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:

- The course imparts in-depth knowledge on the issues relating to the agricultural and industrial economy of India, with the focus on the evolutionary path undertaken and the resultant concerns.
- This will cover issues of MSMEs and small farms toinformtheproblemsindustrialisationaswellasincreasedproductivityofagriculture.

Learning outcomes

The Learning outcomes of this course are as follows:

- This course will familiarize students with the problems, issues,currentdebates,andpolicyinterventionsforlong-termsustainability,efficiency,and resilience.
- The students will be able to understand, comprehend and critically analyse the issues and policies and would be able to form a well-informed and well- articulated opinionoftheirown.

Syllabus

UNIT I: Agricultural Performance since Independence: (9 hours)
Output and productivity growth Agricultural Performance since Independence in the context of land andlabour

UNIT II: The Policy Environment: Food security and nutritional concerns, MSPs, Agricultural price policy, subsidies/cash transfers, The public distribution system; Capital formation (12 hours)

UNIT III: Current Issues in Indian Agriculture (selected topics) (12 hours)
Resource Use Efficiency-Fertiliser, Water, Other inputs; Diversification for future Growth and enhanced farm income; Sustainable agricultural growth—concepts and constraints; Prospects for dryland/organic/zero budget farming; trade and competitiveness;useofnewtechnologyandartificialintelligence;Marketing/infrastructure; Crop insurance/agriculturalfinance

UNIT IV: Industry (12 hours)
Overview of the Industrial Scene in India- Trends in growth and productivity; Competitiveness and changes in Policy Regimes- domestic competitiveness and export; Issues relating to Indian Industry (selected topics); Scale and ownership, MSMEs and large industries, Public and Private Sector, Employment growth, labour and capital (domestic and foreign), formal and informal sectors, Infrastructural bottle- necks, research and development.

Recommended readings

- SukhamoyChakravarty (1984) Aspects of India's Development Strategy for 1980s? EPW vol 19 no20-21

- J. Bhagwati (1993), India in Transition: Freeing the Economy, Clarendon Oxford 1993
- K. V. Ramaswamy (2015) Labour, Employment and Economic Growth in India CambridgeUniversityPress
- Isher Judge Ahluwalia (1985) Industrial Growth in India: Stagnation Since the Mid-sixties,OxfordUniversityPress
- R. Nagaraj (2015) Can the Public Sector Revive the Economy? Review of the Evidence and a Policy Suggestion EPW vol 50 no5
- S N Rajesh Raj, Kunal Sen (2020) The 'Missing Middle' Problem in Indian Manufacturing. What Role Do Institutions Play? EPW April 18, 2020 vol 55 no16
- Indian Industrialisation, ICSSR Research and Surveys and Explorations in Eco- nomics vol.1 (2015)-C P Chandrasekhar (ed), Oxford University Press,Delhi
- Sabyasachi Mitra, Abhijit Sen Gupta, and Atul Sanganeria (2020) Drivers and Benefits of Enhancing Participation in Global Value Chains: Lessons for India, ADB South Asia Working Paper No. 79
- Raghuram Rajan (2015) Make in India, largely for India, Indian Journal of Indus- trial Relations, Vol. 50, No. 3 (January 2015), pp.361-372
- Vaidyanathan, A. (1994), "Performance of Indian Agriculture since Independence" in Kaushik Basu (ed.), Agrarian Questions Oxford UniversityPress.
- Mahendra Dev (2016) Water Management and Resilience in Agriculture vol 51, No 8 EPW Economic & Political Weekly
- Ramesh Chand (2012) Development Policies and Agricultural Markets EPW DE- CEMBER 29, 2012 vol 47 no52
- Yoginder K Alagh (2021) Globalisation and the Indian Farmer EPW vol 56 no 28
- Chatterjee, S., Kapur, D. (2017). Six puzzles in Indian agriculture. India Policy Forum 2016, Vol. 17.
- NABARD Foundation Day, Paper on enhancing Farmers' income by K J S Satyasai and Nirupam Mehrotra. 12 July 2016
- Acharya, S.S. (2007) "Agribusiness in India: Facts and Emerging Issues", AgriculturalEconomicsResearchReview,Vol. 20,ConferenceIssue,pp.409-424
- Mohan, R., (2006) Agricultural Credit in India: Status, Issues and Future Agenda, EconomicandPoliticalWeekly,March18,2006,pp1013-1021.
- Mishra S.N. and Chand, R., (1995) Public and Private Capital Formation in Indian Agriculture: Comments on Complementarily Hypothesis, Economic and Political Weekly, June 24th,1995
- GOI (2007), Report of The Working Group on Risk Management in Agriculture for the Eleventh Five Year Plan (2007-2012), GOI, NewDelhi
- Indian Agriculture Towards 2030-Pathways for Enhancing Farmers' Income, Nutritional Security and Sustainable Food and Farm Systems (2021) An open-access Springerpublication.
- Government of India (2017) "Report of the Committee on Doubling Farmers' In- come". Ministry of Agriculture and Farmers' Welfare, Government ofIndia
- PRS Legislative Research (2017), Swaminathan Report: National Commission on Farmers, at Swaminathan Report: National Commission on Farmers, PRSIndia
- Acharya SS and NL Agarwal (2016), Agricultural Marketing in India, New Delhi: CBS Publishers andDistributors
- Expert Committee Report on Marketing Infrastructure & Agricultural Marketing Reforms (2000) Government of India, Department of Agricultural & Cooperation Krishi Bhavan, NewDelhi

