

Department of Economic Studies and Policy (DESP)

School of Social Sciences and Policy

Syllabus for M.A. Programme in Economics

*Under
National Education Policy - 2020*



Central University of South Bihar

(Established by Central Universities Act, 2009 of Parliament)

NH-120, Gaya-Panchanpur Road, Village-Karhara, Post-Fatehpur

P.S.-Tekari, District-Gaya (Bihar) PIN-824 236

About the Department

The Department of Economic Studies and Policy looks at academic engagement with a difference. While the major focus of the Department is on the teaching of basic principles of economics, its search is for new epistemology, both in theory and practice. It keeps on improving its course curriculum on a regular basis based on the evolving theoretical paradigms in the field of economics by different schools of thought that have ontological bearings. The diverse knowledge base in economics and its ramifications on society continues to be a primordial source of choice for the direction of research. The Department nurtures the creative impulses of both faculty and students and continuously provides forums for developing critiques of existing theories and practices only to create a new space for the latter. In this process, it contextualizes emerging theoretical postulations at all levels including local, sub-regional, national, and international. The Department aspires and attracts students and teachers from all over the country and abroad to develop it as a unique place of learning and develop collaboration with other institutions for teaching and research.

Programme Objectives:

The Objectives of the two-year (four-semester) post-graduate programme are to:

1. Train the students on the ever-expanding knowledge base in economics – both theoretical and applied.
2. Impart multidisciplinary and interdisciplinary education through various courses, including the Indian Knowledge System.
3. Improve the students' analytical and quantitative skills.
4. Provide hands-on training on the analysis of data using modern econometric softwares.
5. Expose the students to the economic issues of the Global, National and Local Economies.
6. Introduce the basics of research methodology to the students and train them to apply this in their dissertations.

Program Learning Outcomes:

After successful completion of the program, the students will be able to:

1. Demonstrate comprehensive knowledge of economic theories and their applications.
2. Demonstrate understanding of interdisciplinary areas of economics.
3. Demonstrate multidisciplinary knowledge through mandatory elective non-credit courses.
4. Express ideas on economic and related issues effectively in writing and orally.
5. Demonstrate the ability to analyse data using econometric software packages.
6. Critically evaluate economic theories and policies with reasoning.
7. Demonstrate capacity to Carry out research in economics and allied disciplines at a higher (doctoral) level.
8. Adopt a professional career in the corporate/ government sectors.

DEPARTMENT OF ECONOMIC STUDIES AND POLICY

Course Structure for M.A. in Economics Programme (Under NEP-2020)

Semester	Course Type	Course Code	Name of the Course	Credit
FIRST SEMESTER	DBCC	ECO81DC00104	Microeconomics I	04
		ECO81DC00204	Macroeconomics I	04
		ECO81DC00304	Mathematical Methods in Economics	04
		ECO81DC00404	Introductory Statistics and Econometrics	04
		ECO81DC00504	Development Economics	04
	Total Credits			20
	MENC	Non-Credit Course equivalent to 02 credits to be chosen from the basket of MENC courses.		00 (Non-credit)
SECOND SEMESTER	DBCC	ECO82DC00604	Microeconomics II	04
		ECO82DC00704	Macroeconomics II	04
		ECO82DC00804	Econometric Methods	04
		ECO82DC00902	Software Applications of Econometrics	02
		ECO82DC01004	Introduction to Research Methodology	04
		ECO82DC01102	Indian Thought in Economics	02
	Total Credits			20
	MENC	Non-Credit Course equivalent to 02 credits to be chosen from the basket of MENC courses.		00 (Non-credit)

Semester	Course Type	Course Code	Name of the Course	Credit	
THIRD SEMESTER	DBCC	ECO91DC01204	International Economics	04	
		ECO91DC01304	Public Finance	04	
	(Any two from here)	ECO91DE01604	Financial Economics I	04	
		ECO91DE01704	Economics of Health	04	
		ECO91DE01804	Economics of Education	04	
		ECO91DE01904	Law and Economics	04	
		ECO91DE02004	Agricultural Economics	04	
		ECO91DE02104	Optimisation in Economic Theory	04	
		ECO91DE02204	Time Series Analysis	04	
		ECO91DE02304	Introduction to Behavioural Economics	04	
		ECO91DE02404	Economics of Migration	04	
		ECO91DE02504	Labour Economics	04	
ECO91DE02604		History of Economic Ideas	04		
OEIC	One course to be chosen by the student from the courses of any other department which are open.			04	
Total Credits				20	
MENC	Non-Credit Course equivalent to 02 credits to be chosen from the basket of MENC courses.			00 (Non-credit)	
FOURTH SEMESTER	DBCC	ECO92DC01404	Indian Economic Development	04	
		ECO92DC01504	Dissertation	04	
	(Any two from here)	ECO92DE02704	Financial Economics II	04	
		ECO92DE02804	Financial Econometrics	04	
		ECO92DE02904	International Finance	04	
		ECO92DE03004	Advanced Topics in Applied Econometrics	04	
		ECO92DE03104	Game Theory with Application to Economics	04	
		ECO92DE03204	Environmental Economics	04	
		ECO92DE03304	Industrial Economics	04	
		ECO92DE03404	Urban Economics	04	
		ECO92DE03504	Indian Public Finance	04	
		ECO92DE03604	Demography and Population Studies	04	
	OEIC	One course to be chosen by the student from the courses of any other department which are open.			04
	Total Credits				20
	MENC	Non-Credit Course equivalent to 02 credits to be chosen from the basket of MENC courses.			00 (Non-credit)
Notes	1. Elective courses would be offered depending upon the availability of specialised faculties. Courses to be offered as elective papers in a particular semester would be announced before the commencement of the semester. 2. Each student would obtain 08 credits from courses offered by other departments in the name of OEIC. 3. Students must complete at least two MENC courses of two credits each in the entire duration of the programme. 4. A student may also earn credits in a semester through the online learning courses offered through the SWAYAM platform or other approved platforms following the guidelines/ordinances of the university related to this.				

Courses Open to Other Disciplines			
Semester	Course Code	Name of the Course	Credit
Odd	ECO81DC00504	Development Economics	04
Even	ECO82DC01102	Indian Thought in Economics	02
Odd	ECO91DE01704	Economics of Health	04
Odd	ECO91DE01804	Economics of Education	04
Odd	ECO91DE01904	Law and Economics	04
Odd	ECO91DE02304	Introduction to Behavioural Economics	04
Odd	ECO91DE02404	Economics of Migration	04
Even	ECO92DC01404	Indian Economic Development	04
Even	ECO92DE03204	Environmental Economics	04
Even	ECO92DE03404	Urban Economics	04

MENC Courses to be taught by the Department if offered			
Semester	Course Code	Name of the Course	Credit
Odd	ECO81ME03700	Early and Modern Economic Thought in India	Non-Credit
Even	ECO92ME03800	Understanding the Union and State Budget	Non-Credit

Description of the Courses			
1.	Discipline Based Core Course	DBCC	This is the foundational course which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study at PG level. This also includes the introductory course on research methodology, dissertation writing, project work, field work, lab work related to the subject.
2.	Discipline Based Core Elective Course	DBCE	This is the elective foundational course, aimed to expand the understanding in a specific area, emerged from the foundational knowledge. The students have choice to choose the course from a basket of DBCE.
3.	Open Elective (Interdisciplinary) Course	OEIC	This is the elective course, aimed to enable exposure to some other discipline or domain. The students have to choose the Open elective course from the other departments.
4.	Mandatory Elective Non-Credit Course	MENC	This is the value-added course to promote multidisciplinary and holistic education among the students. The course is of non-credit nature but mandatory to complete successfully for the award of the Master's degree. The students have to choose the MENC courses, equivalent to at least 04 credits, from a basket of offered courses.

<i>Nature of the Courses</i>	<i>Total Credits</i>
Discipline Based Core	72
Discipline Based Core Electives	
Introductory Course on Research Methodology in the concerned discipline (minimum 04 credits)	
Dissertation/Project Work/Internship/Report submission (minimum 04 credits)	
Open Elective (interdisciplinary in nature)	08
Total	80
Mandatory Elective Non-Credit Course (Minimum 02 MENCC)	04

Detailed Syllabus of Core Courses

Semester I

Course Title: Microeconomics I			
Course Code:	ECO81DC00104	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	First	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion; self-study, assignments, quiz, and seminar, presentations by students.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term External Examination (University Examination)		

Course Objectives

- To familiarize the students with the theoretical understanding about the behaviour of an individual at the micro level, either as a consumer or producer in a market economy.
- To understand the theories of price determination and market analysis.

Learning Outcomes

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

- Think intuitively about economic problems
- Make decisions using marginal analysis and opportunity costs to make optimal choices and identify whether the choices are –efficient or –equitable.
- Describe the incomes earned by the factors of production (land, labour, capital and entrepreneurship) as wages, interest, rents and profit.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Consumer Behaviour: Consumer preferences, Indirect utility, The money metric utility functions, Revealed preference, The Slutsky equation	1-10 [L]
2	Choice under uncertainty: Von Neumann-Morgenstern utility functions, Risk aversion and measures of risk aversion.	11-16 [L]

3	Theory of Firm: Cost minimisation, Profit maximisation, Market equilibrium, Imperfect markets - Monopoly - Price Discrimination, Oligopoly - Cournot, Bertrand, Stackelberg.	17-26 [L]
4	Elements of Game Theory: Concept of a game, Prisoner's dilemma, Iterated elimination of dominant strategies, Nash equilibrium, dynamic game, backward induction, sub-game perfect Nash equilibrium, Repeated games, Elements of co-operative game theory.	26-35 [L]
5	Theory of Distribution: Neo-classical approach - marginal productivity theory, elasticity of technical substitution and factor shares, product exhaustion theorem, theories of pricing of factors in imperfect markets, determination of rent, wages, interest and profit.	36-45 [L]
Tutorials		15 [T]

Recommended Texts:

- (1) Hal R. Varian, *Intermediate Microeconomics: A Modern Approach*, W.W. Norton and Company, USA, 8th edition, 2010. The workbook by Varian and Bergstrom may be used for problems.
- (2) Hal R. Varian, *Microeconomic Analysis*, W.W. Norton and Company, USA, 1992.
- (3) Mas-Colell, A., M. Whinston and J. Green, *Microeconomic Theory*, Oxford University Press, New York and Oxford 1995

Additional References:

- (1) Da Costa, G.C., *Production, Prices and Distribution*, Tata McGraw Hill, New Delhi, 1982.
- (2) Bronfenbrenner, M, *Income Distribution Theory*, Macmillan, London, 1971.

Course Title: Macroeconomics I			
Course Code	ECO81DC00204	Credits	04
L+T+P	3+1+0	Course Duration	One Semester
Semester	Odd	Contact Hours	45(L) + 15(T) = 60 hours
Methods of Content Interaction	Class lectures, group discussions, students' presentations, and tutorials.		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of quizzes, take-home assignments and class test)		
	70% - End-semester university examination		

Course Objectives: Course Objectives

- To provide the students with an introduction to the basic macroeconomic principles.
- To enable them to appreciate the workings of real and money markets and the nature of equilibrium in each market
- To emphasize the role of macroeconomic policies that affect internal and external deficits, inflation and growth of per capita income.
- Throughout the course, a focus will be on critical thinking to analyse macroeconomic problems.

Learning Outcomes

After successful accomplishment of this course, a student should be able to:

- Define and analyse the determinants of macro-economic fluctuations, economic growth, unemployment, inflation.
- Understand the earlier and contemporary macroeconomic events.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Introduction to Macroeconomics: Nature, scope and importance of macroeconomics, Basic issues studied in macroeconomics, Transition from microeconomics to macroeconomics, Classical and modern approach of macroeconomics.	1- 4 [L]
2	Measurement of Macroeconomic Variables: The National Income Accounts, Gross Domestic Product, GDP Deflator, Real versus Nominal GDP and Price indices: Consumers' price index, Wholesale price index, Producer's price index.	5-9 [L]
3	Theories of Output and Employment: Classical theory of income, output and employment determination, Aggregate demand and aggregate supply, Keynesian model of income determination and the multiplier.	10-16 [L]
4	Money and the Role of Monetary Policy: Nature and definition of money, Quantity theory of money, Money in the Keynesian system, Friedman's monetarist theory, Monetarists versus Keynesians, Phillips curves: The relation between unemployment and inflation, stagflation and The long-run Phillips curve.	18-24 [L]
5	IS-LM Framework: The goods market and the IS curve, The Money market and the LM curve. Equilibrium in the goods and money	25-37 [L]

	markets and aggregate demand schedule. Effectiveness of monetary policy and fiscal policy: crowding out effect.	
6	New Classical Economics: An overview of the new classical macroeconomics, The rational expectations concept and its implications. The Keynesian counter critique. Lucas critique and supply-side macroeconomics.	38-45 [L]
Tutorials		15 [T]

Recommended Texts:

- 1) Dornbusch, R., S. Fischer and R Startz, *Macroeconomics*, McGraw Hill, New York, 12th edition, 2018.
- 2) Mankiw, N. Gregory, *Macroeconomics*, Worth Publishers, New York, 9th edition, 2016.
- 3) Froyen, Richard T., *Macroeconomics: Theories and Policies*, Pearson, New York, 10th edition, 2012.

Additional References:

- Abel, A., Bernanke, B. (2016). *Macroeconomics*, 9th ed. Pearson Education.
- Blanchard, O. (2018). *Macroeconomics*, 7th ed. Pearson Education.
- Jones, C. (2016). *Macroeconomics*, 4th ed. W. W. Norton.
- Basu K. (2011). "Understanding Inflation and Controlling It" Vol. 46, Issue No. 41.
- Friedman, M. (1948). "A monetary and fiscal framework for economic stability." *American Economic Review* 38: 245-264.
- Friedman, M. (1968). "The role of monetary policy." *American Economic Review* 58 (1): 1 -17.
- Muth, J. F. (1961). Rational expectations and the theory of price movements. *Econometrica: Journal of the Econometric Society*, 315-335.
- Phillips, A. W. (1958). The relation between unemployment and the rate of change of money wage rates in the United Kingdom, 1861–1957. *economica*, 25(100), 283-299.
- Taylor, J. B. (1993, December). Discretion versus policy rules in practice. In *Carnegie-Rochester conference series on public policy* (Vol. 39, pp. 195-214). North-Holland.
- Tobin, J. (1972). "Inflation and Unemployment." *American Economic Review* 62 (1/2): 1-18.
- Data, Reports, Working Papers available at The Reserve Bank of India Website: <https://www.rbi.org.in/> and Central Statistics Office (CSO), Government of India Website: <http://www.mospi.gov.in/central-statistics-office-cso-0>

Course Title: Mathematical Methods in Economics			
Course Code	ECO81DC00304	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Odd	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lectures, Tutorials, self-study, group and individual assignments.		

Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)
	70% - End Term University Examination.

Course Objectives:

- To introduce the students to the basic mathematical tools required to study economic theory, statistics and econometrics at the Masters Level.
- To make the students learn the application of mathematical tools in economics.

Learning Outcomes:

After completing this course, the students will be able to:

- Solve a range of problems relating to basic mathematical tools.
- Acquire the essential mathematical skills used in economic analysis
- Make use of the mathematical approach in formulating and analysing problems in economics, and recognise its limitations
- Comprehend the articles in leading economics journals that are essential for keeping up with advances in economic science.

Course Contents and Teaching Plan:

Unit	Content	Teaching Hours
1	Preliminaries and Matrix Algebra: Set, Relation and Functions; Types of matrices, matrix operations, matrix inversion, solution of simultaneous equations using matrix algebra, rank of a matrix, evaluation and properties of determinants, input-output models	1-7 [L]
2	Differentiation: Basic rules of differentiation, rules of differentiation involving functions of different variables, higher order derivatives, rules of partial and total differentiations, derivative of implicit functions, applications in economics.	8-15 [L]
3	Integration: Rules of integration, simple and definite Integrals, Application to consumer and producer 's surplus, growth rates and simple properties of time path of continuous variables.	16-21 [L]
4	Differential Equations: First Order Differential Equations: first order linear differential equations with constant coefficient and constant term, dynamics of market price, non-linear differential equations of the first order and first degree, economic applications – Solow growth model. Higher Order Differential Equations - linear second order differential equations with constant coefficients and constant terms.	22-31 [L]
5	Difference Equations: First-order difference equations, complementary function, particular integral and solution, difference equations in economics, dynamic stability of equilibrium, convergence of equilibrium, Linear second	32-37 [L]

	order difference equations with constant coefficients. Economic Applications: cobweb model.	
6	Optimisation: Unconstrained Optimization, Global and local extrema of real-valued functions, Unconstrained maxima and minima with more than one explanatory variable, Optimization subject to equality constraints: The Lagrange Multiplier method; Necessary and sufficient conditions for a solution to the optimization problem with equality constraints. Introduction to Dynamic Optimization and formulation of Dynamic Optimisation Problems.	38-45
	Tutorials	15 [T]

Recommended Texts:

(1) Chiang, A. C. and Kevin Wainwright, Fundamental Methods of Mathematical Economics, Mc Graw Hill, 4th edition, 2005

(2) Simon, Carl P. and Lawrence Blume. Mathematics for Economists, W. W. Norton and Company, 1994.

Additional References:

(1) Allen, R. G. D, Mathematical Economics, Second edition, Macmillan, UK, 1959.

(2) Sydsaeter, Knut, Peter Hammond, and Arne Strom, Essential Mathematics for Economic Analysis, 4th edition, Pearson Education, 2012

(3) Yamane, Taro, Mathematics for Economists: An Elementary Survey, Prentice-Hall, 1968

(4) Chiang A. C., Dynamic Optimization, McGraw Hill Inc, 1992.

(5) Dixit, A, Optimisation in Economic Theory, OUP, 1990

Course Title: Introductory Statistics and Econometrics			
Course Code	ECO81DC00404	Credits	04
L + T + P	3+1+0	Course Duration	One Semester
Semester	Odd	Contact Hours	30(L) + 15(P) + 15(T) = 60 hours
Methods of Content Interaction	Class lectures, tutorials, and practical works using Excel software.		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of quizzes, take-home assignments and class tests)		
	70% - End-semester university examination		

Course Objectives:

- To familiarise the students with basic statistics tools that are used to analyse socio-economic data.
- To introduce the concepts of probability theory and statistical inference that have applications in econometric analysis.
- to provide the student with the basic econometric tools necessary to begin conducting empirical research.
- To expose the students to practical applications of various statistical tools using Excel software.

