

BERHAMPUR UNIVERSITY

COURSE OF STUDIES

(CBCS PATTERN)

**FOR
M.A. IN ECONOMICS**

SEMESTERS I & II EXAMINATIONS 2025- 2026

SEMESTERS III & IV EXAMINATIONS 2026- 2027



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**BERHAMPUR UNIVERSITY
BHANJA BIHAR
BERHAMPUR – 760 007, GANJAM (ODISHA)
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Approved

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Chairman, BOS (Economics)

BERHAMPUR UNIVERSITY
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SEMESTERS I & II EXAMINATIONS – 2025- 2026
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Introduction

The Department of Economics was established in 1972 with two years Master Degree Course in Economics. In order to encourage research activities, the M. Phil. course was introduced in 1979-80. The department also offers Ph. D. programme under the supervision of the faculty members. Currently, the department is running under the headship of Prof. Mrutyunjay Swain, Professor along with Prof. Sudhakar Patra, Dr Bishnu Charan Behera, Mr. Pabitra Singh, Dr. Diptimayee Mishra and Dr. Bibhunandini Das. The department is providing value-based quality education by using ICT enabled facility, class room presentation and weekly seminar. The Department has an academic hall and four class rooms with an interactive panel, two LCD Projectors, separate faculty chambers, Office Room, Head Room, Research Scholar's Room, Computer Lab, Seminar Library etc.

Programme Outcome:

The Master of Arts programme in Economics has been designed with the objective to develop in-depth knowledge of students in frontier areas of economic theory and practices, so that they are able to use the knowledge to study real world economic problems.

The course has a strong focus on theoretical and quantitative skills and training of students in collection and analysis of the data using their software skills. The programme offers specialized optional courses, which allow student to pursue their studies in their area of interest. The students are required to submit report and present their findings of field-study. Besides, to hone the student's writing and analytical skills they are required to submit a dissertation on current economic issues. Thus, the Masters of Arts in Economics programme seeks to:

- Prepare students to develop critical thinking to carry out investigation about various socio-economic issues objectively while bridging the gap between theory and practice.

- Equip the student with skills to analyse problems, formulate hypotheses, evaluate and validate results and draw reasonable conclusions thereof.
- Prepare students for pursuing research or careers that provide employment through entrepreneurship and innovative methods. Because today's unemployment problem can also be solved by developing the micro and small entrepreneurship.
- Prepare students to develop own critical thinking regarding current national or international issues and policies.
- Create awareness to become a rational and an enlightened citizen so that they can take the responsibility to spread the governments' initiatives/schemes to the rural areas for the upliftment of the poor or vulnerable sections of the society for inclusive growth.

Semester	Course	Name of the Paper	No. of Credits	Marks
SEMESTER – I				100 (70 End Semester +30 Mid Semester*)
ECON C 101	Core	Microeconomic Analysis – I	04	-do-
ECON C 102	Core	Macroeconomic Analysis – I	04	-do-
ECON C 103	Core	Quantitative Methods – I	04	-do-
ECON C 104	Core	Public Economics – I	04	-do-
ECON C 105	Core	Economics of Growth and Development –I	04	-do-
ECON C 106	Core	Indian Knowledge System in Economics	04	-do-
SEMESTER – II				100 (70 End Semester +30 Mid Semester*)
ECON C 201	Core	Microeconomic Analysis-II	04	-do-
ECON C 202	Core	Macroeconomic Analysis-II	04	-do-
ECON C 203	Core	Quantitative Methods – II	04	-do-
ECON C 204	Core	Public Economics – II	04	-do-
ECON C 205	Core	Economics of Growth and Development –II	04	-do-
ECON VAC 206	Value added	Computer Application in Economics	0	Grade
SEMESTER – III				100 (70 End Semester +30 Mid Semester*)
ECON C 301	Core	International Trade and Finance – I	04	-do-
ECON C 302	Core	Research Methodology	04	-do-
Group- A (One paper to be opted)				
ECON E 303	Elective	Mathematical Economics – I	04	-do-
ECON E 304	Elective	Industrial Economics – I	04	-do-
ECON E 305	Elective	Environmental Economics-I	04	-do-
Group-B (One paper to be opted)				
ECON E 306	Elective	Econometrics – I	04	-do-
ECON E 307	Elective	Financial Institutions and Markets – I	04	-do-
ECON E 308	Elective	Agricultural Economics – I	04	-do-
ECON E 309	Elective	Indian Economy	04	-do-

Choice Based Credit Transfer (CBCT)					
ECON CT 300	CBCT	Contemporary Indian Economy	04		
ECON VAC 310	Value added	Economic Issues and Policies in Odisha	0		Grade
SEMESTER – IV					100 (70 End Semester +30 Mid Semester*)
ECON C 401	Core	International Trade and Finance – II	04		-do-
ECON C 402	Core	Economics of Social Sector and Environment	04		-do-
ECON D 403	Core	Dissertation	04		100 (50-Thesis evaluation 50-Viva)
Group-A (One paper to be opted)					
ECON E 404	Elective	Mathematical Economics-II	04		
ECON E 405	Elective	Industrial Economics – II	04		-do-
ECON E 406	Elective	Environmental Economics-II	04		-do-
Group-B (One paper to be opted)					
ECON E 407	Elective	Econometrics – II	04		-do-
ECON E 408	Elective	Financial Institutions and Markets – II	04		-do-
ECON E 409	Elective	Agricultural Economics – II	04		-do-
ECON E 410	Elective	Health Economics	04		-do-
ECON NC 411	Non-Credit	Cultural Heritage of South Odisha	0		-

Notes: * (i) Each paper carries 100 marks, which includes 30 marks of Mid-Semexamination and 70 marks of End-Sem. Examination. The mid Sem 30 marks include: 20 marks on written exam, 5 marks on assignments and 5 marks on quiz/GD.

(ii) One unit in each paper shall be based on self-study/students' presentation followed by tutorial classes.

(iii) All PG Students are required to complete **one SWAYAM Course (Minimum 2 Credit)** on or before completion of 3rd Semester.

(iv) **Abbreviations:**

C	-	Core	1600 (Mandatory with no Choice)
E	-	Elective	400 (Mandatory with choice)
CT	-	Credit Transfer	100 (CBCT with inter-departmental choice)
VAC	-	Value added	
AC	-	Non-credit course	
D	-	Dissertation	

(v) **Other Details:**

Course No. _____ **Course Name: Master of Arts in Economics**

Semester: I/II/III/IV Credits: 84 **Core: 16 Papers and Elective: 09 Papers,**

(AE-01, G[A]-03, G[B]-03, Students have to choose 2 papers from each group)

Course Coordinator: HOD, P.G Department of Economics,

Email: headcobu@gmail.com

Brief Description on Courses/Papers and Course Outcomes:

ECON C 101: Microeconomic Analysis – I		
Course Outcome: The course will equip the students with the tools of micro economic fundamentals for a sound understanding of the behaviour of micro economic units like a rational consumer and the firms in various market structures. On successful completion of the course, a student will be able to develop a sound understanding of the core microeconomic concepts that economists use to understand the process of decision-making by an economic agent(s).		
Unit	Contents	Hours
Unit-I	<i>Choice Theory and Consumer Demand</i> Consumer Preferences - Assumptions about Preferences; Utility Function-Basic concepts; Indifference Curve Analysis – Consumers Equilibrium; Marshallian and Hicksian demand functions; Decomposition of Price effect; Indirect Utility Function and Duality in consumption; Revealed Preference Theory; The Von-Neumann-Morgenstern axioms and expected utility theory.	12
Unit-II	<i>Production and Costs</i> Fundamentals of Production function – Product Curves, Isoquants, Marginal rate of Technical Substitution; Short-run and Long-run laws of Production; Types of Production Function-Linear Homogenous, Leontief, Cobb-Douglas, CES, Non-homogeneous, Homothetic Production Functions. Profit maximization and Cost Minimization; Cost function – Traditional and Modern Theories of Cost.	12
Unit-III	<i>Perfect Competition, Monopoly and Monopolistic Competition</i> Perfect Competition – Short run and Long run equilibrium; Monopoly – Profit Maximisation (Short-run and Long-run), Deadweight loss, Natural Monopoly, Measures of Monopoly Power, Control and Regulation; Discriminating Monopolist; Monopolistic Competition – Equilibrium of the firm and the group, Excess capacity.	12
Unit-IV	<i>Oligopolistic Market Structure</i> Non-collusive – Cournot and Stackelberg Duopoly Models; Sweezy's Small Group Oligopoly Model; Collusive – Cartels and Mergers, Market Share, Price Leadership Models; Differentiated Oligopoly, Non-price Competition.	12
Total		48
References: Koutsoyiannis, A. (1979), Modern Microeconomics, (2 nd Edition), Macmillan Press, London. Snyder Nicholson, Microeconomic Theory: Basic Principles and Extensions, CENGAGE Publisher. Green, H.A.G. (1971), Consumer Theory, Penguin, Harmondsworth. Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory: A Mathematical Approach, Mc Graw Hill, New Delhi. Pyndyck, R.S. & D.L. Rubinfeld (1999), Microeconomics, (3 rd Edition) Pentece Hall of India. Baumol, W.J. (1982), Economic Theory and Operations Analysis, Prentice Hall of India, New Delhi. Broadway, R.W. and N. Bruce (1984), Welfare Economics, Basil Blackwell, London. Feldmen, A.M. (1980), Welfare Economics and Social Choice Theory Martinus Nijhoff Publishing, Boston. Graff, J. De V. (1957), Theoretical Welfare Economics, Cambridge University Press, Cambridge. Kreps, David, M. (1990). A course in microeconomic theory Princeton university press. Laidler David (1977). Introduction to microeconomics, Philip Allan Publishers. Little, I.M.D. (1957), A Critique of Welfare Economics (second edition) Oxford University Press, London. Nath, S.K. (1969), A Reappraisal of welfare economics, Routledge of Kegan Paul, London. Roychowdhury, K.C. (1980), Microeconomics, Tata Mc Graw Hill, New Delhi. Sen, A.K. (1970), Collective Choice and Social Welfare, Holden Day Inc. San Fransico. Stigler, G. (1996), Theory of Price, (4 th Edition), Prentice Hall of India, New Delhi. Varian, H. (2000), Microeconomics Analysis, W.W. Norton, New York. Weintrub, E.R. (1974), General Equilibrium Theory, Macmillan, London.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON C 102: Macroeconomic Analysis – I

Course Outcome: This course will build the theoretical understanding of students on various macroeconomic thoughts starting from classical to contemporary Macroeconomics. It can improve the macroeconomic analytical skills from relevant policy perspective. The students will get an overview of the major developments in macroeconomic theory, with particular emphasis on the policy prescriptions of the earlier macroeconomic schools of thought. The students will learn to develop an understanding of the interrelationships among the various macroeconomic variables and the way they impact upon the working of the economy as a whole, thereby determining the course of the economy.

Unit	Contents	Hours
Unit-I	<i>National Income Accounts and Social Welfare</i> Different systems of national income accounting: Social accounting, Input-output accounting, Flow of funds accounting and Balance of Payments accounting; United Nations System of National Accounts (SNA); National income and social welfare, Measure of Economic Welfare (MEW);	12
Unit-II	<i>Consumption Function</i> Keynes' Psychological Law of Consumption: Implication of the law, Short-run and long-run consumption function, Empirical evidence on consumption function; Income-consumption relationship: Absolute income, Relative income, Life cycle and Permanent income hypotheses.	12
Unit-III	<i>Investment function</i> Investment multiplier, Theories of investment and accelerator, Super multiplier, Influence of policy measures on investment.	12
Unit-IV	<i>Demand for Money</i> Classical approach to demand for money: Quantity theory approach, Fisher's equation, Cambridge quantity theory, Keynes's liquidity preference approach: transaction, precautionary and speculative demand for money; Aggregate demand for money; Neo-classical and Keynesian views on interest.	12
Total		48

References: Branson, W.A. (1989), Macroeconomic Theory and Policy, (3rd Edition), Harper and Row, New York. Dornbusch, R. and F. Stanley (1997), Macroeconomics, McGraw Hill, Inc, New York.

Duessenbery, J.S. (1949). Income, saving and the theory of consumer behaviour, Harvard University Press, Harvard.

