SYLLABUS

M.A. (Economics)

Choice-Based Credit System

2025-2026

DEPARTMENT OF ECONOMICS

MAHARAJASRIRAMCHANDRABHANJADEOUNIVERSITY

SRIRAM CHANDRA VIHAR, TAKATPUR, BARIPADA-757003,

MAYURBHANJ, ODISHA

MASTER OF ARTS
DEPARTMENT OF ECONOMICS

CHOICE-BASED CREDIT SYSTEM

SYLLABUS

The M.A. in Economics Course has twenty papers divided into four Semesters: Semester -I, Semester - II, Semester - III and Semester - IV. The semester papers are outlined below. Each paper has five units/modules and carries 100 marks. The Examination pattern shall consist of both the Internal Assessment and End-Semester examination.

Internal Assessment Examination shall be 40 marks consisting of:

1. Quiz- 10 Marks (shall have compulsory 5 questions of 2 marks each. Two Quiz shall be conducted- 1st Quiz at the End of Unit -I and 2nd Quiz at the End of Unit– II. The best Quiz test mark shall be considered for evaluation).
2. Internal Assessment/ Mid Semester – 20 Marks (End of Sem-III)
3. Assignment /Seminar Presentation – 10 Marks (End of Unit-IV)

End Semester Examination shall be 60 marks of theory. The End Semester Examination shall be of 3hoursduration in each paper. The question paper of the Semester Examination shall consist of

a. 2 x 5 = 10 marks (all questions compulsory)
b. 4 x 5 = 20 marks (4 out of 5) and
c. 3 x 10 = 30 marks (3 out of 5).

Mark Distribution for Indian Knowledge System (ECO-106): End Sem Exam shall have;

i. 5 compulsory questions of 1 mark each
ii. Two questions will be answered out of 5 questions, each carrying 5 marks (one question from each unit), and
iii. Three questions will be answered out of 5 questions, each carry 15 marks (one question from each unit).

SEMESTER- I							
PAPER CODE	**COURSE NAME**	**CREDIT**	**MARK DISTRIBUTION**				
			Internal Assessment			**END SEM EXAM**	**Total MARK**
			Quiz	**Assessment/ Presentation**	**Internal**		
ECO-101	Micro Economic Analysis-1	5	10	10	20	60	100
ECO-102	Macro Economic Analysis-I	5	10	10	20	60	100
ECO-103	Mathematics for Economists	5	10	10	20	60	100
ECO-104	Public Economics	5	10	10	20	60	100
ECO-105	Indian Economic Policy	5	10	10	20	60	100
ECO-106	Indian Knowledge System	2	-	-	20	30	50
	Skill Course	-	-	-	-	50	50
TOTAL		**27**	50	50	120	380	600

SEMESTER- II							
PAPER CODE	**COURSE NAME**	**CREDIT**	**Quiz**	**Assessment/ Presentation**	**Internal**	**END SEM**	**Total MARK**
ECO-201	Economics of Environment	5	10	10	20	60	100
ECO-202	Micro Economic Analysis-II	5	10	10	20	60	100
ECO-203	Macro Economic Analysis-II	5	10	10	20	60	100
ECO-204	Statistics for Economists	5	10	10	20	60	100
ECO-205	Research Methodology	5	10	10	20	60	100
OE-ECO-206 (Open Elective)	An Overview of Indian Economy	5	10	10	20	60	100
TOTAL		30	60	60	120	360	600

SEMESTER- III

PAPER CODE	COURSE NAME	CREDIT	Quiz	Assessment/ Presentation	Internal	END SEM	Total MARK
ECO-301	Economics of Growth & Development- I	5	10	10	20	60	100
ECO-302	International Trade & Finance-I	5	10	10	20	60	100
ECO-303	Computer Application for Economic Analysis	5	10	10	20	60	100
ECO-304 (Anyone to be chosen)	A. Econometrics- I B. Financial Institutions & Markets- I C. Health Economics-I	5	10	10	20	60	100
ECO-305 (SWAYAM MOOCS)		3			25	75	100
TOTAL		23	40	40	105	315	500

SEMESTER- IV

PAPER CODE	COURSE NAME	CREDIT	Quiz	Assessment/ Presentation	Internal	END SEM	Total MARK
ECO-401	Dissertation	5				100	100
ECO-402	Economics of Growth & Development- II	5	10	10	20	60	100
ECO-403	International Trade & Finance-II	5	10	10	20	60	100
ECO-404 (any one)	A. Econometrics-I B. Financial Institutions & Markets- II C. Health Economics-II	5	10	10	20	60	100
TOTAL		20	30	30	60	280	400
GRAND TOTAL		**100**	**180**	**180**	**405**	**1335**	**2100**

Master of Arts

Economics

Programme Outcomes

- ➢ The programme shall develop the ability to explain core economic terms, concepts, and theories leading to intellectual growth of the students.
- ➢ It will enhance their ability to employ the "economic way of thinking" and enable them to assess the role of domestic and international institutions and norms in shaping economies.
- ➢ After the completion of the course the students will develop cognitive ability to apply economic theories and concepts to contemporary social issues and can suggest for formulation of economic and social development policies.
- ➢ The programme enables the learners to build up a professional career as economists, financial advisors, economic planners and policy makers. It prepares them to cope with the stress and strain involved in the process of economic development.

Programme Specific Outcomes

- Students of MA in Economics will be able to understand the past, comprehend the present economic condition and forecast the future course of changes in the level of development expected to come through different policies and programmes pursued by the governments and other development agencies.
- The programme will enhance the skill of the students to compute and assess the real situation of the economy, such as demographic changes, income, saving, and investment pattern, nature of employment and social security measures in relation to other countries.
- The programme enables the students to learn application of economic theories in real world situations and foster the development of their own skills in economic reasoning and understanding.

SEMESTER – I

ECO – 101: MICRO ECONOMIC ANALYSIS – I

Credit: 05

Objectives:

- To make the students capable of understanding the behaviour of economic agents.
- To understand how markets work and forecast how various factors influence the prices and quantities of the product in the market

Module - 1

Demand function and Elasticity (price, cross, income) of demand - theoretical aspects and empirical estimation; Theories of demand - utility, indifference curve (income and substitution effects, Slutsky theorem, compensated demand curve) and their applications Revealed preference theory; Revision of Demand Theory by Hicks, consumer's choice involving risk, Consumer's surplus, Elementary theory of price formation - demand and supply equilibrium; Cobweb theorem; Lagged adjustment in interrelated markets.

Module- 2

Production function - short period and long period; Law of variable proportions and returns to scale; Isoquants - least cost combination of inputs; Returns to factors; Economies of scale; Elasticity of substitution; Euler's theorem, Technical progress and production function; Cobb-Douglas; Traditional and modern theories of costs-empirical evidence; derivation of cost functions from production functions; Derived demand for factors **Module- 3**

Marginal analysis as an approach to price and output determination; Perfect competition - short run and long-run equilibrium of the form and industry, price and output determination, supply curve; Monopoly - short-run and long-run equilibrium, price discrimination, welfare aspects, monopoly control and regulation.

Module- 4

Monopolistic competition - general and Chamberlin approaches to equilibrium, equilibrium of the firm and the group with product differentiation and selling costs, excess capacity under monopolistic and imperfect competition;

Module- 5

Non-collusive Oligopoly; Cournot's Duopoly Model, Bertrand's Duopoly Model, Edgeworth, Chamberlin, Kinked demand curve and Stackelberg's solution

Collusive Oligopoly; cartels and mergers, price leadership and basing point price system models; Price and output determination under monopsony and bilateral monopoly.

Course Outcome: The outcome of the paper is to understand the economic behaviour of individuals, firms and markets. It is mainly to equip the students in a rigorous and comprehensive understanding of the various aspects of consumer behaviour and demand analysis, production theory and behaviour of costs, the theory of traditional markets and equilibrium of firms. The study of Microeconomic Analysis makes the minds of students more logical and enhances their capability to qualify for different jobs in government and nongovernment sectors, banking sector and other jobs.

References

- Kreps. David M. (1990). A.course in Microeconomic Theory, Princeton University press, Princeton.
- Koutsoyiannis, A. (1979) Modern Microeconomics, (2nd edition) Macmillan press, London.
- Layard, P.R.G. and A.W. Walters (1979), Microeconomic Theory, McGraw Hill, New York.
- Sen, A. (1999), Microeconomics: Theory and Applications, Oxford University press, New Delhi.
- Stigler, G. (1996), Theory of Price, (4th Edition), Prentice Hall of India, New Delhi.
- Varian, H. (2000) Microeconomic Analysis, W.W. Norton, New York.

ECO – 102: **MACRO ECONOMIC ANALYSIS –I**

Credit: 05

Objectives:

- To learn the major perspectives on what determines the overall economy's performance and will learn to analyse impacts on the economy.
- To learn the key approaches to macroeconomic policy and its effects.
- To understand the functional relationships among macroeconomic aggregates.

Module - 1

National Income and Accounts: Circular flow of income in two, three and four sector economy; different forms of national income accounting- social accounting, input-output accounting, flow of funds accounting and balance of payments accounting

Consumption Function: Keynes' psychological law of consumption - implications 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.