Learning Outcomes:

- Taking this course would help the students to acquire data analysis skills using the tools of statistics.
- Help in gaining an intuitive understanding of the principles of econometric analysis.
- It will also help to learn the methods of interpretation and presentation of statistical results.

Unit	Contents	Teaching Hours
1	Theories of Probability and Distributions: Basic probability concepts and rules; Conditional probability; Random variables and probability distributions: Discrete and continuous probability distributions; probability mass and density functions expectation of a random variable and rules of expectation. Measures of location, dispersion, skewness and kurtosis for a probability distribution; properties of binomial, normal, poisson, and multinomial distributions.	0-7 L
2	Statistical Inference: Population and Sample; Parameter and Statistic; Estimation theory: Point Estimation, Small sample properties, asymptotic properties, Interval Estimation, Testing of hypotheses: Null vs Alternative hypothesis, Simple and Composite hypotheses, Procedure for testing of hypotheses; Type I and Type II errors; power of a test; level of significance, Confidence Interval, confidence limits, Degrees of freedom; Test for the mean, equality of two means, variance and equality of two variances (large and small samples), large sample tests for proportions, test for correlation coefficient.	8-16 [L]
3	Simple Linear Regression Model (SLRM): Definition, specification, and assumptions; OLS estimation; BLUE properties; Inference in SLRM; Goodness of fit measure; Regression without intercept term; Reverse regression.	17-24 [L]
4	Multiple Linear Regression Model (MLRM): Definition, specification, and assumptions; OLS estimation; BLUE properties; Various problems of inference in MLRM; Measuring goodness of fit; Testing overall significance of a regression.	25-32 [L]
5	Some Econometric Problems: Heteroskedasticity, Autocorrelation, Multicollinearity and Specification Bias (definition, causes, consequences, detection, and remedial measures).	33-41 [L]
6	Dummy Variables: Definition; Regression models with dummy variables; Interaction dummy; Comparing two regression models using dummy variables.	41-45 [L]

Tutorials	15 [T]
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Recommended Texts:

Course Title: Development Economics			
Course Code	ECO81DC00504	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Odd	Contact Hours	45 (L) + 15 (T) + 0 (P) = 60 Hrs.
Methods of Content Interaction	Class Lectures, Tutorials, self-study, group and individual assignments and presentations.		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of quizzes, take-home assignments and class test)		
	70% - End-term University examination		

- (1) Bhaumik, Sankar Kumar, *Principles of Econometrics: A Modern Approach Using EViews*, Oxford University Press, New Delhi, 2015.
- (2) Dougherty, Christopher, *Introduction to Econometrics*, (5th Edition). Oxford University Press, 2016
- (3) Newbold, Paul et al., *Statistics for Business and Economics*, 8th edition, Pearson, England, 2013.

Additional References:

- (1) Chatterjee, Samprit and Ali S Hadi, *Regression Analysis by Example*, 5th edition, John Wiley and Sons, New York, 2012.
- (2) Gujarati, D. N. and D C Porter, *Basic Econometrics*, 5th edition, McGraw Hill, New York, 2009.
- (3) Koop, Gary, *Introduction to Econometrics*, John Wiley & Sons, New York, 2008.
- (4) Levine, D M et al., *Business Statistics: A First Course*, 5th edition, Pearson, Delhi, 2011.
- (5) Murthy, M N, *Sampling Theory and Methods*, Statistical Publishing Society, Kolkata, 1967.
- (6) Wooldridge, J M, *Introductory Econometrics: A Modern Approach*, 5th edition, South-Western Cengage Learning, United States, 2013.

Course Objectives

1. To familiarize the students with the theoretical underpinnings of development discourses, and
2. To introduce the measurement issues relating to various development indicators.

Learning Outcomes

1. Enable the students to demonstrate multidimensional knowledge and understanding of the characteristics and economic problems of less-developed countries.

2. It will enable the students to develop critical thinking to those problems and to formulate and evaluate possible policy responses.

Course Contents and Teaching Plan:

Unit	Content	Teaching hours
1	Introducing Economic Development: A Global Perspective - How the Other Half Live, Economics and Development Studies: The Nature of Development Economics, Why Study Development Economics? The Important Role of Values in Development Economics, Economies as Social Systems, The Need to Go Beyond Simple Economics; Mean of Development; Traditional Economic Measures, The New Economic View of Development, Sen's "Capability" Approach, Development and Happiness, Three Core Values of Development, The Central Role of Women, The MDGs and SDGs	1-5 [L]
2	Comparative Economic Development: Basic Indicators of Development: Real Income, Health, and Education, PPP. <i>Holistic Measures of Living Levels and Capabilities:</i> The Traditional HDI, The New HDI. Developing World: Diversity within Commonality: Lower Levels of Living and Productivity, Lower Levels of Human Capital, Higher Levels of Inequality and Absolute Poverty, Higher Population Growth Rates, Greater Social Fractionalization, Larger Rural Populations but Rapid Rural-to-Urban Migration, Lower Levels of Industrialization and Manufactured Exports, Adverse Geography Underdeveloped Markets, Lingering Colonial Impacts and Unequal International Relations	6-13 [L]
3	Contemporary Models of Development and Underdevelopment: Underdevelopment as a Coordination Failure, Multiple Equilibria: A Diagrammatic Approach, Starting Economic Development: - The Big Push with A Graphical Model, Other Cases in Which a Big Push May Be Necessary, Why the Problem Cannot Be Solved by a Super-Entrepreneur. <i>Further Problems of Multiple Equilibria:</i> Michael Kremer's O-Ring Theory of Economic Development: The O-Ring Model, Implications of the O-Ring Theory; Economic Development as Self-Discovery; The Hausmann-Rodrik-Velasco Growth Diagnostics Framework.	14-20 [L]
4	Equality and Justice – Alternative Theories: A brief description of the literature on theories of justice, Rawls' theory of justice in a nutshell, Rawlsian justice versus the capability approach, what do we need for a capability theory of justice, gender justice and justice for marginalized groups, from theories of justice to just practices and policies.	21-26 [L]
5	Poverty, Inequality, and Development: Measuring Inequality and Poverty: Measuring Inequality, Measuring Absolute Poverty, Multidimensional poverty index. Poverty, Inequality, and Social Welfare. Dualistic Development and Shifting Lorenz Curves: Some Stylized Typologies, Kuznets's Inverted-U Hypothesis, Growth and Inequality. Absolute Poverty: Extent and Magnitude: Growth and Poverty; Economic Characteristics of High-Poverty Groups: Rural Poverty, Women and Poverty, Ethnic Minorities, Indigenous Populations, and Poverty. Policy Options on Income Inequality and Poverty: Areas of Intervention, Altering the Functional Distribution of Income through Relative, Factor Prices, Modifying the Size Distribution through Increasing Assets of the Poor, Progressive Income and Wealth Taxes, Direct Transfer Payments and the Public Provision of Goods and Services.	27-37 [L]
6	Institutions, Markets and Economic Development: The institutional turn, Testing the theory, From formal rules to informal norms, Institutions as a 'grand' theory of development. <i>Markets:</i> Markets as institutions, Markets in mainstream economic theory, Institutional definitions of markets, From 'self-regulated' to 'socially regulated' markets, Institutions and markets in the human development Approach	38-45 [L]

	Tutorials	15 [T]
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Recommended Texts:

- (1) Michael P. Todaro and Stephen C. Smith. *Economic Development*, 12th Edition, Pearson. 2015
- (2) Mukherjee, Aparajita and Saumya Chakrabarti, *Development Economics: A Critical Perspective*, Prentice Hall India, New Delhi, 2016.
- (3) Ray, Debraj, *Development Economics*, Oxford University Press, New Delhi, 1998.
- (4) Basu, Kaushik, *Analytical Development Economics: The Less Developed Economy Revisited*, Oxford University Press, New Delhi, 1995.
- (5) Sen, Amartya, *Inequality Reexamined*, Oxford University Press, UK, 1992.

Additional References:

- (6) Deneulin, Severine and Lila Shahani (eds.), *An Introduction to the Human Development and Capability Approach: Freedom and Agency*, Earthscan, London, 2009.
- (7) Fukuda-Parr, S. and A. K. Shiva Kumar, *Handbook of Human Development*, Oxford University Press, New Delhi, 2009.
- (8) Acemoglu, Daron Simon Johnson and James A. Robinson, "Institutions as a fundamental cause of long-run growth," in Philippe Aghion and Steven N. Durlauf, *Handbook of Economic Growth*. Volume /A, ed. (Amsterdam: Elsevier 2005), 389.
- (9) Agenor, Pierre-Richard, *Economics of Adjustment and Growth*, Harvard University Press, Cambridge, 2004.
- (10) Bardhan, Pranab and Christopher Udry, *Development Microeconomics*, Oxford University Press, New Delhi, 1999.
- (11) Dreze, Jean and Amartya Sen, *Development and Participation*, Oxford University Press, UK,
- (12) Chenery, H. and .N. Srinivasan (eds.), *Handbook of Development Economics*, Vol. I & II, Elsevier, Amsterdam. 1989.
- (13) Dreze, Jean and Amartya Sen, *Economic Development and Social Opportunity*, OUP, UK, 1995.
- (14) Fakuda-Parr, S. and A. K. Shiva Kumar, *Readings in Human Development*, Oxford University Press, UK, 2003.
- (15) Ranis, Gustav, 'Human Development and Economic Growth', in David Clark (eds.), *The Elgar Companion to Development Studies*, Edward Elgar Publishing Limited, UK, 2006,
- (16) Stewart, F, G. Ranis and E. Samman, 'Human Development: Alternative Country Choices' in K.Basu and R.Kanbur (eds.), *Welfare, Development, Philosophy and Social Science: Essays for Amartya Sen's 75th Birthday*, Oxford University Press, Oxford, 2007.

Semester II

Course Title: Microeconomics II			
Course Code:	ECO82DC00604	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Second	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion; self-study, assignments, quiz and seminar, presentations by students.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term External Examination (University Examination)		

Course Objectives:

- To familiarize the students with the growing debates on the development implications of welfare issues, externalities as development cost, and problems of social choice.
- While theoretical debates on these issues constitute the central focus of this course, emphasis is given on the part of the students to form their value judgement on development issues.

Learning Outcomes:

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

- Understand the applications of the general equilibrium model (Pareto optimality) and its nature and consequences.
- Explain how competitive markets organize the allocation of scarce resources and distribution of goods and services.
- Understand the basic elements of welfare economics
- Distinguish between the various forms of market failure and explain why the governments might have to intervene.
- Understand the basic role of uncertainty and asymmetric information in analyzing economic incentives.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
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1	General Equilibrium Analysis - The Edgeworth Box, Pareto Efficient Allocations, Market Trade, The Algebra of Equilibrium, Walras' Law, Relative Prices, Equilibrium and Efficiency, Edgeworth Box Efficiency and Equilibrium in Monopoly, Existence of competitive equilibria, Uniqueness and Stability of Competitive equilibrium, Competitive equilibrium as Core allocation, Factor Price Equalization Theorem, Welfare Properties of Competitive Equilibria - First and Second Fundamental Theorems of Welfare Economics.	1-15 [L]
2	Externalities - Coase Theorem, The Tragedy of Commons, Property Rights, Production externalities	16-20 [L]
3	Public Goods -Free riding, Private provision of Public Goods, Comparison to Private Goods, Voting	21-25[L]
4	Economics of Information - The Market for Lemons, Quality Choice, Choosing the Quality, Adverse Selection, Moral Hazard, Signalling, Example: The Sheepskin Effect Incentives.	26-35 [L]
5	Welfare Economics - Welfare Criteria - Pareto Criterion, Kaldor Criterion, Scitovsky Criterion, Samuelson Criterion, Cost-Benefit Analysis, Arrow's Impossibility Theorem.	36-45 [L]
Tutorials		15 [T]

Recommended Readings:

- (1) Akerlof, G. 'The Market for Lemons: Quality Uncertainty and the Market Mechanism', Quarterly Journal of Economics 84, no. 3 (August 1970): 488–500.
- (2) Varian, Hal R, *Intermediate Microeconomics: A Modern Approach*, W.W. Norton and Company, 8th edition, 2010. The workbook by Varian and Bergstrom may be used for problems.
- (3) Varian, Hal R, *Microeconomic Analysis*, VIVA Books, 2010.

Additional References:

- (1) Mas-Colell, Andrew Michael., Whinston, D. and Green, Jerry R. (1995), *Microeconomic Theory*, Oxford University Press.
- (2) Stiglitz, J.E. (1989) *Economics of the Public Sector*, W.W. Norton & Company, London.
- (3) T. Scitovsky (1951) "The State of Welfare Economics", *American Economic Review*, Vol. 41, p.303-
- (4) A. Bergson (1954) "On the Concept of Social Welfare", *Quarterly Journal of Economics*.
- (5) Samuelson, P. A. (1950). Evaluation of real national income. *Oxford Economic Papers*, 2(1), 1-29.

Course Title: Macroeconomics II			
Course Code	ECO82DC00704	Credits	04

L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lectures, Tutorials, self-study, seminar, assignments and presentations by students.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term University Examination.		

Course Objectives:

- To provide a detailed introduction to modern theories of economic growth and business cycles.
- To relate the theoretical analysis to macroeconomic policy and growth of different economies.

Learning Outcomes:

After completing this course, the students will be able to:

- know the main debates and approaches in the literature on economic growth and business cycle
- explain growth theory
- analyse the determinants of growth
- analyse the responses of policy makers to macroeconomic issues relating to growth and fluctuation.
- design a theoretical framework or empirical model for their own research in future.

Course Contents and Teaching Plan:

Unit	Content	Teaching hours
1.	Keynesian and Neo-classical Growth Models: Harrod-Domar model, Solow-Swan model, Infinite horizon (Ramsey-Cass-Koopmans) model, Basics of overlapping-generations (Diamond) model.	1-15 [L]
2.	Models with Endogenous Growth: One sector growth model - The AK model, learning by doing and knowledge leak out, two-sector model of Ujawa-Lucas, Romer's model of technological change.	16-27 [L]
3.	Post Keynesian Growth Theories: Pasinetti, Kaldor, Kalecki and Robinson's Approaches.	28-35 [L]
4.	Business Cycle Theories: Aggregate demand theories of business cycle, Real business cycle theory, New-Keynesian theories of business cycles	36-45 [L]
Tutorials		15 [T]

Recommended Texts:

- (1) Barro, Robert J. and Sala-i-Martin, Xavier. *Economic Growth*, Prentice Hall of India Private Limited, 2nd edition, 2007.
- (2) Romer, David, *Advanced Macroeconomics*, McGraw-Hill, 3rd edition, 2006.
- (3) Aghion, Philippe and Peter Howitt, *The Economics of Growth*, MIT Press, 2008

Additional References:

- (1) Acemoglu, Daron, *Introduction to Modern Economic Growth*, Princeton University Press, 2009.
- (2) Foley, D. and Michl, T, *Growth and Distribution*, Harvard University Press, 2001.
- (3) Jones, C. I., *Introduction to Economic Growth*, W. W. Norton & Co, 2013
- (4) Lavoie, Marc, *Foundations of Post-Keynesian Economic Analysis*, Edward Elgar, 1992.
- (5) Olsson, Ola, *Essentials of Advanced Macroeconomic Theory*, 1st edition, Routledge, 2012
- (6) Sen, A. K., *Growth Economics: Selected Readings*, Penguin Education, 1970
- (7) Sorensen, Peter B. and Hans J. Whitta-Jacobsen (2010): *Introducing Advanced Macroeconomics: Growth & Business Cycles*, 2nd edition, McGraw-Hill
- (8) Weil, David N, *Economic Growth*, International Edition (3rd edition), Routledge, 2012

Course Title: Econometric Methods			
Course Code	ECO82DC00804	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	45(L) + 15(T) + 0(P) = 60 hours
Methods of Content Interaction	Class lectures, tutorials, and group discussions.		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of quizzes, take-home assignments and class test)		
	70% - End-semester university examination		

Course Objective:

- To familiarise the students with the modern tools of econometrics that are used frequently for the purpose of analysing different types of data.

Learning Outcome:

- Taking this course would help the students to enhance the foundation of modern econometric tools and theories.

- It will help to develop necessary perspectives for empirical research using the tools of econometrics.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Review of Classical Linear Regression Model: Specification, assumptions, and estimation; Properties of estimators; Inference; Goodness of fit measures; Overall significance of a regression. Multicollinearity, heteroskedasticity, autocorrelation, normality test, and model specification errors (concept, consequence, tests, and remedial measures).	1-5[L]
2	Binary Choice Models: LPM, logit, probit – estimation, inference and goodness of fit measures.	6-12 [L]
3	Distributed Lag Models: Definition and specification; Koyck's Geometric lag model; Adaptive expectations model; Partial adjustment model; Polynomial lag models.	13-20 [L]
4	Simultaneous Equations System: Definition, structural and reduced-form equations; identification problem; estimation methods.	21-27 [L]
5	Time Series Econometrics: Stationary and non-stationary time series; trend stationary and difference stationary series; tests for stationarity; cointegration and error-correction mechanism; ARIMA forecasting; vector autoregressive (VAR) model; forecasting using VAR; causality tests; ARCH/GARCH for modelling volatility.	28-37 [L]
6	Panel Data Regression: Constant coefficients model; fixed-effects model; random effects model; tests for choosing an appropriate panel regression model.	38-45 [L]
Tutorials		15 [T]

Recommended Texts:

- (1) Bhaumik, Sankar Kumar, *Principles of Econometrics: A Modern Approach Using EViews*, Oxford University Press, New Delhi, 2015.
- (2) Wooldridge, J M, *Introductory Econometrics: A Modern Approach*, 6th edition, South-Western Cengage Learning, United States, 2016.

Additional References:

- (1) Koop, Gary, *Analysis of Economic Data*, John Wiley & Sons, New York, 2013.
- (2) Badi H Baltagi, *Econometric Analysis of Panel Data*, John Wiley & Sons, United Kingdom, 2008.
- (3) Enders, Walter, *Applied Econometric Time Series*, 4th edition, John Wiley & Sons, USA, 2015.

- (4) Brooks, Chris, *Introductory Econometrics for Finance*, 3rd edition, Cambridge University Press, United Kingdom, 2014.
- (5) Fabozzi, F J et al., *The Basics of Financial Econometrics*, Wiley, New Jersey, 2014.
- (6) Gujarati, D, *Econometrics by Example*, 2nd edition, Palgrave Macmillan, USA, 2016.