Friedmen, M. (1956) Studies in the quantity theory of money, The University of Chicago Press, Chicago.

Frisch, H. (1993). Theories of inflation, Cambridge University Press, Cambridge.

Hicks, J.R. (1950). A contribution to the theory of trade cycles, clarendon press, Oxford.

Jha, R. (1999). Contemporary Macroeconomics Theory and Policy, New Age International (P) Ltd., New Delhi.

Keynes, J.M. (1936). The General Theory of Employment, Interest and Money, Macmillan, London.

Mckinen, G.E. (1978), Money, The Price Level and Interest Rates. Prentice Hall of India, New Delhi.

Shapiro, E. (1996), Macroeconomic Analysis, Galgotia Publications, New Delhi. Surrey, M.J.C. (Ed.) (1976), Macroeconomic Themes, Oxford University Press, Oxford.

Assessment: 100 (70 End Semester +30 Mid Semester)

ECON C 103: Quantitative Methods –I

Course Outcome: This paper will enable the students to know different statistical and mathematical tools which are used to be applied by economists to solve various real-world problems.

Unit	Contents	Hours
Unit-I	<i>Functions and Derivatives in Economics</i> Function and type of Functions and their Applications in Economics; Simple Derivative and Differential (both first and second order) and their applications in Economics; Partial Derivatives, Total Derivative and Total Differential and their applications in Economics; Unconstrained and Constrained Optimization of multivariate functions and their application in simple economic problems.	12
Unit-II	<i>Sampling and Estimation Theory</i> Basics of Sampling – Universe and Sample, Population Parameter and Sample Statistics, Sample size; Theory of Sampling distribution and Standard Error; Random and non-random sampling; Simple random, Stratified random and P.P.S. Sampling. Point Estimation and Interval Estimation, Desirable properties of an Estimator.	12
Unit-III	<i>Correlation and Regression analysis</i> Correlation – Simple, partial and multiple correlation (applications only); Multiple regression, partial regression coefficient, Estimation of regression coefficients in a multiple regression model; Standard error of regression coefficients, Goodness of fit of a regression model.	12
Unit-IV	<i>Integration, Differential Equations</i> Integration and its geometrical interpretation, Methods of integration, Application of integration–Consumer’s Surplus and Producer’s Surplus; Differential equations – Solution of first order and second order, their simple applications in Economics.	12
Total		48

References:

- Allen, R.G.D. (1974), *Mathematical Analysis for Economics*, Macmillan Press and ELBS, London.
- Chang, A.C. (1986), *Fundamental Methods of Mathematical Economics*, McGraw Hill, New York.
- Croxtan, Crowden and Klein (1971), *Applied General Statistics*, Prentice Hall of India, New Delhi.
- Dowling, E.D. (1986). *Theory and Problems of Mathematics for Economists*, Schaum’s Outline Series, McGraw Hill, New York.
- Gupta, S.C. (2016), *Fundamentals of Applied Statistics*, S. Chand & Sons, New Delhi.
- Gupta, S.P. (2015), *Statistical Methods*, S. Chand & Sons, New Delhi.
- Yamane, Taro (1975), *Statistics: An Introductory Analysis*, Harper & Row.
- Yamane, Taro (1975), *Mathematics for Economists*, Prentice Hall of India, New Delhi.

Assessment: 100 (70 End Semester +30 Mid Semester)

ECON C 104: Public Economics – I		
Course Outcome: This course is to familiarize the students with the concepts, principles and theories of Public economics. The students will understand about the public expenditure, public revenue, public finance, public budget and role of government, need for public provision of public goods, theory of taxation, theory of expenditure, Fiscal federal relations, fiscal policy instruments and their impact on macro economy.		
Unit	Contents	Hours
Unit-I	<i>Public expenditure and public debt</i> Public Expenditure–Hypotheses: Wagner’s law of increasing state activities, Peacock-Wiseman hypothesis. Pure theory of public expenditure; Structure, growth and effect of public expenditure; Evaluation of public investment; Social Cost-benefit analysis – Project evaluation, Estimation of costs, discount rate, Public Debt– Sources, Effects, burden and it’s management.	12
Unit-II	<i>Fiscal policy and budget</i> Fiscal policy–Objectives of fiscal policy, Neutral, compensatory and functional finance, Fiscal policy for stabilization-automatic vs. discretionary stabilization; inter-dependence of fiscal and monetary policies, The Public Budgets– Kinds of Budgets, Zero-base budgeting, Different concepts of budget deficit, Budgetary deficits and its implications, Balanced budget multiplier.	12
Unit-III	<i>Theories of Public Revenue</i> Public Revenue – Different Approaches to the division of tax burden, Incidence and effects of taxation, Elasticity and buoyancy; Taxable capacity; Benefit and ability to pay approaches; Theory of optimal taxation.	12
Unit-IV	<i>Indian Public Finance</i> Indian tax system, Trends in revenue and expenditure of the Central and State Government; Major taxes in India: base of taxes, direct and indirect taxes, taxation of agriculture, expenditure tax, Reforms in direct and indirect taxes, taxes on services, measuring progressivity and effect of taxation, non-tax revenue of the center, State and local bodies; Analysis of the Union and state government budget, Trends in public debt, Fiscal crisis and fiscal sector reforms in India; Reports of Finance Commissions in India.	12
Total		48
References: Atkinson, A.B. and J.E. Siglitz (1980), Lectures on Public Economics, Tata McGraw Hill, New York. Buchanan, J.M. (1970). The Public Finances; Richard D. Irwin, Homewood. Goode, R. (1986), Government Finance in Developing Countries, Tata McGraw Hill, New Delhi. Musgrave, R.A.(1959), The Theory of Public Finance, Tata McGraw Hill, Kogakhusa, Tokyo. Musgrave, R.A. and P.B.Musgrave (1976). Public Finance in theory and Practice, McGraw Hill, Tokyo. Herber, B.P. (1967), Modern Public Finance, Richard D. Irwin, Homewood. Mueller, D.C.(1979) Public Choice, Cambridge University Press, Cambridge. Duff, L. (1997), Government and Market, Orient Longman, New Delhi. Barman, K. (1986). Public Debt Management in India, Uppal Publishing House, New Delhi. Sreekantaradhya, B.S. (1972), Public Debt and Economic Development in India, New Delhi. Peacock, A. and G.K. Shaw (1976), The Economic Theory of Fiscal Policy, George Allen and Unwin, London. Musgrave, R.A. (1977), Essays in Fiscal Federalism, Greenwood West Port. Oates, W.E. (1972), Fiscal Federalism, Harcourt Brace and Johanowich, New Delhi. Srivastava, D.K. (Ed.) (2000). Fiscal Federalism in India, Har-Anand Publications Ltd., New Delhi. Bhargava, P.K. (1984), Some Aspects of Indian Public Finances, Uppal Publishing House, New Delhi. Mundle, S. (1999), Public Finance Policy: Issues for India, Oxford University Press, New Delhi.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON C 105: Economics of Growth and Development – I		
Course Outcome: The course will explore the concepts and theories of Development Economics with an aim to develop the research capabilities of the students.		
Unit	Contents	Hours
Unit-I	<i>Economic Growth</i> Economic growth versus Economic development; Exogenous Growth Models – Harrod and Domar growth model and it's instability in equilibrium; Solow Model; Meade's Steady State Growth Model; Kaldor's Model; Romer's Endogenous growth model.	12
Unit-II	<i>Social Aspects of Development</i> IKS and Human Sustainability; Poverty and Inequality – Indicators and Measurement of Poverty and Inequality; SDGs; Food Security and Nutrition; Human Capital – Human Development Index and Quality of Life Index; Role of Education and Health in Development; Theory of Demographic Transition, Optimum Theory of Population, Measurement of fertility– Total fertility rate, gross and net reproduction rate, Gender Inequality and Economic development.	12
Unit-III	<i>Investment Techniques</i> Investment criteria and choice of technique– Capital Turnover Criterion, SMP Criterion, Marginal Per Capita Reinvestment criterion, Labour versus capital intensive techniques.	12
Unit-IV	<i>Planning Techniques</i> Planning techniques–Project evaluation and the Cost-benefit analysis; Linear programming and shadow pricing; Planning in a Market Oriented Economy.	12
Total		48
<p>References: Higgins, B.(1959), Economic Development, W.W.Norton, New York. Kindlegerger, C.P. (1977), Economic Development, (3rd Edition), McGraw Hill, New York. Meier, G.M.(1995), Leading Issues in Economics Development, (6th Edition), Oxford University Press, New Delhi. Myint, Hla (1965), The Economics of Underdeveloped Countries, Preager, New York. Myint, H. (1971), Economic Theory and Underdeveloped Countries, Oxford University Press, New York. Todaro, M.P. (1996), (6th Edition), Economic Development, Longman, London. Thirlwal, A.P. (1999), (6th Edition). Growth and Development, Macmillan, U.K. Sen, A.K. (Ed.), (1990), Growth Economics, Penguin, Harmondsworth. Lewis, W.A. (1955), The Theory of Economic Growth, George Allen and Unwin, London. Myrdal, G. (1957), Economic Theory and Underdeveloped Regions, Duckworth, London. Schumpeter, J.A.(1949), The Theory of Economic Development, Harvard University Press Cambridge, Mass. United Nations (1994), Human Development Report, United Nations, New York. A.G.Frank, On Capitalist Underdevelopment, Monthly Review Press. Bhagwati, J. & P. Desai (1970), India: Planning for Industrialization, Oxford University Press, London. Todaro, M.P. (1971), Development Planning: Models and Methods, Oxford University Press, Oxford. Chakravarti, S. (1987), Development Planning: The Indian Experience, Clarendon Press, Oxford.</p>		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON C 106: Indian Knowledge System in Economics

This course aims to explore the rich heritage of Indian economic thought and practices. It will cover ancient texts, historical economic systems, traditional economic wisdom, and the relevance of these ideas in the modern economic context. Students will gain an understanding of how India's economic ideas have evolved and influenced contemporary economic thought. It helps to familiarize the terms like imperialism, colonialism, drain of wealth, land settlements like permanent settlements, zamindari system, economic nationalism etc. which created a mark on Indian economy and society. This syllabus aims to provide a comprehensive understanding of the Indian Knowledge System in Economics, bridging the gap between ancient wisdom and modern economic practices.

Course Outcome: The course will help the students to develop the ability to:

- Understand the foundational concepts of Indian economic thought.
- Explore ancient Indian economic texts and their contributions.
- Analyse traditional economic practices and their relevance today.
- Critically evaluate the evolution of economic ideas in India.
- Compare and contrast Indian economic ideas with modern economic theories.

Unit	Contents	Hours
Unit-I	<p>Introduction to Indian Knowledge System and Ancient Indian Economic Thought</p> <p>Overview of Indian Knowledge Systems; Definition and Scope. Introduction to Indian traditional knowledge: concepts and definition, nature, scope, and importance of traditional knowledge.</p> <p>Definition and scope of ancient Indian economic thought; overview of economic concepts such as Artha (wealth), Dharma (duty, righteousness) Kama (desire/pleasure) and Moksha in Indian thought. Contributions of thinkers like Kautilya; fundamental concepts of Artha shastra: Raja Dharma, Lokayukta, Danda Niti, Taxation, Revenue management, Agriculture, Trade and commerce, Mandala theory (foreign policy and diplomacy).</p>	12
Unit-II	<p>Contribution of Indian Knowledge System to Economic Theory</p> <p>Growth Theory; Ideas on economic growth and development in ancient Indian texts. Wealth creation; Philosophical insights into generating wealth. Monetary Policy; Management of currency and financial resources in ancient times; Barter system and currency, historical evolution and significance.</p> <p>The British Economic Policies; Deindustrialization and its impact; Land revenue systems and their consequences; Resistance and Adaptation; Indigenous economic movements; Swadeshi and cooperative movements.</p>	12
Unit-III	<p>Modern Indian Economic Thought</p> <p>Economic Ideas of Indian National Leaders: Mahatma Gandhi's economic philosophy; Pandit Nehru's industrial policies; Economic Ideas of Ram Manohar Lohia</p> <p>Recent developments in Indian economic thought: Contributions of contemporary Indian Economists- Amartya Sen and Jagdish N Bhagawati</p>	12
Unit-IV	<p>Relevance of Traditional Knowledge in Contemporary Economics</p> <p>Integrating Traditional Practices; Sustainable agriculture; and Indigenous trade practices in modern markets; Lessons for contemporary economic policies; Case studies of successful integration</p> <p>Comparing Indian and Western Economic Thought: Key similarities and differences; Influence of Indian thought on global economics; Potential contributions of Indian knowledge systems to global economics.</p>	12
Total		48

References:

1. Indian Knowledge System: Artha Shasta By Kautilya by Dr. Shaikh Taufiq Khalil
2. Introduction to Indian Knowledge System: Concepts and Application by B. Mahadevan, Vinayak Rajat Bhat, Nagendra Pavana R.N. (2022)
3. Ancient Indian Economic Thought Relevance for Today by Ratan Lal Basu and Raj Kumar Sen (2008)
4. A History of Indian Economic Thought by Ajit Dasgupta (2002)
5. Roy, T. (2011). The Economic History of India: Ancient to Present. Cambridge University Press.
6. Tirthankar Roy (2011) The Economic History of India 1857-1947. OUP, India
7. R C Dutt (2000). The Economic History of India under Early British Rule. Routledge, London
8. Deshpande, S., & Patnaik, U. (Eds.). (2011). Indian Economic Thought: Ancient to Modern. Routledge.
9. Chakravarti, R. (2001). Trade and Traders in Early Indian Society. Manohar Publishers.
10. Economic Thought: A Comparison Between Indian and Western Traditions" by P. V. Andresen.