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Generic Elective (GE-18): Game Theory and Social Sciences

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
IV/VI/VIII	**Game Theory and Social Sciences – ECON068**	**4**	**3**	**1**	**0**	**Class 12th Pass**	**Knowledge of Class XII Standard Mathematics**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course will teach the basic elements of game theory with applications to political science and other social sciences.
- It will coversimultaneous games, extensive-form games, repeated games, and spatial models of elections.
- The course will also focus on using the logic of games to make inferences and arguments about political and social behavior, with readings on collective action, voting, bargaining, repeated interaction, war, and other FinalExamples.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students will learn how to apply multi-person decision making in an interactive setting.
- They will understand how to formulate different real-life situations as games and learn to predict the optimal strategies of players and how the players can exploit strategic situations for their own benefit.
- They will solve basic and intermediate games, including simultaneous-move and extensive-form games, as well as basic games of asymmetric information.
- The students can create and solve an original model designed to understand a social or political problem of interest.

Syllabus

UNIT I: Rational choice; interacting decision-makers; the normal/strategic form (9 hours)

UNIT II: Dominant and dominated strategies; rationalizability; iterated elimination of dominated strategies; dominance solvability; best response functions; Nash equilibrium. (12 hours)

UNIT III: Extensive-form and simultaneous game, Strategic game and its application in social sciences, electoral competition; the war of attrition, auctions; accident law; mixed strategies; finding mixed strategy equilibria;symmetricgamesandsymmetricequilibria;illustrations:reportingacrime;expertdiagnosis (12 hours)

UNIT IV: Strictly competitive equilibrium and maximization (12 hours)

Recommended readings

- Martin J. Osborne, *An Introduction to Game Theory*, Oxford University Press, New Delhi,2004.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Generic Elective (GE-19): Economy of Colonial India

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
IV/VI/VIII	**Economy of Colonial India – ECON069**	**4**	**3**	**1**	**0**	**Class 12th Pass**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- This course Final Examples some key spheres and trends of India's economy under colonial rule and situates them in the realms of land, labour, capital and state policy as they emerged from the shadows of the Mughal decline and moved into the colonial era.
- A special focus will be given on the peasants, artisans, migrants and their changing relationships with state power.
- The course will revisit some influential debates of Indian economic history: deindustrialisation, the nature of growth under colonial conditions, forced commercialization, the modernity of its industrialisation, working classes, drain of wealth and the role of the colonialstate.

Learning outcomes

The Learning outcomes of this course are as follows:

- The students will be able to learn economic transformation from pre-colonial period to the British colonial regime that paved the way of distorted path of growth and development.
- They will understand the nature of colonial economy and how resources of colonies were exploited by the colonial power.
- They will acquire skill to critically engagewithideasofeconomicchangesinthelasttwocenturies.

Syllabus

UNIT I: Economic transformation from pre-colonial to colonial regime (12 hours)
Economic transition, Colonial exploitation and resultant tyranny affected the trend of population, national income; occupational structure, merchandise trade, emergence of state with the East India Company and nature of its rule.

UNIT II: Agrarian Transformation (12 hours)
Colonial Rule on Indian Soil affected land revenue settlements, commercialization of agriculture, changing cropping pattern, land market, rural credit and indebtedness. It further influenced agrarian relations that includes agricultural labour, regional variations, peasant commodity production and generated debates on the 'mode of production in Indian agriculture', the 'invisible' women of India's agrarian history.