Course Title: Software Applications of Econometrics			
Course Code	ECO82DC00902	Credits	02
L + P	40%+60	Course Duration	One Semester
Semester	Even	Contact Hours	15(L) + 15(P) = 30 hours
Methods of Content Interaction	Class lectures and practical works using econometric software packages like EViews and Stata.		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of take-home assignments involving the use of econometric software)		
	70% - Computer based End-semester examination. The question pattern shall be designed by the course instructor which is to be approved by the Question Paper Moderation Committee of the Department.		

Course Objectives:

- To make the students understand the applications of various econometric tools for data analysis using econometric software packages like EViews and Stata.
- To provide hands-on training to the students for applications of econometric software packages for the purpose of data analysis.
- To know the methods of interpretation and presentation of results of econometric exercises.

Learning Outcomes:

- This course would enhance the students' skills for econometric analysis of data.
- It would train the students to analyse various socio-economic issues using empirical data, and by applying the tools of econometrics.
- The students with data analysis skills would be able to compete for jobs in the corporate sector.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Introduction to Econometric Software Packages: Basic commands of EViews and Stata	1 [L]

2	Application of EViews/Stata for Regression Analysis: Model estimation, goodness of fit measure, inference, and diagnostic tests (multicollinearity, heteroskedasticity, autocorrelation, normality test, and model specification errors); interpretation and presentation of regression results.	1 [L] + 2 [P]
3	Application of EViews/Stata in Limited Dependent Variable Models: Estimation of LPM, logit and probit models; inference issues; goodness of fit measures; diagnostic tests; interpretation of results.	1 [L] + 2 [P]
4	Application of EViews/Stata in Distributed Lag Models: Estimation of Koyck's model, adaptive expectations model and partial adjustment model; interpretation of results.	1 [L] + 1 [P]
5	Application of EViews/Stata for Analysis of Time Series Data: Correlogram analysis; stationarity tests; test of cointegration and estimation of ECM; forecasting; estimation of VAR model; test of causality; estimation of ARCH/GARCH models for testing volatility; Interpretation and presentation of results.	2 [L] + 4 [P]
6	Application of EViews/Stata for Analysis of Panel Data: Estimation of alternative panel regression models; tests to choose an appropriate panel regression model (including Hausman test); Interpretation of results of panel regression.	1 [L] + 2 [P]
7	Application of EViews/Stata in Simultaneous Equations Systems: Estimation of SES; Interpretation of results.	1 [L] + 1[P]

Recommended Texts:

- (1) Adkins, Lee C & R Carter Hill, *Using Stata for Principles of Econometrics*, John Wiley & Sons, New York, 2011.
- (2) Baum, Christopher F, *An Introduction to Stata Programming*, 2nd edition, Stata Press, USA, 2016.
- (3) Bhaumik, Sankar Kumar, *Principles of Econometrics: A Modern Approach Using EViews*, Oxford University Press, New Delhi, 2015.
- (4) Cameron, A Colin & P K Trivedi, *Microeconometrics Using Stata*, Stata Press, USA, 2009.
- (5) Das, P., *Econometrics in Theory and Practice - Analysis of Cross Section, Time Series and Panel Data with Stata 15.1*. Springer, Singapore, 2019
- (6) Griffiths, William E et al., *Using EViews for Principles of Econometrics*, John Wiley & Sons, New York, 2012.
- (7) Hamilton, Lawrence C, *Statistics with Stata*, Cengage Learning, USA, 2013.

Course Title: Introduction to Research Methodology			
Course Code	ECO82DC01004	Credits	04

L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	45 (L) + 15 (T) = 60 Hours
Methods of Content Interaction	Class Lectures, Tutorials, self-study, group and individual assignments and presentations.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term External Examination (University Examination)		

Course Objectives:

1. To familiarise the students with the basic concept of research.
2. To introduce different types of research.
3. To emphasise discussion on research process.
4. To orient the students regarding the review of literature.
5. To develop skills and competencies to formulate a research problem.

Learning Outcomes:

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

1. Describe the significant of doing research.
2. Understand the concepts and enable students to review literature critical and identify the research gap.
3. Equip knowledge on formulation of research work.
4. Critically analyse various research issues, evaluate and find out the potential solutions through research article, review and readings lectures.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Research Methodology: An Introduction Meaning of Research, Objectives of Research, Motivation in Research, Types of Research, Research Approaches, Significance of Research, Research Methods versus Methodology, Research and Scientific Method, Importance of Knowing How Research is Done, Research Process, Criteria of Good Research, Problems Encountered by Researchers in India	1-8 [L]
2	Defining the Research Problem: What is a Research Problem? Selecting the Problem, Necessity of Defining the Problem, Technique Involved in Defining a Problem, An Illustration, Formulating a research problem in qualitative research, Abhijit Banerjee, Esther Duflo, and Michael Kremer experimental approach — randomized control trials (RCTs)	9-15 [L]
3	Research Design: Meaning of Research Design, Need for Research Design, Features of a Good Design, Important Concepts Relating to Research Design, Different Research Designs, Basic Principles of Experimental Designs	16-21 [L]

4	Sampling Design: Census and Sample Survey, Implications of a Sample Design, Steps in Sampling Design, Criteria of Selecting a Sampling Procedure, Characteristics of a Good Sample Design, Different Types of Sample Designs, How to Select a Random Sample? Random Sample from an Infinite Universe, Complex Random Sampling Designs	22-28 [L]
5	Measurement and Scaling Techniques: Measurement in Research, Measurement Scales, Sources of Error in Measurement, Tests of Sound Measurement, Technique of Developing Measurement Tools, Scaling, Meaning of Scaling, Scale Classification Bases, Important Scaling Techniques, Scale Construction Techniques	29-37 [L]
6	Methods of Data Collection: Collection of Primary Data, Observation Method, Interview Method, Collection of Data through Questionnaires, Collection of Data through Schedules, Difference between Questionnaires and Schedules, Some Other Methods of Data Collection, Collection of Secondary Data, Selection of Appropriate Method for Data Collection, Case Study Method.	38-45 [L]
Tutorials		15 [T]

Recommended Texts:

- (1) Kothari, C. R. (2004). *Research Methodology: Methods and Techniques*. (2nd ed.) New Delhi: New Age International (P) Ltd.
- (2) Kumar, R. (2011). *Research Methodology: a step-by-step guide for beginners*. SAGE Publications Ltd. Mathura Road, New Delhi:
- (3) de Vaus, D. (2001). *Research Design in Social Research*. Thousand Oaks, CA: Sage Publications.
- (4) Mitchell, M. L. & Jolley, J. M. (2010). *Research Design Explained* (7th ed.) US: Wadsworth, Cengage Learning.

Additional References:

- (5) Desai, Vandana & Robert B Potter (eds.) (2006), *Doing Development Research*, Sage Publications, New Delhi.
- (6) Devereux, Stephen & John Hoddinott (eds.) (1993), *Fieldwork in Developing Countries*, Lynne Rienner Publishers, Boulder, Colorado.
- (7) Fink, Arlene & J Kosecoff (1998), *How to Conduct Surveys: A Step by Step Guide*, Sage, UK.
- (8) Vander Stoep, S. W & Deirdre D. J. (2009). *Research methods for everyday life: blending qualitative and quantitative approaches* San Francisco: John Wiley & Sons ISBN 978-0-470-34353-1

Course Title: Indian Thought in Economics			
Course Code:	ECO82DC01102	Credits	02
L + T + P	1.5 + 0.5 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	22 (L) + 08 (T) Hours

Methods of Content Interaction	Lecture, Tutorials, Group discussion; self-study, assignments, quiz, and seminar, presentations by students.
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)
	70% - End Term External Examination (University Examination)

Course Objectives

- To familiarize the students with the Indian thought on Economics.

Learning Outcomes

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

- Think intuitively about economic problems in conformity with Indian society.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Fundamental Concepts: Classification of Indian Knowledge Systems; Dharma as the basis of all Indian knowledge systems; The prescriptive nature of Indian discourses - Dharmic prescription for Artha and Kaama.	1-3 [L]
2	Basic Economics: Concept of Dhana/Artha; Consumption and Happiness; Five-fold way of expenditure/sharing; Income and Sharing in Vedas.	4-7 [L]
3	Social Economics: Individual as an economic entity; Family as an economic unit; Expansion of family as Kula, Jaati and Gram as economic units; Gandhi's idea of Swarajya; Ekaatma Maanavvaada by Pandit Deendayal Upadhyay; Daana as the basis for social economics.	8-12 [L]
4	State Economics: King's duties - Do's and Don'ts; Justice & Security by King; Concept of Aanvikshikii, Trayii, Vaartaa and Dandaneeti; Seven limbs of Administration, Characteristic of an ideal State's Treasury; Kara - Taxation in Arthashastra.	13-16[L]
5	Comparison with Modern Economics: Comparative study of the modern economic system with the ancient one, Analysing the concept of GDP within an ancient economic framework, Consumeristic Vs Aadhyatmic approach towards an individual, Comparison with Capitalistic, Socialistic and other modern economic models. Ancient Indian Economics as a solution to environmental problems; Role and status of women in Ancient Indian Economics.	17-22[L]
	Tutorials	08 [T]

References

- Acharya Kala (1993) Puranic Concept of Dana Nag Publishers

- 2) Ambedkar, B. Dr Babasaheb Ambedkar: Writings and Speeches, vol. 3, 2nd edition. Delhi: Dr Ambedkar Foundation, 2014 (reprint).
- 3) Bokare, M. Hindu Economics, 2nd edition. Pune: Dr M.G. Bokare Memorial Foundation, 2009.
- 4) Dasgupta, A. A History of Indian Economic Thought. London: Routledge, 1993.
- 5) Deodhar, S. Y. (2019). *IIMA-Economic Sutra: Ancient Indian Antecedents to Economic Thought*. Penguin Random House India Private Limited.
- 6) G. U. Pope (2017) *Tirukkural English Translation and Commentary Createspace Independent Publishing Platform*
- 7) Ganguli, K. Mahabharata, Shanti Parva (Book 12, sections 8, 76, 88 and 188). Sacred-texts.com, 1896a. <http://www.sacredtexts.com/hin/m12/m12b015.htm>.
- 8) Griffith, R. 'The Way Prepared', in Book II, Canto 80 of Ramayana of Valmiki. 1874. Translation accessed from Sacred Text Archive: <http://www.sacred-texts.com/hin/rama/ry 158.htm>.
- 9) Griffith, R. Hymns of the Atharva Veda, Book III, Hymns 4–5; Book XIX, hymns 32 and 62. 1895. Translation accessed from Sacred Text Archive: <http://www.sacred-texts.com/hin/av/av03004.htm>.
- 10) Griffith, R. The Text of the White Yajurveda, books XVI and XXX. 1899. Translation accessed from Sacred Text Archive: <http://www.sacredtexts.com/hin/wyv/index.htm>
- 11) Griffiths, R. Hymns of the Rigveda. Sacred Text Archive, Book 9, Hymn 112; Book IV, Hymn 24. 1886. <http://www.sacred-texts.com/hin/rigveda/>
- 12) Gupta, Bajrang Lal, (2018), A New Paradigm of Development Sumangalam, Gyan Publishing House.
- 13) Jolly, J. Fragments of Brihaspati, in The Minor Law Books, Title of Law XVII: Violation of Agreements. Internet Sacred Text Archive, 1889a. <http://www.sacred-texts.com/hin/sbe33/sbe3375.htm>.
- 14) Kautilya.(2000) *The Arthashastra Penguin*.
- 15) Mahulikar, G.(2018) 'Economic Thought in Kautilya's Arthashastra', in SocioEconomic Dynamics of Indian Culture: A Historical Overview, eds, A. Tilak, D. Jawane, N. Chitnis and R. Vaishampayan. Mumbai: Hindusthan Prakashan Sanstha.
- 16) The World Economy: A Millennial Perspective - Angus Maddison (2001).
- 17) The World Economy: Historical Statistics - Angus Maddison (2003).
- 18) Upadhyay, Deendayal (2017) *Ekatma Manavvaad, Prabhat Prakashan*
- 19) Vidyabhushan, S. A History of Indian Logic: Ancient, Medieval, and Modern Schools. Calcutta: Calcutta University, 1921.
- 20) Vinod, H., ed. 2012, The Oxford Handbook of Hindu Economics and Business. New Delhi: Oxford University Press, 2012.
- 21) Violatti, C. 'The Vedas', in Ancient History Encyclopaedia, 2013. http://www.ancient.eu/The_Vedas/.

Semester III

Course Title: International Economics			
Course Code	ECO91DC01204	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Odd	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lectures, Tutorials, self-study, group and individual assignments.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term University Examination.		

Course Objectives:

- To introduce the students to the fundamentals of international trade and payment.
- It seeks to build understanding about the historical evolution of international trade theories and developments following establishment of the WTO.
- A deeper understanding is provided to the students on terms of trade, balance of payments, international capital movement and their implications for change and development in the domestic economy.
- Addressing the issues such as currency crisis, international policy coordination, and the choice of an exchange rate regime.

Learning Outcomes:

After completing this course, the students will be able to:

- Understand the various reasons why nations engage in international trade, including the direction and volume of trade between nations.
- Use models of trade to demonstrate the gains from trade as well as the effects on income distribution within countries due to trade with foreign nations.
- Analyse the current issues and policies using the concepts of international trade theory.
- Understand the important role of key international institutions in affecting trade, exchange rates and the flow on international assets.

Course Contents and Teaching Plan:

Unit	Content	Teaching hours
1	Introduction of International Trade: The Law of Comparative Advantage – Absolute Advantage, Comparative Advantage, Opportunity Costs and Gains from Trade. Terms of Trade.	1-5 [L]
2	Modern theory of International Trade: Resource Endowment and Heckscher-Ohlin Theory, Economies of Scale, Modern theories of Market Imperfection (Krugman and Lancaster), Theories of Intra-Industry Trade, Gravity model, Technological Gap Model (Posner), Economic Growth and Trade.	6-18[L]
3	International Trade Policy: Tariff and Non-Tariff Barriers, Protectionism and Trade Policies in WTO Regime.	19-25 [L]
4	Economic Integration, Custom Union: concept, Trade creation and Trade Diversion, Economic Integration and regional grouping.	26-31 [L]
5	Balance of Payments Accounting: Meaning, Structure of Balance of Payments Accounts, Credits and Debits, Double-Entry Bookkeeping.	32-37[L]
6	Balance of Payments Adjustment Models: Price Adjustments- Marshall-Lerner Models, The Absorption Approach and Monetary Approach to Balance of Payment, Mundell-Fleming Model-Perfect Capital Mobility; Fixed and Flexible Exchange rates and Impossible Trinity; Devaluation and BOP Crisis, Capital Flight.	38-45 [L]

	Tutorials	15 [T]
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Recommended Texts:

1. Salvatore, Dominick, *International Economics: Trade and Finance*, John Wiley International Student Edition, 10th edition, New York, 2011.
2. Caves, Richard E, Jeffery A. Frankel, Ronald W. Jones, *World Trade & Payments: An Introduction*, Prentice Hall, New York, 10th Edition. 2006.
3. Sodersten Bo, Geoffrey Reed, *International Economics*, Palgrave Macmillan, 1999.

Additional References:

1. Krugman, Paul, Maurice Obstfeld, and Marc Melitz, *International Economics: Theory and Policy*, Addison-Wesley (Pearson Education Indian Edition), 9th edition, New Delhi, 2012.
2. Bhagwati, J, (ed.), *International Trade. Selected Readings*, Penguin Books, England, 1969.
3. Cooper, Richard (ed.), *International Finance*, Penguin Books, Baltimore, 1969
4. Gandolfo, Giancarlo, *International Trade: Theory and Policy*, Springer, 2014
5. Irwin, Douglas. *Free Trade Under Fire*. Princeton University Press, 2015.
6. Feenstra, Robert C. *Advanced International Trade: Theory and Evidence*. Princeton University Press, 2003.

Course Title: Public Finance			
Course Code:	ECO91DC01304	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion; self-study, assignments, quizzes and seminar, presentations by students.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term External Examination (University Examination)		

Course Objectives:

- To provide an introduction to the theory and practice of government finances both from the positive and normative points of view.
- To accomplish this, the course reviews briefly the rationale of government intervention to market.
- Provide a thorough grounding in the principles underlying tax and non-tax design, the provision of goods in the public sector, and tax enforcement; analyses the effects of public sector spending and taxes on the aggregate economy.
- Emphasises on the issues related to government finance in India.

Learning Outcomes:

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

- Analyse the functioning of modern public finance and identify the types of public needs and the mechanisms of their financing.
- Analyse the efficiency and equity implications of government intervention in the economy and their shortcomings.
- Argue the theoretical basis of public expenditures and to analyse their types and economic effect
- Classify public revenues and integrate them into the fiscal and tax system
- Classify public revenues and expenditures through the budget and to analyse the instruments and objectives of budgetary policy.

Course Contents and Teaching Plan:

Unit	Content	Teaching hours
1	The Bases of Public Finance, Public Goods and Externalities: Role of public finance, Fiscal functions of Government –The allocation function, the distribution function and the stabilization function, and coordination of budget functions. Private and public goods, Efficiency and Public goods, Private preferences for Public goods, Social goods and Market Failure, Provision for Social goods, Mixed goods, Merit goods, Positive and Negative Externalities.	1-8 [L]
2	Public Expenditure: Introduction, Growth of Public Expenditure, Theories of Public Expenditure, Causes and Effects of Public Expenditure in India. Concepts, Measurement and Magnitude of Subsidies	9-15 [L]
3	Taxation: Introduction, Economic effects of Taxation; and Theories of Taxation-Ability to pay theory and taxable capacity; deadweight loss and distortion, efficiency and equity considerations, tax incidence (Shifting of burden), optimal taxation; Indian Tax System: structure and reforms; GST.	16-20 [L]
4	Public Debt: Introduction, Sources of Public borrowing, Classical Theory of Public Debt, Effects of Public Debt and Burden of Public Debt; Method of Repayment of Public Debt. Public Debt Burden and Inter-generational Equity, Issues Related to Public Debt Sustainability.	21-27[L]

5	Budget: Introduction, Performance Budgeting, Planning and Programme Budgeting systems, Zero-Base budgeting (ZBB) and Deficits and Deficit Financing; Fiscal responsibility and budgetary management. Gender Budget	27-31 [L]
6	Fiscal Federalism in India: Concept of fiscal federalism, Resources allocation between Centre and State under the Constitution of India, Finance Commission-Report of the latest FC.	32-45 [L]

Recommended Texts:

- (1) Ghosh, Ambar and Chandana Ghosh, *Public Finance*, Prentice Hall India Learning Pvt. Ltd., 2nd edition, New Delhi, 2014.
- (2) Gruber, Jonathan, *Public Finance and Public Policy*, Massachusetts Institute of Technology, Worth Publishers, Macmillan Learning, New York, 6th edition, 2019
- (3) Musgrave, R.A. and P.B. Musgrave, *Public Finance in Theory & Practice*, McGraw Hill Publications, 5th edition, New York, 1989.
- (4) Musgrave, Richard A., *The Theory of Public Finance*, Tata McGraw Hill, New York, 1959.