Assessment: 100 (70 End Semester +30 Mid Semester)

ECON C 201: Microeconomic Analysis – II

Course Outcome: The course will be helpful to the students to know about the managerial and behavioural theories of the firm, Theory of Distribution, General Equilibrium Analysis and welfare economics.

Unit	Contents	Hours
Unit-I	<i>Managerial and Behavioural Theories of the Firm</i> The Marginalist Controversy; A Representative Model of Average Cost Pricing; Bain's Limit-Pricing Theory; Theory of Sales Revenue Maximization; Marris's and William's Static Managerial Model of the Firm.	12
Unit-II	<i>Theory of Distribution</i> Neo-classical Approach – Marginal productivity theory; The Adding-up problem- Product Exhaustion Theorem; Factor Pricing in Perfect and Imperfect Markets.	12
Unit-III	<i>General Equilibrium Analysis</i> Partial vs General Equilibrium; Existence, Stability and Uniqueness of Competitive equilibria; Efficiency in Production, Consumption and Product mix - A $2 \times 2 \times 2$ General Equilibrium Model.	12
Unit-IV	<i>Welfare Economics</i> Pareto Optimality Conditions; Compensation Principle, Bergson-Samuelson's Social Welfare Function; Theory of Second Best; Arrow's Impossibility Theorem; Asymmetric Information.	12
Total		48

References: Baumol, W.J. (1982), Economic Theory and Operations Analysis, Prentice Hall of India, New Delhi.

Broadway, R.W. and N.Bruce (1984). Welfare Economics, Basil Blackwell, London.

Feldmen, A.M. (1980), Welfare Economics and Social Choice Theory Martinus Nijhoff Publishing, Boston.

Graff, J. De V. (1957), Theoretical Welfare Economics, Cambridge University Press, Cambridge.

Green, H.A.G. (1971), Consumer Theory, Penguin, Harmondsworth.

Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory: A Mathematical Approach, Mc Graw Hill, New Delhi.

Koutsoyiannis, A. (1979), Modern Microeconomics, (2nd Edition), Macmillan Press, London.

Kreps, David, M. (1990). A course in microeconomic theory Princeton university press. Laidler

David (1977). Introduction to microeconomics, Philip Allan Publishers.

Little, I.M.D. (1957), A Critique of Welfare Economics (second edition) Oxford University Press, London.

Nath, S.K. (1969), A Reappraisal of welfare economics, Routledge of Kegan Paul, London.

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Roychowdhury, K.C. (1980), Microeconomics, Tata Mc Graw Hill, New Delhi.

Sen, A.K. (1970), Collective Choice and Social Welfare, Holden Day Inc. San Fransico. Stigler, G.

(1996), Theory of Price, (4th Edition), Prentice Hall of India, New Delhi.

Varian, H. (2000), Microeconomics Analysis, W.W. Norton, New York.

Weintrub, E.R. (1974), General Equilibrium Theory, Macmillan, London.

Assessment: 100 (70 End Semester +30 Mid Semester)

ECON C 202: Macroeconomic Analysis – II

Course Outcome: This course will create the theoretical understanding of students from classical to contemporary macroeconomics. It will improve the macroeconomic analytical skills from relevant policy perspectives.

Unit	Contents	Hours
Unit-I	<i>The IS-LM and Post-Keynesian approaches</i> The IS-LM model; Extension of IS-LM model with labour market and flexible price; General equilibrium of product and money market; Post-Keynesian approaches to demand for money; Patinkin and the Real Balance Effect; Friedman and the modern quantity theory; Monetarism vs. Fiscalism.	12
Unit-II	<i>Supply of money</i> Components and determinants of money supply; Factors influencing changes in money supply; Financial Intermediation, Growth and role of Non-Banking Financial Intermediaries (NBFIs) and Regional Rural Banks, Distinction between Banks and NBFIs; RBI approach to money supply; High powered money and money multiplier.	12
Unit-III	<i>Theory of Inflation</i> Inflation: Theories of inflation; Structuralist approach to inflation; Philip curve analysis, Short-run and long-run Philips curve, Tobin’s modified Phillips curve; Policies to control inflation.	12
Unit-IV	<i>Theories of Business Cycles</i> Business cycles: Theories of business cycles – Schumpeter, Kaldor, Samuelson and Hicks; Macro-economic equilibrium – relative role of monetary and fiscal policies.	12
Total		48

References:

- 1.Shapiro, E. (1996), Macroeconomic Analysis, Galgotia Publications, New Delhi. Dornbusch, 2.R. and F. Stanley (1997), Macroeconomics, McGraw Hill, Inc, New York.
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- 6.Duessenbery, J.S. (1949). Income, saving and the theory of consumer behaviour, Harvard University Press, Harvard.
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- 8.Frisch, H. (1993). Theories of inflation, Cambridge University Press, Cambridge.
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- 10.Jha, R. (1999). Contemporary Macroeconomics Theory and Policy, New Age International (P) Ltd., New Delhi.
- 11.Keynes, J.M. (1936). The General Theory of Employment, Interest and Money, Macmillan, London.
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Assessment: 100 (70 End Semester +30 Mid Semester)

ECON C 203: Quantitative Methods –II		
Course Outcome: This paper will enable the students to know about different statistical and mathematical tools which are routinely being applied by economists to solve various real world problems.		
Unit	Contents	Hours
Unit-I	<i>Probability and Theoretical Distribution</i> Deterministic and non-deterministic experiments, various types of events, classical and empirical probability, Laws of addition and multiplication; conditional probability and concept of interdependence. Baye’s theorem and its applications; Elementary concept of random variable; Probability mass and density functions; Expectations, Properties of Binomial, Poisson and Normal distributions.	12
Unit-II	<i>Testing of hypothesis and Computer Application</i> Null and alternative; Type-1 and Type-2 Errors, Goodness of fit; Confidence intervals and level of significance; Hypothesis testing based on Z, t, (Chi square) and F Tests.	12
Unit-III	<i>Matrices and Determinants</i> Matrix – Concept of matrix and types of matrices, Operations on matrices, matrix inversion and rank of a matrix, Cramer’s Rule, Concept of quadratic forms, Determinant and it’s properties. Simple application of vectors, matrices and determinants– Solution of simultaneous equations.	12
Unit-IV	<i>Elementary Operation Research</i> Linear programming – formulation of linear programming and it’s graphical method of solution, input-output analysis – determination of equilibrium level of outputs, prices and employment; Game Theory – Concept the game, solution of game with saddle point and mixed strategies and value of a game.	12
Total		48
References:		
1.Allen, R.G.D. (1974), Mathematical Analysis for Economics, Macmillan Press and ELBS, 2.		
2.London. Chang, A.C. (1986), Fundamental Methods of Mathematical Economics, McGraw Hill,		
3. New York. Croxton, Crowden and Klein (1971), Applied General Statistics, Prentice Hall of India, New Delhi.		
4.Dowling, E.D. (1986). Theory and Problems of Mathematics for Economists, Schaum’s Outline Series, McGraw Hill, New York.		
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6. Gupta, S.P. (2015), Statistical Methods, S. Chand & Sons, New Delhi.		
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8.Yamane, Taro (1975), Mathematics for Economists, Prentice Hall of India, New Delhi.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON C 204: Public Economics – II

Course Outcome: This will help the students to understand about the role of public sector, preference revelation for public goods, rationale for public policy and fiscal federalism. The students will understand about the public expenditure, public revenue, public finance, public budget and role of government, need for public provision of public goods, theory of taxation, theory of expenditure, Fiscal federal relations, fiscal policy instruments and their impact on macro economy.

Unit	Contents	Hours
Unit-I	<i>Role of Public sector</i> Role of Government in organized society; Changing perspective of government in a mixed economy, public and private sector cooperation or competition, Government as an agent for economic planning and development; Government as a tool of operationalizing the planning process, private goods, public goods and merit goods.	12
Unit-II	<i>Preference Revelation for Public Goods.</i> Market failure: Imperfections, decreasing costs, externalities, public goods; Private and public mechanism for allocating resources; Problems for allocating resources; Problems of preference revelation and aggregation of preferences; An economic theory of democracy, Role of bureaucracy. Free rider problem, median voter theorem, theory of rent-seeking.	12
Unit-III	<i>Rationale for Public Policy</i> Allocation of resources – Theory of public goods, Voluntary exchange models, Impossibility of decentralized provision of public goods; contributions of Lindahal and Johansen; Samuelson; Demand revealing schemes for public goods – Tiebout model, Theory of club goods, Stabilization policy – Keynesian case for stabilization policy, Failure of Intertemporal markets, Liquidity preference, social goals, poverty alleviation, Provision of infrastructural facilities, Removing distributional inequalities and regional imbalances.	12
Unit-IV	<i>Fiscal Federalism</i> Fiscal Federalism. Principles of multi-unit finance; Fiscal federalism in India. Vertical and horizontal imbalance. Assignment of function and sources of revenue, constitutional provisions, finance commission and planning commission, devolution of resources and grants. Theory of grants. Resource transfer from union to states – Criteria for transfer of resources; center – State financial relations in India. Problems of states resources and indebtedness, transfer of resources from union and states to local bodies.	12
Total		48

References:

1. Musgrave, R.A. and P.B. Musgrave (1976). Public Finance in theory and Practice, McGraw Hill, Tokyo.
2. Atkinson, A.B. and J.E. Sgiltz (1980), Lectures on Public Economics, Tata McGraw Hill, New York.
3. Buchanan, J.M. (1970). The Public Finances; Richard D. Irwin, Homewood.
4. Goode, R. (1986), Government Finance in Developing Countries, Tata McGraw Hill, New Delhi.
5. Herber, B.P. (1967), Modern Public Finance, Richard D. Irwin, Homewood.
6. Mueller, D.C. (1979) Public Choice, Cambridge University Press, Cambridge. Duff, L. (1997), Government and Market, Orient Longman, New Delhi.
7. Barman, K. (1986). Public Debt Management in India, Uppal Publishing House, New Delhi.
8. Sreekantaradhya, B.S. (1972), Public Debt and Economic Development in India, New Delhi.
9. Peacock, A. and G.K. Shaw (1976), The Economic Theory of Fiscal Policy, George Allen and Unwin, London.
10. Musgrave, R.A. (1977), Essays in Fiscal Federalism, Greenwood West Port.
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12. Srivastava, D.K. (Ed.) (2000). Fiscal Federalism in India, Har-Anand Publications Ltd., New Delhi.
13. Mundle, S. (1999), Public Finance Policy: Issues for India, Oxford University Press, New Delhi.

