

Department of Economics

Banaras Hindu University, Faculty of Social Sciences

Batchelor of Arts in Economics

(In force from Session 2024-25)

UG-4 Years Course Structure & Curriculum as Per NEP UGC Guideline

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Guiding Principles

- 1. Guiding Principles for Undergraduate (UG) Four Year Course:** As per Minutes of the meeting of the NEP Implementation Committee of BHU, held on 16th January, 2024 at 3.00 PM in the Committee Room No. 2, Central Registry, BHU. Guided as;

Sl. no.	Course	Credits	
		(Hons.)	(Hons. with Research)
1.	Major	92	80
2.	Minor	32 out of which 12 credits should be other	32 out of which 12 credits should be other
3.	Multidisciplinary (MD)	9	9
4.	Skill Enhancement Course (SEC)	9	9
5.	Ability Enhancement Course (AEC)	8	8
6.	Value Added Course (VAC)	8	8
7.	Internship*	2	2
8.	Dissertation	-	12

Note: * 1 week of internship is equivalent to 1 credit

2. NEP Implementation Committee of BHU Proposed structure

Semester	Major (92)	Minor (32)	Others (36)
I (20)	Major (4)	Minor (4)	VAC1(4), MD1(3), SEC1(3), AEC1(2)
II (20)	Major (4)	Minor (4)	VAC2(2), VAC3(2), MD2(3), SEC2(3), AEC2(2)
III (20)	Major (8)	Minor (Voc) (4)	MD3(3), SEC3(3), AEC3(2)
IV (20)	Major (14)	Minor (4)	AEC4(2)
V (20)	Major (14)	Minor (Voc) (4)	Internship (2)
VI (20)	Major (16)	Minor (Voc) (4)	
VII (20)	Hons. Major (16)	Hons. with Research Major (16)	Minor (4)
VIII (20)	Major (16)	Major (4), Diss (12)	Minor (4)

Note: **VAC:** Value Added Course, **SEC:** Skill Enhancement Course, **MD:** Multidisciplinary Course

AEC: Ability Enhancement Course, VOC: Vocational Coerces, Diss: Dissertation

A. Economics- Major, Minor & Minor Vocational Papers

Sem	Major (92)	Minor (32)	Others (36)*
I (20)	Introductory Microeconomics (4)	Introductory Microeconomics (4)	VAC1(4), MD1(3), SEC1(3), AEC1(2)
II (20)	Introductory Macroeconomics (4)	Introductory Macroeconomics (4)	VAC2(2), VAC3(2), MD2 (3), SEC2(3), AEC2(2)
III (20)	Quantitative Method-I (4) Indian Economy (4)	Financial Market (Voc) (4)	MD3(3), SEC3(3), AEC3(2)
IV (20)	Intermediate Microeconomics (4) Intermediate Macroeconomics (4) Statistical Method-I (3) Quantitative Method-II (3)	Intermediate Macroeconomics (4)	AEC4(2)
V (20)	Advance Microeconomics (4) Money, Banking & Financial Market (4) Statistical Method-II (3) History of Economic Thought (3)	Environmental Impact Assessment (Voc) (4) *	Internship (2)
VI (20)	Advance Macroeconomics (4) Development Economics (4) Public Economics (4) Basic Econometrics (4)	Survey Method and Project Evaluation (Voc) (4) *	
VII (20)	Hons. Major (16) Research Method (4) Advance Econometrics (4) Elective major-I (4) Elective major-II (4)	Hons. with Research Major (16) Research method (4) Advanced Econometrics (4) Elective major-I (4) Elective major-II (4)	Research Method (4)
VIII (20)	Hons. Major (16) International Economics (4) Environmental Economics (4) Elective major-I (4) Elective major-II (4)	Research Major (16) Applied Econometrics (4) Dissertation (12)	Environmental Economics (4)

Note: A minor modification was made in the presence of all members of the NEP syllabus committee at the Head chamber at 4.00 PM on 09/04/2024, please find the final structure.

Elective Paper Hon. Sem VII & VIII

Option List-I

	Sem-VII		Sem-VIII
Major (4)	Advance Econometrics-I	Major (4)	Advance Econometrics-II
Major (4)	Applied Microeconomics	Major (4)	Applied Macroeconomics
Major (4)	Behavioural Economics-I	Major (4)	Behavioural Economics-II
Major (4)	Financial Economics -I	Major (4)	Financial Economics-II
Major (4)	Natural Resource Economics	Major (4)	Energy Economics
Major (4)	Agriculture-I	Major (4)	Agriculture-II
Major (4)	Population Studies-I	Major (4)	Population Studies-II
Major (4)	Labour Economics-I	Major (4)	Labour Economics-II
Major (4)	Political Economy-I	Major (4)	Political Economy-II
Major (4)	Regional Economic Development	Major (4)	Environment & Sustainable Development

Option List-II

	Sem-VII		Sem-VIII
Major (4)	Operations Research-I	Major (4)	Operations Research-II
Major (4)	Game theory-I	Major (4)	Game theory-II
Major (4)	Institutional Economics-I	Major (4)	Institutional Economics-II
Major (4)	Financial Market-I	Major (4)	Financial Market-II
Major (4)	Economics of Natural Disaster-I	Major (4)	Economics of Natural Disaster-II
Major (4)	Industrial Economics-I	Major (4)	Industrial Economics-II
Major (4)	Health Economics-I	Major (4)	Health Economics-II
Major (4)	Gender Economics -I	Major (4)	Gender Economics -II
Major (4)	Economics of Education-I	Major (4)	Economics of Education-II
Major (4)	Advance Public Economics	Major (4)	Social Choice Theory

Optional Paper Hon with Research Sem VII

Course	Option Paper-I (Theory)	Course	Option Paper-II (Empirical)
Major (4)	Behavioral Economics	Major (4)	Impact Assessment
Major (4)	Political Economy	Major (4)	Large Sample Data Base
Major (4)	Indian Economic thought	Major (4)	Financial Economics
Major (4)	Heterodox Economics	Major (4)	Economics of Climate Change
Major (4)	Nobel Laurate contribution	Major (4)	Economics of Disaster management

Note: The above structure passed by DC meeting held on 06/04/2024 at conference hall Department of Economics at 3.00 PM to 5.30 PM

Others (36)*

Sem	Others Category Papers (36)*			
	VAC	MD	SEC (IT)	SEC (Life Skill)
I	Indian Budgetary Analysis (4)	Understanding Economic development (3)	Data Analysis Using Excel (3)	
II	Vedic Economics (2)	Indian Economic Development (3)	Statistical Analysis Using R Software (3)	
III	Cultural Economics (2)	Global Economy & Financial Issues (3)	Analyzing Qualitative and Quantitative Data (3)	

A. Multidisciplinary 3 papers (3+3+3 credits) in DC meeting identified 3 broad area

- a. Mathematics, statistics and computer application,
- b. Humanities and social sciences and
- c. Natural and Physical sciences

Paper Name	Semester
Understanding Economics Development (3)	I
Indian Economic Development (3)	II
Global Economy & Financial Issues (3)	III