Module - 2

Investment Function: Marginal efficiency of investment and level of investment; Marginal efficiency of capital and investment - long run and short run; the accelerator and investment behaviour - impact of inflation; Influence of policy measures on investment - empirical evidence

Module - 3

Supply of Money: Financial Intermediation - a mechanistic model of bank deposit determination; A behavioural model of money supply determination, a demand determined money supply process; RBI approach to money supply; High powered money and money multiplier; control of money supply.

Module - 4

Demand for money: Classical approach to demand for money - Quantity theory approach, Fisher's equation, Cambridge Quantity theory, Keynes liquidity preference approach, transaction, precautionary, and speculative demand for money - aggregate demand for money

Module - 5

Neo-classical and Keynesian views on interest; The IS-LM model; Extension of IS-LM model with government sector; Relative effectiveness of monetary and fiscal policies; Extension of IS-LM models with labour market and flexible prices.

Outcome:

The outcome of the paper is to understand the behaviour of macroeconomic variables and circular flow. The students are able to analyse the functional relationships among aggregates like price, investment, employment, etc. The course will enable them to get employment in government policy institutions.

References

- Ackley, G.(1978), Macroeconomics: Theory and Policy, Macmillan, New York.
- Blackhouse, R. and A. Salansi(Eds.) (2000), Macroeconomics and the Real World (2vols) Oxford University Press, London.
- Branson, W.A.(1989) Macroeconomics Theory and policy, (3rd Edition) Harper and Row New York.
- Dornbusch, R. and F. Stanley (19997), Macroeconomics, McGraw Hill, Inc, New York.
- Hall, R.E and J.B Taylor (1986), Macroeconomics, W.W. Norton, New York.
- Heijdra, B.J.and V.P. Fredericck(2001), Foundations of Modern Macroeconomics, Oxford university press, New Delhi,
- Jha, R.(1991), Contemporary Macroeconomics Theory and Policy Wiley Eastern Ltd. New Delhi.
- Romer D.L. (1977), Advanced Macroeconomics, McGraw Hill Company Ltd., New York.

- Scarfe, B.L., (1977), Cycles, Growth and Inflation, McGrow Hill, New Yourk .
- Shapiro, E. (1996) Macroreconmic Analysis, Galgotia Publications, New Delhi.
- Survey.M.J.C (Ed) (1976) Macroeconomic Themes, Oxford University Press, Oxford.

ECO – 103: **MATHEMATICS FOR ECONOMISTS**
Credit: 05
Objectives:

- To improve the mathematical skills necessary to study economics.
- To identify, solve and interpret the characteristics of mathematical functions.
- To learn nonlinear functions using differential calculus.

Module - 1
Concept of function and types of functions; Limit, continuity and derivative; Rules of differentiation; Interpretation of revenue, cost, demand, supply functions; Elasticity and their types; Multivariable functions; Concept and types of production functions; Rules of partial differentiation and interpretation of partial derivatives;
Module - 2
Problems of maxima and minima in single and multivariable functions; Unconstrained and constrained optimization in simple economic problems; Simple problems in market equilibrium; Concept of integration; Simple rules of integration; Application to consumer's surplus; Growth rates and simple properties of time path of continuous variables.
Module - 3
Determinants and their basic properties; Solution of simultaneous equations through Cramer's rule; Concept of matrix - their types, simple operations on matrices, matrix inversion and rank of a matrix; Concept of vector - its properties; Matrices and vectors; Concept of quadratic forms - Eigen roots and Eigen vectors; Introduction to input-output analysis; Difference equations - Solutions of first order and second order difference equations; Applications in trade cycle models; Growth models and lagged equilibrium models.
Module - 4
Linear programming - Basic concept; Formulation of a linear programming problem - Its structure and variables; Nature of feasible, basic and optimal solution; Solution of linear programming through graphical and simplex method.
Module - 5
Statement of basic theorems of linear programming Formulation of the dual of a programme and its interpretation; Shadow prices and their uses; Concept of duality and statement of duality theorems; Concept of a game; Strategies - simple and mixed; Value of a game; Saddle pointsolution; Simple applications.

Outcome: The course introduces the learners to the basic mathematical concepts, tools, and techniques and also discusses how these techniques are applied to economic analysis with examples**.** It mainly focuses on those mathematical techniques which are directly useful in economic analysis which can be applied by the students in their professional lives. It enhances the analytical skill of the students and increases their employability in different government, quasi government and nongovernment sectors.

References

- 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.
- Gupta, S.C. (1993) Fundamentals of Applied Statistics, S.Chand& Sons, New Delhi.
- Handry, A.T. (1999), Operations Research, Prentice Hall of India, New Delhi.
- Speigal, M.R. (1992) Theory and Problems of Statistics, McGrow Hill Book Co, London.
- Taha,H.A.(1997) Operations Research : An Introduction (6th Edition), Prentice Hall of India Pvt. Ltd New Delhi.
- Yamane, Taro(1975) Mathematics for Economists, Prentice Hall of India, New Delhi.

ECO – 104: PUBLIC ECONOMICS
Credit: 05

Objectives:

- To understand the economics of government expenditure and taxation.
- To learn the effects of government intervention on behaviour of individuals, households, and firms.
- To understand the implications of public policies for ensuring efficiency and equity.

Module - 1

Role of government, Private goods, public goods, and merit goods; Market failure - imperfections, decreasing costs, externalities, public goods; Uncertainty and non-existence of future markets; Information asymmetry - Theory of second best.

Module - 2

Public Expenditure: Wagner's law of increasing state activities: Wiseman-Peacock hypothesis; Pure theory of public expenditure; Structure and growth of public expenditure; Reforms in expenditure budgeting; Programme budgeting and zero-base budgeting.

Taxation: Theory of optimal taxation; Excess burden of taxes; Trade-off between equity and efficiency; Theory of measurement of dead weight losses; the problem of double taxation

Module - 3

Fiscal Policy: Objectives of Fiscal policy - Interdependence of fiscal and monetary policies; budgetary deficits and its implications; Fiscal policy for stabilization - automatic vs. discretionary stabilization. Balanced budget multiplier.

Public Debt: Classical view of public debt; Compensatory aspect of debt policy; Principles of debt management and redemption

Module - 4

Principle of multi-unit finance: Fiscal federalism in India; Vertical and horizontal imbalance; Assignment of function and sources of revenue; Constitutional provisions; Finance commission Devolution of resources and grants; Theory of grants: Resource transfer from Union to States - Criteria for transfer of resources; Problems of State's resources and indebtedness.

Module - 5

Indian tax system; Revenue of the Union, states and local bodies; Major taxes in India: base of taxes, direct and indirect taxes, reforms in direct and indirect taxes, taxes on services; Non-tax revenues of Centre, State and local bodies; Analysis of Central and State government budgets.

Outcome: The course would develop the analytical ability of students to distinguish between beneficial and detrimental effects of a government policy and their effect on macroeconomics framework of an economy. It will help students to critically analyse the fiscal reforms and policy choices of the government in developed and developing countries. It helps students to get employment in public policy institutions, government and non-government institutions.

Reference:

- Atkinson A.B. and J.E. Siglitz (1980) Lectures on Public Economics, Tata McGrow Hill, New York.
- Auerbach, A.J. and M.Feldstern (Eds) (1985), Handbook of Public Economics, Vol. I. North Holland Amsterdam.
- Buchanan, J., M. (1970) The Public Finances, Richard D.Train Home-wood.
- Goode R.(1986) Government Finance in Developing Countries Tata McGraw Hill, New Delhi.
- Houghton, J.M. (1970) The Public Finance, : Selected Reading, Pengin, Harmondsworth.
- Jha, R (1998) Modern Punlic Economics Routledge, London.
- Menutt, P.(1996), The Economics of public choice, Edward Eigar, U
- Musgrave, R.A and P.B.Musgave (1976) Public Finance in Theory and Practices, McGraw Hill Kogakusha, Tokyo.
- Shome.P, (Ed) (1995) Tax policy: Handbook Tax Division Fiscal Affairs Department, International Monetary Fund Washington D.C.

ECO – 105: **INDIAN ECONOMIC POLICY**

Credit: 05

Objectives:

- To know the basic characteristics of Indian economy.
- To learn different tools to measure poverty and inequality.
- To understand the importance, causes and impact of population growth and its distribution, translate and relate them with economic development.

Module - 1

Growth of Indian Economy since 1950, Indicators of Development - PQLI, Human Development Index (HDI), gender development indices. Planning in India: Objectives and strategy of planning; Failures and achievements of plans; Developing grass-root organizations for development - Panchayats, NGOs and pressure groups.

Module - 2

Broad demographic features of Indian population; Population Policy and its development, Rural-urban migration; Urbanization and civic amenities; Poverty and Inequality Economic Reforms: Rationale of internal and external reforms; Globalisation of Indian economy

Module - 3

Agrarian Structure - Land reforms in India; Technological change in agriculture - pricing of agricultural inputs and output; Terms of trade between agriculture and industry; Agricultural finance policy; Agricultural Marketing and warehousing; Issues of food security - policies for sustainable agriculture.

Module - 4

Public sector enterprises and their performance; Industrial Sickness; Privatisation and disinvestment debate; Cottage and small scale industries, Problems of Small-scale sector; Parallel economy.