Assessment: 100 (70 End Semester +30 Mid Semester)

ECON C 205: Economics of Growth and Development – II		
Course Outcome: The course will explore the concepts and theories of Development Economics with an aim to develop the research capabilities of the students.		
Unit	Contents	Hours
Unit-I	<i>Approaches to Development-I</i> Partial theories of growth and development – Vicious circles of Poverty, Circular Causation; Development Theories – Classical, Rostow, Marx and Schumpeter theories of development; Unlimited supply of labour; Big push; Balanced and Unbalanced growth.	12
Unit-II	<i>Approaches to Development-II</i> Critical Minimum Effort Thesis; Low-income Equilibrium Trap; Forward and Backward Linkage; Ranis & Fei model; Dependency theory of development.	12
Unit-III	<i>Sectoral Aspects of Development</i> IKS and economic sustainability; Role of agriculture in economic development; Efficiency and productivity in agriculture; New technology and sustainable agriculture; Globalization and agricultural growth; Rationale and Pattern of Industrialization in developing countries; Terms of trade between agriculture and industry; Infrastructure and its importance.	12
Unit-IV	<i>Macroeconomic Policies</i> Macroeconomic policies and development – Role of monetary and Fiscal policies in developing countries - Prior savings, Inflation and growth; External resources – FDI, AIDs and Technology inflow; MNC activity in developing countries.	12
Total		48
References: 1.Higgins, B.(1959), Economic Development, W.W.Norton, New York. Kindleberger, C.P. (1977), Economic Development, (3rd Edition), McGraw Hill, New York. 2.Meier, G.M.(1995), Leading Issues in Economics Development, (6th Edition), Oxford University Press, New Delhi. 3.Myint, Hla (1965), The Economics of Underdeveloped Countries, Preager, New York. 4.Myint, H. (1971), Economic Theory and Underdeveloped Countries, Oxford University Press, New York. 5.Todaro, M.P. (1996), (6th Edition), Economic Development, Longman, London. Thirlwall, A.P. (1999), (6th Edition). Growth and Development, Macmillan, U.K. Sen, A.K. (Ed.), (1990), Growth Economics, Penguin, Harmondsworth. 6.Lewis, W.A. (1955), The Theory of Economic Growth, George Allen and Unwin, London. Myrdal, G. (1957), Economic Theory and Underdeveloped Regions, Duckworth, London. 7.Schumpeter, J.A. (1949), The Theory of Economic Development, Harvard University Press Cambridge, Mass. 8.United Nations (1994), Human Development Report, United Nations, New York. 9.A.G.Frank, On Capitalist Underdevelopment, Monthly Review Press. 10.Bhagwati, J. & P. Desai (1970), India: Planning for Industrialization, Oxford University Press, London.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON VAC 206: Computer Application in Economics		
Course Outcome: The students can able to understand applications of different statistical packages for Economic analysis and can conduct the statistical analysis on economic problems.		
Unit	Contents	Hours
Unit-I	<i>Basic Concepts</i> MS Excel Spread sheet - Concept and use of spread sheet, Structure of a spread sheet, Spread in-built functions, Chart feature of a spread sheet, Operation and Use of MS-Excel.	12
Unit-II	<i>Statistical Data Processing Techniques-I</i> Statistical Package handling and command description of Statistical Package for Social Science (SPSS) and R; Basic statistical functions and their as.	12
Unit-III	<i>Statistical Data Processing Techniques-II</i> Use of statistical packages such as SPSS, Excel and R in frequency distribution, Use of statistical packages for Hypothesis testing based on Z, t, (Chi square) and F Tests, correlation and regression analysis;	
Unit-IV	<i>Statistical Data Processing Techniques-III</i> Use of statistical packages such as SPSS, Excel and R for Correlation and regression; Simple and multiple regression analysis; Analysis of Variance (ANOVA), Analysis of Covariance (ANCOVA), Time Series Analysis;	12
Total		48
References:		
<p>1. Balguruswamy, E. (1997), Programming in Basic, Tata McGraw Hill, New Delhi.</p> <p>2. Byron S. Gottfried (1997); Programming with Basic, Schaum's Cutline Series, McGraw Hill, New York.</p> <p>3. Jaggi, V.P. and Jain, Sushma (1994), Computers for Beginners. Academic Press, New Delhi.</p> <p>4. Jaggi, V.P. and Jain, Sushma (1994), Basic for Beginners, Academic Press, New Delhi.</p> <p>5. Kerns (1993), Essentials of Microsoft Windows, Word and Excel, Prentice Hall of India, New Delhi.</p> <p>Martin S. Matthew (1997), Excel for Windows 95, Tata McGraw Hill, New Delhi.</p> <p>6. Ram, B. (1997), Computer Fundamentals, Second Edition, New Age International, New Delhi.</p> <p>7. Tom Sheldon (1997), Windows 95 Made Easy, Tata McGraw Hill, New Delhi.</p>		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON C 301: International Trade and Finance – I		
Course Outcome: This course will help the students to understanding of theories of international trade, gains from trade and intervention in trade. This will help the students to improve their analytical skills and they can relate with current trade situation.		
Unit	Contents	Hours
Unit-I	<i>Theory of International Trade-I</i> IKS and maritime trade; The pure theory of international trade – Theories of absolute advantage, comparative advantage and opportunity costs; Empirical testing of classical theory; Trade equilibrium under constant, increasing and diminishing cost conditions, and imperfect competition.	12
Unit-II	<i>Theory of International Trade-II</i> Heckscher–Ohlin theory of trade, Leontief paradox, Theorem of factor price equalization, Stolper–Samuelson theorem, Rybczynski theorem, Kravis and Linder theorem of trade. Technological change and international trade.	12
Unit-III	<i>Gains from trade</i> Gains from trade: their measurement and distribution; Concept of terms of trade, their uses and limitations; Hypothesis of secular deterioration of terms of trade, its empirical relevance and policy implications for less developed countries; Terms of trade and income distribution; Trade as an engine of economic growth; Concept and policy implications of immiserising growth.	12
Unit-IV	<i>Interventions in trade</i> Theory of interventions: Tariffs, Quotas and Non-tariff barriers, technical and administrative barriers, Effects of tariffs under partial and general equilibrium perspectives; Tariff and income distribution; Optimum tariff; Subsidies, Dumping - Forms of Dumping – Antidumping and International Price Discrimination. Metzler Paradox; Effective Rate of protection, Types of regional economic integration; Theory of customs union: Viner’s partial equilibrium approach to welfare effects of customs union; General equilibrium analysis of customs union – Lipsey model and Vanek model; Empirical findings and dynamic considerations of customs union and free trade area.	12
Total		48
References: Bhagwati , J. (Ed.) (1981), International Trade, Selected Readings, Cambridge, University Press. Carbough, R.J. (1999), International Economics, International Thompson Publishing, New York. Chacholiades, M.(1990), International Trade : Theory and Policy, McGraw Hill, Kogakusha, Japan. Dunn, R.M. and J.H. Mutti (2000), International Economics, Routledge, London. Kenen, P.B.(1994), The International Economy, Cambridge University Press, London. Kindleberger, C.P. (1973), International Economics, R.D.Irwin, Homewood. Krugman, P.R. and M.Obstfeld (1994), International Economics: Theory and Policy, Glenview, Foreman. Salvatore, D. (1997), International Economics, Prentice Hall, Upper Saddle River, N. J., New York. Soderston, Bo (1991), International Economics, The Macmillan Press Ltd., London. Nichans, J. (1984), International Monetary Economics. John Hopkins University Press, Baltimore. Aggarwala, M.R. (1979), Regional Economic Cooperation in South Asia, S. Chand and Co., New Delhi. Kenen, P.B. (1995), Economic and Monetary Union in Europe, Cambridge University Press, U.K. Kindleberger, C.P. (1996). A History of Financial Crisis : Manias, Panics and Crashes, (3 rd Edition), John Wiley and Sons, New York.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON C 302: Research Methodology

Course Outcome: The course will help students to introduce students to quantitative and qualitative methods for conducting meaningful inquiry and research. It is expected to gain an overview of research intent and design, methodology and technique, format and presentation, research ethics and data management and analysis.

Unit	Contents	Hours
Unit-I	<i>Introduction to Social Science Research</i> Introduction to social science research, different types of research. type of data: primary and secondary, time-series and cross-section data.	12
Unit-II	<i>Review of Literature and Research Design</i> Need for reviewing literature, Sources of Literature, Types of Literature review, Developing Research proposal, Formulation of research design, Need of a research design, Different types of research design, Features of a good research design	12
Unit-III	<i>Data Collection and Data Analysis</i> Sampling in social science research, Different sampling methods- Random sampling, Probability sampling, simple and stratified random sampling, cluster sampling, systematic sampling, Sampling and non-sampling errors. Methods of data collection, questionnaire design, interview method, participant observation, case studies, Data Analysis Tools and Techniques: Descriptive and Inferential statistics, parametric and non-parametric tests	12
Unit-IV	<i>Research Report</i> Meaning and purpose of report, Target group in report writing, Contents of a report, Format of a Report, Qualities of a good research report, Types of a report. Planning of a report, Organisation of a report, Presentation of a report, Style in Report writing, Conclusion and Generalization, Research ethics.	12
Total		48

References:

1. Kothari, C. R (2004), Research Methodology: Methods and Techniques, New Age International Publishers
2. Cauvery R., Sudha Nayak, U.K, Girija, M., Meenakshi, R . (2015), Research Methodology by S Chand & Co Ltd, ISBN: 9788121922203, 9788121922203
3. Young, P.V. (2010), Scientific Social Survey and Research, Prentice-Hall of India Pvt.Ltd, ISBN: 9788120300859, 9788120300859

Assessment: 100 (70 End Semester +30 Mid Semester)