B. Value added Courses 3 papers (4+2+2 credits) in DC meeting identified 2 broad area

- a. Indian economy
- b. Cultural sciences

Paper Name	Semester
Indian Budgetary Analysis (4)	I
Vedic Economics (2)	II
Cultural Economics (2)	II

C. Skill Enhancement Course 3 papers (3+3+3 credits) in DC meeting identified 2 broad area

- a. Information and technology

Paper Name	Semester
Data Analysis Using Excel (3)	I
Statistical Analysis Using R Software (3)	II
Analyzing Qualitative and Quantitative Data (3)	III

3. Curriculum and Credit Framework for Undergraduate Programmes

As per the guideline of UGC, 2022, **the NEP 2020** states, “Assessments of educational approaches in undergraduate education that integrate the humanities and arts with Science, Technology, Engineering and Mathematics (STEM) have consistently shown positive learning outcomes, including increased creativity and innovation, critical thinking and higher-order thinking capacities, problem-solving abilities, teamwork, communication skills, more in-depth learning and mastery of curricula across fields, increases in social and moral awareness, etc., besides general engagement and enjoyment of learning (*UGC, 2022*).

The NEP 2020 UG structure will be of either 3 or 4-year duration, with multiple exit options within this period, with appropriate certifications, e.g.,

1. a UG certificate after completing 1 year in a discipline or field including vocational and professional areas, or
2. a UG diploma after 2 years of study, or a Bachelor’s degree after a 3-year programme.
3. The 4-year multidisciplinary Bachelor's programme, however, shall be the preferred option since it allows the opportunity to experience the full range of holistic and multidisciplinary education in addition to a focus on the chosen major and minors as per the choices of the student”

3.2.1 Semester/Credits:

- i) A semester comprises 90 working days and an academic year is divided into two semesters.
- ii) A summer term is for eight weeks during summer vacation.
- iii) Internship/apprenticeship/work-based vocational education and training can be carried out during the summer term, especially by students who wish to exit after two semesters or four semesters of study.

3.2.2 Major and Minor disciplines

Major discipline is the discipline or subject of main focus and the degree will be awarded in that discipline. Students should secure the prescribed number of credits (about 50% of total credits) through core courses in the major discipline.

Minor discipline helps a student to gain a broader understanding beyond the major discipline. For example, if a student pursuing an Economics major obtains a minimum of 12 credits from a bunch of courses in Statistics, then the student will be awarded B.A. degree in Economics with a Minor in Statistics.

3.2.3 Credit hours for different types of courses

The workload relating to a course is measured in terms of credit hours. A credit is a unit by which the coursework is measured. It determines the number of hours of instruction required per week over the duration of a semester (minimum 15 weeks).

Each course may have only a lecture component or a lecture and tutorial component or a lecture and practicum component or a lecture, tutorial, and practicum component, or only practicum component. For example, a three-credit lecture course in a semester means three one-hour lectures per week with each one-hour lecture counted as one credit. In a semester of 15 weeks duration, a three-credit lecture course is equivalent to 45 hours of teaching.

One credit for tutorial work means one hour of engagement per week. In a semester of 15 weeks duration, a one-credit tutorial in a course is equivalent to 15 hours of engagement.

Similarly, a 4 –credit course with 3- credits assigned for lectures and one credit for tutorial shall have three 1-hour lectures per week and one 1-hour tutorial per week. In a semester of 15 weeks duration, a four-credit course is equivalent to 45 hours of lectures and 15 hours of tutorials

- **Lecture courses:** Courses involving lectures relating to a field or discipline by an expert or qualified personnel in a field of learning, work/vocation, or professional practice.

- **Tutorial courses:** Courses involving problem-solving and discussions relating to a field or discipline under the guidance of qualified personnel in a field of learning, work/vocation, or professional practice.

5.2. Levels of Courses:

Courses shall be coded based on the learning outcomes, level of difficulty, and academic rigor.

The coding structure is as follows:

- i. **0-99: *Pre-requisite courses*** required to undertake an introductory course which will be a pass or fail course with no credits. It will replace the existing informal way of offering bridge courses that are conducted in some of the colleges/ universities.
- ii. **100-199: *Foundation or introductory courses*** that are intended for students to gain an understanding and basic knowledge about the subjects and help decide the subject or discipline of interest. These courses may also be prerequisites for courses in the major subject. These courses generally would focus on foundational theories, concepts, perspectives, principles, methods, and procedures of critical thinking in order to provide a broad basis for taking up more advanced courses. These courses seek to equip students with the general education needed for advanced study, expose students to the breadth of different fields of study; provide a foundation for specialized higher-level coursework; acquaint students with the breadth of (inter) disciplinary fields in the arts, humanities, social sciences, and natural sciences, and to the historical and contemporary assumptions and practices of vocational or professional fields; and to lay the foundation for higher level coursework.
- iii. **200-299: *Intermediate-level courses*** including subject-specific courses intended to meet the credit requirements for minor or major areas of learning. These courses can be part of a major and can be pre-requisite courses for advanced-level major courses.
- iv. **300-399: *Higher-level courses*** which are required for majoring in a disciplinary/interdisciplinary area of study for the award of a degree.
- v. **400-499: *Advanced courses*** which would include lecture courses with practicum, seminar-based course, term papers, research methodology, advanced laboratory experiments/software training, research projects, hands-on-training, internship/apprenticeship projects at the undergraduate level or First year Postgraduate theoretical and practical courses.
- vi. **500-599:** Courses at first-year Master's degree level for a 2-year Master's degree programme
- vii. **600-699:** Courses for second-year of 2-year Master's or 1-year Master's degree programme
- viii. **700 -799 & above:** Courses limited to doctoral students

B. Economics- Major, Minor & Minor Vocation

Sem	Major		Minor
I	ECOMJ11-Introductory Microeconomics (4)		ECOMN11-Introductory Microeconomics (4)
II	ECOMJ21-Introductory Macroeconomics (4)		ECOMN21-Introductory Macroeconomics (4)
III	ECOMJ31-Quantitative Method-I (4) ECOMJ32-Indian Economy (4)		ECOMV31- Financial Market-(4)-Voc
IV	ECOMJ41- Intermediate Microeconomics (4) ECOMJ42- Intermediate Macroeconomics (4) ECOMJ43- Statistical Method-I (3) ECOMJ44- Quantitative Method-II (3)		ECOMN41-Intermediate Macroeconomics (4)
V	ECOMJ51- Advance Microeconomics (4) ECOMJ52- Money, Banking & Financial Market (4) ECOMJ53- Statistical Method-II (3) ECOMJ54- History Economic Thought (3)		ECOMV51-Environmental Impact Assessment (Voc) (4) *
VI	ECOMJ61- Advance Macroeconomics (4) ECOMJ62- Development Economics (4) ECOMJ63- Public Economics (4) ECOMJ64- Basic Econometrics (4)		ECOMV61-Survey Method and Project Evaluation (Voc) (4) *
VII	Hons. Major (16) ECOMJ71- Research Method (4) ECOMJ72-Advance Econometrics (4) ECOMJ73- Elective major-I (4) ECOMJ74- Elective major-II (4)	Hons. with Research Major (16) ECOMJ7R1- Research method (4) ECOMJ7R2- Advanced Econometrics (4) ECOMJ7R3- Elective major-I (4) ECOMJ7R4- Elective major-II (4)	ECOMN71- Research Method (4)
VIII	Hons. Major (16) ECOMJ81- International Economics (4) ECOMJ82- Environmental Economics (4) ECOMJ83- Elective major-I (4) ECOMJ84- Elective major-II (4)	Research Major (16) ECOMJ8R1- Applied Econometrics (4) ECODS8R2- Dissertation (12)	ECOMN81- Environmental Economics (4)