UNIT III: The de-industrialisation debate (12 hours)
Role of infrastructure for merchandise trade, evolution of entrepreneurial and industrial structure; constraints on industrial growth; labourrelations; drain of wealth; international trade and Balance of Payments

UNIT IV: Evolution of State and Financial Market (9 hours)
Evolution of state and its function for social welfare and relief under famine and starvation; Public Finance, Government revenue, expenditure and investment over the years; Emergence of Modern Banking in India and its role in economy; Overall assessment of colonial economy: stagnation and decline with regional variations.

Recommended readings

- Guha, S., 1991, Mortality decline in early 20th century India, Indian Economic and Social History Review, vol. 28
- Roy,T,2011,*TheEconomicHistoryofIndia1857-1947*,3rdedn,OrientLongman, Delhi.
- Irfan Habib, 2006, Indian Economy 1858-1914, A People's History of India, vol. 28, Tulika,Delhi
- Chaudhary, L., B. Gupta, T Roy and A. V. Swami (eds.), A New Economic History of Colonial India, Routledge, London and NewYork.
- Parthasarathi, P. 2009, Historical Issues of Deindustrialization in Nineteenth Cen- tury South India, in T Roy and Giorgio Riello (eds) How India Clothed the World: The World of South Asian Textiles, 1500-1850 , Brill,Leiden
- Morris, M.D , 1965, Summary and Conclusions in Emergence of an Industrial Labour Force in India, OUP,Delhi
- Roy, T., 2018, Capital and Empire (1850-1930): Trade and Finance in A Business History of India: Enterprise and the Emergence of Capitalism from 1700, CambridgeUniversityPress,Delhi
- Chatterjee, B., 1992, Trade, Tariffs and Empire, Oxford University Press, Delhi, Epilogue.
- Washbrook, D. , 2012, The Indian Economy and the British Empire in Douglas M Peers and Nandini Gooptu (ed.) India and the British Empire, OUP, Delhi.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Generic Elective (GE-20): Basic Environmental Economics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
IV/VI/VIII	**Basic Environmental Economics – ECON070**	**4**	**3**	**1**	**0**	**Class 12th Pass**	**Introductory /Principles of Microeconomics**

CourseObjectives:

- The objective of this course is to provide basic knowledge of environmental economics, and its relationship between microeconomics and welfare economics.
- It covers the sig- nificance and application of Environmental Economics in the present environmental challenges in India. It describes and comprehends various environmental policies by de- ploying various policy instruments as well as measure the various market and non-market benefits of environmental policies.
- Finally, the course addresses the transboundary en- vironmental problems, and challenges related to trade and the environment.

Course LearningOutcomes

- The students will be able to learn the basic factors influencing the environmental chal- lenges faced by the present world.
- They will comprehend the functions of state and institution in mitigating such challenges.

Content (Unit-wise):

Unit 1 : Introduction to Environment Economics (9 hours)

What is environmental economics, Overview of environmental problems in India Unit 2 :

Welfare economics and inefficiencies (9 hours)

Pareto efficiency in consumption (Edgeworth Box), Pareto efficiency in Production, Theorems of welfare economics

Unit 3 : Externalities, property rights and Environmental Policy (9 hours)

Market Failure, externalities in Production and consumption, Externalities in prop- erty rights. Types of environmental goods (use and non-use value)

Unit 4 : Bargaining Solutions and Environmental Policies (9 hours)

Coase Theorem and its implications, Overview of regulatory policies related to environment, implementation of environmental policy

Unit 5 : International Environmental Problems (9 hours)

Environment and World Trade Organization, GATT, Multilateral Environmental Agreements, Transboundary environmental problems

SuggestedReadings:

– Charles Kolstad. Intermediate Environmental Economics, Oxford University Press, 2ndedition(2012).[Indianreprintavailable.]

– Roger Perman, Yue Ma, James McGilvray and Michael Common. Natural Re- source and Environmental Economics, Pearson Education/Addison Wesley, 4th edition(2011).
– Robert N. Stavins (ed.). Economics of the Environment: Selected Readings, W.W. Norton,6thedition(2012).