Module - 5

Problems relating to fiscal policy; Fiscal crisis and fiscal sector reforms in India. Analysis of price behaviour in India: Financial sector reforms: Review of monetary policy of RBI.

Outcome: To have knowledge about different issues related to the Indian Economy like planning, poverty, unemployment, sectoral structure, monetary policy, fiscal policy and economic development. The students can apply the knowledge so received in the field of research and policy analysis. The students cutting across discipline can apply the knowledge so received in the field of competitive examination, research and policy analysis.

Reference:

- Ahluwalia, I.J. and I.M.D, Little (Eds) (1999), India's, Economic Reforms and Development (Essay in Honour of Manmohan Singh Oxford University Press, New Delhi.
- Bardhan P.K. (9th Edition) (1999) The Political Economy of Development in India, Oxford University Press, New Delhi.
- Bawa, R.S. And P.S. Raikhy (Ed) (1997) Structural Changes in Indian Economy, Guru Nanak Dev University Press, Amritsar.
- Brahmannda P.R. and V.R Panchmukhi (Eds) (2001) Development Experience in the Indian Economy: Inter-State Perspectives. Bookwell Delhi.
- Chakravarty. S. (1987) Development Planning The Indian Experience, Oxford University Press, New Delhi.
- Dantwala M L. (1996) Dilemmas of Growth The Indian Experience sage publication New Delhi.
- Shoup, C.S., (1970), Public Finance, Aldine, Chicago
- Datt. R. (Ed) (2001) Second Generation Economic Reforms in India, Deep & Deep Publications, New Delhi.
- Govt of India, Economic Survey (Annual) Ministry of Finance New Delhi.
- Jain A, K. (1986) Economic Planning in India, Ashish Publishing House, New Delhi.
- Jalan, B. (1992) The Indian Economy Problems and Prospects, Viking, New Delhi.
- Jalan.B. (1996) India's Economic policy Preparing for the Twenty- First Century, Viking, New Delhi
- Joshi, V. and I.M.D. Little (1999) India: Macro Economics and Political Economy, 1964-1991, Oxford University Press, New Delhi
- Parikh K.S. (1999) India Development Report-1999-2000, Oxford University Press, New Delhi
- Reserve Bank of India, Report on Currency and Finance (Annual)
- Sandesara, J.C. (1992), Industrial Policy and Planning 1947.-1991: Tendencies, Interpretations and Issues, Sage Publications, New Delhi.
- Sen, R.K. and B. Chatterjee (2001) Indian Economy: Agenda for 21st century (Essays in Honour of Prof. P.R. Brahamananda) Deep & Deep publications, New Delhi.

ECO- 106: INDIAN KNOWLEDGE SYSTEM IN ECONOMICS
Credit:02

Outcome: 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.

Module 1: Introduction to the Indian Knowledge System

An Overview of Indian Knowledge System- Definition, Scope and Objectives, Relevance of Indian Knowledge System in the Present Scenario, Ancient Indian Knowledge System- Definition, Types, Importance, and Relevance of Traditional Knowledge in Contemporary Economics. India's Initiatives to Protect Traditional Knowledge

Module 2: Ancient Indian Economic Thought

Nature and Significance of Ancient Indian Economic Thought, Overview of economic concepts such as Artha (wealth), Dharma (duty, righteousness) Kama (desire/pleasure) and Moksha in Indian thought. Kautilya's Economic ideas and its relevance in the Indian knowledge system, Economic Ideas of Thiruvalluvar.

Module 3: Modern Indian Economic Thought

Economic Ideas of R.C. Dutt, Dadabhai Naroji- The Drain Theory, Mahadev Govind Ranade and Economics of Development, G.K. Gokhale- Taxation and Budgetary Policy, Gandhian Economics

Module 4: Contemporary Economic Thought

Jawaharlal Nehru- Economic Planning, P.C. Mahalanobis- Two Sector Model, Dr. B.R. Ambedkar- Financial Economics, Agricultural Economics, Economics of Caste.

Module 5: Importance of Industrialization in India

Economics of Socialism, Economic Ideas of C. Rajagopalchari, V.K. R.V. Rao- Views on National Income, Industrialisation, , D.R. Gadgil- Industrial Evolution in India.

Reference

1. B. Mahadevan, Vinayak Rajat Bhat, Nagendra Pavana R.N. (2022), Introduction to Indian Knowledge System: Concepts and Application
2. Ratan Lal Basu and Raj Kumar Sen (2008), Ancient Indian Economic Thought Relevance for Today
3. Ajit Dasgupta (2002). A History of Indian Economic Thought, Routledge.
4. Roy, T. (2011). The Economic History of India: Ancient to Present. Cambridge University Press.
5. Tirthankar Roy (2011) The Economic History of India 1857-1947. OUP, India
6. R C Dutt (2000). The Economic History of India under Early British Rule. Routledge, London
7. Deshpande, S., & Patnaik, U. (Eds.). (2011). Indian Economic Thought: Ancient to Modern. Routledge.
8. Lokanathan, V .(2015) A History of Economic Thought.

Life Skills Course (30 hours)
Syllabus

Here's a suggested syllabus outline for a 30-hours Life Skills course. This curriculum can be customized based on the participants' needs, level of expertise, and course objectives. This Life Skills course is a compulsory course for P.G. students of the MSCB University, Baripada.

Course Objective:

To provide students with a foundational understanding of yoga practices and their application to improve physical health, mental well-being, emotional balance, and overall life skills.

Program Structure:

This is a 30-hours program to be introduced in a semester pattern as a 3-credit course which included two sections like Theory & Practical:

- 10-hours Phase -I (Theory) program spread over 5 consecutive days, 2 hours each day in the first month where the main modules will be covered.

- 20-hours Phase -II (Practical) program spread over 10 consecutive days, 2 hours each day in the 2nd, 3rd & 4th month which will include follow-up sessions spread over next 3 months.

Module 1: Introduction to Yoga (4 hours)

- History & Philosophy of Yoga (1 hour)
  - Origins of Yoga
  - Key yoga texts (Yoga Sutras, Bhagavad Gita, Hatha Yoga Pradipika)
  - Different types and schools of Yoga
- Yoga as a Life Skill (1 hour)
  - Yoga in daily life
  - Yoga for mental clarity, emotional balance, and stress management
- Fundamental Principles (1 hour)
  - The Eight Limbs of Yoga (Ashtanga Yoga)
  - Yamas and Niyamas (Ethical guidelines)
- Setting Intentions (1 hour)
  - The role of intention (Sankalpa) in practice and life
  - Personal goal setting for the course

Module 2: Physical Practice (Asana) (10 hours)

- Foundational Postures (4 hours)
  - Standing postures (Mountain, Warrior series)
  - Seated postures (Easy Pose, Seated Forward Bend)
  - Balancing postures (Tree Pose, Dancer Pose)
  - Backbends (Cobra, Bridge Pose)

- Alignment and Safety (2 hours)
  - Understanding body alignment in postures
  - Injury prevention techniques
- Yoga for Flexibility & Strength (2 hours)
  - Poses to improve flexibility
  - Strength-building sequences
- Yoga for Relaxation and Restoration(2 hours)
  - Gentle and restorative postures
  - Introduction to Restorative Yoga and its benefits

Module 3: Breathwork (Pranayama) (4 hours)

- Introduction to Pranayama (1 hour)
  - What is Pranayama?
  - Importance of breath control
- Basic Pranayama Techniques (2 hours)
  - Nadi Shodhana (Alternate Nostril Breathing)
  - Ujjayi Breathing
  - Kapalabhati (Skull Shining Breath)
- Breathwork for Stress Management (1 hour)
  - How to use breathing techniques to manage stress, anxiety, and emotions

Module 4: Meditation and Mindfulness (6 hours)

- Introduction to Meditation (1 hour)
  - What is Meditation?
  - Benefits of meditation for mental and emotional well-being
- Mindfulness Practices (2 hours)
  - Body scan meditation
  - Mindful breathing
  - Mindful movement
- Guided Meditation Techniques (2 hours)
  - Visualization practices
  - Mantra Meditation
  - Loving-kindness meditation
- Creating a Home Meditation Practice (1 hour)
  - Setting up a regular meditation routine
  - Overcoming obstacles to consistent practice

Module 5: Yogic Lifestyle and Nutrition (2 hours)

- Yogic Diet and Nutrition (1 hour)
  - Basics of a sattvic diet (yoga-inspired nutrition)
  - The role of food in physical and mental health

- Integrating Yoga into Daily Life (1 hour)
  - Developing healthy habits and routines
  - Yoga beyond the mat: applying mindfulness in daily activities

Module 6: Emotional Balance & Stress Management (2 hours)

- Understanding the Mind-Body Connection (1 hour)
  - Emotional regulation through yoga
  - Yoga for managing anxiety, depression, and stress
- Practical Techniques for Emotional Health (1 hour)
  - Journaling, affirmations, and self-reflection practices
  - Using asanas, pranayama, and meditation for emotional balance

Module 7: Reflection, Integration, and Closing (2 hours)

- Personal Reflection and Journaling (1 hour)
  - Reflecting on personal growth and the impact of yoga on life skills
  - Sharing experiences and insights with peers
- Course Wrap-up and Future Planning(1 hour)
  - Review of key concepts
  - How to continue yoga practice beyond the course

Assessment & Evaluation

- ➢ Attendance and Participation: 50%
- ➢ Personal Yoga Practice and Reflection: 30%
- ➢ Final Presentation or Essay on Yoga Life Skills Application: 20%

This syllabus provides a balanced approach between theory, practice, and reflection. It focuses not only on yoga as physical exercise but also as a holistic practice to enhance life skills and well-being.