ECON E 303: Mathematical Economics – I		
Course Outcome: The course will create an understanding of the students to know the use of mathematical principle. It will make learners to know the consumer and producer behaviour, and their application in economics.		
Unit	Contents	Hours
Unit-I	<i>Consumer Behaviour</i> Utility Function: Basic concepts, Cardinal and Ordinal measure of utility; Utility maximization; Ordinary and Compensated demand functions; Derivation of Slutsky Equation, Price and income elasticities of demand and the nature of commodities, Duality Theorems– Direct and Indirect Utility function duality, Roy’s Identity; Theory of revealed preference.	12
Unit-II	<i>Production, Cost and the Firm</i> Production Function: Basic Concepts, Elasticity of Substitution, Properties of Homogeneous, Cobb-Douglas (CD), CES Production Function; Optimization Behaviour of the firm– Constrained output maximisation and cost minimisation; Unconstrained profit maximisation; Optimization Behaviour of multi-product firm – Constrained revenue maximisation and Unconstrained profit maximisation; Duality in production – Production and Cost function Duality, Derivation of short-run and long-run costfunctions.	12
Unit-III	<i>Perfect Competition, Monopoly and Monopolistic Market Structures</i> Equilibrium of a Firm under perfect competition; Short-run and Long-run equilibrium of a Monopoly Firm; Discriminating Monopoly; Equilibrium of a Multiplant Monopoly; Price and output determination under Monopolistic Competition in the Short-run and Long-run.	12
Unit-IV	<i>Oligopolistic Market Structure</i> Non-collusive and Collusive Duopoly and Oligopoly: Non-collusive Models – Cournot, Stackelberg and Kinked Demand Curve Models; Collusive Models – Cartels and Mergers, Market Share, Price Leadership Models; Factor pricing under Bilateral monopoly.	12
Total		48
References: Allen, R.G.D. (1976), <i>Mathematical Economics</i> , Macmillan, London. Henderson, J.M. and R.E.Quandt (1990), <i>Microeconomics Theory: A Mathematical Approach</i> McGraw Hill, New Delhi. Ferguson, C.E. (1976), <i>Neo-classical Theory of Production and Distribution</i> . Allen, R.G.D. (1974), <i>Mathematical Analysis for Economists</i> , Macmillan Press and ELBS London. Chiang, A.C. (1986), <i>Fundamental Methods of Mathematical Economics</i> , McGraw Hill, New York. Jha, R. (1991), <i>Contemporary Macroeconomic Theory and Policy</i> , Wiley Eastern Ltd., New Delhi. Hadley, G. (1962), <i>Linear Programming</i> , Addison Wesley Publishing Co., Massachusetts. Kothari, C.R. (1992), <i>An Introduction to Operations Research</i> , Vikas Publishing House, New Delhi. Dorfman, R.P.A. Solow R. W.: <i>Linear Programming and Economics Analysis</i> , McGraw Hill. Gillett, B.E. <i>Introduction to Operations Research</i> , McGraw Hill, New York.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON E 304: Industrial Economics-I		
Course Outcome: This course will provide an introduction to current theory and empirical work in Industrial economics.		
Unit	Contents	Hours
Unit-I	<i>Concept and Scope of Industrial Economics</i> Concept and Scope of industrial economics; Organisation of a firm: Ownership, control and objectives of the firm; Choice of the organizational form; Business motives of the firm.	12
Unit-II	<i>Industrial Location Theories</i> Analysis of industrial location–Determinants of industrial location; Approaches to industrial locational Analysis; Economic theories of industrial location: Weber’s Theory, Market Area Theory of Palander and Central Place Theory of Losch; Operational approaches to industrial location,	12
Unit-III	<i>Market Structure, Market Conduct and Profitability</i> Market structure: Standard forms of market structures, Sellers’ concentration; Product differentiation; Entry conditions. Profitability: Market structure and profitability: Determinants of profitability. Theory of profitability; Market structure and innovation: The theories of technological innovation.	12
Unit-IV	<i>Market Concentration and Market Performance</i> Market concentration: Theoretical issues; Measurement of market concentration and monopoly power; Extent of market concentration; Concentration and market performance of a firm. Market Performance: Growth of the firm; Conceptual framework for the theory of growth; Constraints on growth of the firm; Industrial Productivity and Efficiency; Measurement of Industrial efficiency; Some efficiency condition in production.	12
Total		48
References: Barthwal, R.R. (1985), Industrial Economics, Wiley Eastern Ltd., New Delhi. Desai, B. (1999), Industrial Economy in India (3 rd Edition), Himalaya Publishing House, Mumbai. Government of India, Economic Survey (Annual) Kuchhal, S.C. (1980), Industrial Economy of India (5 th Edition), Chaitanya Publishing House, Allahabad. Singh, A. and A.N.Sadhu (1988), Industrial Economics, Himalaya Publishing House, Bombay. Bagchi, A. and M. Banerjee (Eds.) (1979), Change and Choice in Indian Industry, Bagchi Publications, Calcutta. Kelkar, V.L. and V.V. Bhanoji Rao (Eds.) (1996), India Development Policy Imperatives, Tata McGraw Hill, New Delhi. Sandesara, J.C. (1992). Industrial Policy and Planning – 1994 – 1991 : Tendencies, Interpretations and Issues, Sage Publications, India Pvt. Ltd., New Delhi. Sandesara, J.C. (1982), Industrial Growth in India.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON E 305: Environmental Economics – I		
Course Outcome: The main Course outcome of the course is to enable the students to understand the tools and techniques of environmental economics; assess and analyze the resources, environmental policy and regulation in India. It will help students understand the link between environment, education and health.		
Unit	Contents	Hours
Unit-I	Meaning & definition of Environment Economics: Definition of Environmental Economics, Scope of Environmental economics, Nature and significance of Environmental economics, Relationship between Economics and Environment- Flow chart, Functions of the Environment. Market failure and Externality.	12
Unit-II	Environment and Economics Environment and Economics- Inter linkage- Environment as a public good-Environment vs. Economic growth- Population and Environment linkage- Environmental use as an allocate problem- Valuation of Environmental damages: land, water, air and forest.	12
Unit-III	Theories of Environmental Economics: Buildings Spaceship Earth. Hardins Tragedy of the Commons, Club of Rome Model, Schumachers Small is Beautiful, Dalys Steady State Economics. Input-Output Models of the Environment.	12
Unit-IV	Theories of Natural Resource Management: Material Balance and Entropy Law. Hostellings Theory of Exhaustible Resources. Dasgupta and Heal, Optimal Depletion of Renewable Resources. Carrying Capacity of the Environment. Sustainable Development.	12
Total		48
<ol style="list-style-type: none"> 1. Baumol, W.J. and W.E.Oates (1988), The Theory of Environmental Policy (2nd Edition) CUP, Cambridge. 2. Bhattacharya, R.N. ed. (2001): Environmental Economics, An Indian Perspective, Oxford University Press, New Delhi. 3. Hanley, N.J.F.Shogren and B.White (1997) Environmental Economics in Theory and Practice. Macmillan. 4. Jarret H. ed. Environmental Quality in a Growing Economy, John Hopkins Press, Baltimore. 5. Kalpagam, (1998): Environmental Economics, Sterling Press. 6. Kolstrad, C.D. (1999): Environmental Economics, Oxford University Press, New Delhi. 7. Mehta, S, S. Mundle, and U. Sankar (1995): Controlling Pollution: Incentives and Regulation, Sage, New Delhi. 8. Murthy, M.N., A. James and S.Misra (1999): The Economics of Water Pollution in India. Oxford University Press, New Delhi. 9. Pearce, D.W and R. Turner (1991): Economics of Natural Resource Use and Environment. John Hopkins Press, Baltimore. 		
Rao, O.K. (2000): Sustainable Development, Economics and Policy, Blackwell Publishers, UK.		
Assessment: 100 (70 End Semester +20 Mid Semester)		

ECON E 306: Econometrics – I		
Course Outcome: The course will enable the students to learn the basic tools of econometric analysis. The students will understand the methods of econometric analysis and their application in empirical research.		
Unit	Contents	Hours
Unit-I	<i>Basic Econometrics</i> Nature, meaning and scope of econometrics; Simple linear regression model – Assumptions; OLS Estimation; Blue properties of OLS estimators and the Gauss-Markov theorem; Derivation of R ² ; Inference in the least-squares model, Analysis of variance and the least-squares model; Prediction in the least-squares model; Estimation of extension two variable linear regression model	12
Unit-II	<i>Problems in Regression Analysis</i> Multiple/General regression model, Non-linear regression models – parabolic, exponential, log-linear, semi-log, hyperbolic, and logistic regression models. Meaning and nature, tests, consequences and remedial measures of problems of Heteroscedasticity.	12
Unit-III	<i>Regressions with Qualitative and Lagged Variables</i> Multicollinearity and Auto-correlation; Problems of Specification Error and Errors of Measurement. Estimation of regression models	12
Unit-IV	<i>Regressions with Qualitative and Lagged Variables</i> Dummy variable technique - Testing structural stability of regression models, Comparing two or more regression models, Interaction effects, Seasonal analysis, other use of dummy variables; Regression with dummy dependent variables - LPM, Logit, Probit models and their applications.	12
Total		48
References: Gujarati, D.N. (2005), Basic Econometric (3 rd Edition), McGraw Hill, New Delhi. Goldberger, A.S. (1998), Introductory Econometrics, Harvard University Press, Cambridge, Mass. Kmenta, J. (1997), Elements of Econometrics (Reprint Edition), University of Michigan Press, New York. Koutsoyiannis, A. (1977), Theory of Econometrics (2 nd ed.) The Macmillan Press Ltd., London. Theil, H. (1981) Introduction to Econometric Prentice Hall of India, New Delhi. Johnson, J. (1991), Econometric Methods, McGraw Hill Book Co., London. Pindyck, R.S. and D.L. Rubinfeld (1976), Econometric Modles and Economic Forecasts, McGraw Hill Kogakusha, Tokyo. Harvey, A.C. (1981), Econometric Analysis of Time Series, Phillip Allen, London. Intrilligator, M.D. (1978), Econometric Methods, Techniques and Applications, Prentice Hall Englewood Cliffs, New Jersey.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON E 307: Financial Institutions and Markets – I		
Course Outcome: This course enables the students to undertake a rigorous study of the theoretical and empirical foundations of financial economics.		
Unit	Contents	Hours
Unit-I	<i>Nature and Role of Financial System</i> Money and finance –Financial inter-mediation and financial intermediaries – The structure of the financial system – Functions of the financial sector – Indicator of financial development – Equilibrium in Financial markets – Financial system and economic development.	12
Unit-II	<i>Structure of Interest Rates</i> Theories of interest rate determination – Level of interest rates – Long period and short period rates – Term structure of interest rates – Spread between lending and deposit rates – Administered interest rates – Appropriate interest rate policy.	12
Unit-III	<i>The Central Bank and Monetary Policy</i> Functions of central bank – The aims and objectives of the monetary policy in developed and developing countries – Instruments of monetary policy – proliferation of banking and non-bank financial intermediaries – Effectiveness of monetary policy – Credit creation and its control	12
Unit-IV	<i>The Commercial Banks and Development Banks</i> Profitability and efficiency of banks; Development banks – Role and functions; Investment banking and merchant banking; Financial sector reforms in India.	12
Total		48
References: Agnihotri, S.B. (2000), Sex Ratio in Indian Population : A Fresh Exploration, SAGE, New Delhi. Agrawala S.N. (1972), India’s Population Problem, Tata Mc Graw-Hill Co., Bombay. Bhole, L.M. (1999), Financial Institutions and Markets, Tata Mc Graw Hill Company Ltd., New Delhi. Bhole, L.M. (2020), Indian Financial System, Chugh Publications, Allahabad. Bose, A. (1996), India’s Basic Demographic Statistics, B.R. Publishing Corporation, New Delhi. Chamberlain, G. (1981). Training in Options, Woodhed-Faulker, Cambridge. Chandler L.V. and S.M. Goldfeld (1977). The Economics of Money and Banking, Harper & Row, New York. Chandra, P. (1997) Financial Markets. (4 th Edition). Table McGraw Hill, New Delhi. Choubey, P.K. (2000), Population Policy in India, Kanishka Publications, New Delhi. Edminsiter, R.O. (1988) Financial Institutions, Markets and Management Mc Graw Hill, New York. Goldsmith, R.W. (1969) Financial Structure and Development Yale, London. Gulati, S.C. (1988), Fertility in India : An Econometric Study of a Metropolis, SAGE, New Delhi. Gupta, L.C. (Ed.) (1999) India’s Financial Markets and Institutions, Society for Capital Research and Development, Delhi.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON E 308: Agricultural Economics – I		
Course Outcome: This course will help the students to understand the importance of agriculture in economic development and to discuss major agricultural issues and policies.		
Unit	Contents	Hours
Unit-I	<i>Agriculture and Economic Development</i> Nature and scope of agricultural and rural economics; Traditional agriculture and its modernization; Role of agriculture in economic development; Interdependence between agriculture and industry – some empirical evidence; Models of interaction between agriculture and the rest of the economy; Agricultural development, poverty and environment.	12
Unit-II	<i>Rural infrastructure, economic activities</i> Use of land, water and energy; Rural transport; communication, banking, extension services, role, modes and problems of rural electrification, rural social infrastructure – education and health and information dissemination. Livestock economics – Livestock resources and their productivity; Problems of marketing; White revolution; Fishery and poultry development; Forestry, horticulture and floriculture; issues and problems in rural industrialization and development of agro-based industries.	12
Unit-III	<i>Land Reforms and labour market</i> Rural labour supply; Interlocking of factor markets; Mobility of labour and segmentation in labour markets; marginalization of rural labour; Nature, extent and trends in rural unemployment; Agricultural wages in India; male-female wage differences; Non-agricultural rural employment – Trends and determinants. Principles of land utilization; Land distribution – Structure and trends; Land values and rent; Land tenures and farming systems – Peasant; capitalist collective and state farming; Tenancy and crop sharing – forms, incidence and effects; Land reform measures and performance; Women and land reforms; Problems of marginal and small farmers.	12
Unit-IV	<i>Agricultural Productivity</i> Agricultural production – Resource use and efficiency; Production function analyses in agriculture; Factor combination and resource substitution; cost and supply curves; size of farm and laws of returns – Theoretical and empirical findings; Farm budgeting and cost concepts; Supply response of individual crops and aggregate supply; Resource use efficiency in traditional agriculture; technical change, Labour absorption and gender issues in agricultural services.	12
Total		48
Bilgrami, S.A.R. (1996), Agricultural Economics, Himalaya Publishing House, Delhi.		
Brahmananda, P.R., B.K.Narayan and A.Kalappa (Ed.)(1987), Dimensions of Rural Development in India, Himalaya Publishing House, New Delhi.		
Dantwala M.I. et al (1991), Indian Agricultural Development Since Independence, Oxford & IBH, New Delhi.		
Ghatak, S. and K. Ingerscent (1984), Agriculture and Economic Development, Select Books, New Delhi.		
Rao, C.H. Hanumantha (1975), Agricultural Growth, Rural Poverty and Environmental Degradation in India, Oxford University Press, New Delhi.		
Rudra, A. (1982), Indian Agricultural Economics : Myths and Reality, Allied Publishers, New Delhi.Soni,		
R. N. (1995), Leading Issues in Agricultural Economics, Vishal Publishing Co., Jalandhar.		
Wanmali S. and C. Ramasamy (Eds.) (1995), Developing Rural Infrastructure, Macmillan, New Delhi.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON E 309 Indian Economy		
To critically understand the economic growth trajectory, economic policies, and institutional reforms of modern India To understand four major economics challenges of Indian Economy, i.e. Poverty, Inequality, Unemployment and inflation To have an in-depth analysis of the sectoral contributions of agriculture, industry and service sector in India To examine the operation and implementation of fiscal and monetary policy in India		
Unit	Contents	Hours
Unit-I	Growth and Structure of Indian Economy Growth and Structure of Indian Economy Since 1950. Growth of Indian economy since 1950. Measures for raising economic growth. The unorganized Sector and its implications for the economy, Changes in occupational pattern, Demographic trends and economic development. Rate and trend in saving, investment and growth rate.	12
Unit-II	Growth and Economic Reforms Trade Liberalization and economic Reforms since 1990s; Triumph of Liberalization: Political Context, Shifting of Consensus, Growth and BOP Crisis, New Industrial Policy, Trade Liberalization, Financial sector reforms.	12
Unit-III	Sectoral Growth of Indian Economy Agricultural Sector: performance, food security, input market, public investment in agriculture, agriculture and environment; Secondary Sector: output and employment pattern, productivity, privatization, regional aspects; Tertiary Sector: what explains rapid service growth, is it sustainable, Education – infrastructure and outcome, Health – infrastructure and outcome.	12
Unit-IV	Major Economic Problems Poverty: estimations – old and new method, expenditure growth - the NAS and NSS, farmers suicide; Inequality: forms, inequality at national level, regional inequality, urban – rural inequality; Unemployment: measurement, trends and patterns, rural and urban, gender aspect of unemployment, jobless growth, green jobs and growth; Inflation: trend and pattern, inflation and growth debate, sources of inflationary pressure, food price inflation.	12
Total		48
References:		
<ol style="list-style-type: none"> 1. Panagariya, Arvind (2008): India: The Emerging Giant, Oxford University Press, New York 2. Acharya, S. and Mohan, R. (Eds.) (2010): India's Economy: Performance and Challenges, Oxford University Press, New Delhi. 3. Ahluwalia, I. J. and Little, I. M. D. (Eds.) (1998): India's Economic Reforms and Development: Essays for Manmohan Singh, Oxford University Press, New Delhi. 4. Rakshit, M. (2009): Macroeconomics of Post-reform India, Oxford University Press, New Delhi 5. Ahluwalia, I. J. (1985). Industrial Growth in India, Oxford University Press, New Delhi. 6. Jalan, Bimal, (1996), Problems and Prospects of the Indian Economy, 7. Kapila, U., (Ed.) (latest edition). Indian Economy Since Independence, Vols. 1 & 2, Academic foundation, New Delhi. 		