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Generic Elective (GE-21): Law and Development

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
IV/VI/VIII	**Law and Development – ECON071**	**4**	**3**	**1**	**0**	**Class 12th Pass**	**Introductory /Principles of Microeconomics**

CourseObjectives:

- Law is widely thought of a prerequisite to economic development. The course focuses on how property rights play a central role in economic development and individuals investif they can reap the future benefits of their investments as well formation of assetswithcollateral.
- Thecoursedealswiththequestions,wherepropertyrightscome from, how they are made and evolve, why, by whom and in what manner attributes of property rights are grafted onto different objects, claims, or assets.
- More specifically, the course covers key areas such as property rights, business transactions, and industrial promotion,withguidanceforpro-developmentlegislationineach.

Course learning outcomes:

- The students will acquire understanding the efficacy of laws and institutions in the modern economies for property rights and debt that helped equity and transparency for economic development.
- The students will learn the facility incomparativelaw,approachestolegalinstitutionalism,andlawandpoliticaleconomy.

Content(unit-wise):

Unit 1 : Introduction (9 hours)

The Importance of Laws and institutions for EconomicDevelopment

Unit 2 : Property Rights and Economic Development (12 hours)

Property rights and their role in resource allocation (Market and non-market mechanism for land transfer); Intellectual Property Rights (IPRs) Patents, Copyright and Trademarks. Cost and benefits of private IPRs; Individual rights vs common good

Unit 3 : Legal Frameworks for Business Transactions and Economic Development (12 hours)

Economics of Contract Law Legal contract; Role of Contracts for functioning of markets; Incomplete contracts; Efficient contracts; Damages measures and theirefficiency properties.

Unit 4 : Law and Industrial Promotion as Tools for Economic Development (12 hours)

Anti-trust laws, Competition Policy; Legal Process: Litigation – its causes and consequences; Benefits of legal certainty

- SuggestedReadings:

– Lee, Yong-Shik (2017) ”GeneralTheory of Law and Development,” Cornell

Interna- tional Law Journal: Vol. 50 : No. 3 , Article 2. Available at: https://scholarship.law. cornell.edu/cilj/vol50/iss3/2

- Cooter, Robert and Thomas Ulen, Law and Economics, Sixth Edition, Addison Wesley 2013, ISBN 9780132540650. Free here Law and Economics, 6th edition (jku.at)
- Lee, Y.S., Call for a New Analytical Model for Law and Development (Septem- ber 16, 2016). Law and Development Review, Vol. 8, No. 2 (June 2015), 1-67, Available at SSRN: https://ssrn.com/abstract=2839943
- Lee, Y.S.; General Theory of Law and Development; https://ww3.lawschool.cornell.edu/research/I final.pdf
- Trubek, D. M., & Santos, A. (Eds.). (2006). The new law and economic develop- ment: a critical appraisal. Cambridge UniversityPress.
- Dam, K. W. (2007). The law-growth nexus: The rule of law and economic devel- opment.BrookingsInstitutionPress.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Generic Elective (GE-22): Public Finance inIndia

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
IV/VI/VIII	**Public Finance in India – ECON072**	**4**	**3**	**1**	**0**	**Class 12th Pass**	**NIL**

CourseObjectives:

- This course covers an overview of recent trends and issues in government finances of India.
- It will look into the recent trends in budget, deficits, reforms in taxes of the centre, states and the local governments and the issues of fiscal federalism and decentralisation in India.
- It also offers an overview of principles and finances of India's flagships welfare programs.

Course LearningOutcomes:

- The students will learn India's recent trends and issues in direct and indirect taxes, intergovernmental transfers and welfare policies.
- It will enable them to compare and contrast India's public sector performance with the conceptual standards and perfor- mances of other nations.
- It will also equip them to engage in empirical based public policy debates around taxation, fiscal federalism and welfare policies.
- The course will be useful for students aiming towards careers in the government sector, policy analysis, business andjournalism.

Content (Unit-wise):

Unit 1 : Current Issues of India's Tax system (12 hours)

Overview of India's tax system and performance; GST; Issues in Direct Taxes; other issues in indirect taxes (eg. taxes on petroleum products)

Unit 2 . Analysis of Budget and Deficits: (12 hours)

Union and State Budget analysis; Deficit and Debt Management; Unit

3 Fiscal Federalism in India (12 hours)

Theories of Fiscal Federalism; Overview of Fiscal Federalism Structure in India; Intergovernmental Transfers; Local Finances in India

Unit 4 : Development and Welfare Policies- (9 hours)

India's Flagship Programs- Public Distribution system, National Health Mission, Universal Health Insurance, Education, other Central and State sponsored schemes

SuggestedReadings:

- RelevantchaptersfromLatestFinanceCommissionReports
- Relevant chapters from the latest EconomicSurvey