Recommended Books:

- Patanjali Yogasutra by Swami Vivekananda
- Light on Yoga by B K S Iyenger
- Hatha Yoga by Swami Sivananda
- APMB by Swami Satyananda Saraswati
- Light on pranayama by B K S I yenger
- Srimad Bhagavad Gita by Gitapress, Gorakhapur

SEMESTER – II

ECO-201: ECONOMICS OF ENVIRONMENT
Credit: 05

Objectives:

- To understand the causes of market failure and the importance of property rights in context of environment.
- To show how economic analysis can help identify the causes of environmental degradation and the policy measures to deal with.

Module 1
Pareto optimality and competitive equilibrium; Fundamental theorems of welfare economics; Externalities and market inefficiency - externalities as missing markets; property rights and externalities, non-convexities and externalities; Pareto optimal provision of public goods - Lindahl's equilibrium; preference revelation problem and impure and mixed public goods, common property resources.

Module 2
Use values; Option values and non-use values; Valuation methods: methods based on observed market behaviour; Hedonic property values and household production models (travel cost method and household health production function), Methods based on response to hypothetical markets, contingent valuation method.

Module 3
Environmental externalities: Pigouvian taxes and subsidies, marketable pollution permits and mixed instruments (the charges and standards approach), Coase's bargaining solution and collective action; Informal regulation and the new model of pollution control, Monitoring and enforcement of environmental regulation.

Module - 4
Environmental institutions and grassroots movements; Global environmental externalities and climatic change - Tradable pollution permits and international carbon tax, Trade and environment in WTO regime.

Module 5
Theories of optimal use of exhaustible and renewable resources; Environmental and development trade-off and the concept of sustainable development; Integrated environmental and economic accounting and the measurement of environmentally corrected GDP; Macroeconomic policies and environment.

Outcome: The students get a scope to understand the valuation of environmental goods. It also makes them aware of environmental problems and policy measures undertaken by the government. The students also learn how to make optimum use of renewable and non-renewable natural resources. Understanding environmental issues and management of environmental resources enhances their employability in NGOs specially involved in environmental protection.

Reference:

- Baumol W.J. and W.E. Oates (1988) The Theory of Environmental Policy (2^{nd} Edition) Cambridge University Press, Cambridge.

- Bromley, D.W.(Ed) (1995), Handbook of Environmental Economics, Blackwell, 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.
- Hussen A.M. (1999) Principles of Environmental Economics Routledge, London.
- Jeroen, C.J.M. van den Bergh (1999) Handbook of Environmental and Resource Economics, Edward Elgar Publishing Ltd U.K.
- Kolstad C.D. (1999) Environmental Economics, Oxford University Press, New Delhi.
- Pearce D.W. and R. Turner (1991) Economics of Natural Resource Use and Environment, John Hopkins University Press, Baltimore.
- PermanR.Ma and J. McGilvary (1996) Natural Resource and Environmental Economics, Longman, London.
- Tietenberg, T. (1994) Environmental Economics Policy and Harper Collins New York.

ECO-202: MICRO ECONOMIC ANALYSIS –II

Credit: 05

Objectives:

- It helps students to apply the theoretical knowledge in research.
- To understand theoretical models in a conceptually and analytically rigorous form, also with references to theoretical studies and applied researches.
- To form an opinion on the scope and limitations of the theoretical models.

Module - 1

Critical evaluation of marginal analysis; Baumol's sale revenue maximization model; Williamson's model of managerial discretion; Marris model of managerial enterprise; Full cost pricing rule; Bain's limit pricing theory and its recent developments including Sylos- Labini's model.

Module - 2

Neo-classical approach - marginal productivity theory; Product exhaustion theorem; Elasticity of technical substitution; technical progress and factor shares; Theory of distribution in imperfect product and factor markets.

Module - 3

Determination of rent, wages, interest and profit; Macro theories of distribution - Ricardian, Marxian, Kalecki and Kaldor's, Behavioural model of the firm; Game theoretic models

Module - 4

Pigovian welfare economics; Pareto optimal conditions; Value judgement; Social welfare function; Compensation principle; Inability to obtain optimum welfare - Imperfections, market failure, transaction costs, externalities

Module - 5

Theory of Second Best - Arrow's impossibility theorem. Partial and general equilibrium, Walrasian excess demand and input-output approaches to general equilibrium, existence, stability and uniqueness of equilibrium and general equilibrium

Outcome: The course will make the students capable of understanding the various economic issues and applied parts of economics. It will empower students to explain the social reality with better arguments and optimum solutions. The students will understand the basics of the distribution of income and wealth. Learners get exposed to various types of efficiencies and become able to analyse the situations under which the market fails and how the state interferes in achieving efficiency for the promotion of social welfare. The study of Microeconomic Analysis makes the minds of students more logical and enhances their capability to qualify for different jobs in government and nongovernment sectors, banking sector and other jobs.

Reference:

- Kreps. David M. (1990). A.course in Microeconomic Theory, Princeton University press, Princeton.
- Koutsoyiannis, A. (1979) Modern Microeconomics, (2nd edition) Macmillan Press, London.
- Layard, P.R.G. and A.W. Walters (1979), Microeconomic Theory, McGraw Hill, New York.
- Sen, A. (1999), Microeconomics: Theory and Applications, Oxford University Press, New Delhi.
- Stigler, G. (1996), Theory of Price, (4th Edition), Prentice Hall of India, New Delhi. Varian, H. (2000) Microeconomic Analysis, W.W. Norton, New York.

ECO-203: MACRO ECONOMIC ANALYSIS –II
Credit: 05
Objectives:

- To introduce students to advanced topics in macroeconomics to enhance independent research.
- To learn how to use these indicators in evaluating current economic conditions.
- To learn what determines the performance of the economy.

Module 1

Post-Keynesian Demand for Money: Post-Keynesian approaches to demand for money - Patinkin and the real balance effect, Approaches of Baumol and Tobin; Friedman and the modern quantity theory; Crisis in Keynesian economics and the revival of monetarism.

Module 2

Classical, Keynesian and Monetarist approaches to inflation; Structuralist theory of inflation; Philips curve analysis - short-run and long-run Philip's curve; Samuelson and Solow - the natural rate of unemployment hypothesis.

Module 3

Business Cycles: Theories of Schumpeter, Kaldor, Samuelson and Hicks, Goodwin's model: Control of business cycles - relative efficacy of monetary and fiscal policies.

Module 4

Macroeconomic in an Open Economy: Mundell-Fleming model - Asset markets. Expectations and exchange rates; Monetary approach to balance of payments.

Module - 5

New Classical Macroeconomics: The new classical critique of micro-foundations, the new classical approach: policy implications of new classical approach - empirical evidence.

Outcome: On completion of the course students will be able to apply supply and demand models to analyze responses of the market to external events, Analyse different phases of trade cycle, demonstrate various trade cycle theories, understand the impact of cyclical fluctuation on the growth of business, and lay policies to control trade cycle. They can illustrate the meaning of inflation and its relation with unemployment. The course will enable them to get employment in government policy institutions.

Reference:

- Ackley, G.(1978), Macroeconomics: Theory and Policy, Macmillan, New York.
- Blackhouse, R. and A. Salansi(Eds.) (2000), Macroeconomics and the Real World (2vols) Oxford University Press, London.
- Branson, W.A.(1989) Macroeconomics Theory and policy, (3rd Edition) Harper and Row New York.
- Dornbusch, R. and F. Stanley (19997), Macroeconomics, McGraw Hill, Inc, New York.
- Hall, R.E and J.B Taylor (1986), Macroeconomics, W.W. Norton, New York.
- Heijdra, B.J.and V.P. Fredericck(2001), Foundations of Modern Macroeconomics, Oxford university press, New Delhi,
- Jha, R.(1991), Contemporary Macroeconomics Theory and Policy Wiley Eastern Ltd. New Delhi.
- Romer D.L. (1977), Advanced Macroeconomics, McGraw Hill Company Ltd., New York.
- Scarfe, B.L., (1977), Cycles, Growth and Inflation, McGraw Hill, New Yourk.
- Shapiro, E. (1996) Macroeconomic Analysis, Galgotia Publications, New Delhi. Survey. M.J.C (Ed) (1976) Macroeconomic Themes, Oxford University Press, Oxford.

ECO-204: STATISTICS FOR ECONOMISTS
Credit: 05
Objectives:

- To understand basic theoretical and applied principles of statistics.
- To learn sampling techniques for research work.
- To acquire knowledge on formulation of hypothesis and its testing.

Module 1

Meaning, assumptions and limitations of simple correlation and regression analysis; Pearson's correlation coefficient and Spearman's rank correlation coefficients and their properties; Concept of the least squares and the lines of regression; Standard error of estimate; Partial and multiple correlation and regression.