ECON CT 300: Contemporary Indian Economy		
Course Outcome: This course will enable the students to understand the status and importance of basic economic indicators of Indian Economy.		
Unit	Contents	Hours
Unit-I	Growth and Structure of Indian Economy. Growth of Indian economy since 1950. Measures for raising economic growth. Trends in the nature and magnitude of poverty, inequality and unemployment. Changes in occupational pattern, Demographic trends and economic development. Trends in savings, investment and GDP growth.	07
Unit-II	Growth of Agricultural and Industrial Sectors: Trends in agricultural production and productivity. Food policy and public distribution system (PDS). Impact of liberalization in agricultural sector. Industrial Growth performance and problems. Industrial concentration; its nature and extent. Cottage and small scale industries. Impact of liberalization and privatization on the industrial sector.	08
Unit-III	Money Supply, Inflation and Public Policies: Factors determining interest rates; Money supply and inflation in India. Financial sector reforms during 1990's; Recent tax reforms; Growth and structure of subsidies in India; Macro-economic policies – fiscal policy, income policy and stabilization policy; Parallel economy and its implications.	08
Unit-IV	International Trade Policies: Composition and directions of India's foreign trade; Factors determining the balance of payment; Disequilibrium in the balance of payment; Causes, consequences and policy measure; India's policies towards foreign capital; collaboration, export promotion and import substitution; Exchange rate policy and the convertibility of Rupee.	07
Total		30
Selected Readings:		
1. Mishra, S.K. and V.K. Puri, Indian Economy - 1st Development Experience, Himalaya Publishing House, Mumbai (2020) 2. Economic Surveys, Government of India 3. Dhar, P.K., Indian Economy- Its growing dimensions, Kalyani Publishers, New Delhi		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON VAC 308: Economic Issues and Policies of Odisha		
Course Outcome: This course will provide an understanding of different economic issues and policies in Odisha.		
Unit	Contents	Hours
Unit-I	Overview of Odisha Economy: Structural change and occupational structure, Demographic features, Causes and effects of high growth rate of population, Measures to control population, Human Development, Trends of State Domestic Product, Fiscal Situation, FRBM Act. etc.	12
Unit-II	Agriculture in Odisha, Importance of Agriculture, Trends in Agriculture growth, Cropping pattern, green revolution, Agricultural finance, Land tenure and Land reforms etc. Agricultural Policies of Odisha	12
Unit-III	Industry and Service sector: Industrial Structure, performance of manufacturing sub sector, performance of large scale industries, new industrial Policies, performance of banking and Tourism sector etc. MSMEs of Odisha	12
Unit-IV	Social Sector developments in Odisha: Development of Health and Education in Odisha: Areas of concerns such as Trends of Unemployment, Poverty, Displacement and Migration.	12
Total		48
References:		
<ol style="list-style-type: none"> 1. Pany, R.K. and K.K. Pani Odisha Economy , Kitab Mahal, Cuttack, 3rd Edition 2022 2. Sethy, Susanta Kumar, Odisha Economy: Its Growing Dimensions, Bharti Publications; 2nd Edition 2022[Paperback] 3. Odisha Economic Survey 2021-22 and other previous issues, Government of Odisha 4. Orissa State Development Report 2001, Planning Commission, New Delhi 5. Odisha - Economy - Encyclopedia Britannica, https://www.britannica.com › place › Odisha › Economy 		

ECON C 401: International Trade and Finance – II		
Objective: This course aims to provide an understanding of approaches for balance of payments adjustments trade policies, balance of payments, international institutions and economic integration. This help students to improve their analytical skills and they can relate with current trade situation.		
Unit	Contents	Hours
Unit-I	<i>Balance of payments</i> Meaning and components of balance of payments; Equilibrium and disequilibrium in the balance of payments; Devaluation and balance of payments adjustment; Foreign trade multiplier with and without foreign repercussions and determination of national income and output.	12
Unit-II	<i>Approaches for Balance of Payment Adjustments</i> Absorption, Payments and Monetary approaches for adjustment in the balance of payments; Expenditure-reducing and expenditure-switching policies for balance of payments adjustment; Approaches for achieving internal and external equilibrium simultaneously: The Swan model and Mundell-Fleming model; Relative merits and demerits of fixed and flexible exchange rates in the context of growth and development in developing countries. Theory of foreign exchange markets, Exchange trading, Arbitrage, and market hedging.	12
Unit-III	<i>International Economic Co-operation</i> Regionalism – EU, rationale and progress of SAARC/SAPTA and ASEAN region; problems and prospects of forming customs union in Asia; Multilateralism – UNCTAD, NIEO, GATT/WTO, G20; Optimum Currency Areas; Rise and fall of the gold standard and Bretton-Woods system and emerging international monetary system. International financial institutions – IMF and World Bank; Need, adequacy and determinants of international liquidity; Conditionality clause of IMF from the point of view of India. Theory of short-term capital movements and East Asian crisis, Asian Development Bank – Their achievements and failures.	12
Unit-IV	<i>Trade Policies and India</i> Trade problems and trade policies in India during the last five decades; Recent changes in the direction and composition of trade and their implications; Rationale and impact of trade reforms since 1991 on the balance of payments, employment and growth; Instruments of export promotion; Recent import and export policies, and agenda for the future.	12
Total		48
References: Manmohan Singh (1964), India's Export Trends and the Prospects for Self-sustained Growth, Oxford University Press, New Delhi. Mundell, R. (1968), International Economics. The Macmillan Company Ltd. New York. Panchmukhi, V.R., K.M. Raipuria and R.Tandon (1987), Money and Finance in World Economic Order (RIS), Indus Publishing Co., Delhi. Panchmukhi, V.R. (1978), Trade Policies of India - A Quantitative Analysis, Concept Publishing Company, New Delhi. Joshi, V. and I.M.D. Little (1998), India's Economic Reforms, 1999-2000, Oxford University Press, New Delhi. Ptel, S.J. (1995), Indian Economy Towards the 21 st Century, University Press Ltd., India. Satyanarayan, B. (1986), India's Trade with Asia and the Far East Countries, B.R.Publishing Corp, New Delhi.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON C 402: Economics of Social Sector and Environment		
Course Outcome: This course enables the students to have an idea on resources and environmental economics, and environmental policy and regulation in India. It will help students understand the link between environment, education and health.		
Unit	Contents	Hours
Unit-I	<i>Economics of Environmental Policy</i> Environmental externalities and market inefficiency – Environmental taxes and subsidies; Marketable pollution permit; Deposit refund system; Coase’s property rights and bargaining solution; Command and control approach; Comparison of regulations and markets-based instruments; Global environmental externalities; Climate change and carbon tax; Trade and environment. Porter's hypothesis, Pollution havens hypothesis.	12
Unit-II	<i>Environmental Regulation and Natural Resource Management in India</i> Mechanism for environmental regulation in India; Environmental laws and their implementation; Policy instruments for controlling water and air pollution; Forest policy; People’s participation in the management of common property resources; Joint Forest Management; Social forestry – rationale and benefit.	12
Unit-III	<i>Economics of Education</i> Education as an instrument for economic growth; Human capital vs. physical capital; Demand for education – private and social demand; Cost of education, wastage and stagnation benefits of education – direct and indirect benefits, private and social benefits.	12
Unit-IV	<i>Economics of Health</i> Health Dimension of development; Determinants of health – poverty, malnutrition and environmental issues. Economic dimensions of health care – Demand and supply of health care; The concept of Burden of Disease; Institutional issues in health care delivery in India.	12
Total		48
References: Baumol, W.J. and W.E. Oates (1988); The Theory of Environmental Policy, (2 nd Edition), Cambridge University Press, Cambridge. Berman, P. (Ed.) (1995). Health Sector Reform in Developing Countries: Making Health Development Sustainable, Boston: Harvard Series on Population and International Health. Blaug, M. (1972), Introduction to Economics of Education, Penguin, London. Bromely, D.W.(Ed.) (1995), Handbook of Environment Economics, Blackwell, London. Cohn, E. and T.Gaske (1989), Economics of Education, Pergamon Press, London. Fisher, A.C. (1981), Resource and Environmental Economics, Cambridge University Press, Cambridge. Hanley, N.J.F. Shogern and B.White (1997), Environmental Economics in Theory and Practice, Macmillan. Jeroen, C. J. M. and Van Den Bergh (1999), Handbook of Environmental and Resource Economics, Edward Elgar Publishing Ltd., U.K. Common, M. (1998), Environmental and Resource Economics, Longman, London. Jarrett, H. (1966), Environmental Quality in a Growing Economy, Johns Hopkins, Baltimore.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON D 403: Dissertation (Project Work)

Course Outcome:

The students will get a field exposure on relevant research issues with orientation to the entire investigative procedure involved in sample-surveys, ranging from sample drawl and execution of the questionnaire, tabulation and computation to the economic analysis of data, report preparation and presentation.