BA HONS. ECONOMICS MAJOR PAPERS

BA Hons. Economics Semester-I

ECOMJ11- Introductory Microeconomics (Major-4)

Course Objective: This course is designed to exhibit for basic understanding of Introductory Microeconomics. The emphasis will be on thinking like an economist. This course demonstrate how microeconomic concepts can be practically applied in real-life situations, making the learning experience more engaging and relatable.

Course Learning Outcomes: The course expects students basic understanding microeconomics concepts like: how individuals make decisions as consumers, laws and concept of utility, laws of the production function, and different types of costs along with distinguishing features of both product markets. Expected graphical explanation of markets and real-life problems.

Course Content:

UNIT-1: The Subject Matter of Economics: Definitions, Central Problems of Economy, Trade-off between Scarcity and choice, Micro vs Macro, Demand and Supply, Concept of Demand and Supply Elasticity. (8)

UNIT-2: Introduction to Consumer Behaviour & Producer Behaviour: Consumer equilibrium under Cardinal and ordinal Utility approach, Derivation of Demand curve through both approaches, Decomposition of Price Effect into Income and Substitution Effects. (Graphical Representation). Introduction to short run and long run production functions, producer equilibrium. Cost: Traditional and Modern theory of cost, relationship between cost, revenue and profit. (20)

UNIT-3: Product Market –Price and output determination under different market structures: long run and short run analysis; Monopoly Power and Dead weight Loss; Price Discrimination. (17)

Suggested Readings

1. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. The workbook by Varian and Bergstrom may be used for problems.
2. Koutsoyiannis, A. (1975). *Modern microeconomics*. Springer.
3. Mankiw, N.G. (2018) *Principle of Microeconomics*, 8th edition
4. Pindyck, R. S., & Rubinfeld, D. L. (2013). *Microeconomics* (8thed.). New York: Pearson Education.
5. C. Snyder & Nicholson, W. (2011). *Fundamentals of Microeconomics* (11thed.). New Delhi: Cengage Learning India.

BA Hons. Economics Semester-II

ECOMJ21- Introductory Macroeconomics (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: This course is designed to exhibit for basic understanding of Introductory concepts of Macroeconomics. This course demonstrate how economy will work and what are the major macroeconomic variable of interests.

Course Learning Outcomes: The course expects students basic understanding macroeconomics concepts like: how economy will work on employment, income, consumption and investment.

Course Content:

Unit-I National Income: Concept of Stock & Flow, Sectors of the economy; Circular Flow of Income in two, three and four Sector economy; National Income Accounting & Identities: Measurement of National Income, Problems of measurement of National income in India, Structure of Indian Economy through National Account Statistics; Measurement of Cost of Living: CPI, GNP Deflator. (9 Lectures)

Unit-II Theory of Employment and Income: Classical analysis of determination of Equilibrium output and Employment, Simple Keynesian theory of employment and income determination: With and Without Government Sector; Ricardian Equivalence- Impact and Efficacy of Policy Action, The Neo-Classical Synthesis- The IS-LM Model and the interaction of the Real and Monetary Sectors. IS-LM model in the open economy under fixed exchange rate without capital mobility. (12 Lectures)

Unit-III Consumption, Investment & Economic Fluctuations- Consumption Function: Keynes' Absolute Income Hypothesis, Theories of Consumption after Keynes- Relative Income Hypothesis, Permanent Income Hypothesis, Life Cycle Hypothesis, Consumption under Uncertainty; Investment Multiplier: Simple and Dynamic, Leakages and limitations; The principle of Acceleration, Interaction of Accelerator and Multiplier; Investment function: Types of investment, Concept of MEC and MEI, Neo-Classical Theory of Investment.

Economic Fluctuations: Trade Cycle: Nature and Characteristics; Theories of Trade Cycle: Samuelson, Hicks; Control of trade cycle, Recent Recession(s) in the World. (24 Lectures)

Suggested Readings:

1. Dernberg Thomas F (1985): Macroeconomics: Concepts, Theories and Policies, 7th Edition.
2. Dornbusch, Fischer & Startz (2005): Macroeconomics, Tata McGraw-Hil Publishing Co. Ltd
3. Shapiro Edward (2007): Macroeconomic Analysis, Galgotia Publications Pvt. Ltd.
4. Blanchard Olivier (2007): Macroeconomics, Ch-8,9, Pearson Education
5. Branson William (2006): Macroeconomics: Theory and Policy, AITBS
6. Rana, K.C. & Verma K.N: Macro Economic Analysis, Vishal Publishing House
7. Hejindra, B.J. and F.V. Ploeg (2001): Foundations of Modern Macroeconomics, Oxford University Press, Oxford.
8. Shapiro, Edward (2001) Macroeconomic Analysis, Galgotia Publications Private Limited, New Delhi

BA Hons. Economics Semester-III

ECOMJ31- Quantitative Method-I (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The objective of this course is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level. In this course, particular set theory, linear Algebra and differentiation but the means for illustrating the method of applying mathematical techniques to apply in economics.

Learning Outcome: The course upgrades the mathematical economics understating of students. These analytical tools help students to understand different functions, which are used in analysis of economic theories and problems. These tools are necessary for anyone seeking employment as an analyst in the corporate world.

Course Content:

Unit -I: Set and its operations: Set and its operations, Relation & Functions, Types of Functions: polynomial, exponential, logarithmic, Limit & Continuity. (10 Lectures)

Unit -II: Linear Algebra: Matrix Operation, determinants, transpose and Inverse matrix, Linear and quadratic forms, Solution of Equation: Crammers Rule, matrix application to market, national income and input-output models. (15 Lectures)

Unit -III: Differentiation: One & two Variable rules, partial differentiation, comparative statistics and its application. Second and higher order derivatives: total deferential rules, derivatives of implicit function. (20 Lectures)

Suggested Readings

1. Sydsaeter, K., Hammond, P. (2002). Mathematics for economic analysis. Pearson Educational.
2. Chiang, A and Wainwright, K. (2005) Fundamental Methods of mathematical Economics
3. Yamane, Taro (1975): Mathematics for Economists, Prentice Hall of India, New Delhi.
4. Rosser, M. (2003). Basic Mathematics for Economists. (2nd ed.). New York: Routledge.
5. Bhardwaj, R. S. (2007). Mathematics for Economics and Business. Excel Books India.