Module 2

Deterministic and non-deterministic experiments; various types of events - classical and empirical definitions of probability; Laws of addition and multiplication; Conditional probability and concept of interdependence; Baye's theorem and its applications

Module 3

Elementary concept of random variable; Probability, mass and density functions; Properties (without derivations) of Binomial, Poisson and Normal distributions

Module 4

Basic concepts of sampling - Determination of Sample size, Advantages and Disadvantages of Sampling Method, Random and non-random sampling: Estimation: Interval Estimation and Point estimation, An estimator and its sampling distribution; Desirable properties of an estimator

Module 5

Testing of Hypothesis - Null and alternative; Goodness of fit; Confidence intervals and level of significance; Procedure for testing of Hypothesis, Type 1 and Type 2 errors, Hypothesis testing based on Z, t, Chi-square and F test

Outcome: Students would learn the common statistical techniques and terminologies used in the course. Students would gain knowledge to interpret examples of methods for summarizing data sets, including common graphical tools and summary statistics. Students would develop an understanding of the basic concepts of probability, random variables, and sampling distribution of a statistic. Students would learn the measurement of central tendency, hypothesis testing, analysis of variance and multiple regression and correlation analysis. They would become familiar with the sources of vital statistics data, how to interpret such data and how to perform basic tests to evaluate them which will help students in their doctoral research and their employability in educational and research institutions improves.

Reference:

- Gupta, S.C. (1993) Fundamentals of Applied Statistics, S.Chand& Sons, New Delhi.
- Handry, A.T. (1999), Operations Research, Prentice Hall of India, New Delhi.
- Speigal, M.R. (1992) Theory and Problems of Statistics, McGrow Hill Book Co, London.

ECO- 205: Research Methodology
Credit: 05
Course Objective:

Students will learn different methods and techniques of data collection, editing, presentation, analysis and interpretation to reach at a valid conclusion. But the students of different branches of social sciences are not well equipped to handle these aspects. Keeping this in mind the present 'Certificate Course' is designed.

Module- 1
Social Science Research: Meaning, Objective, Type and Criteria of Good Research Review of Literature: Need and Types of Literature Review, Finding the Gap

Module- 2
Data Collection: Census vis-a-via Sample, Methods of Sampling Design, methods of collection of primary data with relative merits and demerits.

Module- 3
Research Design and Formulation of Hypothesis
Data Analysis: Descriptive Statistics, Correlation and Regression Analysis (Using MS-Excel & SPSS software)

Module- 4
Report Writing: Meaning, Type, Format, Organisation, and Presentation; Qualities of a Good Research Report; Research Ethics – An Introduction to use of 'Turnitin' for plagiarism check

Module- 5
Data entry and analysis using econometric software.

Course Outcome:

The outcome of this course is to understand the basics of research, the tools and techniques to be employed for computation and analysis of data and finally to prepare a comprehensive report. This course is mainly designed to enhance the skill of the researcher for undertaking independent research work.

Reading List:

1. 'Research Methodology' by C. R, Kothari (New Age International Publishers)
2. 'Research Methodology' by R.Cauvery et al. (S.Chand Publishing House)
3. 'Fundamentals of Statistics' byA.M.Goon,B.Dasgupta andM.K. Gupta (The World Press Private Ltd.)
4. 'Scientific Social Survey and Research' by P.V.Young (Prentice Hall of India Pvt.Ltd.)

5. 'Research methodology' byD.Chawla&N.Sondhi (Vikas Publishing House)
6. e-Pg Pathsala: P-03 (M-27). P-04 (M-21), P-07 (M-06,M-07).
7. Statistical Methods for Practice and Research: A Guide to Data Analysis Using SPSS by A.S.Gaur & S.S.Gaur, 2nd Edition, Response Books, SAGE Publication.

OPEN ELECTIVE COURSE

OE-ECO-206: AN OVERVIEW OF INDIAN ECONOMY
Credit: 05

Objectives:

- To know the basic characteristics of Indian economy.
- To learn different tools to measure poverty and inequality.
- To understand the importance, causes and impact of population growth and its distribution, translate and relate them with economic development.

Module-1

Basic Features of Indian Economy, Demography, Poverty and Inequality, Anti-Poverty Programs, Employment and Unemployment

Module-2

Development and Growth, Human Development Index, Physical Quality of Life Index, Gender Development Index, Happiness Index.

Module-3

Indian Fiscal Policy, Objectives, Tax, Expenditure, debt, budget and its components, Deficit concepts

Module-4

Indian Monetary Policy, Objectives, Types of Monetary Policy, Instruments of Monetary Policy, Role of Reserve Bank of India

Module-5

Millennium Development Goals, Sustainable Development Goals, Importance of Tourism for Economic Growth.

Outcome: To have knowledge about different issues related to the Indian Economy like demography, poverty, inequality, employment and unemployment, monetary policy, fiscal policy and economic development. The students cutting across discipline can apply the knowledge so received in the field of competitive examination, research and policy analysis.

Reference:

- Ahluwalia, I.J. and I.M.D, Little (Eds) (1999), India's, Economic Reforms and Development (Essay in Honour of Manmohan Singh Oxford University Press, New Delhi.
- Bardhan P.K. (9th Edition) (1999) The Political Economy of Development in India, Oxford University Press, New Delhi.
- Bawa, R.S. And P.S. Raikhy (Ed) (1997) Structural Changes in Indian Economy, Guru Nanak Dev University Press, Amritsar.
- Brahmannda P.R. and V.R Panchmukhi (Eds) (2001) Development Experience in the Indian Economy: Inter-State Perspectives. Bookwell Delhi.
- Chakravarty. S. (1987) Development Planning The Indian Experience, Oxford University Press, New Delhi.
- Dantwala M L. (1996) Dilemmas of Growth The Indian Experience sage publication New Delhi.
- Joshi, V. and I.M.D. Little (1999) India: Macro Economics and Political Economy, 1964-1991, Oxford University Press, New Delhi
- Parikh K.S. (1999) India Development Report-1999-2000, Oxford University Press,

New Delhi

- Reserve Bank of India, Report on Currency and Finance (Annual)

- Sandesara, J.C. (1992), Industrial Policy and Planning 1947.-1991: Tendencies, Interpretations and Issues, Sage Publications, New Delhi.

SEMESTER-III

ECO – 301: ECONOMICS OF GROWTH AND DEVELOPMENT- I

Credit: 05

Objectives:

- To understand factors for economic development from theories.
- To gain an understanding of the relationship between societies and individual growth.
- To learn reasons for underdevelopment and policy suggestions for economic growth and development.

Module 1

Economic growth and development - Factors affecting economic growth: capital, labour and technology; Growth models - Harrod and Domar, instability of equilibrium; Neo-classical growth models - Solow and Meade, Mrs. Joan Robinson's growth model

Module 2

Cambridge criticism of Neo-classical analysis of growth, The capital controversy. Kaldor's growth model; Technological progress - embodied and disembodied technical progress; Hicks, Harrod; learning by doing.

Module 3

Development and underdevelopment - perpetuation of underdevelopment; Poverty - absolute and relative; Measuring development and development gap - Per capita income, inequality of income, Human development index and other indices of development and quality of life. Food security; education, health and nutrition

Module 4

Human resource development; Population problem and growth pattern of population - Theory of demographic transition; Population as limits to growth and as ultimate source - Population, poverty and environment.

Module 5

Economic development and institutions - markets and market failure, state and state failure, issues of good governance, food security in India.

Outcome: After the completion of the course, the students will be able to understand the basic assumptions and features of economic growth and development. They will develop theoretical knowledge about the concepts of poverty, inequality and development gap and explore diverse dimension and measures of development, as well as the application of microeconomic analysis to issues of development in poor countries, including the study of household decisions and the analysis of institutions and norms influencing development.

Reference:

- Sankar, U.(Ed) (2001), Environmental Economics, Oxford Universaity Press, New Delhi.
- Gimmell, N (1987), Surveys in Development Economics, Blackwell, Oxford.
- Higgins, B 1959), Economics Development, W.W. Norton, New York.
- Hogendrn, (1996), Economic Development, Addison, Wesley, New York.
- Kahkonon, S.andM.Olson (2000), A New Institutional Approach to Economic Development Vistaar.
- Todaro, M P (1996), (6^{th} Edition), Economic Development, Longman, London.
- Thirwal, A.P. (1999), (6^{th} Edition), Growth and Development, Macmillan, U. K.

ECO – 302: INTERNATIONAL TRADE AND FINANCE – I
Credit: 05
Objectives:

- To identify and analyze problems in the field of trade and finance, and to develop solutions.
- To use theoretical and practical knowledge gained in the field of International Trade and Finance.
- To discuss the developments in global markets by using critical thinking skills.

Module 1
The pure theory of international trade - theories of absolute advantage, comparative advantage and opportunity costs, the modern theory of international trade; Theorem of factor price equalization; Empirical testing of the theory of absolute cost and comparative cost - Heckcher-Ohlin theory of trade
Module 2
Kravis and Linder theory of trade; Role of dynamic factors, i.e. changes in tastes, technology and factor endowments in explaining the emergence of trade; The Rybczynski theorem - concept and policy implications of immiserizing growth; Causes of emergence and measurement of intra-industry trade and its impact on developing economies.
Module 3
Measurement of gains from trade and their distribution; Concepts 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; Trade as an engine of economic growth; Welfare implications - Empirical evidence and policy issues;

Module 4 The Theory of Interventions (Tariffs, Quotas and non-tariff barriers); Economic effects of tariffs and quotas on national income, output, employment, terms of trade, and income distribution; Balance of payments on trading partners both in partial and general equilibrium analysis.