Guidelines for Preparing Dissertation

Manuscripts should consist of four major sections and should be placed in the order listed:

Preliminary Pages
Title Page
Certificate
Acknowledgment
Table of Contents
List of Tables
List of Figures
List of Abbreviations/Nomenclature/Symbols (optional)
Abstract
Text
Introduction (may be referred to as Chapter 1)
Body of Manuscript: It should consist of the followings.
Review of Literature
Data and Methodology
Results and Discussion
Conclusion
References (required)
Appendices (optional)

ECON E 404: Mathematical Economics – II

Course Outcome: The aim of the course is to provide an understanding of market equilibrium, game theory, Linear programming and input-output analysis. The course will generate knowledge for the students about the market equilibrium, game theory, Linear programming and input-output analysis.

Unit	Contents	Hours
Unit-I	Market Equilibrium Single Market Equilibrium - Marshallian Vs Walrasian equilibrium conditions; Lagged market equilibrium, Cobweb Model; Multi-market equilibrium – General equilibrium system of Walras, Stability conditions for equilibrium.	12
Unit-II	Game Theory The pay-off matrix of a game; two-person, zero-sum game; non-constant sum game; pure and mixed strategies, maximin and minimax solutions, saddle point solution, Cooperative games, Nash Bargaining Solution; Prisoner's dilemma.	12
Unit-III	Linear programming and Non-Linear Programming Linear programming– Primal and dual problem, Simplex method; Transport and storage problems and other applications of linear programming in economics, Concept of Non Linear Programming, Kuhn Tucker Conditions of optimisation.	12
Unit-IV	Input-output Analysis – Open and Closed systems. Transaction Matrix and coefficient Matrix, Hawkins Simon conditions. Dynamic Input-output system. Application in Economics.	12
Total		48

References:

- Allen, R.G.D. (1976), *Mathematical Economics*, Macmillan, London.
- Henderson, J.M. and R.E.Quandt (1990), *Microeconomics Theory: A Mathematical Approach* McGraw Hill, New Delhi.
- Ferguson, C.E.(1976), *Neo-classical Theory of Production and Distribution*.
- Allen, R.G.D. (1974), *Mathematical Analysis for Economists*, Macmillan Press and ELBS London.
- Chiang, A.C. (1986), *Fundamental Methods of Mathematical Economics*, McGraw Hill, New York.
- Jha, R.(1991), *Contemporary Macroeconomic Theory and Policy*, Wiley Eastern Ltd., New Delhi.
- Hadley, G. (1962), *Linear Programming*, Addison Wesley Publishing Co., Massachusetts.
- Kothari, C.R. (1992), *An Introduction to Operations Research*, Vikas Publishing House, New Delhi.
- Dorfman, R.P.A.Solow R.W. : *Linear Programming and Economics Analysis*, McGraw Hill.
- Gillett, B.E. *Introduction to Operations Research*, McGraw Hill, New York.

Assessment: 100 (70 End Semester +30 Mid Semester)

ECON E 405: Industrial Economics – II		
Course Outcome: The students will come to know the industrial policy and industrial development in India.		
Unit	Contents	Hours
Unit-I	<i>Optimum Plant Size and Diversification, Vertical Integration and Merger</i> The cost theory and optimum size of the plant: The theory of cost and production functions, Efficiency and the size of the firm; Empirical estimation. Motives for diversification: Theories and empirical evidence on mergers and acquisitions (M & As) and diversification; Measurement approaches and empirical evidence.	12
Unit-II	<i>Industrial Finance Accounting, Ratio Analysis and Investment decisions</i> Finance Accounting: Need of Finance; type of Finance and source of finance; Financial statements: Balance Sheet, Profit and Loss Account; Assessment of financial soundness. Financial ratio analysis: Classification and description of financial ratios; The standard of comparison of ratios; Break Even analysis; Application of Break Even analysis. Investment Decisions: Nature and type of Investment decisions.	12
Unit-III	<i>Indian Industrial Growth</i> Classification of industries; Industrial policy in India - Role of Public and private sectors; Recent trends in Indian industrial growth; MNCs and transfer of technology; Liberalization and privatization and the growth of industries.	12
Unit-IV	<i>Industrial Finance and Labour</i> Industrial Finance: Role, nature, volume and types of institutional finance – IDBI, IFCI, SFCs, SIDC, commercial banks etc. Industrial Labour: Structure of industrial labour; Employment dimensions of Indian industries; Industrial legislation; Industrial relations; Exit policy and social security; Wages and problem of bonus; labour market reforms.	12
Total		48
References: Barthwal, R.R. (1985), Industrial Economics, Wiley Eastern Ltd., New Delhi. Desai, B. (1999), Industrial Economy in India (3 rd Edition), Himalaya Publishing House, Mumbai. Government of India, Economic Survey (Annual) Kuchhal, S.C. (1980), Industrial Economy of India (5 th Edition), Chaitanya Publishing House, Allahabad. Singh, A. and A.N.Sadhu (1988), Industrial Economics, Himalaya Publishing House, Bombay. Bagchi, A. and M. Banerjee (Eds.) (1979), Change and Choice in Indian Industry, Bagchi Publications, Calcutta. Kelkar, V.L. and V.V. Bhanaji Rao (Eds.) (1996), India Development Policy Imperatives, Tata McGraw Hill, New Delhi. Sandesara, J.C. (1992). Industrial Policy and Planning – 1994 – 1991 : Tendencies, Interpretations and Issues, Sage Publications, India Pvt. Ltd., New Delhi. Sandesara, J.C. (1982), Industrial Growth in India.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON E 406: Environmental Economics – II		
Course Outcome: The students will be able to assess the causes and consequences of environmental problems using economic tools and interpret the trade-offs between economic development and environmental sustainability.		
Unit	Contents	Hours
Unit-I	Theory and Policy of Pollution Control: Prevention, Control and abatement of pollution- Choice of policy instruments in developing countries- Environmental education- Environmental law- Optimal Level of Pollution. Polluter Pays Principle – Pigovian Taxes and Subsidies. Pollution Permits. Charge and Standards approach. Coase Theorem. Role of Govt. in Environmental Regulation	12
Unit-II	Measurement of Environmental Degradation: Environmental Costs and Benefits: Under and Non-user Benefits. Direct and Indirect Valuation Methods: Contingent Valuation Method and Willingness to pay. Hedonic Property Values, Travel Cost, Averted Expenditure and Dose Response Methods. Green National Income and Genuine Savings.	12
Unit-III	Indian Industrial Growth Classification of industries; Industrial policy in India - Role of Public and private sectors; Recent trends in Indian industrial growth; MNCs and transfer of technology; Liberalization and privatization and the growth of industries.	12
Unit-IV	Industrial Finance and Labour Industrial Finance: Role, nature, volume and types of institutional finance – IDBI, IFCI, SFCs, SIDC, commercial banks etc. Industrial Labour: Structure of industrial labour; Employment dimensions of Indian industries; Industrial legislation; Industrial relations; Exit policy and social security; Wages and problem of bonus; labour market reforms.	12
Total		48
<p>Basic Reading List</p> <ol style="list-style-type: none"> 1. Baumol, W.J. and W.E.Oates(1988), The Theory of Environmental Policy (2ndEdition) CUP, Cambridge. 2. Bhattacharya, R.N. ed. (2001): Environmental Economics, An Indian Perspective, Oxford University Press, New Delhi. 3. Hanley, N.J.F.Shogren and B.White (1997) Environmental Economics in Theory andPractice. Macmillan. 4. Jarret H. ed. Environmental Quality in a Growing Economy, John Hopkins Press, Baltimore. 5. Kalpagam, (1998): Environmental Economics, Sterling Press. 6. Kolstrad, C.D. (1999): EnvironmentalEconomics, Oxford University Press, New Delhi. 6. Rao, O.K. (2000): Sustainable Development, Economics and Policy, Blackwell Publishers, UK. 7. Sankar, U ed (2001): Environmental Economics, Oxford University Press, New Delhi. 8. Saxena, H.M. (2000): Environmental Management. Rawat Publishers, New Delhi. 9. Sengupta, R.P. (2000): Ecology and Economics: An Approach to Sustainable Development OxfordUniversity Press, v New Delhi. 		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON E 407: Econometrics – II

Course Outcome: The students will understand the application of time series and their estimation in empirical research.

Unit	Contents	Hours
Unit-I	<i>Simultaneous Equation Models-Meaning</i> Introduction to Simultaneous Equation models with examples; Simultaneous equation bias and inconsistency of OLS estimators; Structural and Reduced form; Identification problem–Order and Rank conditions for identification	12
Unit-II	<i>Estimation of Simultaneous Equations</i> Methods of estimating simultaneous equation system: Recursive methods and OLS, Indirect least squares (ILS), 2SLS and 3SLS.	12
Unit-III	<i>Autoregressive and Distributed Lag Models</i> Autoregressive and Distributed Lag Models – Koyck model; Adaptive Expectation model; Stock Adjustment model; Almon approach to distributed-lag models	12
Unit-IV	<i>Time Series Analysis</i> Time-Series Analysis – Basic concepts of time-series; Stationary and Non-stationary Stochastic Process; Integrated Stochastic Process; Random Walk model; Tests of Stationarity–Autocorrelation function and Correlogram; Unit Root test and Dickey-Fuller test, Phillips Parren Test, Co-integration and Engle-Granger (EG) test.	12
Total		48

References:

Goldberger, A.S. (1998), Introductory Econometrics, Harvard University Press, Cambridge, Mass.

Gujarati, D.N. (2005), Basic Econometric (3rd Edition), McGraw Hill, New Delhi.

Kmenta, J. (1997), Elements of Econometrics (Reprint Edition), University of Michigan Press, New York.

Koutsoyiannis, A. (1977), Theory of Econometrics (2nd ed.) The Macmillan Press Ltd., London.

Theil, H. (1981) Introduction to Econometric Prentice Hall of India, New Delhi. Johnson, J. (1991), Econometric Methods, McGraw Hill Book Co., London.

Pindyck, R.S. and D.L. Rubinfeld (1976), Econometric Modles and Economic Forecasts, McGraw Hill Kogakusha, Tokyo.

Harvey, A.C. (1981), Econometric Analysis of Time Series, Phillip Allen, London.

Intrilligator, M.D. (1978), Econometric Methods, Techniques and Applications, Prentice Hall Englewood Cliffs, New Jersey.

Assessment: 100 (70 End Semester +30 Mid Semester)

ECON E 408: Financial Institutions and Markets – II		
Course Outcome: The course will create the understanding of the students to know the Non-bank Financial Intermediaries, Financial markets, securities and derivatives markets and international financial markets.		
Unit	Contents	Hours
Unit-I	<i>Non-bank Financial Intermediaries</i> Definition and types of non-bank financial institutions: Their growth and impact on India's economic development, measures taken to control their operations.	12
Unit-II	<i>Financial Markets</i> Role and structure of money market and capital market – call money market. Treasury bill market, commercial bill market including commercial paper and certificate of deposits, discount market.	12
Unit-III	<i>Securities and Derivatives Markets</i> Government securities market – markets for derivatives: features and options and other derivatives: types, uses and pricing of derivatives – Primary and secondary market for securities; SEBI: its impact on the working of capital market in India; IRDA and its role in financial markets.	12
Unit-IV	<i>International Financial Markets</i> Reforms in International monetary system for developing countries – Lending operation of world bank and its affiliates – Working of IDA and IFC; The Growth of Regional financial institutions; Asian Development Bank and its lending activities; Asian Development Bank and India, Euro-dollar and Euro-Currency markets; their developmental role and regulation at the international level.	12
Total		48
References:		
Hanson, J.A. and S. Rathuria (Eds.) (1999) India. A Financial Sector for the Twenty First Century, Oxford University Press, New Delhi.		
Harker, P.T. and S.A. Zenias (2000) (Ed.), Performance of Financial Institutions, Cambridge University Press, Cambridge.		
Johnson, H.J. (1993) Financial Institutions and Markets, Mc Graw Hill, New York. Khan, M.Y. (1996). Indian Financial System. Tata Mc Graw Hill, New Delhi. Machiraju, M.R. (1999), Indian Financial Systems. Vikas Publishing House, New Delhi.		
Mitra, A. (1979), Implications of Declining Sex Ratio in India's Population, Allied, New Delhi.		
Ohlson, J.A. (1987). The Theory of Financial Markets and Institutions, North Holland Amsterdam.		
Prasad, K.N. (2001). Development of India Financial System. Sarup & Sons, New Delhi. Robinson, R.I. and D. Wrightman (1981). Financial Markets, McGraw Hill, London. Sahadevan, K. G. and M.T. Thiripalraju (1997), Mutual Funds, PHI, New Delhi.		
Sayers, R.S. (1967), Modern Banking, Oxford University Press, New Delhi.		
Srinivasan, K. (1998), Basic Demographic Techniques and Applications, SAGE, New Delhi.		
Sudarshan and A. Shariff (1999), Gender Population and Development, Oxford University Press, New Delhi.		
Assessment: 100 (70 End Semester +30 Mid Semester)		

ECON E 409: Agricultural Economics – II

Course Outcome: This course enable the students to know the importance of rural finance and cooperation in India, agricultural prices, agricultural growth in India and its relation with external sector.