BA Hons. Economics Semester-III

ECOMJ32- Indian Economy (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The objective of this course is to transmit the body of knowledge on the issue and problem of Indian economy.

Learning Outcome: After the completing course expected that student can understand the problem of Indian economy and what are the theoretical and empirical solution to overcome from these economic problem

Course Content:

Unit -I: Indian Economy Since Independence: Basic features and problems of Indian Economy, Economic History of India Since Independence, Change in Indian Economic structure after Globalization, Emergence and development of Planning exercise in India – historical debates, plan models and shift in focus over time, Evaluation of Five-Year Plans, Planning commission v/s NITI Aayog, Black Economy, Demonetization, HDI, MDGs and SDGs in India. (22 Lectures)

Unit -II: Sectoral Performance of Indian Economy: Sectoral Composition of Indian Economy: Agricultural Crisis & Policy response, Trends in Agricultural Production and Productivity, Evaluation of land reforms & Green, White and Blue Revolution, Trends and Patterns of Industrial Sector Growth with focus on PSUs and policy of Disinvestment, MSMEs– Growth, Structure, Policy & Performance, Dualism and Labour Absorption, Service sector & Leap frog jump in India. (18 Lectures)

Unit -II: External Sector in India: India's foreign trade – composition, trends, India's Balance of payment since 1991, Convertibility of Rupee, Foreign Capital routes, MNCs & Impact of Globalization, WTO and India. (20 Lectures)

Suggested Readings

1. Kapila,Uma (2020-21) Indian Economy Performance and Policies,21st Edition, Academic Foundation.
2. Kapila,Uma (2019): Indian economy since Independence, Academic Foundation
3. Dutt Guarav and Sundaram's (2017), Indian Economy. S Chand & Co. Ltd. New Delhi.
4. Singh, Ramesh, (2020-2021): Indian Economy, 12th Revised Edition,Tata-McGraw Hill

Publications, New Delhi.

5. Jalan, B (2000): The Indian Economy – Problems & Prospects, Viking, New Delhi
6. Mishra S.K & V.K Puri (2017). Indian Economy and –Its Development Experience. Himalaya Publishing House.
7. Brahamananda, P.R. & V.R. Panchmukhi (1987)(Eds) : The Development Process of the Indian Economy, Himalaya Publishing House, Bombay
8. Dhingra, I.C., (2017): March of the Indian Economy, Heed Publications Pvt. Ltd.,
9. Dantwala, M.L(1995).: Dilemmas of Growth, The Indian Experience, Sage Publications, NewDelhi

BA Hons. Economics Semester-IV

ECOMJ41- Intermediate Microeconomics (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: This course is a sequel to Introductory Microeconomics and designed to provide a sound training in microeconomic theory to analyse the individual economic behaviour. The emphasis will be on mathematical approach to understanding of the concepts. It covers how microeconomic concepts can be practically applied to analyse real-life situations, making the learning experience more engaging and relatable.

Course Learning Outcomes: The course expects from students to solve the problem related the consumer and producer behaviour using mathematical approach, especially consumer and producer optimization problems.

Course Content:

Unit 1: Consumer Optimization (Mathematical Approach): Preferences and Utility, Axioms of Utility Function, Utility Maximization and Expenditure Minimization, Comparative Static Equilibrium, Uncompensated Vs Compensated (Hicks and Slutsky) Demand Curves. Slutsky's Approach of Decomposition of Price Effect.

Demand and Supply Analysis: Partial Market Equilibrium- A linear and Non-Linear Model, General Market Equilibrium, Comparative Static Equilibrium Model -Shifts in Equilibrium, Consumer Surplus. (18)

Unit 2: Producer Optimization (Mathematical Approach): Homogenous functions: Properties, Cobb-Douglas and CES production functions. Cost and Revenue Analysis: Relationship among Total, Marginal and Average Concepts, Marginal Concepts and Elasticity, Cost Minimization and Profit Maximization. (12)

Unit 3: Factor Market and Distribution: Personal versus Functional Distribution; Marginal Productivity Theory of Distribution, Determination of Factor Prices under Perfect Competition

and Monopoly, Rent: Ricardian, Modern and Quasi Theory of Rent. Wage: Modern Theory of Wages; Collective Bargaining and Wage theory. Interest: Classical, Loanable Funds and Keynesian theory of interest. Profit: Schumpeter's Innovation Theory and Dynamic Theory of Profits. (15)

Suggested Readings

1. A.R. Prasad and I. Mohan, A Study on the Theory of Consumer Demand (An Exposition with Simple Mathematics), Himalaya Publishing House Pvt. Ltd.
2. B. Douglas Bernheim and Michael D. Whinston, *Microeconomics*, Tata McGraw- Hill (India), 2009.
3. C. Snyder and W. Nicholson, *Fundamentals of Microeconomics*, Cengage Learning (India), 2010.
4. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. The workbook by Varian and Bergstrom may be used for problems.
5. Koutsoyiannis, A. (1975). *Modern microeconomics*. Springer.

BA Hons. Economics Semester-IV

ECOMJ42- Intermediate Macroeconomics (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: This course is a sequel to Introductory Macroeconomics and provide a deep understating of Classical, New Classical, Keynesian, New Keynesian and Post Keynesian macroeconomics models and Inter-temporal Decision Making of economy.

Course Learning Outcomes: The course expects from students to solve the problem related the economy as whole, especially related to money & inflation, Employment, Incime and Investment.

Course Content:

Unit-I Money & Inflation: - Post Keynesian Theories of Demand for Money-Baumol, Tobin and Patinkin-An Overview, Friedman and the Modern Quantity, Theories of Inflation- Structural and Monetarist Approaches; Phillips Curve Controversy, The Natural Rate of Unemployment Hypothesis-Adaptive Expectation and Rational Expectation models, NRU and full employment, NRU and NAIRU, Understanding Inflation in India. (14 Lectures)

Unit-II New Classical & New Keynesian Macroeconomics- New-Classical Model of Macroeconomics: Models of Income and Employment Determination: An Overview, New Classical Macroeconomics, The Real Business Cycle Theory –The Model of Kydland and Prescott, Understanding Recent Economic Crises.

New-Keynesian Model of Macroeconomics: -Wage and Price Stickiness- Normal Rigidities-Wage Contract Models, Real Rigidities- Search Models-An Elementary Treatment, Staggered Price Adjustment Model-Menu Cost Argument, Sources of Rigidity-Imperfect Information & Coordination Failure. (22 Lectures)

Unit-III Inter-temporal Decision Making & Macroeconomics Policies- Inter-temporal Decision Making: - Representative Agent Model of Ramsey and Overlapping Generation Model-

Only Introduction OLG. Macro Policy- Coordination of Fiscal and Monetary Policy, Taylor Rule, Rules versus Discretion, Monetary Transmission Mechanism and Targeting. (9 Lectures)

Suggested Readings

1. Frisch, H: Theories of Inflation, Cambridge University Press
2. Dornbusch, Fischer & Startz, Macroeconomics, Tata McGraw-Hill Publishing Co. Ltd.
3. S. Brian and Richard V., 'Modern Macroeconomics' Edward Elgar Publishing House
4. Shapiro, Edward., Macroeconomic Analysis, Gollgotia Publications Pvt.Ltd., New Delhi
5. Blanchard Olivier & Fischer Stanley. Lectures on Macroeconomics. Cambridge: MIT Press,
6. Mankiw, G & Romer D, "New Keynesian Economics" Vol-1 & 2 The MIT Press
7. Lewis M. K. and P.D.Mizen (2000) Monetary Economics, , 1st Edition, Oxford
8. Thorn, R.S. Edited (1976), "Monetary Theory and Policy" Praeger Publishers, New York
9. Levacic, R. and A. Rebman: Macroeconomics: An Introduction to Keynesian and Neo-Classical Controversies.