Additional References:

- (1) Alan J. Auerbach and Martin Feldstein, (1985 & 1987) *Handbook of Public Economics* Vol. 1 & 2, Elsevier, Amsterdam, North Holland.
- (2) Bagchi, Amaresh (ed.), *Readings in Public Finance*, Oxford University Press, New Delhi, 2005.
- (3) *Economic Survey*, Government of India (latest).
- (4) Hick. U.. *Public Finance*.
- (5) James M. Buchanan, (1965) "An Economic Theory of Clubs", *Economica*, New Series Vol. 32, No. 125, pp. 1-14.
- (6) Paul A. Samuelson, (1954) "The Pure Theory of Public Expenditure", *Review of Economics and Statistics*, Vol. 36, No. 4, pp. 387-389.
- (7) Paul A. Samuelson, (1955) "A Diagrammatic Exposition of the Theory of Public Expenditures", *Review of Economics and Statistics*, Vol. 37, No. 4, pp. 350-356.
- (8) Raghendra Jha, (1998) *Modern Public Economics*, Routledge, London.
- (9) Rao, M. Govind (2017) *Public Finance in India in the Context of India's Development*, NIPFP, WP No. 219, New Delhi
- (10) Report of the 14th Finance Commission, 2015-20.
- (11) *State Finances: A Study of Budgets*, Reserve Bank of India (latest).
- (12) Stiglitz, Joseph E, *Economics of the Public Sector*, W.W. Norton & Company, 3rd edition, New York, 2000.

Semester IV

Course Title: Indian Economic Development			
Course Code	ECO92DC01404	Credits	04

L+T+P	3+1+0	Course Duration	One Semester
Semester	Even	Contact Hours	45(L) + 15(T) = 60 hours
Methods of Content Interaction	Class lectures, group discussions, students' presentations, and tutorials.		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of quizzes, take-home assignments and class test)		
	70% - End-semester university examination		

Course Objectives:

- This course seeks to acquaint the students with the macroeconomic and social sector issues in the context of economic development in India in the post-liberalisation era.
- It seeks to expose the students to the current debates and discussions in the context of the Indian economic development.

Learning Outcomes:

- The course would help the students to gather an up-to-date knowledge about the developments in the Indian economy.
- The students will be able to identify a set of topical issues that may be taken up for research investigation after completion of the current programme.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Growth and Sectoral Performance: Aggregate GDP growth, structural change and productivity; Manufacturing growth and issues relating to productivity, market structure, and economies of scale; Issues relating to services-led growth;	1- 7 [L]
2	Inclusive Growth: Regional and sectoral dimensions in employment, poverty and inequality; Measurement issues; Recent debates on poverty and employment during reforms; Issues relating to rural and urban employment, livelihood security, National Urban Livelihood Mission MGNREGA, Social sector development in India: Education and Health, Regional disparities and sustainable development and environmental protection.	8-19 [L]
3	Food Security in India: Agricultural growth, performance and distribution; Concept of food security, Food self-sufficiency and food security in India, The Public Distribution System (PDS) and its impacts, MDM and ICDS. Rural and urban food insecurity.	20-26 [L]
4	Financial Sector Reforms in India: Issues relating to reforms in banking, insurance, pensions, exchange rate and capital market.	27-32 [L]

5	Trade and Payment Reforms in India: Contours of trade and payments reforms in India; including WTO related reforms in market access; Merchandise trade performance and determinants; Balance of payments and issues related to accumulation of foreign exchange reserves, Capital account convertibility.	33-39 [L]
6	Aatma Nirbhar Bharat: Different pillars of self-reliant- Economy, infrastructure development, technology, vibrant demography and Natural resources in the process of economic development.	40-45 [L]
Tutorials		15 [T]

References:

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- (2) Anand, R., Kochhar, K., Mishra, S. Make in India: Which exports can drive the next wave of growth? *IMF working paper*, WP/15/119 (2015).
- (3) Basole, A., Basu, D., Bhattacharya, R. Determinants and impacts of subcontracting: Evidence from India's unorganised manufacturing sector. *International Review of Applied Economics*, 29, 374-402. (2015).
- (4) Acharya, Sankar and Rakesh Mohan (eds.), *India's Economy: Performance and Challenges*, OUP, New Delhi, 2010.
- (5) Ashima Goyal, *Handbook of the Indian Economy in the 21st Century: Understanding the Inherent Dynamism*, Oxford University Press, New Delhi, 2014.
- (6) Bhagwati, Jagdish and Arvind Panagariya, *India's Tryst with Destiny: Debunking Myths that Undermine Progress and Addressing New Challenges*, Collins Business, Noida, Uttar Pradesh, 2012.
- (7) Centre for Sustainable Employment. State of working India 2018. *Azim Premji University*.
- (8) Chanda, R. (2017). Services for Indian manufacturing. In M. Dev (ed.) *India Development Report*.
- (9) Chatterjee, S., Kapur, D. (2017). Six puzzles in Indian agriculture. *India Policy Forum* 2016, Vol. 17.
- (10) Das, D., Singh, J., Choudhury, H. (2018). Judicial production of labour market flexibility: Contract labour employment in Indian organised manufacturing. In Hill and Patil (eds.): *Employment policy in emerging economies*. Routledge.
- (11) Mahendra Dev, S (ed.), *India Development Report 2012-13*, OUP, New Delhi, 2013.
- (12) Mahendra Dev, S, *Inclusive Growth in India*, OUP, New Delhi, 2008.
- (13) Balakrishnan, P, *Economic Growth in India*, OUP, New Delhi, 2010.
- (14) Basu, K (ed.), *India's Emerging Economy*, OUP, New Delhi, 2005.
- (15) Bhaumik, S K (ed.), *Reforming Indian Agriculture: Towards Employment Generation and Poverty Reduction*, Sage Publications, New Delhi, 2008.
- (16) Sikdar, S, *Contemporary Issues in Globalization: An Introduction to Theory and Policy in India*, OUP, New Delhi, 2nd edition, 2012.
- (17) Tendulkar, S and T A Bhavani, *Understanding Reforms*, OUP, New Delhi, 2007.
- (18) Chakravarty, R, *The Financial Sector in India*, OUP, New Delhi, 2006.
- (19) Panagariya, A, *India: The Emerging Giant*, OUP, New Delhi, 2008.
- (20) Rakshit, M, *Macroeconomics of Post-Reforms India*, OUP, New Delhi, 2008.
- (21) Rakshit, M, *Money and Finance in the Indian Economy*, OUP, New Delhi, 2008.
- (22) Reddy, Y V, *Lectures on Economic and Financial Sector Reforms in India*, OUP, New Delhi, 2004.
- (23) Dreze, Jean and Amartya Sen, *An Uncertain Glory: India and Its Contradictions*, Allen Lane, New Delhi, 2013.
- (24) Dreze, Jean, *Sense and Solidarity - Jholawala Economics for Everyone*, Permanent Black, New Delhi, 2017.
- (25) Chetan Ghate (ed.), *The Oxford Handbook of the Indian Economy*, Oxford University Press, New Delhi, 2016.
- (26) *Economic Survey*, Government of India, recent years.

(27) *Selected articles from various journals* (to be referred in the class).

Course Title: Dissertation			
Course Code	ECO92DC01504	Credits	04
L + T + P	-----	Course Duration	One Semester
Semester	Even	Contact Hours	60 (Interaction with the supervisor(s))
Methods of Content Interaction	The dissertation work shall include the following: <ul style="list-style-type: none"> • Research proposal writing includes the Statement of the problem, Review of Literature, Objectives of the study, and Data & Methodology. • Data analysis by the students under the guidance of the adviser(s). • Submission of the dissertation in both soft and hard bound form by the student(s). 		
Assessment and Evaluation	30% weight (to be evaluated by a team of internal faculties) on the following: <ul style="list-style-type: none"> • Selection of topic, preparation of a review of literature on the topic, objectives of the study and methodology & data sources. 		
	70% weight on dissertation and seminar on the final output, to be distributed as follows: <ul style="list-style-type: none"> • Marks to be assigned by the supervisor (chosen by the departmental committee) on the final report – 20% weight • Marks to be assigned by an internal faculty other than internal field adviser (chosen by the departmental committee) – 20% weight • Final seminar – 30% weight – to be evaluated by the team of internal faculties 		

Course Objectives:

- To expose the students to the realities to relate their theoretical understandings of the subject to practical situations.
- To develop critical perspectives to evaluate the alternative theoretical paradigms in economics.
- To encourage the students to think of alternative theories that may be developed in the light of their research and field experiences.

Learning Outcomes:

After completing this course, the students will be able to:

- This course would enhance the students' skills for undertaking studies to evaluate various developmental policies.
- It would train the students to analyse various socio-economic issues using empirical data from the field or secondary sources.
- The students would be able to frame policies for economic development in the light of their findings.

Conduct of the Course:

- The dissertation work may be undertaken either by an individual student or by a group of students having a common interest in the topic after the approval of the department committee.

- Each student/group will be assigned a supervisor (adviser) from among the faculties by the departmental committee, who will guide and extend all supervisory advice.
- A dissertation topic is to be selected by the end of the third semester. The final title of the dissertation shall be approved after the presentation of the work carried out.

Detailed Syllabus of Elective Courses

Semester III

Course Title: Financial Economics I			
Course Code	ECO91DE01604	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Odd	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lectures, Tutorials, self-study, group and individual assignments and presentations.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term University Examination.		

Course Objectives:

This is the first of an elective two-course sequence. The objective of this sequence is

- To transmit the fundamentals of the financial markets, and the dynamic nature of the markets' characteristics.

Learning Outcomes:

After completing this course, the students will be able to:

- describe how financial markets work and understand the features of different financial assets.
- calculate and interpret key concepts related to financial markets and assets.
- use some basic models to price financial assets.

Course Contents and Teaching Plan:

Unit	Content	Teaching hours
1.	Basic concepts and Introduction to Financial Markets: Real assets versus financial assets, Role of financial assets in an economy Basic concepts of cash flow and maturity, interest rate, investment and market, bank and other financial institutions; Characteristics of financial market instruments – main types of financial instruments – definitional introduction - fixed deposits, stocks, derivatives, bonds, coupons and options Capital market, consumption and investment with and without capital market; Market place and transaction costs; Fisher separation theorem; the agency problem, The problems of moral hazard and adverse selection.	1-9 [L]
2.	Deterministic Cash Flow Stream: The basic theory of interest - Compounding, Present value and discounting, Internal rate of return, Evaluation criteria; Fixed Income Securities – Annuities, Perpetuities, Yield, Duration, Immunisation, Convexity; The term structure of interest rates – Yield curve, Term structure and its theories (Expectation theory, Liquidity preference theory, Market segmentation theory, Preferred Habitat theory), Forward rates, Running present value, duration (Fisher-Weil formula) and immunization.	10-17 [L]
3.	Choice under Uncertainty and Mean-variance portfolio theory (single period random cash flow): Utility theory given uncertainty, basic idea of risk measurement and its graphical representation (risk averse, risk neutral and risk lover), Risk Aversion, Certainty equivalence. Asset return, random return, portfolio mean and variance; Feasible set and Markowitz model; One fund and Two fund theorem	18-29 [L]
4.	CAPM (Capital asset pricing model), Arbitrage Pricing Theory and Capital Market Efficiency: Market equilibrium; Capital market line and security market line and estimation of beta and Jensen's and Sharpe index; CAPM as a pricing formula and its derivation (Numerical problems); Modified CAPM: The Arbitrage Pricing Theory (APT). Capital Market Efficiency and its implications.	30-38 [L]

5.	Derivative Securities: Basic concept of spot and forward prices and yield to maturity; Forward contracts and forward prices and its value; Basic concept of Swap; Basic notion of future contracts and future prices; Hedging (minimum variance type). Option and Option pricing: Concepts and nature of options values; Option combination and Put-Call parity; Single period option theory; Basic concepts of Multi-period options; Binomial option pricing model; Black-Scholes Option pricing model.	39-45 [L]
Tutorials		15 [T]

Recommended Texts:

- (1) Bodie, Zvi, Alex Kane, Alan J. Marcus and Pitabas Mohanty, *Investments*, Tenth edition, McGraw Hill Education, 2017.
- (2) Copeland, T. E., J. F. Weston and K Shastri, *Financial Theory and Corporate Policy*, Pearson, 2005.
- (3) Frederic S. Mishkin and Stanley Eakins, *Financial Markets and Institutions*, 8th edition, Pearson, 2014
- (4) Luenberger, David, *Investment Science*, Oxford University Press, 2009.

Additional References:

- (1) Bebczuk, R. N., *Asymmetric Information in Financial Markets: Introduction and Applications*, Cambridge University Press, 2003
- (2) Berk, Jonathan and Peter DeMarzo Corporate Finance, Third Edition, Pearson, 2019.
- (3) Bhole, L.M. and Jitendra Mahakud, *Financial Institutions and Markets: Structure, Growth and Innovations*, Tata McGraw Hill, 2004
- (4) Houthakker, H.S. and P.J. Williamson, *Economics of Financial Markets*, Oxford University Press, 1996
- (5) Iton E. J, M. J. Gruber, S. J. Brown, and W.N. Goetzmann, *Modern Portfolio Theory and Investment Analysis*, 9th edition, Wiley, 2014
- (6) ZviBodie, Robert C. Merton, David c. Cleeton, *Financial Economics*, Pearson Education, 2012

Course Title: Economics of Health			
Course Code	ECO91DE01704	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Odd	Contact Hours	45(L) + 15(T) = 60 hours
Methods of Content Interaction	Class lectures; Tutorials; Group discussion; and Paper presentation by students		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of quizzes, take-home assignments and class test)		
	70% - End-term university examination		

Course Objectives:

- To present basic economic theory with its application to health.
- To understand the economics of health from theoretical and empirical perspectives.
- To expose the students to critical policy issues.

Learning Outcomes:

After completing this course, the students will

- Get familiarised with important concepts in the fields of economics of health.
- Understand how the policy makers set priorities in health care and how evaluations are done in these areas.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Economics of Health: Definition, concept and components of health, The role of health in economic development, Comparison of Education and Health, Health as human capital.	1-10 [L]
2	Determinants of Health: Poverty, Malnutrition, Economic Dimensions of Health Care – Demand and Supply of Health Care.	11-19 [L]
3	Financing and Institutional Issues in Health Care: Resource Mobilisation and Utilisation of health care in India, Equity and Efficiency Effects of health care financing, Health Care and Resource Constraints.	20-26 [L]
4	Externalities in Health and health care, government intervention and policies. Inequalities in Health and health care in India, Institutional Issues in Health Care Delivery.	27-31[L]
5	Expenditure on Health: Public expenditure on health, PPP model on health, and out-of-pocket expenditure on health in India.	32-37[L]
6		38-45 [L]

	The New Health Policy: National Rural Health Mission and PMJAY Ayushman Bharat Yojana - other Health Programmes.	
Tutorials		15 [T]

Recommended Texts:

- (1) Bhattacharya, J., Hyde, T., Tu, P. Health economics, Palgrave Macmillan, (2014)
- (2) [Frank A. Sloan](#) and [Chee-Ruey Hsieh](#), Health Economics, The MIT Press; second edition (2017).
- (3) Klarman, H.E., *The Economics of Health*, Columbia University Press, New York, 1965.

Additional References:

- (1) Panchamukhi, P.R, *Economics of Health: A Trend Report*, ICSSR Survey, Allied, New Delhi, 1980.
- (2) World Bank, *The World Development Report 1993: Investing in Health*, OUP, New York, 1994.
- (3) Dasgupta, Monica et al., *Women's Health in India: Risk and Vulnerability*, OUP, Delhi, 1995.
- (4) Folland, [Sherman](#), [Allen Goodman](#) and [MironStano](#), *Economics of Health and Health Care*, Pearson Education, New York, 2009.
- (5) [Phelps](#), Charles, *Health Economics*, Pearson Education, New York, 2009.
- (6) Baru, R V, *Private Health Care in India: Social Characteristics and Trends*, Sage Publications, New Delhi, 1998.
- (7) World Development Report, *Investing in Health*. (1993).

Course Title: Economics of Education			
Course Code	ECO91DE01804	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Odd	Contact Hours	45(L) + 15(T) = 60 hours
Methods of Content Interaction	Class lectures; Tutorials; Group discussion; and Paper presentation by students		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of quizzes, take-home assignments and class test)		

70% - End-term university examination

Course Objectives:

1. To present basic economic theory with its application to education.
2. To understand the economics of education from theoretical and empirical perspectives.
3. To expose the students to critical policy issues.

Learning Outcomes:

After completing this course, the students will

1. Get familiarised with important concepts in the fields of economics of education.
2. Understand how the policymakers set priorities in education sectors and how evaluations are done in these areas.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Definition and scope of Economics of Education: Meaning, scope and importance of Economics of Education, Education as Consumption and Investment goods.	1-5 [L]
2	Human Capital Formation: Introduction, Human Capital and Economic Development, Investment in Human Capital, Human capital vs. physical capital, Components of human capital, Education and economic growth.	6-16 [L]
3	Demand for education: Private demand and Social demand; Cost of Education – Expenditure on Education, Private and Social Costs, Direct and indirect benefits, private and social benefits of Education, Rate of return to investment in education.	17-26 [L]
4	Educational Planning: Cost-benefit analysis, Production function models, Manpower requirement approach and input-output models, Resource mobilization and utilization, Pricing, subsidies. Sustainable Development Goals 4: Inclusive and equitable quality education.	27-32 [L]

5	Educational Financing: Role of financing in the development of education, Financing of education in India, Equity and efficiency effects of financing education in India. Socio-economic effects of educational financing and household financing on education.	33-38 [L]
6	Education and Economic Development in India: A Review of Educational Development in India, Educational Policy in India, Educational Planning and the problem of educated youth unemployment and accumulation of knowledge through skill enhancement.	39-45 [L]
Tutorials		15 [T]

Recommended Texts:

- (1) Blaug, Mark, *Introduction to Economics of Education*, Penguin, London, 1972.
- (2) Becker, Gary S., *Human Capital: A theoretical and Empirical Analysis with Reference to Education*. 3rd edition. 2009.