- Latest BudgetDocument
- Rangarajan, Chakravarthy, and D. K. Srivastava. ”Fiscaldeficits and government debt: implications for growth and stabilisation.” Economic and Political Weekly (2005): 2919-2934
- Rao, M. Govinda. ”Centraltransfers to states in India: rewarding performance while ensuring equity.” Final report submitted to NITI Aayog(2017).
- Relevantarticlesfromreputedjournals

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Generic Elective (GE-23): Health andDevelopment

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
IV/VI/VIII	Health and Development – ECON073	4	3	1	0	Class 12th Pass	NIL

CourseObjectives:

- Thiscoursedealswiththeinterfacebetweenthehealthanddevelopment,bothmonetaryandnon-monetary terms.
- It identifies how health care markets differ from other goods and services, the unique role of health insurance for health equity.
- The course address how medical spending has evolved over time, role of state and institution for delivering health care services.
- It also covers the various strategies address by the nation and internationalorganisationsforensuringhealthcareandbetterlife.

Course LearningOutcomes:

- The students will be able to understand economic dimensions of health services, determinants of health care, role of state and institution, policies relating to health equity andstrategiestodealwithcommunicableandnon-communicablediseases

CourseOutline:

Unit 1 : Health, Wealth, and Welfare; Utility and Health; Causes and Consequences of Regional Variations in Health Care (9 hours)

Unit 2 : Health expenditure

Health Care Spending Growth; The Transformation of Medical Care to Health; TheDemandforMedicalCare;out-pocketexpenditure (9 hours)

Unit 3 : Health Insurance (9 hours)

Externalities in Health and Medical Care; The Demand for Health Insurance; Health Insurance Supply and Managed Care; Government Provision of Health Insurance; Universal Insurance Issues and International Comparisons of Health Care Systems; managing market (9 hours)

Unit 4 : Economics and mental health (9 hours)

Unit 5 : Health Systems (9 hours)

International health systems and Indian experiences, and health care financing.

Suggested Readings: Following is the suggested list of books/papers, which can be updated with more recent papers as ans when they becomeavailable.

Main Textbooks

- Deaton, A. (2007). Height, health, and development. Proceedings of the national academy of sciences, 104(33), 13232-13237.
- IMF (2004), Health and Development, https://www.imf.org/external/pubs/ft/health/eng/hdwi/h
- Satpathy SK, Bansal RD. Health economics–concepts and conceptual problems. HealthPopulPerspectIssues.1982Jan-Mar;5(1):23-33.PMID:10310083.
- Frank, R. G., & McGuire, T. G. (2000). Economics and mental health. Handbook ofhealtheconomics,1,893-954.

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Generic Elective (GE-24): Global Political Economy

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
IV/VI/VIII	Global Political Economy – ECON074	4	3	1	0	Class 12th Pass	NIL

- CourseObjectives:
  - This course introduces students to the contemporary structures, trends and developments in the world economy from a political economy perspective.
  - The period covered is from the end of Second World War up to global economic crisis of 2008. Areas covered include the organization of production and corporate structure; changes in labour processes and labour regimes;
  - The financialization of the world economy; and the shift intheunderstandingofthenatureandroleofthestateunderglobalisation.
- Course LearningOutcomes:
  - This course enables students to develop a critical understanding of the contemporary global economy, changing dynamics of political economic relation and developments over the last five or six decades.

Content (Unit-wise):

Unit 1 : Introduction (6 hours)

The political economy of globalisation, a theoretical and historical overview.

Unit 2 : Changing dynamics of capitalist production. (9 hours)

Organisational forms and labour processes in the Fordist and Post-Fordist produc- tion regimes; multinational corporations – evolution, structural form and dynam- ics; global value chains and production networks; the nature of employment, job security and labour rights in a globalising world.

Unit 3 : Institutional setting of global trade. (6 hours)

Evolution of the role, structure and mechanisms of the international trade regime.

Unit 4 : The role of finance in the globalised economy. (9 hours)

Financialization– trends, instruments, features and consequences.

Unit 5 : The state in the era of globalisation: (6 hours)

Globalisation and the limits of the welfare and developmental states; the neoliberal state.

Unit 6 : Global economic instability and crisis: (9 hours)

The 2008 global economic crisis – prelude; proximate and long-term causes; and policy response.

- SuggestedReadings:

– Dore, R. (2008). Financialization of the global economy. Industrial and Corporate Change, 17,1097-1112.

– Harvey, D. (2005). A brief history of neoliberalism. Oxford UniversityPress.