Unit	Contents	Hours
Unit-I	<i>Rural finance and cooperation in India</i> Role of capital and rural credit; Organized and unorganized capital market; Rural savings and capital formation; characteristics and sources of rural credit – Institutional and non-institutional; Reorganization of rural credit – co-operatives, commercial banks, regional rural banks, role of NABARD. Cooperative movement; Genesis and growth of cooperative sector; Agricultural cooperation in India; Problems and prospects of cooperative Institutions.	12
Unit-II	<i>Agricultural Prices</i> Marketing and state policy; Agricultural markets and marketing efficiency – Marketing functions and costs. Market structure and imperfections; Regulated markets; Marketed and marketable surplus; Behaviour of agricultural prices – Cobweb model; Price and income stability; State policy with respect to agricultural marketing; ware-housing; prices; taxation and crop insurance; Terms of trade between agricultural and non-agricultural prices; Need for state intervention; Objectives of agricultural price policy – Instruments and evaluation; Food security in India and Public distribution system.	12
Unit-III	<i>Agricultural growth in India</i> Recent trends in agricultural growth in India; Inter-regional variations in growth of output and productivity; Cropping pattern shifts; Supply of inputs – irrigation, power, seed and fertilizers; pricing of inputs and role of subsidies; Distribution of gains from technological change; Role of public investment and capital formation in Indian agriculture; Strategy of agricultural development and technological progress; sustainable agriculture – indigenous practices; bio-technological practices and growth potential.	12
Unit-IV	<i>Agriculture and external sector</i> International trade in agricultural commodities; commodity agreements; Issues in liberalization of domestic and international trade in agriculture; Role of MNCs.; Globalisation of Indian economy and problems and prospects of Indian agriculture; Impact of World Trade Organisation on Indian agriculture.	12
Total		48

References:

- Bilgrami, S.A.R. (1996), Agricultural Economics, Himalaya Publishing House, Delhi.
- Brahmananda, P.R., B.K.Narayan and A.Kalappa (Ed.) (1987), Dimensions of Rural Development in India, Himalaya Publishing House, New Delhi.
- Dantwala M.I. et al (1991), Indian Agricultural Development Since Independence, Oxford & IBH, New Delhi.
- Ghatak, S. and K. Ingerscent (1984), Agriculture and Economic Development, Select Books, New Delhi.
- Rao, C.H. Hanumantha (1975), Agricultural Growth, Rural Poverty and Environmental Degradation in India, Oxford University Press, New Delhi.
- Rudra, A. (1982), Indian Agricultural Economics: Myths and Reality, Allied Publishers, New Delhi.
- Soni, R. N. (1995), Leading Issues in Agricultural Economics, Vishal Publishing Co., Jalandhar.
- Wanmali S. and C. Ramasamy (Eds.) (1995), Developing Rural Infrastructure, Macmillan, New Delhi.

Assessment: 100 (70 End Semester +30 Mid Semester)

ECON E 410: Health Economics

Course Outcome: On successful completion of the course, students will be able to

1. gain knowledge of the key analytical reasoning and tools of health economics and their normative foundations and ethical implications; basic economic theories and models of regulation applied to health care providers as hospitals and long-term care organizations and the health-related behavioral determinants and an overview of some recent policies aimed at improving the populations' lifestyles;
2. use economic models to understand behaviors of actors in the health care sector, do analyses of needs for health care services, make analyses of efficiency and quality of health care organizations, find and utilize relevant data sources describing and use relevant econometric models for the analysis of the economic agents' behaviour; and
3. attain competence to apply economic concepts and models to the fields of demand for health, demand for health services, demand for health insurance, provision of health insurance and provision of health care; competence to describe, analyse and critically address economic aspects of healthcare organizations.

Unit	Contents	Hours
Unit-I	Introduction to Health Economics Health Economics: Definition and Relevance; Health and healthcare; Healthcare as an economic good; Wants, demands and needs; Economic Methods and Health Economics; Does Economics apply to health and healthcare; Why health economics?	12
Unit-II	The Demand for and Supply of Health and Healthcare Demand for Health and healthcare: concept, a theoretical and empirical investigation, determinants; Socioeconomic Disparities in Health; Demand for Insurance and Moral Hazards; Supply of health and health care: concept, determinants.	12
Unit-III	Health Production and Development Health Production: concept and estimation; Health and Development: theory and evidences Measurement of Health and Health Status: Patient Reported; Patient Centeredness; Health Outcomes; Health Summary Measures; Health Technology Assessment	12
Unit-IV	Overview of India's Health Sector Features of Indian Health Sector; Health Care System in India: history, structure, programs, infrastructure, health information system; Public Health in India; Financing Healthcare in India; Health Sector Reform in India	12
Total		48

References:

1. Jay Bhattacharya, J., Hyde, T., Tu, P. (2014): *Health Economics*, Palgrave Macmillan, UK
2. Krabbe, P. F. M. (2017): *The Measurement of Health and Health Status*, Elsevier Inc, London.
3. Berman, P. (Ed.) (1995). *Health Sector Reform in Developing Countries: Making Health Development Sustainable*, Boston: Harvard Series on Population and International Health.

Assessment: 100 (70 End Semester +30 Mid Semester)

ECON VAC 411: Cultural Heritage of South Odisha

Non-Credit Course
Cultural Heritage of South Odisha
(ଦକ୍ଷିଣ ଓଡ଼ିଶାର ସଂସ୍କୃତିକ ବିଭବ)
(To be taught in 4th Semester)

Aim of the Course (ପାଠ୍ୟକ୍ରମର ଲକ୍ଷ୍ୟ)

Kabi Samrat Upendra Bhanja is the master-spirit of Odia Language and Culture during Medieval period. The campus of Berhampur University has been rightly named after Kabi Samrat Upendra Bhanja as 'BHANJA BIHAR'. South Odisha is the adorable storehouse of literary and cultural wealth of ancient and medieval Odisha which has elicited remarkable national acclaim. This course has been introduced with a view to familiarizing all the P.G. Students of Berhampur University with the excellent craftsmanship exemplified by the literary stalwarts including Kabi Samrat Upendra Bhanja along with the Arts, Culture and Folk Tradition of South Odisha. (ମଧ୍ୟଯୁଗୀୟ ଓଡ଼ିଆ ସାହିତ୍ୟ ଓ ସଂସ୍କୃତିର ମହାନାୟକ କବି ସମ୍ରାଟ ଉପେନ୍ଦ୍ର ଭଞ୍ଜ । ବ୍ରହ୍ମପୁର ବିଶ୍ୱବିଦ୍ୟାଳୟ ତାଙ୍କ ନାମରେ 'ଭଞ୍ଜବିହାର' ଭାବରେ ନାମିତ । ଗଞ୍ଜାମ ସମେତ ଦକ୍ଷିଣ ଓଡ଼ିଶା ସମଗ୍ର ରାଜ୍ୟର ବୁଧହଂସ କେଳିସର । ଏହାର କଳା-ସାହିତ୍ୟ-ସଂସ୍କୃତି-ଲୋକପରମ୍ପରା ସର୍ବଭାରତୀୟ ସ୍ୱୀକୃତିପ୍ରାପ୍ତ । ଏହାକୁ ଦୃଷ୍ଟିରେ ରଖି ବ୍ରହ୍ମପୁର ବିଶ୍ୱବିଦ୍ୟାଳୟେ ସ୍ନାତକୋତ୍ତର ଶ୍ରେଣୀର ସମସ୍ତ ଛାତ୍ରଛାତ୍ରୀଙ୍କୁ କବି ସମ୍ରାଟ ଉପେନ୍ଦ୍ର ଭଞ୍ଜଙ୍କ ସମେତ ଦକ୍ଷିଣ ଓଡ଼ିଶାର ଅନ୍ୟାନ୍ୟ ସାହିତ୍ୟିକ ପ୍ରତିଭା ଏବଂ ଏହି ଅଞ୍ଚଳର କଳା, ସଂସ୍କୃତି, ଲୋକ ପରମ୍ପରା ସମ୍ପର୍କରେ ସାଧାରଣ ଧାରଣା ପ୍ରଦାନ କରିବା ପାଇଁ ଏପରି ଅଧ୍ୟୟନ ବ୍ୟବସ୍ଥା କରାଯାଇଛି ।)

Details of the Course
This Paper consists of 50 marks with following 4 Units.

- Unit- I : Literary works of Kabi Samrat Upendra Bhanja
- Unit-II : Other Litterateurs of South Odisha
- Unit-III: Cultural Heritage of South Odisha
- Unit-IV: Folk and Tribal Traditions of South Odisha

- ୟୁନିଟ-୧: କବିସମ୍ରାଟ ଉପେନ୍ଦ୍ର ଭଞ୍ଜଙ୍କ କୃତି ଓ କୃତିତ୍ୱ
- ୟୁନିଟ-୨: ଦକ୍ଷିଣ ଓଡ଼ିଶାର ଅନ୍ୟାନ୍ୟ ସାରସ୍ୱତ ସାଧକ
- ୟୁନିଟ-୩: ଦକ୍ଷିଣ ଓଡ଼ିଶାର ସାଂସ୍କୃତିକ ବିଭବ
- ୟୁନିଟ-୪: ଦକ୍ଷିଣ ଓଡ଼ିଶାର ଆଦିବାସୀ ଓ ଲୋକ ପରମ୍ପରା

Course Outcome (ପାଠ୍ୟକ୍ରମର ନିଷ୍ପତ୍ତି)

The teaching imparted to the P.G. students of Berhampur University on the various dimensions of the literary and cultural heritage of South Odisha will help them to acquire a valuable understanding of the same. They will be inspired adequately to take the positives learnt from the course and use them in future in their personal literary and cultural pursuits and thereby promote the literature and culture of Odisha on a global scale. (ଓଡ଼ିଆ ସାହିତ୍ୟ ଓ ସଂସ୍କୃତିର ଏହିପରି ଏକ ଗୁରୁତ୍ୱପୂର୍ଣ୍ଣ ଦିଗରେ ପାଠଦାନ କରିବା ଦ୍ୱାରା କେବଳ ଯେ କବିସମ୍ରାଟ ଉପେନ୍ଦ୍ରଭଞ୍ଜ ଓ ଦକ୍ଷିଣ ଓଡ଼ିଶାର କଳା-ସାହିତ୍ୟ-ସଂସ୍କୃତି-ଆଦିବାସୀ ଲୋକ ଜୀବନ ଓ ଲୋକ ପରମ୍ପରା ସମ୍ପର୍କରେ ବିଶ୍ୱବିଦ୍ୟାଳୟର ଛାତ୍ରଛାତ୍ରୀ ସତେତନ ହୋଇପାରିବେ; ତାହା ନୁହେଁ, କବିସମ୍ରାଟ ଉପେନ୍ଦ୍ରଭଞ୍ଜଙ୍କ ସହିତ ଦକ୍ଷିଣ ଓଡ଼ିଶାର ସାହିତ୍ୟିକ ପରିମଣ୍ଡଳ ଏବଂ ଏହି ଅଞ୍ଚଳର ସାଂସ୍କୃତିକ ବିଭବ ଓ ଲୋକପରମ୍ପରା ସମ୍ପର୍କରେ ବିଶ୍ୱବିଦ୍ୟାଳୟର ଛାତ୍ରଛାତ୍ରୀମାନେ ମଧ୍ୟ ସମ୍ୟକ ଜ୍ଞାନ ଆହରଣରେ ବ୍ରତୀ ହୋଇପାରିବେ ।)

Approved

Montyjunjay Swain

Chairman, BOS(ECONOMICS)