BA Hons. Economics Semester-IV

ECOMJ43- Statistical Methods-I (Major-3)

Credit-3 (3L)/ (45 Hours)

Course Objective: The objective of this course is to transmit the body of knowledge of Statistical Methods at the undergraduate level. The course offers elementary understanding of statistics, which includes data description, correlation, regression, time series and Index numbers.

Learning Outcome: The course develops basic understating of statistical methods which are widely applied. This course help students to understand the statistical methods used for data interpretation and analysis. The knowledge of statistical methods will help students seeking employment in the academia and corporate world.

Course Content:

Unit I: Meaning and Scope of statistics; collection, organisation, summarization and presentation of data; Data description – measure of location, spread, position and symmetry. (10)

Unit II: Correlation & Regression – Correlation-types, partial & multiple correlation coefficients, methods- Karl Pearson and rank correlation, and properties; regression – regression lines, method of least square, standard error of the estimate and limitations, covariance and correlation coefficients. (20)

Unit III: Time Series & Index Number– components and measurements; interpolation and extrapolation; Index Numbers- construction, types, test of adequacy and base shifting & splicing. (15)

Suggested Readings

1. Gupta, S. C. (2011). Fundamentals of statistics (pp. 18-1). New Delhi: Himalaya Publishing House.
2. S. C. Gupta, V. K. Kapoor (2014) Fundamentals of Applied Statistics, Sultan Chand & Sons
3. Bluman, A. G. (2013). Elementary statistics: A step by step approach: A brief version (No. 519.5B585E.). McGraw-Hill.
4. Berenson, M. L., Stephan, D. F., Krehbiel, T. C., & Levine, D. M. (2011). Statistics for Managers using MS Excel. Pearson Higher Ed.
5. Nagar, A.L. and Das, R.K (1983), Basic Statistics, Second Edition, Oxford University Press

BA Hons. Economics Semester-IV

ECOMJ44- Quantitative Method-II (Major-3)

Credit-3 (3L/45 Hours)

Course Objective: The objective this course is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory and macroeconomic theory. In this course, particular, constrained and unconstrained optimisation, use of calculus in mathematical analysis of economic theory.

Learning Outcome: The course provides the mathematical foundations necessary for further study of a variety of disciplines including postgraduate economics, finance and data analytics. The analytical tools introduced in this course have applications wherever optimization techniques are used in business decision-making for managers and entrepreneurs alike.

Course Content:

Unit-I: Unconstrained Optimization-global and local extrema of real-valued functions, necessary and sufficient conditions for the extrema values of functions of one variable or several variables; Hessian determinant, optima of convex and concave functions-one and several variables; Applications in Economics

Constrained Optimization: The Lagrange Multiplier method and Hessian Conditions- Application in consumer and producer behaviour. (20)

Unit-II: Integral Calculus: Indefinite Integral: Integration by substitution, Parts, and Partial Fraction; Definite Integral: Area under or between Curves and Improper Integrals; Applications of Definite Integral in Economics. (12)

Unit-III: Difference and Differential Equations: Introduction to First-order linear differential & Difference equations, Applications in Economics (13)

Suggested Books

1. Chiang, Alpha C. and Wainwright, Kevin (2005): Fundamental Methods of Mathematical Economics, 4th Edition, McGraw-Hill.
2. Dowling, Edward T. (2004): Introduction to Mathematical Economics, Third Edition, Tata McGraw-Hill.
3. Renshaw, G. (2011). Maths for Economics. (4th ed.). Oxford. Oxford University Press
4. Simon, C. P., & Blume, L. (1994). Mathematics for economists (Vol. 7). New York: Norton.
5. Sydsaeter, K., Hammond, P. (2002). Mathematics for economic analysis. Pearson Educational.

BA Hons. Economics Semester-V

ECOMJ51- Advance Microeconomics (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: This course is a sequel to Intermediate Microeconomics which is designed to provide a sound training in microeconomic theory by making them aware of mathematical tools along with the conceptual clarity of general equilibrium and welfare and asymmetric information.

Course Learning Outcomes: The expects conceptual clarity of general equilibrium and welfare and asymmetric information of the students. The course trains the students of economics about the basic terminologies used in game theory.

Course Content:

Unit 1: General Equilibrium and Welfare Economics: The Walrasian System, Existence, Uniqueness and Stability of an Equilibrium, Two-Consumer General Equilibrium System, General equilibrium models of Consumption, production and exchange; Welfare Economics - First and Second Fundamental Theorems of Welfare Economics, Welfare Criteria - Fairness; Pareto optimality; Kaldor efficiency; Scitovsky Criterion; Samuelson Criterion; Social Choice; Social Welfare Function; Arrow's Impossibility Theorem and the related results. (20)

Unit 2: Asymmetric Information: Externalities; public goods and markets with asymmetric information. (10)

Unit 3: Game Theory: Rules of the Game, The Extensive and Strategic form of Games. Solutions: Dominant Strategy, Dominance Solvability, Nash Equilibrium. Applications: Cournot Duopoly, Stackelberg model, the commons problem; Mixed strategies and their applications: Natural

Monopoly and Bankruptcy Law, Zero-sum games, playing safe: Maximin, playing sound: Minimax, playing both safe and sound: Playing Nash. (20)

Suggested Readings

1. C. Snyder and W. Nicholson, *Fundamentals of Microeconomics*, Cengage Learning (India), 2010.
2. Koutsoyiannis, A. (1975). *Modern microeconomics*. Springer.
3. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. The workbook by Varian and Bergstrom may be used for problems.
4. Pindyck, R. S., & Rubinfeld, D. L. (2013). *Microeconomics* (8thed.). New York: Pearson Education.
5. Osborne, M.J. *An Introduction to Game Theory*, Oxford University Press, 2004.

BA Hons. Economics Semester-V

ECOMJ52- Money, Banking and Financial Market (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The objective of the course is to provide a deep training on money, banking and financial market. It covers the money & Inflation related problem and solutions, Banking Related issues facing the economics and financial market in detail.

Course Learning Outcomes: The expects clarity of students on money, banking and financial market related problem and how they are working.