- Hymer, S. (1975). The multinational corporation and the law of uneven develop- ment. In H. Radice (ed.): International firms and modern imperialism. Penguin Books.
- Nayyar, D. (2003). Globalisation and development. In H.-J. Chang (ed.): Re- thinking development economics. AnthemPress.
- Reddy, N. (2003). Economic globalisation, past and present: The challenges to labour. In K. Jomo, K.Jin (eds): Globalization and its discontents, revisited. TulikaBooks.
- Thun, E. (2011). The globalization of production. In J. Ravenhill (ed.): Global political economy. Oxford UniversityPress.
- Tonkiss, F. (2008). Contemporary economic sociology: Globalisation, production, inequality.Routledge.
- Vakulabharanam, V. (2009). The recent crisis in global capitalism: Towards a Marxianunderstanding.EconomicandPoliticalWeekly,44,144-150.
- Varoufakis, Y. (2011). The global Minotaur: America, the true origins of the financial crisis and the future of the world economy. ZedBooks.
- Winham, G. (2011). The evolution of the global trade regime. In J. Ravenhill (ed.): Global political economy. Oxford UniversityPress.

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Generic Elective (GE-25): History of Indian Economic Thought

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
IV/VI/VIII	History of Indian Economic Thought – ECON075	4	3	1	0	Class 12th Pass	NIL

CourseObjectives:

- The purpose of this course is to develop understanding among the students about Indian Economic Thinking in ancient and pre-independence India.
- This course exposes students to prominent Indian economic thinkers from the ancient period till the early 20th century. The course will provide intellectual underpinning of ancient Indian economics, which will help them solve many ongoing economic problems.

Course LearningOutcomes:

- The students will be able to have idea about the ancient Indian economic system
- The course will help the students to understand the current economic system in view of the economic history of the country

- Content (Unit-wise):

Unit 1: Ancient and pre-colonial period (15 hours)

Postulates of Ancient Indian Economics; Buddhism and economics; Consumption, production, exchange and distribution in Ancient Indian Economy; Public finance and economic functions of government.

Unit 2 : Colonialism, Exploitation and Economic development (15 hours)

Classical & Neoclassical economics and Indian economic thought during colonial period; Theory of wealth drain and, famine and poverty; Industrialization, agrarian policy, infrastructure and structural changes.

Unit 3 : Economic thought: Indian Freedom Movement (15 hours)

Gandhian Economic model of swadeshi; Gokhle and Economics of Education; free trade to discriminating protection; Ranade and Economics of development; Ambedkar's thought on population, agriculture, banking and industrilisation.

- SuggestedReadings:

- Kangle, R. P. (1986). *KautiliyaArthasastra (vol. No. 1-3)* Motilal Banarsidass Publication.
- Bahadur, R. and Aiyanger, K.V.R. (1934). Aspects of Indian Economic Thought. The Madras Law Journal Press, Mylapore, Madras.
- Dasgupta, A. (1993). The history of Indian Economic Thought. Routledge, London and New York.
- Shah, K.T. (1954). Ancient Foundations of Economcis in India. Vora & Co. Publishers Ltd. Bombay.
- Mahadev Govind Ranade (2000). Indian political Economy. Indian economic association trust for research and development. Ch1.
- J. Krishnamurty (ed.; 2011). *Towards Development Economics: Indian Contribu- tions1900–1945*,OUP.
- Government of Maharashtra Education Department (1982). *On Measures for Birth Control' Dr. Babasaheb Ambedkar: Writings and Speeches, Volume.-2, Appendix-1* Government of

Maharashtra, page261.

- Waldauer, C., Zahka, W. J., & Pal, S. (1996). Kautilya's Arthashastra: A neglected precursor to classical economics. *Indian Economic Review*, 101-108.
- Tisdell, C. A. (2003). *A western perspective on Kautilya's' Arthasastra': Does it provide a basis for economic science?* (No. 1742-2016-140719, pp. 1-13).
- Adams, J. (2006). Economics, economists, and the Indian economy. *India Review*, *5*(1), 37-61.
- Skare, M. (2013). The missing link: From Kautilya's The Arthashastra to modern economics. *Journal of Philosophical Economics*, *6*(2), 2-31.
- Deodhar, S. Y. (2018). Indian antecedents to modern economic thought.
- Ambedkar, B. R. (1918). Small holdings in India and their remedies. *Journal of Indian Economic Society*, *1*, 1900-1945.

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