Additional References:

- (1) Bhushan, Sudhanshu, *The Future of Higher Education in India*, Springer Nature Singapore Pte Ltd. 2019.
- (2) Tilak, J.B.G, *Education and Development*, Academic Foundation, New Delhi, 2018.
- (3) Akinyemi, Samuel, *The Economics of Education*, Strategic Book Publishing & Rights Agency, LLC, 2013
- (4) Chittopadhyay, Saumen, *Education and Economics: Disciplinary Evolution and Policy Discourse*, Oxford University Press, 2012
- (5) Mehrotra, Santosh, *The Economics of Elementary Education In India: The Challenge Of Public Finance, Private Provision And Household Costs*, SAGE Publications, 2006
- (6) Psacharopoulos, G. (ed.), *Economics of Education: Research and Studies*, Pergamon Press, London, 1987.
- (7) Mc Mohan, W.W, *Education and Development: Measuring the Social Benefits*, OUP, Oxford. 1999.
- (8) Tilak, J.B.G, *Education for Development in Asia*, Sage, ND. 1994.
- (9) Tilak. J.B.G, *Economics of Inequality in Education*, Sage, New Delhi. 1989.
- (10) Cohen, E. and T. Gaske, *Economics of Education*, Pergamon Press, London, 1989

Course Title: Law and Economics			
Course Code	ECO91DE01904	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Odd	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion.		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of quizzes, take home assignments and class test)		

	70% - End-term university examination
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Course Objectives:

- To introduce the students to the economics of law and debates on efficiency of laws.
- To develop an understanding of basic theories of law and economics under the ambit of legal property rights, contract, tort and established legal processes.

Learning Outcomes:

After successful accomplishment of this course, a student should be able to:

- understand economic theory or logic to analyse laws or legal provisions.
- to analyse how households and firms's market interaction and social efficiency get affected by legal rules.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	An Introduction to Law and Legal Principles: The Civil Law and Common Law Traditions; The History of Indian Legal Tradition; Indian Judicial System.	1-4 [L]
2	Property Rights: The Legal Concept of Property; An Economic Theory of Property; Public and Private Property; The Public use of Private Property; Taking and Regulation Applications. Case Study in Indian Context.	5-14 [L]
3	Contracts: Bargaining Theory: An Introduction to Contracts; An Economic Theory of Contracts; Legal Remedies Applications. Case Study in Indian Context.	15-20 [L]
4	An Economic Theory of Tort Law: Definition of Tort; Different concepts of Liabilities – Vicarious, Strict and Absolute. Case Study in Indian Context.	21-27 [L]
5	Economics of Legal Process: Trial; Appeal; Judiciary; Lawyer's profession. Case Study in Indian Context.	28-35 [L]
6	Crime and Punishment: An Economic Theory of Crime and Punishment; Does Punishment Deter Crime; Efficient Punishment; The Death Penalty. Case Study in Indian Context.	36-45 [L]
Tutorials		15 [T]

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Recommended Texts:

- (1) Cooter, R. and T. Ulen, *Law and Economics*, Pearson Addison Wesley, Boston, 2004.
- (2) Jain, Satish K (ed.), *Law and Economics*, OUP, New Delhi, 2010.
- (3) Economic Analysis of Law in India: Theory and Applications', Edited by Babu, P.G., Eger, T., Raja, A., Schaefer, H.B., and Somashekhar, T., 2010, Oxford University Press.

Additional References:

- (1) Barzel, Yoram, *The Economics of Property Rights*, Cambridge University Press, 1988.
- (2) Ronald H. Coase, The Problem of Social Cost, 3 J. L. & ECON. 1 (1960)
- (3) Steven Shavell, *An Economic Analysis of Accident Law*, Harvard University Press, Cambridge(MA), 1987.
- (4) Cooter, Robert D. and Ulen, Thomas S, *Law and Economics*, 3rd edition, Addison-Wesley, New York, 1999.
- (5) Friedman, David D, *Law's Order*, Princeton University Press, New Jersey, 2000.
- (6) Hart, H.L.A., *The Concept of Law*, Clarendon Press, Oxford, 1961.
- (7) Holmes, Oliver Wendell, *The Common Law*, Harvard University Press, Cambridge (MA), 1963.

Course Title: Agricultural Economics			
Course Code	ECO91DE02004	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Odd	Contact Hours	45(L) + 15(T) + 0(P) = 60 hours
Methods of Content Interaction	Class lectures, group discussions, students' presentations, and tutorials.		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of quizzes and class test)		
	70% - End-semester university examination		

Course Objectives:

- To acquaint the students with the theoretical works in the field of agricultural economics from the perspective of development.
- To identify the core issues in the recent debates and discussions on the features of backward agrarian economies that may require further research investigations.

Learning Outcomes:

- The students will have clear understanding of the issues in current debates on backward agrarian economies.
- It will help to develop the perspectives for undertaking theoretical works in the field of agrarian development.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Agriculture and Economic Development- Introduction to Agricultural Economics, Definition of Agricultural Economics – Nature and Scope of Agricultural Economics- Interdependence of Agriculture and Industry – Role of agriculture in economic development.	1-6 [L]
2	Theories of Peasant Economy: Features of Peasant Societies; Elements of Peasant Political Economy; The Theories of Optimizing Peasant (profit-maximising peasant, risk averse peasant, drudgery averse peasant, and sharecropping peasant); Women in Peasant Household.	7-12 [L]
3	Organizational Issues in Agriculture: Institutions and Markets in Backward Agrarian Economies: Land Institutions and Land Markets: Efficiency and Equity Issues; Rural Labour Market- Labour Contracts and	13-20 [L]

	Organisations; Credit Contracts and Markets; Agricultural Output Markets. Inter-linked market and agricultural development. Changes in agrarian structure in India. Agro-climatic conditions and agricultural pattern	
4	Technological Change in Agriculture: Technology in agricultural production, nature and effects and measurement- Measuring efficiency in agricultural production; technical, allocative and economic efficiencies. Yield gap analysis-concepts-types and measurement. Nature and sources of risk, modelling and coping strategies. Trends in irrigation development (water management) and its impact on agricultural productivity and stability. Bio-physical technology and productivity growth. Impact of agro-mechanical technology. Technological change and distribution of gains. Post-harvest technology and Remote sensing in agriculture. Issues in agricultural competitiveness.	21-30 [L]
5	Agricultural prices- marketing and state policy; Agricultural markets and market efficiency- Marketing functions and costs; Market structure and imperfections; regulated markets; marketed and marketable surplus; Crop insurance; Terms of trade between agricultural and non-agricultural prices; Need for state interventions; Objectives of agricultural policy- Instruments and evaluation; Food security in India and Public Distribution System. Agricultural Price Policy – Instruments of Agricultural Price Policy – National Agricultural Policy, Costs and returns to scale. Agricultural subsidies, commodity prices and state intervention.– The New Economic Policy and Indian Agriculture – New Farm Bills 2020.	31-40 [L]
6	Agriculture and external sector- International trade in agricultural commodities; India's signing of the Agreement on Agriculture (AoA); Commodity agreements- Role of WTO; Issues the liberalisation of domestic and international trade in agriculture- nature and features of agro-industries; Role of MNCs; Globalisation of Indian economy and problems and prospects of Indian agriculture Impact of WTO on Indian agriculture.	41-45 [L]
Tutorials		15 [T]

Recommended Texts:

- 1) Ellis, Frank, *Peasant Economics*, Chs. 1, 3, and 4 to 9, CUP, 2nd Edition, 1993.
- 2) Rao, V M and K C Hiranath (2010), "Agricultural Policy Reviews: A Synthesis", in *Agriculture, Food Security, and Rural Development*, Asian Development Bank, Oxford University Press, New Delhi.
- 3) Ashok Gulati and Tim Kelly (1999), *Trade Liberalisation and Indian Agriculture*, Oxford University Press, New Delhi, Ch. 5.
- 4) Raj, K. N. (1990) *Organizational issues in Indian agriculture*, Oxford : Oxford University Press, Delhi

- 5) Soni, R.N. and S. Malhotra, *Leading Issues in Agricultural Economics*, Vishal Publishing Co., 2015

Additional References:

- 1) Akram-Lodhi, A. Haroon, and Cristobal Kay (eds.) (2009), *Peasants and Globalization: Political Economy, Rural Transformation and the Agrarian Question*, Routledge.
- 2) B L Gardner and G C Rausser (eds.), *Handbook of Agricultural Economics*, Vol. 1A, Ch. 6, Elsevier, Amsterdam, 2001.
- 3) R Evenson and Prabhu Pingali (eds.), *Handbook of Agricultural Economics*, Vol. 3, Chs. 51, 52, 55, 56, Elsevier, Amsterdam, 2007.
- 4) Karla Hoff, Avishay Braverman and Joseph E Stiglitz (eds.), *The Economics of Rural Organization*, The World Bank - OUP, 1993.
- 5) Amit Bhaduri, *The Economic Structure of Backward Agriculture*, Macmillan, 1983.
- 6) Pranab Bardhan, *Land, Labour and Rural Poverty*, OUP, 1983.
- 7) Pranab Bardhan, *The Economic Theory of Agrarian Institutions*, OUP, 1989.
- 8) Pranab Bardhan and Christopher Udry (eds.), *Development Microeconomics*, OUP, 1999.
- 9) Stephen Hymer & Stephen Resnick (1969), "A Model of an Agrarian Economy with Nonagricultural Activities", *American Economic Review*, Vol. 59, pp. 493-506.
- 10) Gustav Ranis & Frances Stewart (1993), "Rural Nonagricultural Activities in Development: Theory and Applications", *Journal of Development Economics*, Vol. 40, No. 1.
- 11) Nurul Islam (1997), *The Nonfarm Sector and Rural Development*, Food, Agriculture and the Environment Discussion Paper # 22, IFPRI, Washington, D.C.
- 12) Haggblade, Steven, Jeffrey Hammer and Peter Hazell (1991), "Modeling Agricultural Growth Multipliers", *American Journal of Agricultural Economics*, Vol. 73, No. 2, May.
- 13) John Hariss (1991), "Agriculture/Non-agriculture Linkages and the Diversification of Rural Economic Activity: A South Indian Case Study", in Jan Breman & Sudipto Mundle (eds.), *Rural Transformation in Asia*, Oxford University Press, New Delhi.
- 14) V S Vyas (1996), "Diversification of Agriculture: Concept, Rationale and Approaches", *Indian Journal of Agricultural Economics*, Vol. 51, No. 4.
- 15) Ashok Gulati and Sudha Narayan (2003), *The Subsidy Syndrome in Indian Agriculture*, Oxford University Press, New Delhi.
- 16) Biswajit Dhar (2007), 'Prospects of Agricultural Trade Liberalisation' in Suparna Karmakar, Rajiv Kumar and Bibek Debroy (eds.), *India's Liberalisation Experience: Hostage to the WTO?*, Sage Publications, New Delhi.
- 17) Bhalla, G S and Gurmail Singh (2012), *Economic Liberalisation and Indian Agriculture*, Sage Publications, New Delhi.
- 18) Bhaumik, S. K. (ed.) (2008), *Reforming Indian Agriculture: Towards Employment Generation and Poverty Reduction*, Sage Publications, New Delhi, Introduction and Chapters 1-3.
- 19) Mahendra Dev, S (2008), *Inclusive Growth in India*, Oxford University Press, New Delhi, Chs. 2 & 3.
- 20) Mahendra Dev, S (2009), "How to Revive Indian Agriculture?" in S Singh and V R Reddy (eds.), *Changing Contours of Asian Agriculture*, Academic Foundation, New Delhi, Ch. 6.

Course Title: Optimisation in Economic Theory			
Course Code	ECO91DE02104	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Odd	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lectures, Tutorials, self-study, group and individual assignments and presentations.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term University Examination.		

Course Objectives:

The objective of this course is to transmit the knowledge on optimisation techniques used in economics and how several aspects of optimisation are interrelated, and how suitable they are.

Learning Outcomes:

After completing this course, the students will be able to solve optimisation problems that seek answer as to how a consumer should behave, how firms should compete in a market or how government should decide on its monetary policy.

Course Contents and Teaching Plan:

Unit	Content	Teaching hours
1.	Review of Classical Optimisation: Unconstrained Optimization, Global and local extrema of real-valued functions, Optimization subject to equality constraints: The Lagrange, Multiplier method; Necessary and sufficient conditions for a solution to the optimisation problem with equality constraints. Properties of convex and concave functions. Interpretation of the Lagrangian Multiplier. Comparative static problems.	1- 6 [L]
2.	Linear Programming: (a) Formulation of the Linear Programming Problem – Definitions of feasible solutions and basic feasible solutions – The simple method of solving linear programming problems; (b) The dual of a linear programming problem – duality theorems – interpretation of the dual variables; and (c) Simplex algorithm, Big M method and 2-phase method, duality simplex method, complimentary slackness theorem, post optimality analysis.	7- 16 [L]
3.	Non-linear Programming: Kuhn - Tucker conditions and interpretation of the Lagrangian multiplier. Multi-variable optimization with equality and inequality constraints, Comparative static problems, concave programming.	17- 24 [L]

4.	Quadratic Programming: QP as a sub-topic of NLP, formulations, matrix form of QP, Kuhn-Tucker conditions, and simplex method in restricted basis.	25- 30 [L]
5.	Integer Programming: Basic concepts and formulations of IP, pure and mixed IP, branch-and-bound method, cutting plane algorithm, and some applications.	31- 35 [L]
6.	Dynamic programming: Basic elements, deterministic and probabilistic DP, multi-stage DP, solution approaches – calculus of variations, optimal control theory and DP, some illustrative examples (in oil-transport technology, inventory control and selection of facilities). [10 hours]	36- 45 [L]
Tutorials		15 [T]

Recommended Texts:

- (1) Intriligator, M.D., *Mathematical Optimization and Economic Theory*, Prentice Hall, 1971.
- (2) Taha, H.A., *Operations Research: An Introduction*. Pearson Education Limited, 2017
- (3) Srinivasan, G., *Operations Research: Principles and Applications*. Prentice-Hall of India, 2010

Additional References:

- (1) Dixit, A., *Optimisation in Economic Theory*, OUP, 1990.
- (2) Dorfman R., Samuelson P.A and Solow R. M., *Linear Programming and Economic Analysis*, Dover Publications, 1988.
- (3) Hadley, G. *Linear Programming*, Addison-Wesley Pub. Co., Massachusetts, 1962.
- (4) Gass, S. I, *Linear Programming: Methods and Applications*, McGraw-Hill, 1969.
- (5) Gopal, M. *Modern Control System Theory*, Wiley Eastern, 1993.

Course Title: Time Series Analysis			
Course Code	ECO91DE02204	Credits	04
L + T + P	3+1+0	Course Duration	One Semester
Semester	Odd	Contact Hours	40(L) + 10(P) + 10(T) = 60 hours
Methods of Content Interaction	Class lectures, tutorials, and practical works using statistical/econometric software packages.		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of quizzes, take-home assignments, and class test)		
	70% - End-semester university examination		

Course Objectives:

- To expose the students to time series econometric tools that are frequently used in socio-economic research.
- To train the students to use econometric software packages like Eviews, STATA and R to estimate univariate and multivariate time series models.

Learning Outcomes:

After completing this course, the students will be able to:

- Learn the techniques to handle time series data while carrying out research work.
- Acquire skills to analyse time series data of different frequencies using software packages.
- Be well-equipped to compete for emerging jobs in the corporate sector.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Stationary Univariate Model: Wold decomposition theorem, Difference equations, ARMA models and Box-Jenkins methodology, Model Selection, Forecasting methodology.	1-8 [L]
2	Nonstationary Univariate Models: Trend/Cycle decomposition, Beveridge-Nelson decomposition, Deterministic and stochastic trend models, Unit root tests, Stationarity tests.	9-15 [L]
3	Structural Change and Non-Linear Models: Tests for structural change with unknown change point. Estimation of linear models with structural change. Regime switching models.	16-23 [L]
4	Stationary Multivariate Models: Dynamic simultaneous equations models, Vector autoregression (VAR) models, Granger causality, Impulse response functions, Variance decompositions, Structural VAR models.	24-30 [L]
5	Nonstationary Multivariate Models: Spurious regression, Cointegration, Granger representation theorem, Vector error correction models (VECMs), Structural VAR models with cointegration, testing for cointegration, Estimating the cointegrating rank, Estimating cointegrating vectors.	31-38 [L]
6	Conditional Variance Models: Univariate and Multivariate GARCH Models.	39-45 [L]
Computer Applications: Analysis of time series data using a suitable econometric software package.		46-55 [P]
Tutorials		10 [T]

Recommended Texts:

- 1) Agung, I. G. N., *Advanced Time Series Data Analysis : Forecasting using EViews*. Hoboken, New Jersey ; Wiley, 2019.
- 2) Das, Panchanan, *Econometrics in Theory and Practice: Time Series and Panel Data with Stata 15.1*, Springer, 2019.
- 3) Enders, W., *Applied Econometric Times Series*, Wiley, 2014.
- 4) Hamilton J. D., *Time Series Analysis*, Princeton University Press, 1994.
- 5) Robert H Shumway & David S Stoffer, *Time Series Analysis and Its Applications with R examples*, Third Edition, Springer, 2011
- 6) Ruey S. Tsay, *Analysis of Financial Time Series*, Wiley, 2010.

(Journal articles for specific topics will be announced by the instructor)

Course Title: Introduction to Behavioural Economics			
Course Code:	ECO91DE02304	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Odd	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion; self-study, assignments, quiz, and seminar, presentations by students.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term External Examination (University Examination)		

Course Objectives

- To impart basic concepts of behavioral economics and expose the students to the debates of economic decision-making processes.
- To enrich the understanding of the students studying economics about how individuals make economic decisions in case of risk, uncertainty and strategic interactions.