Module 5

The political economy of non-tariff barriers and their implications; nominal, effective and optimum rates of tariffs - their measurement, impact and welfare implications; Trade under imperfectly competitive market.

Outcome: By completing this course, the students would be able to identify the basic difference between inter-regional and international trade, understand how international trade has helped countries to acquire goods at cheaper cost and explain it through the various international trade theories. They can explain how restrictions on international trade would limit a nation in the services and goods produced within its territories and at the same time explain that a rise in international trade is essential for the growth of globalization. They would be able to understand the importance of maintaining equilibrium in the balance of payments and suggest suitable measures to correct disequilibrium as well. They would be aware of the changes in the composition as well as direction of foreign trade after international trade and know the causes and effects of deficits in the balance of payments, measures adopted to correct the deficits and identify the need for having trade reforms.

Reference:

- Bhagwati J (1981) International Trade Selected Readings, Cambridge, University Press Massachusetts.
- Carbough, R.J. (1999) International Economics, International Thompson Publishing, New York..
- Chacholiades, M.(1990) International Trade : Theory and policy McGraw Hill, Kpgakusha, Japan.

- Dana, M.S. (2000) International Economics: Study, Guide and Work Book, Routledge Publishishers, London.
- Dunn, R, M and 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, Homewood.
- King, P.G. (1995) International Economics and International Economic Policy; A Reader McGraw Hill International, Singapore.
- Krugman, P.R. and M.Obstfeld (1994) International Economics: Theory and Policy, Glenview, Foresman.
- Salvatore, D. (1997) International Economics, Prentice Hall, Upper Saddle River, N.J. New York.
- Soderston, Bo. (1991) International Economics, The Macmillan Press, London.

ECO – 303: COMPUTER APPLICATIONS FOR ECONOMIC ANALYSIS (PRACTICAL)
Credit: 05
Objectives:
- To have practical knowledge of data analysis and interpretation of results.
- To browse and download information related to economics from the Indian and international organizations.
- To enable students to use the knowledge in research work.

Module1: Data Management and Data Transformation

An Introduction to SPSS and creating data file, defining the variables, Entering the Data, Opening the existing Data file, Inserting Variables, Inserting Cases, Sorting cases, Splitting Files, Selecting cases and Listing cases,

Module 2: Charts

Bar Charts, Line Charts, Pie Charts, Descriptive statistics

Module 3

t-test, Chi-square Test, F-test and analysis of variance.

Module 4

Correlation and Regression

Module 5

Causality test, structural break, Stationarity test, Logit test

Outcome: After completion of the course, the students would be able to develop the capability to use this in data analysis. They would be able to browse and download information related to economics from Indian and international organizations like RBI, World Band, IMF, etc. This course would enrich the students with practical knowledge of using SPSS to analyse data and interpretation of results. They would apply the knowledge in their research work can avail the job opportunities in the field of government, non-government and quasigovernment sectors.

Reference:

- SPSS Version 7.5 (1997), Reference Manual
- Neil Frude, (1998), SPSS-A Guide to SPSS/PC
- Kenneth J. White (1997), SHAZM version 8.0 Reference Mannual, McGraw Hill.
- E. Balagurusamy (1988), Programming in BASIC
- D Gujarati, (1995), Basic Econometrics, McGraw Hill, Third Edition.

ELECTIVE-1
(ANY ONE OUT OF ECO- 304A, 304B & 304C)

ECO – 304A: ECONOMETRICS –I
Credit: 05
Objectives:

- To have a deeper understanding of econometrics tools and its application.
- To learn model construction and estimation, with applications in consumer and producer theory.
- To gain insights into the relationship between econometric estimation and diagnostic testing.

Module 1
Nature, meaning and scope of econometrics; Simple and general linear regression model - Assumptions, Estimation (through OLS approach) and properties of estimators; Gauss-Markov theorem;
Module 2
Standard Errors of regression coefficients, Concepts and derivation of R^2 and adj R^2, Prediction, Normality assumption, Statistical inference, Maximum likelihood estimation; Three variable linear regression model- OLS estimators and their properties, adj R^2 , Inferences. Concept and analysis of variance approach and its applications in regression analysis;
Module 3
Problems in Regression Analysis: Multicollinearity- sources, effects, detection and solution; Heteroscedasticity- tests, consequences, solution; Autocorrelation- sources, consequences, remedies. Estimation of non-linear equations - parabolic, exponential, geometric, hyperbolic, modified exponential; Gomertz and logistic functions.
Module 4
Problems of specification error and errors of measurement, Dummy variable technique - Testing structural stability of regression models comparing two regressions, interaction effects, seasonal analysis, piecewise linear regression.
Module 5
Use of dummy variables, regression with dummy dependent variables; The LPM, Logit, Probit and Tobit models.

Outcome: This course provides a path to follow research in the general area of economics and business. Students would gain an understanding of primarily about estimation and hypothesis testing. What is different and generally much more interesting and useful is that the parameter being estimated and tested are not just means and variances but relationships between variables, which is much of economics and other social sciences. The course would familiarise the students to study economics with an applied approach. The enhanced skill of data analysis that is acquired by studying this paper opens job opportunities in the field of teaching, research, corporate areas and the banking sector.

References:

- Amemiya, T. (1985) Advanced Econometrics Harvard University Press, Cambridge, Mass.
- Baltagi, B. H. (1998) Econometrics Springer, New York.
- Dongherty, C, (1992) Introduction to Econometrics, Oxford University Press, New York.
- Goldberger, A. S. (1998), Introductory Econometrics, Harvard University Press,

Cambridge Mass.
- Gujarati D. N. (1995), Basic Econometrics (2nd Edition) McGraw Hill, New Delhi.
- Hill R. C., E. G. William and G.G. Judge (1997) Undergraduate Econometics, Wiley, New York.
- Kennedy P. (1998) A Guide to Econometrics (4th Edition) MIT Press, New York.
- Kmenta J. (1997), Elements of Econometrics (Reprint Edition) University of Michigan Press, New York.
- Koutsoyiannis A. (19977) Theory of Econometrics (2nd Edition) The Macmillan Press Ltd, London.
- Krishna, K. L. (Ed) (1997) Econometric Applications in India, Oxford University Press, New Delhi.
- Maddala G. S. (Ed) (1993) Econometrics Methods and Application (2vols) Aldershot U.K.
- Theil, H. (1981) Introduction to Econometrics, Prentice Hall, New Delhi.

ECO- 304B: FINANCIAL INSTITUTIONS AND MARKETS- I
Credit: 05
Objectives:

- To understand concepts relevant to financial markets and financial institutions.
- To learn risk and return associated with financial instruments.
- To gain knowledge on the mechanics and regulation of financial securities exchanges and determine how the value of stocks, bonds, and securities are calculated.
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Module 1
Money and finance - Money and near-money - Financial intermediation and financial intermediaries - The structure of the Financial System – Financial Institutions, Financial Markets and Financial Instruments and Services – Weaknesses of Indian Financial System- Functions of the financial sector - Equilibrium in Financial Markets

Module 2
Indicators of Financial Development - Financial System and Economic Development – Theories of the Impact of Financial Development on Savings and Investment-Criteria to evaluate assets: Risk and financial assets, types of risk, return on assets, Risk - return trade-off
- Valuation of Securities.

Module 3
Theories of interest rate determination – Classical Theory, The Loanable Funds Theory, The Keynesian Theory and Modern Theory - Term Structure of Interest rates – Theories of Term Structure of Interest rates: Expectation Theory, Liquidity Premium Theory, Market Segmentation Theory; Appropriate interest rate policy.

Module 4
The Reserve Bank of India; Functions of Central Bank, objectives of the monetary policy in developed and developing countries - Instruments of monetary policy, Recent Policy Developments

Module 5
Functions of Commercial Banks - Credit creation and its control; Services of banks in modern times, Development banks – types, role and functions; Investment banking and merchant banking; Financial Sector reforms in India.

Outcome: On completion of the course, students will be able to explain the broad features of Indian financial system with its components, objectives and purview. Also, understand the instruments to control credit in the country. They would be able to effectively narrate the kinds and components of money with its regulatory system, and be aware of the functions, objectives and limitations of commercial banks. Identify the existence and development of non-banking financial institutions, know the important role of Mutual funds, LIC, investment companies etc., utilize and effectively participate in the development process. Understand the conditions of financial markets and its impact in the economy. The course increases the student's employability in banking, insurance and other government and quasi government sector.