Course Content:

Unit-I Money & Inflation- Money: Meaning & Functions, Gresham's Law; High Powered Money and Money Multiplier; RBI Approach to Supply of Money; Value of money: Cash Transaction Approach, Cash Balance Approach; Keynesian theory of demand for money. Inflation: Types, Effects, Demand pull and cost push Inflation, structural inflation; Inflation and Unemployment-The Phillips Curve-Short run & Long run; concept of Inflationary Gap, Double Inflationary Gap, Trends, causes and control of inflation in India. (25 Lectures)

Unit-II Banking-Commercial Banking- Meaning and Functions, Process of Credit Creation; Concept of Micro-finance. Central Banking- Functions; Methods of Credit Control; Recent Reforms in Banking Sector in India; Monetary Policy: Objectives & Limitations (with reference to India). (10 Lectures)

Unit-III Financial Market: Role and structure of Money Market; Capital market: Primary and secondary market in India; Introduction to BSE and NSE; SEBI: Functions and role; Financial Instruments: Government securities, derivatives, futures, options and swaps, bond, debentures & equities. (10 Lectures)

Suggested Readings

1. Lewis M. K. and P.D.Mizen (2000): Monetary Economics, Oxford
2. Jadhav Narendra (2006): Monetary Policy, Financial Stability & Central Banking, Macmillan
3. Baye and Jansen (1996): Money, Banking and Financial Markets, AITBS
4. Gail E. Makinen (1978): Macroeconomics: Concepts, Theories and Policies, Money, The Price Level and Interest Rate, Prentice Hall India Ltd.
5. David E. W. Laidler (1977): The Demand for Money: Theories & Evidence, Dun Donnelley
6. O. P. Kotwal (1987): Theories of Inflation: A Critical Survey, Tata-McGraw-Hill Publishing Co. Ltd.
7. Ackley G, (1978): Macroeconomics: Theory & Policy, New York, Macmillan
8. Rana, K.C. & Verma K.N: Macro Economic Analysis, Vishal Publishing House
9. Shekhar & Shekhar, (1998): Banking Theory & Practice, Vikash Publishing House Pvt. Ltd.

BA Hons. Economics Semester-V

ECOMJ53- Statistical Method -II (Major-3)

Credit-3 (3L)/ (45 Hours)

Course Objective: The objective of this course is to transmit the body of knowledge of inferential statistics at the undergraduate level. The course offers, probability theory, probability distribution and statistical inferences.

Learning Outcome: The course introduces the probability theory and distribution for discrete and continuous variables. The basic knowledge of inferential statistics will enable students seeking employment in the academia and corporate world.

Course Content:

Unit -I: Probability Theory - Sample spaces and events; probability axioms and properties; counting techniques; conditional probability and Bayes' rule. (10)

Unit -II: Probability Distribution –Random variables; Probability functions & characteristics; discrete and continuous distributions- uniform, binomial, normal, poisson and exponential random variables. (15)

Unit -III: Statistical Inference: Estimation of parameters -point and interval estimation; properties of good estimators; Law of large numbers & central Limit theorem; Hypothesis testing- Z-test, t-test, F-test, Chi-Square. (20)

Suggested Reading

1. J L Devore (2020) probability and statistics for engineering and the sciences, 9E, metric edition
2. Gupta, S. C., & Kapoor, V. K. (2020). Fundamentals of mathematical statistics. Sultan Chand & Sons

3. Croxton, F. E., & Cowden, D. J. (1964). Applied General Statistics. (2nd ed.). New Delhi: Prentice Hall of India Private Limited. (latest edition)
4. Freund, J. E., & Perles, B. M. (2007). Modern Elementary Statistics. (12th ed.). New Jersey: Prentice Hall.
5. Anderson, D. R., Sweeney, D. J., Williams, T. A., Camm, J. D., & Cochran, J. J. (2014). Essentials of Statistics for Business and Economics. Boston: Cengage Learning.

BA Hons. Economics Semester-V

ECOMJ54- History of Economic Thought (Major-3)

Credit-3 (3L)/ (45 Hours)

Course Objective: The objective of this course is to transmit the body of knowledge of history of economic thoughts. The course offers, Indian economic thought, western thought and contemporary economics thinkers.

Learning Outcome: This course expects the understanding of historical development of economics ideas and theories. The knowledge of thoughts will enable students to know about the development of the subject of economics.

Course Content:

Unit – I: Indian Economic Thought: Kautilya: The View of Welfare State, Taxation, Agriculture and Wage Policy; Valluvar: The View of Wealth, Factor of Production and Welfare State; The Economic View of Naoroji, Pt Madan Mohan Malviya, Mahatma Gandhi, J. K. Mehta and Pt. Deendayal Upadhyay. (15 Lectures)

Unit – II: Western Economic: Thought Features of Physiocracy, Mercantilism and Colonialism, Classical School of Economics – Adam Smith, Ricardo, J.B. Say and J.S. Mill, Scientific Socialism – Karl Marx, Economic Ideas of Marshall, Sismondi, Pigou and Keynes (15 Lectures)

Unit – III: Contemporary Economic Thinkers: Economic Idea of Samuelson- Consumer Behaviour; Idea of Lewis of Economic Development; Economic View of Robert Solow, Amartya Sen, Paul Romar and Claudia Goldin. (15 Lectures)

Suggested Reading

1. Roy, Tirthankar, (2020): The Economic History of India, 1857–2010, OUP, India
2. Dalrymple William, (2019): The Anarchy: The East India Company, Corporate Violence, and the Pillage of an Empire, Bloomsbury Publishing
3. Dutt, R.C. (2018): The Economic History of India in the Victorian Age: From the Accession of Queen Victoria in 1837 to the Commencement of the 20th Century, Franklin Classics
4. Lokanathan, V. (2018): A History of Economic Thought, S Chand publication
5. Hajela, T.N, (2015) History of Economic Thought, 18th Edition, Ane Books

6. Paul, R. R. (2014): History of Economic Thought, Kalyani Publisher
7. Mishra, A.K. (2010): A Compilation of Indian Economic Thought (From Kautilya to Kalam), Worldman Publication, New Delhi
8. Haney, L.H. (2009): History of Economic Thought, University of Michigan
9. Dasgupta, A.K. (1993) A History of Indian Economic Thought, Routledge

BA Hons. Economics Semester-VI

ECOMJ61- Advance Macroeconomics (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: This course is a sequel to Intermediate Macroeconomics which is designed to provide a deep understanding of model of economic growth, endogenous growth and related problems.

Course Learning Outcomes: The course expects the theoretical knowledge of growth models and its related problems. The course trains the students of economics about the growth different related issues in different types of economies.