Learning Outcomes

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

- Integrate insights from psychology and other disciplines of social sciences to develop better understanding of human behavior.
- Learn research tools to collect and analyze data related with human behavior.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Introduction to Behavioral Economics: Origin, themes and methods of behavioural economics, , Decision-making under Neo-classical economic framework and deviations, Role of Intuition, Emotions, Beliefs in decision making, Bounded Rationality, Neuro-economics.	1-10 [L]
2	Making Choices Under Risk and Uncertainty: Prospect Theory, Probabilistic judgement, Judgment under Risk & Uncertainty, reference-dependent preferences, Heuristics and Biases, Anchoring Mental Accounting	11-20 [L]
3	Inter-temporal Decision-Making: Inter-temporal choice, Discounted Utility Model, Time Discounting and Preferences Preference Reversal	21-28 [L]
4	Behavioral Game Theory: Trust, Cooperation, Reciprocity, Nudges, Libertarian Paternalism, Behavioural public policy	28-35 [L]
5	Research tools to Behavioral Economics: experiments in economics, Laboratory experiments, Field experiments: Randomised control trials.	36-45 [L]
Tutorials		15 [T]

Recommended Texts:

- 1) Ariely, D., *Predictably Irrational: The Hidden Forces That Shape Our Decisions*, Harpercollins, 2010.
- 2) Dhami S., *The Foundations of Behavioral Economic Analysis*. Oxford University Press, 2016.
- 3) Kahneman, D. *Thinking Fast and Slow*. Allen Lane, Penguin Books, 2011.
- 4) Robert J. Oxoby Experiments and Behavioral Economics in M. Altman, *Handbook of Contemporary Behavioral Economics: Foundation and Developments*. Prentice HallIndia.
- 5) Thaler, R. H., and Cass S., *Nudge: Improving Decisions About Health, Wealth, and Happiness*. New York: Penguin, 2009 (updated version).
- 6) Thaler, R. H., *Misbehaving: The Making of Behavioral Economics*. New York: W. W. Norton & Company, 2015.
- 7) Wilkinson N. and Klaes M., *An Introduction to Behavioural Economics*. Palgrave MacMillan, 2012.

Course Title: Economics of Migration			
Course Code	ECO91DE02404	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	45 (L) + 15 (T) + 0(P) = 60 Hrs.
Methods of Content Interaction	Class Lectures, Tutorials, self-study, group and individual assignments and presentations.		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of quizzes, take-home assignments and class test)		
	70% - End-term University examination		

Course Objectives:

- To provide the students with an overview of the key concepts in the economics of migration.
- To emphasize discussion on migration as a tool for economic development.
- To develop skills and competencies of the students in analyzing various migration models.

Learning Outcomes:

- After completion of the course the learners will be able to:
- Enable students to conduct and identify research issues related to different aspects of migration.
- Understand the concepts and contributions of various migration studies to the development model.
- Equip knowledge on the emerging issue of migration and development and can carry out their research work.
- Choose appropriate tools and techniques to analyse and interpret the data related to migration issues.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	International Migration and Development: Dynamics of the Internal and international migration flows; Rural-Urban migration; Push-Pull theories of migration; Cost and Benefit of Migration; Migration as a livelihood strategy; Domestic and international migrants remittances; migrants remittances and economic growth.	1-10 [L]
2	The Migration Decision and Forms of Migration: International Migration, Self-Selection, and the Distribution of Wages: Evidence from Mexico and the United States; Economic Impacts of Immigration: A Survey; Migration Incentives, Migration Types – The Role of Relative Deprivation; Migrants’ Savings, the Probability of Return Migration and Migrants’ Performance; Income Maximization and the Selection and Sorting of International Migrants.	11-15 [L]
3	Migration Models: The Move: Modeling individual migration decisions by John Kennan and James R. Walker; The economics of circular migration by Amelie F. Constant, Olga Nottmeyer and Klaus F.Zimmermann IZA DP No. 6940; The Economics of Immigration By George J. Borjas; Migration Policy Debates: Is migration good for the economy?	16-20 [L]

4	High and low skilled migration: Skill Based immigrant selection and labor market outcomes by visa category Abdurrahman Aydemir; Welfare migration by Corrado Guilietti and Jackline Wahba; Diaspora resources and policies by Sonia Plaza; Skilled Immigrants' Contribution to Innovation and Entrepreneurship in the US; High-skill emigration, human capital formation and development: Brain drain and human capital formation in developing countries: winners and losers; Skill migration and skill creation: evidence from a quasi-experiment in the Pacific; Skilled migration: the perspective of developing countries; The Microeconomic Determinants of Emigration and Return Migration of the Best and Brightest: Evidence from the Pacific; Global Economic Prospects: Economic Implications of Remittances and Migration.	21-30 [L]
5	International Migration and Remittances: Altruistic and Contractual Remittances Between Male and Female Migrants and Households in Rural Thailand; Social Remittances: Migration Driven Local-level Forms of Cultural Diffusion; Family and Collective Remittances to Mexico: A Multi-dimensional Typology; International Migration, Remittances, and Household Investment: Evidence from Philippine Migrants' Exchange Rate Shocks.	28-34 [L]
6	International Migration and Community Development: A critical appraisal of theories of international migration; Emigration from India: Patterns, Magnitude, Composition, Diasporas and Remittances; Immigrants in India: Changing patterns, and profiles including refugee migration; Globalization and Migration: Some pressing contradictions; Are bilateral remittances countercyclical? Migrants' remittances: micro and macro perspectives: Domestic remittances by Bhaswati Das and Rajni Singh; Associated Gains from Migration by Pinak Sarkar; Remittances, financial development and growth; Experimental approaches in migration studies; The economics of migrants' remittances.	35-45 [L]
Tutorials		15 [T]

Recommended Texts:

- (1) Hendrik Van den Berg, Örn B. Bodvarsson (2009), *The Economics of Immigration: Theory and Policy*, Springer Berlin.
- (2) Issac Julius (1998), *Economics of Migration*, Taylor & Francis Ltd.
- (3) Michael P. Todaro and Stephen C. Smith (2015). *Economic Development*, 12th Edition, Pearson.
- (4) Sari Pekkala Kerr & William R. Kerr (2011). *Economic Impacts of Immigration: A Survey*. Working Paper 09-013. Harvard Business School.
- (5) Amelie F. Constant and Klaus F. Zimmermann (2013). *International Handbook on the Economics of Migration*, Edward Elgar, Cheltenham, UK, and Northampton, USA.

Additional References:

- (6) Stark, O. and J. E. Taylor (1991), "Migration Incentives, Migration Types – The Role of Relative Deprivation", *Economic Journal*, Vol. 101 (408), pp. 1163-1178.
- (7) Galor, O. and O. Stark (1990), "Migrants' Savings, the Probability of Return Migration and Migrants' Performance", *International Economic Review*, Vol. 31(2), pp. 463-467.
- (8) Grogger, J. and G. H. Hanson (2011), "Income Maximization and the Selection and Sorting of International Migrants", *Journal of Development Economics*, Vol. 95 (1), pp. 42-57.
- (9) Chiquiar, D. and G. Hanson (2005), "International Migration, Self-Selection, and the Distribution of Wages: Evidence from Mexico and the United States", *Journal of Political Economy*, Vol. 113 (2), pp. 239-281.
- (10) Banerjee, Abhijit, Raghavendra Chattopadhyay, Esther Duflo, Daniel Keniston and Nina Singh. 2021. *Improving Police Performance in Rajasthan, India: Experimental Evidence on Incentives*,

Managerial Autonomy, and Training." *American Economic Journal: Economic Policy*, 13(1):36-66. DOI: 10.1257/pol.20190664

- (11) Borjas, George J. (1994). The Economics of Immigration. *Journal of Economic Literature* Vol. XXXII, pp. 1667–1717
- (12) Hunt, J. (2010), "Skilled Immigrants' Contribution to Innovation and Entrepreneurship in the US", *Open for Business: Migrant Entrepreneurship in OECD Countries*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264095830-en>.
- (13) Leah Vanwey. 2004. "Altruistic and Contractual Remittances Between Male and Female Migrants and Households in Rural Thailand." *Demography* 41(4): 739-756.
- (14) Peggy Levitt. 1998. "Social Remittances: Migration Driven Local-level Forms of Cultural Diffusion." *International Migration Review* 32(4): 926-948.
- (15) Luin Goldring. 2004. "Family and Collective Remittances to Mexico: A Multi-dimensional Typology." *Development and Change* 35(4): 799-840.
- (16) J. Edward Taylor, Joaquin Arango, Graeme Hugo, Ali Kouaouci, Douglas Massey, and Adela Pellegrino. 1996. "International Migration and Community Development." *Population Index* 62(3): 397-418.
- (17) Jorge Durand, Emilio Parrado, and Douglas Massey. 1996. "Migradollars and Development: A Reconsideration of the Mexican Case." *International Migration Review* 30(2): 423-444.
- (18) Filiz Garip. 2010. "Repeat Migration and Cumulative Remittances as Mechanisms for Wealth Inequality in Mexico."
- (19) Frankel, Jeffrey (2009): Are bilateral remittances countercyclical? NBER Working Paper No 15419.
- (20) Giuliano, Paola and Marta Ruiz-Arranz (2009): Remittances, financial development and growth, *Journal of Development Economics*, 90, 1: 144-52.
- (21) McKenzie, David and Dean Yang (2010): Experimental approaches in migration studies, *Handbook of Research Methods in Migration*, forthcoming. CReAM Discussion Paper No 17/10: http://www.econ.ucl.ac.uk/cream/pages/CDP/CDP_17_10.pdf
- (22) Rapoport, Hillel and Frederic Docquier (2006): The economics of migrants' remittances, Chapter 17 in S.-C. Kolm and J. Mercier Ythier, eds.: *Handbook of the Economics of Giving, Altruism and Reciprocity*, Elsevier - North Holland.
- (23) Yang, Dean (2008): International Migration, Remittances, and Household Investment: Evidence from Philippine Migrants' Exchange Rate Shocks, *Economic Journal*, 118: 591-630.
- (24) Skill Based immigrant selection and labor market outcomes by visa category Abdurrahman Aydemir Welfare migration by Corrado Guilietti and Jackline Wahba IZA DP No. 6450
- (25) Beine, Michel, Frederic Docquier and Hillel Rapoport (2008): Brain drain and human capital formation in developing countries: winners and losers, *Economic Journal*, April.
- (26) Chand, Satish and Michael Clemens (2008): "Skill migration and skill creation: evidence from a quasi-experiment in the Pacific", Working Paper, Center for Global Development
- (27) Docquier, Frederic and Hillel Rapoport (2009): Skilled migration: the perspective of developing countries. Chapter 10 in J. Bhagwati and G. Hanson, eds.: *Skilled immigration today: problems, prospects and policies*, Oxford University Press. Working paper version: http://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=147724
- (28) Gibson, John and David McKenzie (2011): "The Microeconomic Determinants of Emigration and Return Migration of the Best and Brightest: Evidence from the Pacific", *Journal of Development Economics*, forthcoming. doi:10.1016/j.jdeveco.2009.11.002
- (29) World Bank (2006): *Global Economic Prospects: Economic Implications of Remittances and Migration*, Washington D.C.: The World Bank.
- (30) The Move: Modelling individual migration decisions by John Kennan and James R. Walker The economics of circular migration by Amelie F. Constant, Olga Nottmeyer and Klaus F. Zimmermann IZA DP No. 6940
- (31) Bhagwati, Jagdish (2009): Overview of issues, Chapter 1 in J. Bhagwati and G. Hanson, eds.: *Skilled immigration: problems, prospects and policies*, Oxford University Press, pp. 3-11.

Course Title: Labour Economics			
Course Code:	ECO91DE02504	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Odd	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion; self-study, assignments, quiz, and seminar, presentations by students.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term External Examination (University Examination)		

Course Objectives

- To familiarize the students with the theoretical understanding about the functioning of labour markets
- To develop understanding of intricate linkages between households, labour market and institutions.

Learning Outcomes

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

- Think intuitively about issues of labour in India.
- Students will be able to identify and understand the major theoretical and policy issues in labor economics.

Unit	Contents	Teaching Hours
1	Labour Supply and Demand: Static Labour, Leisure Choice, Effects of Social Programs and Income Taxes; The Life-Cycle Model– Investments in Human Capital, Collective Models of Household Labour Supply; Occupational Choice Static Cost, Profit and Labour Demand Functions– Elasticity of Derived Demand: the Hicks- Marshall Rules –Adjustment Costs and Dynamic Labour Demand	1-10 [L]
2	Labour Market Equilibrium: Compensating Differences– Adam Smith; Evidence on Premium for Risky or Nasty Jobs, Efficiency Wages, Segmented Labour markets; Migration, Unemployment: Job Search; Effects of Unemployment Insurance	11-18 [L]
3	Wage Structure and Distribution of Income: Industry Wage Differentials– Productivity and Real wages; Returns to Education – Signaling–Pensions and Retirement; Training, Minimum Wage Laws; Earnings by Size– The Roy Model, Functional Distribution; Intergenerational Income Mobility	19-26 [L]
4	Labour Market Discrimination: Economic Effects of Prejudice: Theoretical Analysis – Wage Differentials by Race and Sex	27-30 [L]

5	Labour Contracts, Union and Regulations: Objectives and Political Structure – Bargaining Theories – Relative Wage Effects, Strikes, Union-Growth and Decline –Union-Oligopoly Models; Employment Determination –Compensation, Bonding; Tournaments; Incentive Pay– Multi- tasking , Team Production– Relational Contracts – Career Concerns– Wages and Promotions; Flexibility, International Labour Standards; Comparative Analysis – International Trade and Labour Markets	31-45[L]
Tutorials		15 [T]

Recommended Texts:

1. Ashenfelter, O. and Layard, R. The Handbook of Labor Economics, Volumes 1 & 2, North Holland, 1986; Volume 3A, 3B & 3C, 1999.
2. Borjas, G., *Labor Economics*, New York: McGraw-Hill Companies, 1996
3. Pierre Cahuc Stéphane Carcillo André Zylberberg, *Labor Economics*, The MIT Press, Cambridge, 2014.

(Journal articles for specific topics will be announced by the instructor)

Course Title: History of Economic Ideas			
Course Code	ECO91DE02604	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Odd	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lectures, Tutorials, self-study, group and individual assignments.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term University Examination.		

Course Objectives:

- To expose the students to the history of development of economic ideas.
- To trace the paths of development of the subject of economics.
- To acquire the knowledge of the interplay between ideas and events in economics and other areas of social life.
- To categorize and classify thoughts and ideas of past scholars on the subject of economics.

Learning Outcomes:

After completing this course, the students will be able to:

- Understand the development of ideas in the field of economics.
- Explain and analyse the developments of economics as a discipline in various ancient cultures.
- Compare and contrast as well as discuss classical economic theories.
- Synthesize the elements of neoclassical and Keynesian approaches in the modern era.

Course Contents and Teaching Plan:

Unit	Content	Teaching hours
1	The Birth of Political Economy: Mercantilism; Some early contributors of classical political economy (Petty, Locke, North, Cantillon, etc.)	1-9[L]
2	The Rise of Classical Economics: Contributions of Smith, Ricardo, Malthus, and Mill.	10-22[L]
3	The Economics of Marx: Value and surplus value; The process of accumulation; Crises in capitalist economy; Imperialism.	23-32 [L]
4	The Marginalist Revolution and Evolution of Neoclassical Orthodoxy: Jevons, Walras, Menger, and Marshall.	33-38 [L]
5	Sraffaian Economics: An Introduction.	39-45 [L]
	Tutorials	15 [T]

Recommended Texts:

- (1) Screpanti, E and S Zamagni, An Outline of the History of Economic Thought, Oxford University Press, Oxford, 2005.
- (2) Hunt, E K and Mark Lautzenheiser, History of Economic Thought: A Critical Perspective, 3rd edition, M E Sharpe, Inc., London, 2011.

- (3) Sweezy, Paul M, The Theory of Capitalist Development, Dennis Dobson Ltd., London, 1946.
- (4) Roy, Tirthankar, The Economic History of India 1857-2010, OUP, India

Additional References:

- (5) Samuels, W J et al., A Companion to the History of Economic Thought, Blackwell Publishing, Oxford, 2003.
- (6) Vaggi, G and P Groenewegen, A Concise History of Economic Thought, Palgrave Macmillan, New York, 2003.
- (7) Medema, S G and W J Samuels, The History of Economic Thought: A Reader, Routledge, London, 2003.
- (8) Schumpeter, Joseph A, History of Economic Analysis, Taylor & Francis, USA, 1986.
- (9) Elster, Jon, An Introduction to Karl Marx, Cambridge University Press, Cambridge, 1986.
- (10) Heinrich, Michael, An Introduction to the Three Volumes of Karl Marx's Capital, Monthly Review Press, New York, 2004.
- (11) —New Perspectives on the Work of Piero Sraffa, Cambridge Journal of Economics, Vol. 36, No. 6, November, 2012.
- (12)

Semester IV

Course Title: Financial Economics II			
Course Code	ECO92DE02704	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lectures, Tutorials, self-study, group and individual assignments and presentations.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term University Examination.		

Course Objectives:

- This is the second of an elective two-course sequence. The objective of this sequence is
- To provide the students with a deeper understanding of how the firms finance, invest and manage themselves in the real world.