Reference:

- Bhole,L. M. (1999) Financial Institutions and Markets, Tata McGraw Hill Company Ltd. New Delhi.
- Edminister, R.O.(1986) Financial Institutions Markets and Management, McGraw Hill New York.
- Bhale, L.M. (2000), Indian Financial System, Chugh Publication, Allahabad.
- Goldsmith, R. W. (1969) Financial Structure and Development, Yale, London.
- Hanson, J. A. and S. Kathuria (Eds) (1999) India; A Financial Sector for the Twenty First Century, Oxford University Press New Delhi.
- Harker P. T. and S. A. Zenios (2000) (Eds) Performance of Financial Institutions Cambridge University Press, Cambridge.
- Johnson , H. J. (1993) Financial Institutions and Markets, McGraw Hill, New York.
- Khan M. Y. (1996) Indian Financial System Tata McGraw Hill, New Delhi.
- Machiraju, M. R. (1999) Indian Financial System, Vikas Publishing House, New Delhi.
- Ohlson, J.A (1987) The Theory of Financial Markets and Institution, North Holland, Amsterdam.
- Prasad, K. N. (2001), Development of India"s Financial System, Sarup& Sons, New Delhi.
- Robinson, R. I. And D. Wrightman (1981) Financial Markets, McGraw hill , London.
- Smith, P.F. (1978) Money and Financial Intermediation: The Theory and Structure of Financial System, Prentice Hill, Englewood Cliffs, New Jersey.

ECO- 304C: HEALTH ECONOMICS – I

Credit: 05

Objectives:

- To understand the performance of the public sector vis-à-vis the private sector in provision of health care in developing countries.
- To learn the relationship between health and human capital

Module 1

Introduction to Health Economics- What is Health Economics, Theoretical foundation of the emergence of Health Economics, Relevance of Health Economics, Resource Allocation. Application of Economics to health and health care

Module 2

Health & Economic Development – labour supply &labour Productivity- -Health and Human Capital, Health & Demography, Health &Income, Health as a Public good, Demand & supply of health care, factor influencing demand, health care and market failure

Module 3

Health care in public sector. Reasons for poor public sector performance. Utilisation of public health facilities: in-patient and outpatient treatment, Anti & Post-natal care, public Health Subsidies.

Module 4

Health care in the Private Sector, growth of the Private Health sector, structure of Private, Health sector, rural medical providers, use of Private sector regulation of the Private health sector in India

Module 5

Health & Development in Odisha- state of health in Odisha, policies and programmes for Health Development in Odisha, Disease load in Odisha, State of Tribal Health in Odisha, Health infrastructure, health financing in Odisha

Outcome: Going through this course, the students would develop an idea about the emergence and development of the theoretical foundation of health economics and how health impacts economic development and growth. They would be able to understand the performance of public sector vis-à-vis private sector in provision of health care in developing country like India. The course would enable the students to know the status of health and development in Odisha with a special emphasis on tribal health in the state.

Reference:

- Govt. of India (2005), Report of the National Commission on Macroeconomics and Health, New Delhi: Govt. of India, Ministry of Health and Family Welfare
- A J Culyer and Joseph P. Newhouse (2000), Handbook of Health Economics, Amsterdam: Elsevier
- Sophie Witter, et al (2000), Health Economics for Developing Countries, London, Macmillan
- Peter Zweifel and Friedrich Breyer 1970, Health Economics, New York, Oxford University Press
- Michel Spence and Maurean Lewis (eds) (2009), Health and Growth: Commission on Growth and Development, Jaipur; Rawat Publications
- Ajay Mahal et al (2000), Who Benefits from Public Health Spending in India, Wasington, D C: World Bank
- A K Kalla and P C Joshi (eds) (2004), Tribal Health and Medicines, New Delhi: Concept Publishing Company
- Abdo S Yazbeck and David H Peters (eds) (2003), Health Policy Research in South Asia, Wasington, D C: World Bank
- Philip Musgrave (ed) (2004), Health Economics in Development, Wasington, D C: World Bank
- Anthony J Culyer (ed) (2006) , Health Economics, London: Routledge
- L N Dash (2011), Health and India‟s Development Challenge, New Delhi: Regal Publications
- L N Dash (ed) (2013), Health and India‟s Economic Development: Challenge and Opportunities, New Delhi: Synergy Books

SEMESTER-IV

ECO- 401: DISSERTATION
Credit: 05
Objectives:

- To use acquired knowledge in studying various societal issues.
- To suggest policy measures for solutions to societal problems.

Outcomes: The purpose of this course is to gain and to understand the existing research, debates relevant to a particular topic and area of the study. It helps the students to learn the way to present the knowledge in the form of a report. It promotes the involvement of the students either individually or in teamwork and encourages them to carry out case studies addressing different socio-economic issues.

ECO – 402: ECONOMICS OF GROWTH AND DEVELOPMENT– II
Credit: 05
Objectives:

- To learn different theories of economic development.
- To understanding the importance of technology for society and economic growth.
- To learn different policies for economic growth and development.

Module 1
Approaches to development: Partial theories of growth and development – a vicious circle of poverty, circular causation, unlimited supply of labour, big push, balanced growth, unbalanced growth, critical minimum effort thesis, low-equilibrium trap; Dualism -technical, behavioural and social; Ranis and Fei model; Dependence theory of development; Structural view of development.
Module 2
Sectoral aspects of Development: Role of agriculture in economic development; Efficiency and productivity in agriculture, New technology and sustainable agriculture; Globalisation and agricultural growth; rationale and pattern of industrialisation in developing countries
The choice of technique and appropriate technology and employment; Terms of trade between agriculture and industry; Infrastructure and its importance; Labour markets and their functioning in developing countries.
Module 3
Export-led growth; Dual gap analysis; Balance of payments; Tariffs and effective protection; post-GATT international economic order; WTO and developing countries.
External resources - FDI, aid vs. trade, Technology inflow; MNC activity in developing countries; Borrowings - domestic and external; Burden of borrowing - IMF and World Bank policies in developing countries.
Module 4
Macroeconomic Policies and Development: Role of monetary and fiscal policies in developing countries - savings, inflation and growth - Empirical evidence.
Module 5
Allocation of Resources: Need for investment criteria in developing countries - present vs. future, Alternative investment criteria; Cost-benefit analysis, Shadow prices, Project evaluation and UNIDO guidelines.

Outcomes: Students would be acquainted with the various perspectives of economic growth and development and its relevance. Students would know the nature and classical theories of development. Students would be able to apply economic theories and concepts to contemporary social issues, as well as formulate an analysis of policy and recognize the role of ethical values in economic decisions. Students would learn the key tools to analyze agricultural economies, with an eye towards understanding a wide array of impacts, from agricultural policies to trade and climate change and what the role agriculture and industry have in economic development.

References:

- Sankar, U.(Ed) (2001), Environmental Economics, Oxford University Press, New Delhi.
- Dasgupta, P. (1993), An Enquiry into Well-being and Destitution, Clarendon Press, Oxford.
- Ghatak, S. (1986), An Introduction to Development Economics, Allen and Unwin, London.
- Gillis, M.D.H Perkins, M. Romer and D.R Snodgrass (1992), Economics of Development (3rd Edition), W.W. Norton, New York.
- Kahkonon, S.and M. Olson (2000), A New Institutional Approach to Economic Development Vistaar.
- Todaro, M P (1996), (6th Edition), Economic Development, Longman, London.
- Thirwal, A.P. (1999), (6th Edition), Growth and Development, Macmillan, U. K.

ECO – 403: INTERNATIONAL TRADE AND FINANCE – II

Credit: 05

Objectives:

- To identify and analyze problems in the field of trade and finance, and to develop solutions.
- To learn about economic forums and cooperation for the enhancement of international trade.
- To discuss different trade barriers for the development of international trade and policies for trade enhancement.

Module 1

Meaning and components of balance of payments; Equilibrium and disequilibrium in the balance of payments; The process of adjustment under systems of gold standard, exchange rates and flexible exchange rates; Expenditure-reducing and expenditure-switching policies and direct controls for adjustment; Policies for achieving internal and external equilibrium simultaneously under alternative exchange rate regimes

Module 2

A critical review of the monetary approach to the theory of balance of payments adjustment; Foreign trade multiplier with and without foreign repercussions and determination of national income and output; Relative merits and demerits of fixed and flexible exchange rates in the context of growth and development in developing countries.

Module 3

Forms of economic co-operation; reforms for the emergence of trading blocs at the global level; Static and Dynamic effects of a customs union and free trade areas; Rationale and economic progress of SAARC/SAPTA and ASEAN regions; Problems and prospects of forming a customs union in the Asian region; Regionalism (EU, NAFTA); Multilateralism and WTO; Conditionality clause of IMF

Module 4

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 balance of payments, employment and growth.

Module 5
Problems of India's international debt; Working and regulations of MNCs in India; Instruments of export promotion and recent import and export policies and agenda for future.

Outcome: Students would know the country's position regarding international trade, payments and foreign exchange. The students would learn the methods regarding improvement in terms of trade, international debt and balance of payments positions and adjustments. Students would know about the policies regarding increase in exports, to deal with international institutions and to maintain relation with other countries. Since globalization and international relations can increase the rate of growth and solve domestic problems like inflation, unemployment and value of currency etc.