Course Content:

Unit-I Problem of Economic Growth- Problem of Economic Growth- Problem of Economic Growth and the General Solution; Growth Equilibrium: Existence, Uniqueness and Stability. (4 Lectures)

Unit-II Models of Economic Growth- Models of Economics Growth-Neo-Keynesian Models of Growth & Distribution- N. Kaldor, L. Pasinetti and Mrs. Joan Robinson; Concept of Golden Age and Golden Rule of Accumulation. Technology and Growth- Hicks, Harrod and Solow- Neutrality of Technical Change, Technical Progress and Steady State-Solow and Kaldor. Money and Growth- James Tobin and H.G. Johnson. (27Lectures)

Unit-III Endogenous Growth & Convergent Analysis -Endogenous Growth Models- AK Models, Lucas Model of Human Capital, Romer Model of Endogenous Innovation. Convergence Analysis- The Classical Approach to Convergence Analysis, Growth Accounting and Structural Breaks. (14 Lectures)

Suggested Reading

1. Blanchard, O. and Fischer, S. 1989. Lectures on Macroeconomics,
2. Cass, D. 1965. Optimum Growth in an Aggregative Model of Capital Accumulation," Review of Economic Studies 32, 233-240.
3. Koopmans, T. 1965. On the Concept of Optimal Growth," in The Econometric Approach to Development Planning, Chicago, Rand- McNally.
4. Barro, Robert J. and Xavier Sala-i-Martin, Economic Growth, McGraw-Hill,
5. Romer, David, Advanced Macroeconomics, New York: McGraw-Hill,

6. H.G. Jones, "An Introduction to Modern Theories of Economic Growth" McGraw-Hill Book Company
7. Stiglitz J.E. & Uzawa H, "Readings in Modern Theory of Economic Growth" The M.I.T. Press
8. Hahn F.H., "Readings in Theory of Growth" Macmillan
9. Jones C.I., "Introduction to Economic Growth" W.W. Norton & Company, New York
10. Romer David, "Advanced Macroeconomics" McGraw Hill Co.
11. Sen, A.K.,ed.(1970) Growth Economics, Penguin Books.

BA Hons. Economics Semester-VI

ECOMJ62- Development Economics (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The aim of course is to provide a depth understanding of economic development like, theories of economic development, dualism, poverty, inequality related to different types of economies.

Course Learning Outcomes: The course expects the theoretical knowledge of economic development concepts, theories and poverty and inequality related problems. The course trains the economics students as per the market need.

Course Content:

Unit-I Nature & Importance; Economic Development: Concept and measurements- traditional economic measures, the new economic view of development, Core Values of Development, Objectives of Development; Characteristics of developing world; Economic growth vs. Economic Development; Millennium Development Goals; Sustainable development goals.

Dualism: Concepts and Definition; Theories of Dualism: Technical, economic, social, financial and structural. (17 Lectures)

Unit-II Theories of Economic Development: Lewis's theory of unlimited supply of labour, Rostow stages of economic growth, Low Level Equilibrium Trap- Nelson Model, Critical Minimum Effort Thesis, Theory of Big Push Rosenstein Rodan, Theory of Balanced Growth- Ragner Nurkse, Unbalanced Growth Strategy- Hirschman, Harrod and Domar model of economic Growth. (20 Lectures)

Unit-III Poverty & Inequality: Measurement of Poverty: headcount ratio, poverty gap index, FGT index; Inequality measures: size distribution, Lorenz curve, Gini coefficients; Kuznets's Inverted-U Hypothesis; Growth and Poverty. (8 Lectures)

Suggested Reading

BA Hons. Economics Semester-VI

ECOMJ63- Public Economics (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The aim of course is to provide a depth understanding of public economic. It covers theories of public expenditure, role of government, provision of public good and social choice theories.

Course Learning Outcomes: The course expects the theoretical knowledge of public economic concepts, theories and problems. The course trains the economics students as per the market need.

Course Content:

UNIT I – Introduction to Public Economic: Economic Rationale of Mixed Economy; Public Finance and shift to Public Economics, Theories of Public Expenditure; Wagner's Law of Increasing and the Wiseman-Peacock Hypothesis, Role of Government; Efficiency markets and Governments, Equity and the Social Welfare Function; Market failure and role of government, Asymmetric Information and market Failure (15 Lecturers)

UNIT II: Public goods – Concept, Characteristics and Types of Public Goods; Efficient Provision of Public Goods; Pure Theories of Public Goods – Bowen Model, Lindahl Model, Pigou Model, Preference revelation Mechanisms for Public Goods, Pareto efficiency; The Principle of Maximum Social Advantage. (15 Lecturers)

UNIT III- Social Choice Theory – Public Policy & Social Choice, State, Civil Society & Public Opinion, An Economic Theory of Democracy: Rent Seeking and Directly Unproductive Profit Seeking Activities, Structure of Social Decision rules with restricted domain; Liberty and Rights (15 Lecturers)

Selected Reading

1. Sury, M. M. (2020); Public Economics, New Century Publications
2. Hyman, David N. (2020); Public Finance -A Contemporary Application of Theory to Policy, Cengage, ISBN: 9780357133019
3. Atkinson, Anthony B. and Stiglitz, Joseph E.(2015); Lectures on Public Economics: Updated Edition, Mc-Grow Hill
4. Kocherlakota, Narayana R. (2010); The New Dynamic Public Finance, Princeton University Press.
5. Cullis, John& Jones, Philip (2009); Public Finance and Public Choice, Oxford University Press
6. Jha, Rahubendra (1999), Modern Public Economics, London and New York
7. Muller, D.C. (1989), Public Choice II, Cambridge University Press, Cambridge
8. Arrow Kenneth, J. (1963) Social Choice and Individual value, Yale university Press, New Haven

BA Hons. Economics Semester-VI

ECOMJ64- Basic Econometrics (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The objective of this course is to transmit the body of basic knowledge of econometrics at the undergraduate level. The course offers, simple linear regression model, multivariate linear regression and violation of CLRM assumption & specification.

Learning Outcome: The course develops basic theoretical and empirical understating of the economic problems. This Course help students to understand the basics econometrics and its assumption to apply. The basic knowledge of econometrics is necessary for anyone seeking employment as an analyst in the academia and corporate world.

Course Content:

Unit -I: Simple Linear Regression Model: Introduction to econometrics, Assumption, OLS Estimation, Properties, Gauss-Markov theorem, Goodness of fit, CNLRM, Method of maximum likelihood. (15)

Unit -II: Multivariate Linear Regression: Estimstion, R^2 and adjusted R^2 ; testing hypotheses; Introduction to dummy variables. (10)

Unit -III: Violation of CLRM Assumption & Specification: Heteroscedasticity, Auto-correlation, Multicollinearity- Causes, Consequences, Detection and Remedies; Specification Analysis: Omission of a relevant variable; Inclusion of irrelevant variable; Functional forms of regression models, Tests of specification. (20)

Suggested Readings

1. Kmenta, J. (1997). Elements of Econometrics. University of Michigan Press
2. Gujarati, D. N. (2021). Econometrics by Example (1st ed.). New Delhi: Palgrave.
3. Studenmund, A. H. (2014). Using Econometrics: A Practical Guide. (7th ed.). New Delhi, Pearson.
4. Wooldridge, J. M. (2018). Introductory econometrics: A modern approach, (7th Ed),
5. Adkins, Lee. C. and Hill, R. Carter (2011). Using Stata for principles of econometrics. John Wiley & Sons.

BA Hons. & Research Economics Semester-VII

ECOMJ71- Research Methods (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The aim of course is to provide a deep of research methods. It covers both qualitative and quantitative methods, research proposal, design, data collection and report writing.