Learning Outcomes:

After completing this course, the students will be able to:

- Learn methods to evaluate financial alternatives and create financial plans to get the optimal capital structure.
- Understand the theory relating to dividend policy.
- Comment on dividend policies of companies.
- Understand the process of mergers and takeovers.
- Explain main justifications for, and dangers of, mergers and takeovers

Course Contents and Teaching Plan:

Unit	Content	Teaching hours
1.	Patterns of Financing: Internal Funds – Common Stock – Debt – Financial Markets/Institutions – Issue of securities – Venture Capital – Initial Public Offering – Security Sales and Auctions – Private Placements and Public Issue Junk Bonds.	1-6[L]
2.	Capital Budgeting and Cost of Capital: Investment Criteria, Estimation of project Cash Flows, Capital Budgeting, Capital Budgeting Under Constraints; Computation of Cost of Capital – Cost of debt, preferred stock and equity, weighted average cost of capital.	7-15[L]
3.	Capital Structure Choice: The value of firm with tax, Modigliani-Miller irrelevance hypothesis, choices in financing-debt and equity, the financing mix: trade-offs and theory; signalling hypothesis; effect of agency cost on capital structure, cost of capital, empirical determinants of capital structure choice.	16-25[L]
4.	Dividend Policy: Irrelevance of dividend policy without tax; valuation, growth and dividend policy, dividend policy with taxes; theory of optimal dividend policy; Stock dividends and share re-purchase empirical determinants of optimal dividend policy.	26-35[L]
5.	The Market for Corporate Control: Mergers & Takeovers: Types of mergers and takeovers. The principles of valuation of mergers and takeovers. Stand - alone value of the target and of the buyer. Efficiency theories of M&A activities: differential efficiency, inefficient management, synergy effects theory. The sources and types of synergy. Agency theories of M&A. Signalling theories of M&A. Hostile takeovers and free - rider problem. Management defences. Valuing synergy on the basis of DCF.	36-45[L]
Tutorials		15 [T]

Recommended Texts:

- (1) Brealey, R., S. Myers and F. Allen, *Principles of Corporate Finance*, Tenth edition, McGraw Hill, 2011.
- (2) Copeland, T. E., J. F. Weston and K Shastri, *Financial Theory and Corporate Policy*, Pearson, 2005.
- (3) Hull, John C and Sankarshan Basu, *Options Futures & Other Derivatives*, 9th edition, Pearson Education India, 2016

Additional References:

- (1) Berk, Jonathan, and DeMarzo, Peter, *Corporate Finance*, Pearson International, 2007.
- (2) Chandra, Prasanna, *Financial Management*, 9th edition, Tata McGraw Hill, 2012
- (3) Ross, Stephen A, Randolph W Westerfield and Bradford D Jordan, *Fundamentals of Corporate Finance*, 11th Ed., McGraw-Hill Companies, 2015.
- (4) Ross, Stephen A, Randolph W Westerfield and Jaffrey Jaffe, *Corporate Finance*, 6th Ed., McGraw-Hill Companies, 2002.
- (5) Relevant research papers to be supplements from journals such as, *Journal of Corporate Finance*, *Journal of Finance*, *Journal of Financial Economics*, *Journal of Applied Corporate Finance*, *Journal of Banking and Finance* and *Emerging Markets Review*.

Course Title: Financial Econometrics			
Course Code	ECO92DE02804	Credits	04
L + T + P	3+1+0	Course Duration	One Semester
Semester	Even	Contact Hours	40 (L) + 10 (T) + 10 (P) = 60 Hours
Methods of Content Interaction	Lectures, Tutorials, practical, self-study, group and individual assignments and presentations.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term University Examination.		

Course Objectives:

- To acquaint the students with the financial data, models and methods of analysis of financial time series.
- To train the students on the appropriate use of econometric methods in finance.

Learning Outcomes:

After completing this course, the students will be able to:

- get familiar with financial data
- conduct empirical applications of financial theory based on real financial data using econometric techniques.
- feel confident to evaluate existing empirical work on finance and carry out their own empirical work.

Course Contents and Teaching Plan:

Unit	Content	Teaching hours
1.	<p>Introduction, test of return predictability and abnormal returns: Basic nature of financial market data, importance of quantitative analysis of high frequency data, issues relating to specification, estimation and interpretation of financial market models.</p> <p>Technical trading rules, measures of return predictability, review of test of forecasting power and bootstrap.</p> <p>Abnormal returns, tests on abnormal returns, cross-sectional approach.</p>	1-14 [L]
2.	<p>Empirical Analysis of Static Equilibrium Models: Statistical framework for estimation and testing of capital asset pricing model (CAPM), minimum-variance portfolio (MVP), the measure of beta. Estimation and testing of arbitrage pricing model (APM), portfolio as factors with/without a risk free asset, macroeconomic variables as factors, estimation of risk premia and expected returns, selection of factors: statistical approaches (– factor analysis and principal component analysis).</p>	15-24 [L]
3.	<p>Volatility Models: Discrete time volatility models of returns, Formulation and estimation/testing/prediction of various volatility of asset returns at long horizons, time varying expected returns, systematic and idiosyncratic risks; implied volatility, ARCH and GARCH volatility models, Asymmetric GARCH effects. Various applications in finance.</p>	25-32 [L]
4.	<p>Testing Market Interdependence: VAR/VECM models, Granger causality, multivariate GARCH models.</p>	33-40 [L]
5.	<p>Value at Risk: Theory of VaR and estimation techniques</p>	41-45 [L]
Application of tools using econometric software packages		10 [P]
Tutorials		05 [T]

Recommended Texts:

- (1) Campbell, J.Y., A W Lo A C MacKinlay, *The Econometrics of Financial Markets*, Princeton University Press. 1997
- (2) Ruey S. Tsay, *Analysis of Financial Time Series*, Third Edition, Wiley, 2010

Additional References:

- (1) Brooks, Chris, *Introductory Econometrics for Finance*, 3rd edition, Cambridge University Press, 2015.
- (2) Tsay, Ruey S., *An Introduction to Analysis of Financial Data with R*, Wiley, 2013
- (3) Tsay, Ruey S., *Multivariate Time Series Analysis: with R and Financial Applications*, Wiley, 2014.
- (4) Francq, Christian and Jean-Michel Zakoian, *GARCH Models: Structure, Statistical Inference and Financial Applications*, 1st edition, Wiley, 2010.
- (5) *More research papers to be supplemented (while delivering the lectures) from journals like Journal of Financial Econometrics, Journal of Time Series Econometrics, Journal of Time Series Analysis and Journal of Econometrics.*

Course Title: International Finance			
Course Code	ECO92DE02904	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lectures, Tutorials, self-study, group and individual assignments and presentations.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term University Examination.		

Course Objective:

This course focuses on the understanding theory of international finance as well as its real-world applications.

Learning Outcomes:

After completing this course the students will be able to:

- Understand the importance of studying and analysing international economic issues and problems.
- Understand the different implications of openness.
- Learn to evaluate international financial policies.

Course Contents and Teaching Plan:

Unit	Content	Teaching hours
1.	The International Money Market: Foreign exchange market – spot and forward market – demand and supply of foreign exchange – demand and supply of foreign exchange – purchasing power parity – nominal, effective, real and shadow exchange rates.	1-6 [L]
2.	Theories Foreign Exchange Rates: Stock vs flow theories, the monetary theory of exchange rates, asset approach to exchange rate, portfolio-balance approach to exchanges rates, sticky price theory, theories of overshooting.	7-14 [L]
3.	International Monetary Systems: Gold standard, Bretton-Woods and managed floating – fixed versus flexible exchange rates; controversies over appropriate exchange rate systems – international liquidity – Special Drawing Rights – International Monetary Fund Plans for reform of international monetary system – developing countries in international monetary arrangements – International Bank for Reconstruction and Development, New International Economic Order.	15-22 [L]
4.	The International Capital Market: Nature and characteristics – Eurocurrency markets – international financial risk management-international capital movements – commercial borrowings of developing countries – external debt management – transfer problem.	23-30 [L]
5.	International Investment and Financing: Investment and borrowing with transaction costs, international dimension of cash management, portfolio investment international capital asset pricing, capital budgeting for foreign direct investment.	31-38 [L]
6.	Institutional Structure of International Finance: The Euro-dollar, euro currency markets, multinational banking, international trader with letters of credit, financing international trade, institutions regulating international trade GATT, WTO, free – trade areas, customs union, NAFTA, ASEAN etc.	38-45
Tutorials		15 [T]

Recommended Texts:

- (1) Feenstra R. C., and A.M. Taylor, *International Macroeconomics*, New York: McGraw-Hill, 2014
- (2) Krugman P. R., M. Obstfeld, and Marc Melitz: *International Finance: Theory and Policy*, Pearson, 2017
- (3) Levi, M.D., *International Finance: The Markets and Financial Management of Multinational Business*, 3rd Edition, McGraw Hill International Editions, Finance Series, 1996.
- (4) Pilbeam, K, *International Finance*, Macmillan, 1994

Course Title: Advanced Topics in Applied Econometrics			
Course Code	ECO92DE03004	Credits	04
L + T + P	3+1+0	Course Duration	One Semester
Semester	Even	Contact Hours	40(L) + 10(P) + 10(T) = 60 hours
Methods of Content Interaction	Class lectures, tutorials, and practical works using statistical/econometric software packages.		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of quizzes, take-home assignments, and class test)		
	70% - End-semester university examination		

Course Objectives:

- To expose the students to some advanced tools of econometrics that are frequently used in socio-economic research.
- To familiarise with some important techniques of multivariate data analysis.
- To train the students to use statistical/econometric software packages to analyse the socio-economic data.

Learning Outcomes:

- Taking this course would enhance the students' data analysis skills using the modern tools of econometrics.
- It will also help to learn the methods of preparation of reports based on econometric analysis of data.
- The students would be well-equipped to compete for emerging jobs in the corporate sector.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Advanced Econometric Methods: Maximum likelihood (ML); Generalized method of moments (GMM).	1-6 [L]

2	Analysis of Cross-Section Data: Censoring, truncation and selection bias (Tobit, Heckman correction); Multinomial regression models.	7-12 [L]
3	Stochastic Regressors and Instrumental Variables Method: Endogeneity problem; Instrumental variable estimation.	13-19 [L]
4	Alternatives to OLS Regression: Quantile regression; Multivariate regression; Seemingly unrelated regression.	20-26[L]
5	Advanced Panels Data Models: Dynamic heterogeneous panels; Non-stationary panels; Panel unit root and cointegration tests.	27-35 [L]
6	Multivariate Analysis: Factor analysis; Principal component analysis; Discriminant analysis; Cluster analysis.	36-45 [L]
Computer Applications: Analysis of cross-section and panel data using a suitable econometric software package; Applications of multivariate techniques using a suitable statistical package.		46-55 [P]
Tutorials		10 [T]

References:

- (1) Wooldridge, J M, *Introductory Econometrics: A Modern Approach*, 5th edition, South-Western Cengage Learning, United States, 2013.
- (2) Wooldridge, J M, *Econometric Analysis of Cross-section and Panel Data*, 2nd edition, The MIT Press, Cambridge, 2010.
- (3) Badi H Baltagi, *Econometric Analysis of Panel Data*, John Wiley & Sons, United Kingdom, 2008.
- (4) Green, W H, *Econometric Analysis*, 7th edition, Pearson Education, USA, 2012.
- (5) Asteriou, D and S G Hall, *Applied Econometrics*, 2nd edition, Palgrave Macmillan, London, 2011.
- (6) Rencher, A C, *Methods of Multivariate Analysis*, 2nd edition, John Wiley & Sons, United Kingdom, 2002.
- (7) Tacq, J J A, *Multivariate Analysis Techniques in Social Science Research: From Problem to Analysis*, Sage International, United Kingdom, 1997.
- (8) Spencer, N H, *Essentials of Multivariate Data Analysis*, CRC Press, New York, 2014.
- (9) Adkins, Lee C & R Carter Hill, *Using Stata for Principles of Econometrics*, John Wiley & Sons, New York, 2011.
- (10) Griffiths, William E et al., *Using EViews for Principles of Econometrics*, John Wiley & Sons, New York, 2012.
- (11) Cameron, A Colin & P K Trivedi, *Microeconometrics Using Stata*, Stata Press, USA, 2009.

Course Title: Game Theory with Application to Economics			
Course Code	ECO92DE03104	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion.		
Assessment and Evaluation	30% - Continuous internal assessment (in the form of quizzes, take-home assignments and class test)		
	70% - End-term university examination		

Course Objectives:

- To provide an introduction to game theory and strategic thinking
- To draw examples from economics, politics, and elsewhere, and discuss those in the context of game theory.

Learning Outcomes:

After successful accomplishment of this course, a student should be able to

- Understand and analyse different types of games and their applicability in strategic decisionmaking.
- Understand the role of probabilities in explaining human decisions.

Course Contents and Teaching Plan:

Unit	Content	Teaching Hours
1	Introduction: What is game theory? The theory of rational choice. Games with Perfect information: Nash equilibrium, , Maxmin strategies, Mixed Strategy equilibrium, Extensive games with perfect information, Subgame perfect Nash Equilibrium, Ultimatum game, Coalition games.	1-14 [L]
2	Games with Imperfect Information: Bayesian games, beliefs and sequential games, Signalling games- education as a signal of ability. Repeated Games: The Prisoner's dilemma, finitely and infinitely repeated games	15-24 [L]
3	Evolutionary Equilibrium: Monomorphic pure strategy equilibrium, Mixed strategy and Polymorphic equilibrium.	25-32 [L]
4	Mechanism design in static settings: Revelation principle; Payoff equivalence.	33-38 [L]

5	Bargaining: Bargaining as an extensive game, Nash's axiomatic model, relation between strategic and axiomatic models.	39-45 [L]
Tutorial		15

Recommended Texts:

- Gibbons, R., A Primer in Game Theory. Harvester/Wheatsheaf, New York. First Edition, 1992.
- Osborne M. J., An Introduction to Game Theory, Oxford University Press, First Indian edition, 2006.

Additional References:

- Dixit A. K., and Nalebuff B. J., Thinking Strategically: The Competitive Edge in Business, Politics and Everyday Life. W.W. Norton, 1991.
- Fudenberg, D., and Tirole, J., Game Theory. MIT Press, Cambridge, MA. Business, Politics, and Everyday Life. Norton, New York, 1991.
- Mas-Colell, A., Whinston M., and Green, J., Microeconomic Theory, Oxford University Press, New York and Oxford 1995

Course Title: Environmental Economics			
Course Code:	ECO92DE03204	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion; self-study, assignments, quizzes and seminar, presentations by students.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term External Examination (University Examination)		

Course Objectives

- To develop the understanding of concepts of environmental economics and to apply the tools of environmental economics in resolving environmental problems.
- To learn how the markets allocate goods and why they sometimes fail to allocate environmental goods optimally. Students will learn to design regulations which correct market failures.
- To learn how to regulate pollutants that travel across country boundaries and how environmental regulations affect trade flows.

Learning Outcomes

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

- Recognise the role of economic activity in environmental damage
- Understand the nature and scope of contemporary environmental debates.
- Recognise the local and global economic response to environmental damage, including from governments, industry, individuals and non-government organisations.
- Assist in the identification of needs and the design, planning, resourcing and development of projects in environmental and social sustainability.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Introduction: Environment and economic development, Relationship between ecology and economy. The Ecosystem and its cycles, flow of energy, Biogeochemical cycles and environmental degradation.	1-5 [L]
2	Economics of Natural Resources: Renewable: solar energy, wind energy, hydro energy, tidal energy, geothermal energy and biomass energy etc. and Non – renewable: fossil fuels, crude oil, natural gas, coal and nuclear energy (uranium) and mineral sources such as gold. Efficiency and sustainable yield.	6-10 [L]
3	Externalities: Market failure: public goods, public bads, free riders problems, negative and positive externalities, The Coase Theorem, Environmental valuation of ecosystem services, total economic value, subjective and objective preference-based valuation.	11-20[L]
4	Institutions: Institutions and environmental regulations and policies. common property resources and sustainable development.	21-26[L]
5	Environment and Development: Concept and indicators of sustainable development, poverty and environment, climate change and development, Political economy and sustainable development: Participatory institutions and Panchayati Raj Institution, planning and the government.	27-38 [L]
6	International Trade and the environment: Price differential, arbitrage and trade, theories of international trade, dirty industries in south Asia. The Intergovernmental Panel on Climate Change (IPCC), COP climate summit latest.	39-45[L]
Tutorials		15 [T]

References:

- (1) Field, B C and M K Field, *Environmental Economics: An Introduction*, McGraw Hill Education (New York), 7th edition, 2016.
- (2) Kolstad, C Charles, *Environmental Economics*, OUP, 2000.
- (3) Bhattacharya, Rabindra N (ed.), *Environmental Economics An Indian Perspective*, OUP, 2001.
- (4) Sankar, Ulaganathan, *Environmental Economics: Readers in Economics*, OUP, 2001.
- (5) Sengupta, Ramprasad, *Ecology & Economics: An Approach to Sustainable Development*, OUP, 200
- (6) Dasgupta, Partha, *Human Wellbeing and the Natural Environment*, OUP, 2001.
- (7) Shiva, Vandana, *Ecological, Economic and Political Costs of the Green Revolution*, INTACH (Delhi), 1996.
- (8) Pearce, W David and Kerry R Turner, *Economics of Natural Resources and the Environment*, 1990.

- (9) Conrad, M J and W Colin Clark, *Natural Resource Economics Notes and Problems*, CUP, 1987.
 (10) Conrad M J, *Resource Economics*, CUP, 1999.

Course Title: Industrial Economics			
Course Code	ECO92DE03304	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lectures, Tutorials, self-study, group and individual assignments.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term University Examination.		

Course Objectives:

- Provide a detailed understanding about the economics of the industry in a cogent and analytical manner, with reference to India.
- Provides students with the analytical skills required for understanding business problems in industrial economics.
- To provide an understanding of the behaviour of firms and the nature of competition in Indian Industry

Learning Outcomes:

After completing this course, the students will be able to:

- Analyze the main issues and debates in the field of industrial economics.
- Explain the economic behaviour of different industries, firms and markets in relation to their output and pricing decisions.
- Describe and explain the pricing behaviour by firms with market power and its welfare implications.
- Evaluate different policy approaches to industry.

Course Contents and Teaching Plan:

Unit	Content	Teaching hours
1	Introduction: Nature and scope of industrial economics- concepts of firm, industry and market; Ownership control and objectives of a firm - Passive and active behaviour of firm- Size, Growth, Profitability, Productivity, Efficiency and Capacity Utilization - Concept and measurement.	1-8 [L]
2	Market Structure: Sellers' concentration, product differentiation, conditions of entry and economics of scale, market structure and profitability, Market Conduct: -Market and product pricing, pricing theories and strategies, Investment expenditure; Market Performance: - Growth and profitability of the firms, its constraints, Theories of growth of Firm, (Downie's Theory, Penrose's Theory and Morris Theory), the technological strategy of the firm.	9-18[L]
3	Industrial and Productivity and Efficiency: Concept of Industrial Productivity, Measurement of Total and Single factor Productivity – Determinants of Productivity, Importance of Productivity – Efficiency Concept – Determinants of Economic Efficiency – Measurement of Efficiency levels.	19-28[L]
4	Indian Industry: Aspects of Indian Industrial development- Role of Public and Private Sectors in growth of industries, Role of MNC, FDI, Joint ventures, and transfer of technology- performance of MSME; Government policies and Regulation of Industry- current issues in competition policy; industrial policy towards R&D.	29-36 [L]
5	Industrial Finance: Role, Nature and types of industrial finance, sources of institutional finance, Different institutions of finance -IDBI, IFCI, ICICI, SFCs, NIDC, SIDCS, UTI, LIC, General Insurance Corporations and Commercial Banks - Financial Statement Analysis.	37-45 [L]
Tutorials		15 [T]

References:

- (1) Hay, D. A., and D.J. Morris., Industrial Economics and Organization: Theory and Evidence, Oxford University Press, 1991
- (2) Tirole, J. The Theory of Industrial Organization, MIT Press, Cambridge, 1985.
- (3) Ahluwalia, I. J., Industrial Growth in India: Stagnation since Mid-sixties, Oxford University Press, New Delhi, 1985.