Reference:

- Bhagwati J (1981) International Trade Selected Readings, Cambridge, University Press Massachusetts.
- Carbough, R.J. (1999) International Economics, International Thompson Publishing, New York..
- Chacholiades, M.(1990) International Trade : Theory and policy McGraw Hill, Kpgakusha, Japan.
- Dana, M.S. (2000) International Economics: Study, Guide and Work Book, Routledge Publishishers, London.
- Dunn, R, M and 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, Homewood.
- King, P.G. (1995) International Economics and International Economic Policy; A Reader McGraw Hill International, Singapore.
- Krugman, P.R. and M.Obstfeld (1994) International Economics: Theory and Policy, Glenview, Foresman.
- Salvatore, D. (1997) International Economics, Prentice Hall, Upper Saddle River, N.J. New York.
- Soderston, Bo. (1991) International Economics, The Macmillan Press, London.

ELECTIVE - (ANY ONE)

ECO- 404A: ECONOMETRICS-II
Credit: 05
Objectives:

- To learn how econometric methods are used to estimate causal relationships from observational data.
- To identify and estimate macroeconomic variables in economics and other social sciences.
- To formulate simple research questions and carry out independent analyses in order to answer those.
- To learn econometric software specifically Eviews and STATA for practical implementation of the methods learned in class.

Module 1
Autoregressive and distributed lag models - Koyak model, Partial adjustment model, adaptive expectations; Instrumental variables; Problem of auto-correlation - Application; Almon approach to distributed-lag models; Durbin h-test Error correlation mechanism, Causality test, Granger test and Sim's test.

Module 2
Introduction and examples; The simultaneous equation bias and inconsistency of OLS estimators; The identification problem; Rules of identification - order and rank conditions; Methods of estimating simultaneous equation system; Recursive methods and OLS;
Indirect least squares (ILS); 2SLS, 3SLS and ML methods - applications.
Module 3
Time Series Analysis: Stationary, unit roots, co-integration - spurious regression, Dicky- Fuller test, Engle-Granger test, Random Walk model, Forecasting with ARIMA modelling; Box-Jenkins methodology; Vector autoregression; Problems with VAR modelling -Applications; Time-varying parameters and Kalman filter.
Module-4
Panel Data Techniques: Panel data techniques - random coefficients model; Fix effects model; Random effect model, Discriminant analysis, Autoregressive Distributed Lag (ARDL) Model.
Module-5
Analysis of Volatility, Autoregressive Conditional Heteroscedasticity (ARCH), Generalised ARCH (GARCH) and EGARCH.

Outcome: By completing this course, the students would be able to use different econometric models in their research to analyse various types of data. It will also enable them to understand the simultaneous equation bias and inconsistency of OLS estimators, Indirect least squares (ILS); 2SLS, 3SLS and ML methods and their applications. The enhanced skill of data analysis that is acquired by studying this paper opens the job opportunity in the field of teaching, research, corporate areas and banking sector.

References:

- Amemiya, T. (1985) Advanced Econometrics Harvard University Press, Cambridge, Mass.
- Baltagi, B. H. (1998) Econometrics Springer, New York.
- Dongherty, C, (1992) Introduction to Econometrics, Oxford University Press, New York.
- Goldberger, A. S. (1998), Introductory Econometrics, Harvard University Press, Cambridge Mass.
- Gujarati D. N. (1995), Basic Econometrics (2nd Edition) McGraw Hill, New Delhi.
- Kennedy P. (1998) A Guide to Econometrics (4th Edition) MIT Press, New York.
- Kmenta J. (1997), Elements of Econometrics (Reprint Edition) University of Michigan Press, New York.
- Koutsoyiannis A. (19977) Theory of Econometrics (2nd Edition) The Macmillan Press Ltd, London.
- Krishna, K. L. (Ed) (1997) Econometric Applications in India, Oxford University Press, New Delhi.
- Maddala G. S. (Ed) (1993) Econometrics Methods and Application (2vols) Aldershot U.K.
- Theil, H. (1981) Introduction to Econometrics, Prentice Hall, New Delhi.
- Brooks, C. (2014) Introductory Econometrics for Finance, 4th Edition.

ECO- 404B: FINANCIAL INSTITUTIONS AND MARKETS-II
Credit: 05
Objectives:

- To understand concepts relevant to different markets and financial institutions.
- To gain knowledge of the mechanics and regulations of national and international organizations.

- To understand the functions and trading of stocks, bonds, and securities in exchanges and how they are regulated.

Module 1

Functions and Importance of Money Market and Capital Market; Characteristics of Developed and Underdeveloped Money Market; Differences and similarities between Money Market and Capital Market; Call Money Market, Treasury bill Market, Commercial bill market including commercial paper and certificate of deposits; Discount market -Government securities market

Module 2

Primary Market and Secondary Market for securities; Markets for derivatives; SEBI: its Genesis, organization, objectives and functions, IRDA and its objectives and regulations in insurance markets; IRDA Guidelines for licensing Insurance Agents

Module 3

Nature, organization and participants – Structure of Foreign Exchange Markets - devaluation, and depreciation - Foreign Capital Flows, forms and volume - Rise and fall of Brettonwood Institutions - International liquidity - Reforms in international monetary system for developing countries

Module 4

Lending operation of World Bank and its affiliates - Working of IDA and IFC, The Theory of optimum currency areas - Growth of regional financial institutions.

Module 5

Asian Development Bank and its lending activities; Asian Development Bank and India; Euro-dollar and Euro-currency markets:

Outcome: Students would have knowledge regarding the money market, capital market, and stock exchange. They would be able to understand the relationship between financial development and economic development. They would have knowledge about controller of financial system, e.g., RBI, SEBI, IRDA and lending operation of World Bank and its affiliates, growth of regional financial institutions. A basic understanding of the functioning of the financial institutions markets enhances their employability in financial sector and enables them to apply for jobs in government and non-government institutions.

References:

- Bhole, L. M. (1999) Financial Institutions and Markets, Tata McGraw Hill Company Ltd. New Delhi.
- Edminister, R.O.(1986) Financial Institutions Markets and Management, McGraw Hill New York.
- Bhale, L.M. (2000), Indian Financial System, Chugh Publication, Allahabad.
- Hanson, J. A. and S. Kathuria (Eds) (1999) India; A Financial Sector for the Twenty First Century, Oxford University Press New Delhi.
- Harker P. T. and S. A. Zenios (2000) (Eds) Performance of Financial Institutions Cambridge University Press, Cambridge.
- Johnson, H. J. (1993) Financial Institutions and Markets, McGraw Hill, New York.
- Khan M. Y. (1996) Indian Financial System Tata McGraw Hill, New Delhi.
- Machiraju, M. R. (1999) Indian Financial System, Vikas Publishing House, New Delhi.
- Prasad, K. N. (2001), Development of India"s Financial System, Sarup& Sons, New Delhi.
- Robinson, R. I. And D. Wrightman (1981) Financial Markets, McGraw hill , London.
- Smith, P.F. (1978) Money and Financial Intermediation: The Theory and Structure of Financial System, Prentice Hill, Englewood Cliffs, New Jersey.

ECO- 404C: HEALTH ECONOMICS – II
Credit: 05
Objectives:

- To understand the gender perspective of health.
- To acquire knowledge about the workings of the healthcare system with a special reference to India

Module 1
Health, Gender and Development- Women's Health at the Global level, Women's Health and Nutrition, Maternal Mortality Rate (MMR), Reproductive health, prevalence of Anaemia and women Health, Sex ratio, Women's health, Antenatal care and post-natal care
Module 2
Rural Health in India, NRHM, Rural Health Infrastructure, Rural health care System: sub-centre, Primary health centre and Community Health Centre
Module 3
Healthcare financing in India- public expenditure on health, Private Spending, Household Expenditure on Health, the user fee for Health care, external financing, Health insurance and Health financing, healthcare financing by the centre and states, and medical insurance schemes **Module 4**
Health and Millennium Development Goals (MDGs), Policy, Plan and Programmes for health development in India. Healthcare system reform in India.
Module 5
Healthcare development in Developing Economics and Developed Economies Economics of healthcare market, Healthcare development and PPP

Outcome: After completing the course the students would understand the gender perspective of health. They would know the workings of the healthcare system with a special reference to India and Healthcare development in Developing and Developed Economies.

References:

- Govt. of India (2005), Report of the National Commission on Macroeconomics and Health, New Delhi: Govt. of India, Ministry of Health and Family Welfare
- A J Culyer and Joseph P. Newhouse (2000), Handbook of Health Economics, Amsterdam: Elsevier
- Sophie Witter, et al (2000), Health Economics for Developing Countries, London, Macmillan
- Michel Spence and Maurean Lewis (eds) (2009), Health and Growth: Commission on Growth and Development, Jaipur; Rawat Publications
- Ajay Mahal et al (2000), Who Benefits from Public Health Spending in India, Washington, DC: World Bank
- A K Kalla and P C Joshi (eds) (2004), Tribal Health and Medicines, New Delhi: Concept Publishing Company
- Abdo S Yazbeck and David H Peters (eds) (2003), Health Policy Research in South Asia, Washington, DC: World Bank
- Philip Musgrave (ed) (2004), Health Economics in Development, Wasington, DC: World Bank
- Anthony J Culyer (ed) (2006) , Health Economics, London: Routledge
- L N Dash (2011), Health and India's Development Challenge, New Delhi: Regal Publications
- L N Dash (ed) (2013), Health and India's Economic Development: Challenge and Opportunities, New Delhi: Synergy Books