- (4) Ahluwalia, I. J., Productivity and Growth in Indian Manufacturing, Oxford University Press, New Delhi, 1991.
- (5) Ferguson, Paul R. and Glenys J. Ferguson, Industrial Economics: Issues and Perspectives, Macmillan, London, 1994.
- (6) Barthwal, R.R, Industrial Economics, Wiley Eastern Ltd, New Delhi, 1985.
- (7) Mookherjee, Dilip (ed.), Indian Industry: Policies and Performance, Oxford University Press, Delhi, 1998.
- (8) Pushpangadan, K and N Shanta, The Dynamics of Competition: Understanding India's Manufacturing Sector, Oxford University Press, New Delhi, 2009
- (9) R.R Barthwal, (2000); Industrial Economics, New Age International. New Delhi.

Course Title: Urban Economics			
Course Code:	ECO92DE03404	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion; self-study, assignments, quiz, and seminar, presentations by students.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term External Examination (University Examination)		

Course Objectives

- To introduce students to different concepts and theories of urban economics and develop understanding of its multiple facets
- To expose them to learn various issues and challenges confronting urban locations in India and their possible solutions.

Learning Outcomes

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

- Think intuitively about urban problems
- Make decisions using marginal analysis and opportunity costs to make optimal choices and identify whether the choices are- efficient or equitable.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	Introduction to Urban Economics & Development of Cities: Concept of urbanization, Objective of Urban Economics, Existence of cities, axioms of urban economics. Firm clustering, factory cities, innovation cities, labour pooling, localization and urbanization economies, comparison of size of cities	1-8 [L]
2	Land Rent & Markets and Land use pattern Land rent and urban structure, Residential Land Market, Urban Land Markets with Factor Substitution.	09-14 [L]
3	The Spatial Distribution of Employment and Population: The Monocentric City- Rise and Demise, Urban Sprawl, Neighborhood Choice, Zoning and Growth controls	15-22 [L]
4	Urban Transportation Congestion Externalities, Congestion Tax and Alternatives, Autos and Air Pollution, Automobiles and Poverty. Commuting and transit Ridership- the Cost of Travel and Model Choice, Efficient Volume of Ridership, Designing a Transit System	23-30 [L]
5	Urban Infrastructure and Housing Spending and Educational Achievement- Education Production Function, Spending Inequalities and Public Policy Water supply and sanitation, Access to basic urban amenities Importance of Housing- Durability, Detritions and Maintenance, the Filtering Model of Housing Market Housing Policy- Public Housing, Housing Vouchers, Rent Control and Rent Regulation	31-40 [L]
6	Crime in cities: Crime Facts, the Rational Criminals, the Equilibrium Quantity of Crime, Legal Opportunities and Education.	41-45 [L]
Tutorials		15 [T]

*Students would be encouraged to go through the case studies on Indian Cities related to above mentioned topics.

Recommended Texts:

- (1) O' Sullivan A., Urban Economics (7th edition), McGraw Hill, 2008.
- (2) Brueckner, J.K., Lectures on Urban Economics, MIT Press, 2011.

Additional Reference(s):

- (1) Edward L. Glaeser, Cities, Agglomeration, and Spatial Equilibrium: the Lindahl Lectures, New York, Oxford University Press, 2008 (ISBN-13: 9780199290444)
(Focus on Mathematical Modeling)

Course Title: Indian Public Finance			
Course Code:	ECO92DE03504	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion; self-study, assignments, quizzes and seminar, presentations by students.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term External Examination (University Examination)		

Course Objectives:

- To provide an introduction to the theory and practice of government finances both from the positive and normative points of view in the Indian context.
- To have a detailed understanding of Indian public Finance: its trend and pattern; its objectives and performances.
- To discuss the Indian budget critically.

Learning Outcomes:

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

- Analyse the functioning of modern public finance and identify the types of public needs and the mechanisms of their financing.
- Analyse the efficiency and equity implications of government intervention in the economy and their shortcomings.

- Argue the theoretical basis of public expenditures and analyse their types and economic effect
- Classify public revenues and integrate them into the fiscal and tax system in the Indian context
- Classify public revenues and expenditures through the budget and analyse the instruments and objectives of budgetary policy in the Indian context

Course Contents and Teaching Plan:

Unit	Content	Teaching hours
1	Budget: Meaning, type of budgets- revenue and capital budgets; classification of budget- economic and functional; Budgetary procedure in India - preparation, enactment, presentation and execution of the Budget; consolidated, contingency funds, public account, votable and non-votable items; critical evaluation of the recent budget in India.	1-5 [L]
2	Indian Tax Structure: Tax revenue of the central government; tax revenue of the state government; taxes on income and wealth; Indirect taxation: GST and Custom Duties; Non-Tax Revenue Sources Union Government – Contribution of PSUs, interest receipt, fiscal services, general services, social & community services, economic services. State Government - Contribution of PSUs, interest receipts, general services, social and community services, economic services, Grants from the centre. Evaluation of Indian Tax structure.	6-15 [L]
3	Public Expenditure: Growth and Composition of Expenditure of Union government – Revenue and Capital, Causes of the Rise in public expenditure, Problem of increasing subsidies. Growth and Composition of state's expenditure, non-development and development expenditure, revenue and capital expenditure. Public expenditure management.	15-23 [L]
4	Public Debt Internal Public Debt: Trends in India's internal public debt, Composition of Public Debt of the Union and State Government, Public Debt Management in India. External Public Debt. Public Enterprises: Role of public enterprises in the Indian economy, Problems of public sector undertakings, price policy for public enterprises, divestment of equity in PSUs - pros & cons.	24-28 [L]
5	India's Fiscal Policy: Objectives of fiscal policy in India; The problem of Fiscal Imbalances and Deficit Finance: Problem of increasing deficit at the Central and State levels –Fiscal deficit, Revenue Deficit, Primary Deficit, Fiscal Consolidation Measures at the Central and State levels; Fiscal Responsibility and Budget Management Act,2003; Roadmap for future Fiscal reforms in India.	29-35[L]

6	Fiscal Federalism: Federal Finance in India, Constitutional provisions and Statutory provisions relating to the appointment of Finance Commission, issues and approaches of various Finance Commission, changing criteria for Transfer of resources from Central to States, devolution of resources and grants from Central to States; problems of horizontal and vertical imbalances, Increasing dependence of states on the centre, Recommendations of the Move from Planning Commission to NITI Aayog.	36-45 [L]
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Recommended Readings:

1. Rangarajan, C. & Srivastava, D. K., (2011). "Federalism and Fiscal Transfers in India," OUP Catalogue, Oxford University Press, number 9780198070986, April.
2. Rao, M. Govind (2017) Public Finance in India in the Context of India's Development, NIPFP, WP No. 219, New Delhi
3. Srivastava, D.K. (2005): Issues in Indian Public Finance, New Century Publications, Delhi
4. Srivastava, M.(1981): Fiscal Policy and Economic Development in India, Chugh Publications, The University of Michigan .
5. Sury M.M., (1990), Government Budgeting in India, Commonwealth Publishers.
6. World Bank (2005): State Fiscal Reforms in India: Progress and Prospects, Macmillan, India

Additional References

- Annual Report, Ministry of Finance, Government of India, various years
- Bhargava, P .K.(1991): India's Fiscal Crisis, Ashish Publishing House, the University of California
- Chelliah, Raja J. : Fiscal Policy in Underdeveloped Countries, With Special Reference to India, Routledge, ISBN:9780415593588, 0415593581
- Cutt, J. (2011): Taxation and Economic Development in India, Cambridge University Press.
- Ganguly, S.P. (2007) Control Over Public Finance In India (second Revised Edition), ISBN:9788180692918, 8180692914, Concept Publishing Company, New Delhi-110059.
- Government of India: Economic Survey, different years.
- Government of India: Reports of the Task Force on Direct and Indirect Taxes.
- Government of India: Reports of the Tax Reforms Committee - Interim and Final (Chairman: Raja J. Chelliah).
- Government of India: Union Budgets, different years.
- Gulati, I.S.: Centre State Financial Relations, an Assessment of the Role of Finance Commission.
- Gupta, J.R. (2007) Public Economics In India: Theory And Practice, ISBN:9788126907540, 8126907541, Atlantic Publishers & Distributors (P) Limited, New Delhi =110027.
- Indian Public Finance Statistics, Ministry of Finance, Government of India.

- Jain, A.K. & Parul Jain (2007) - Reforms in Direct Taxes through Union Budgets, Rbsa Publishers, ISBN-139788176113786
- Jain, A.K.: Direct Taxation in India: Some Aspects.
- Jain, A.K.: Taxation of Income in India.
- Jain, I.: Resource Mobilization and Fiscal Policy in India.
- Premchand, A. : Control of Public Expenditure in India.
- Reddy, Y. V., and G. R. Reddy. 2019. Indian Fiscal Federalism. Oxford, UK: Oxford University Press.
- Report of the Fourteenth Finance Commission, Government of India.
- Reports of different Finance Committees.
- Reserve Bank of India, Annual Report, different years.
- Reserve Bank of India, Report on Currency and Finance, different years.
- Reserve Bank of India, State Finances- A Study of Budget, different years.
- Singh, C. (2018): Public Debt Management in India, Cambridge University Press, India.

Course Title: Demography and Population Studies			
Course Code	ECO92DE03604	Credits	04
L + T + P	3 + 1 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	45 (L) + 15 (T) Hours
Methods of Content Interaction	Lectures, Tutorials, self-study, group and individual assignments.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term University Examination.		

Course Objectives:

- To introduces the students to the fundamentals of basic concepts and sources of data in Demography.
- To help students develop knowledge, skills and values appropriate to the practices of Population Studies.
- To stimulate and encourage integration of theory and practice in the fields of Population Studies.
- The course also tries to discuss the various factors affecting population growth and its proximate determinants.

Learning Outcomes:

After completing this course, the students will be able to:

- Students will become familiar with basic concepts and sources of data in Demography.
- Students will be stimulated and encouraged and will be able to integrate the theory and practice in the fields of Population Studies.
- Students will be able to do academic and policy-oriented research on population and development interrelationships, Population and environment etc.

Course Contents and Teaching Plan:

Unit	Content	Teaching hours
1	Demography: Meaning, scope and importance of Demography; Difference from population studies, Demographic Theories. Source of Demographic data: Census, Sampling, Vital Registration methods, NFHS/SRS and DHS	1-6 [L]
2	Population and its Measurement: Components of Population Growth and their interdependence, Measures of Population Change. Indian Population: Composition, Structure Pattern, etc.	7-11 [L]
3	Fertility and Mortality: Concept and measures of Fertility, Fertility indicators – their computation and sources of data, Crude birth rate (CBR), General Fertility rate (GFR), Age Specific Fertility Rate (ASFR), Total Fertility Rate (TFR), Gross Reproduction rate (GRR), Net Reproduction Rate (NRR), Mortality concept and measures.	12-21 [L]
4	Morbidity - Mortality indicators: their computation and sources of data, Crude Death rate (CDR), Age Specific death rate (ASDR), Infant Mortality Rate (IMR), Maternal Mortality rate (MMR).	22-26
5	Population Theories: Theories of Population Growth – Malthus to Modern, Hebert Spencer, Pearl & Reed, Karl Marx, Economic Theories of fertility - Easterlin, Leibenstein, Caldwell; Blake Model, Limits to population Growth, Theory of Demographic Transition.	27-34 [L]
6	Population and Development: Facts about World Population, The Conflicting Role of Population, Growth in the Development Process Evaluating the Effect of Population, Growth on Living Standards, Enke's Work, Simon's Challenge, The 'Optimum' Population, A Model of the Low-Level Equilibrium Trap, The Critical Minimum Effort Thesis. Population Policy in India	35 - 45 [L]

	Tutorials	15 [T]
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Recommended Texts:

4. Bogue, Donald J (1969), Principles of Demography – New York: John Wiley and Sons.
5. Bhende, A. and T. Kanitkar (2006), Principles of Population Studies Himalaya Publishing House, Bombay.
6. A. P. Thirlwall (1994), Growth and Development with Special Reference to Developing Economies Fifth Edition, Macmillan Education.

Additional References:

7. Arthur Haupt and Thomas T Kane (2004), Population Reference Bureau, Population Handbook, 5th edition ISBN 0-917136-12-8.
8. Bose, Ashish (2006), Beyond Demography: Dialogue with People, B R Pub, ISBN: 81-7646-565-8
9. Gupta, Monica Das, Chen, Lincoln C, Krishnan, T.N, (Ed) (1996), Poverty & Development in India Oxford India, ISBN 019564656-8, Health.
10. Hansraj (2019), Fundamentals of Demography, Surjeet Publications, ISBN-81-229-0336-3
11. Krishnamurthy Srinivasan (2017), Population Concerns in India: Shifting Trends, Policies and Programs, Sage Publication.
12. Newell, Colin (1993), Methods and Models in Demography, ISBN 9780898624519, Guilford Press.

MENC Courses Offered by the Department

Course Title: Early and Modern Economic Thought in India			
Course Code:	ECO81ME03700	Credits	Non-credit (for other departments)
L + T + P	1.5 + 0.5 + 0	Course Duration	One Semester
Semester	Even	Contact Hours	23 (L) + 7 (T) Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion; self-study, assignments, quiz, and seminar, presentations by students.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term External Examination (University Examination)		

Course Objectives

- To familiarize the students with the Indian thought on Economics.

Learning Outcomes

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

- Think intuitively about economic problems in conformity with Indian society.

Course Contents and Teaching Plan:

Unit	Content	Teaching Hours
1	Sources and Major Literature: Vedas, Brahmanas, Puranas, Smritis Ancient Indian Economists: Vrihaspati, Kamandak, Kautilya, Shukra Thiruvalluvar	1-5[L]
2	Fundamental Concepts Purushartha (Four fold objectives of Life), Ashram (Four Stages of Life), Varna (Four fold professions), Concept of wealth, Rina, Daan, vyaj, Source of wealth- Land, industry, husbandry, forest, mines	6-11[L]
3	State and Economics: Duty of Kings, Welfare State, Public Finance: Taxation, Expenditure	12-17[L]

4	Modern Economic Thoughts: Dada Bhai Naroji, M.G Ranade, MK Gandhi, B. R Ambedkar, Deen Dayal Upadhyaya	18-23[L]
Tutorials		07

Recommended texts:

- Deodhar, S. Y., *IIMA-Economic Sutra: Ancient Indian Antecedents to Economic Thought*. Penguin Random House India Private Limited, 2019
- Kautilya. *The Arthashastra* Penguin.
- Upadhyaa, Deendayal (2017) *Ekatma Manavvaad*, Prabhat Prakashan

Additional References:

Ancient Indian Texts

Course Title: Understanding the Union and State Budget			
Course Code:	ECO92ME03800	Credits	Non-credit (Equivalent to two credit course)
L + T + P	23+7+0	Course Duration	One Semester
Semester	Even	Contact Hours	23 (L) + 7 (T) Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion; self-study, assignments, quiz, and seminar, presentations by students.		
Assessment and Evaluation	30% - Continuous Internal Assessment (Formative in nature but also contributing to the final grades)		
	70% - End Term External Examination (University Examination)		

Course Objectives

- To familiarize the students with the theoretical understanding of Budget in general and budget in India in particular.
- To examine the Indian budget from different theoretical perspectives.

Learning Outcomes

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

- Think intuitively about the economic budget
- Assess the short-term and long-term vision of a budget.
- Assess the growth and social justice aspects of a budget.
- Prepare a budget for a state or union.

Course Contents and Teaching Plan:

Unit	Contents	Teaching Hours
1	<p>The Economic Basis of Government Activity and Evaluation of Public Economic Policies - market failure and government intervention; Equity versus efficiency– Positive and normative analysis; Externalities and Government policy:</p> <p>Changing Role of State: Issues in Public Finance in a Globalising World with special emphasis on global public goods;</p> <p>Classical Public Finance Fundamental theories Behind Budget from economic growth and distributive justice dimensions, The Theory of Public Goods: Provision of Private Goods and Public Goods: Markets and Government, Pure Theories of Public Expenditures: Tiebout, Samuelson and Buchanan's Contributions. Long term and short term visions of the Budget, Budget in the Federal structure.</p>	1-10 [L]
2	<p>Actual, revised and budget estimates; Zero-Based Budgeting, Gender budgeting; and Budgeting Policies; Theory of Fiscal Policy: Fiscal Policy with Special Reference to Under-developed Countries, Federal-Fiscal Relation in India: Fiscal devolution and centre-state financial relations, Understanding the Union Budget of recent times: Empirical analysis, Understanding State Budget of recent times Empirical analysis</p>	11-23 [L]
Tutorials		7 [T]

References

- 1) Budget of India, weblink: <https://www.indiabudget.gov.in/>
- 2) Mark Musell, R (2009) Understanding Government Budgets: A Practical Guide, Routledge, Taylor & Francis, 270 Madison Ave, New York, NY 10016, 270 Madison Ave, New York, NY 10016
- 3) Stiglitz, Joseph E, (2000) *Economics of the Public Sector*, W.W. Norton & Company, 3rd edition, New York

- 4) Karnam, G (2018) Public Budgeting in India: Principles and Practices, 7th Floor, Vijaya Building, 17 Barakhamba Road, New Delhi -110 001, India, ISBN 978-81-322-3915-4
- 5) Reddy, Y. (2015). Continuity, change and the way forward: The fourteenth finance commission. Economic and Political Weekly, 50(21), 27- 36.
- 6) Chakraborty, P. (2015). Intergovernmental fiscal transfers in India: Emerging trends and realities. In P. Patnaik (ed.): Macroeconomics. Oxford University Press.
- 7) Ministry of Finance, Economic and social classification of the budget.
- 8) Ministry of Finance, Economic survey (latest).
- 9) Ministry of Finance, Finance commission report (latest).
- 10) Ministry of Finance, Union budget
- 11) Report of the 14th Finance Commission, 2015-20.
- 12) *State Finances: A Study of Budgets*, Reserve Bank of India (latest).