Course Learning Outcomes: The course expects deep knowledge of research methods, techniques applied in social science research.

Course Content:

Unit-I Research: An Introduction- Introduction to Research: Distinction between social science research and science research, Research Methods V/s Methodology. Types and approaches of Research: Introduction to Descriptive, Analytical, Fundamental, Inductive and Deductive, Historical, Experimental and Ex Post Facto Research Approaches. Research Onion & Aspects of Research Process, Introductory Understanding of Research Paradigm. (15 Lectures)

Unit-II Problem, Proposal & Research Design- Formulation of a Research Problem, Writing of Research Proposal, Review of literature, Introduction to citation & reference style, Hypothesis, its Sources and Types. Research Design- Introduction to Quantitative, Qualitative & Mixed Method Research Designs. (15 Lectures)

Unit-III Data Collection & Report Writing- Sampling Methods: Probability & Non-probability sampling methods and their types, Preparation of Questionnaire/ Schedule, pilot survey, Reliability and Validity. Report writing: Structure of Research Report/dissertation, Plagiarism and ethics in research. (15 Lecturers)

Suggested Readings:

1. Kothari, C. R. (2004). Research methodology: Methods and techniques. New Age International.
2. Cooper, D. R., Schindler, P. S., & Sun, J. (2006). Business research methods (Vol. 9, pp. 1-744). New York: McGraw-Hill.
3. Ethridge, D. (2004). Research methodology in applied economics: organizing, planning, and conducting economic research (No. BOOK). Blackwell publishing.
4. Goode, W. J., & Hatt, P. K. (1952). Methods in social research.
5. Bryman, A. (2016). Social research methods. Oxford university press.
6. Jackson, S. L. (2015). Research methods and statistics: A critical thinking approach. Cengage Learning.
7. Lansing, J. B., & Morgan, J. N. (1971). Economic survey methods.
8. Medhi, J. (1992). Statistical methods: an introductory text. New Age International.
9. Lee, N., & Lings, I. (2008). Doing business research: a guide to theory and practice. Sage.
10. Panneerselvam, R. (2011). Research Methodology PHI Learning Private Limited New Delhi.

11. Sarangi, P. (2010). Research Methodology, Taxman Publications Private Limited, New Delhi.
12. Kumar, R. (2018). Research methodology: A step-by-step guide for beginners. Sage.

BA Hons. & Research Economics Semester-VII

ECOMJ72- Advance Econometrics (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The objective of this course is to transmit the body of knowledge of advance econometrics at the undergraduate level. In this course, particular offer, simultaneous equation, time series econometrics, and panel data regression models.

Learning Outcome: The course develops theoretical and empirical understating of the economic problems. This course help students to understand the advance econometrics models based on real data. The knowledge of advance econometrics is necessary for anyone seeking employment as an analyst in the academia and corporate world.

Course Content:

Unit -I: Simultaneous Equation: Simultaneous Equation Bias; Structural Models; Reduced form Models; Identification Problem; Tests for Simultaneity and Exogeneity; ILS, 2SLS (15)

Unit -II: Time Series Econometrics: Introduction to time series; test of stationarity: Correlogram, DF & ADF; ARIMA-Box-Jenkins; Multivariate Models- Cointegration and Error Correction, Introduction to Dynamic Regression Model – Koyck & Almon Approach (20)

Unit -III: Panel Data Regression: Pooled Regression, fixed effects; random effects model. (10)

Suggested Readings

1. Gujarati, D. N., Porter, D.C., (2009). Basic Econometrics. (5th ed.). New Delhi: McGraw Hill.
2. Gujarati, D. N. (2021). Econometrics by Example (1st ed.). New Delhi: Palgrave.
3. Wooldridge, J. M. (2018). Introductory econometrics: A modern approach, (7th Ed),
4. Dougherty, C. (2016). Introduction to Econometrics (5th ed.). New York: Oxford University Press.
5. Koutsoyiannis, A. (1973). Theory of Econometrics. New York: Harper & Row.

BA Hons. Economics Semester-VIII

ECOMJ81- International Economics (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The aim of course is to provide a depth understanding of International economic. It covers theories of international trade, trade policy and international trade Policy.

Course Learning Outcomes: The course expects the theoretical knowledge of International economic along with empirical applications. The course trains the economics students as per the market need.

Course Content:

Unit-I Theories of International Trade: The Ricardian, The Mills, The Haberler theories of trade, specific factors, and Heckscher-Ohlin models; new trade theories; the international location of production; firms in the global economy, outsourcing and multinational enterprises. (15 Lectures)

Unit-II Trade Policy: International trade direction, composition and determinants, An overview of world trade, Instruments of trade policy; political economy of trade policy; controversies in trade policy. (15 Lectures)

Unit-III International Macroeconomic Policy -Balance of Payments: Concept and Components; Fixed versus flexible exchange rates; foreign trade multiplier, international monetary systems; financial globalization and financial crises. (15 Lectures)

Suggested Readings:

1. Paul Krugman, Maurice Obstfeld, and Marc Melitz (2012); International Economics: Theory and Policy, 9th edition Addison-Wesley (Pearson Education Indian Edition.
2. Dominick Salvatore, (2011); International Economics: Trade and Finance, 10th edition John Wiley International Student Edition.
3. Cherunilam Francis: International Economics (4th Edition) (2006); Tata McGraw-Hill Companies
4. Sodersten B O & Reed Geoffrey (2003); International Economics, McMillan Press Ltd
5. Mannur, H.G. (2007); International Economics, Vikas Publication House, Second revised edition.

BA Hons. Economics Semester-VIII

ECOMJ82- Environmental Economics (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The aim of course is to provide a depth understanding of environmental economic. It covers introduction, theories of environment regulation, and valuation problem.

Course Learning Outcomes: The course expects the theoretical knowledge of environmental economic along with empirical methods for valuation of environment goods and services.

Course Content:

Unit-I Introduction to Environmental Economics: History and Origin, Economy and Ecology; Definition, Scope and Subject matter; Distinction between Ecological, Environmental and Natural Resources Economics. Economy and Environment Interaction; Biophysical Foundations of Economic activity; Ecosystems: Meaning and Functions; Sources and Sink functions of the ecosystem. Material Balance approach. The Economic Problem of Environmental Pollution; Market Failure, Pollution as Public Good or Bad, Role of Externality as the fundamental determinant. (15 Lectures)

Unit-II Theories of Environmental Regulation and Policy: The socially optimal level of pollution and attainment of optimal pollution. Command-and-control policies; Market based Incentives: Pigovian Taxes and Subsidies and Uniform Standards; Pollution fees and Tradable Permits; refundable deposits. (15 Lectures)

Unit-III Valuation of Environmental Goods and Services: Meaning, need and justification Total Economic Value: Components of Total Economic Value; Valuation methods (only an introductory approach). Sustainable Economic Development; Meaning and Definition, Evolution and Importance, The Components of Sustainable Development; Approaches and Indicators of Sustainable Development, SDGs. (15 Lectures)

Selected Readings

1. Charles, Kolstad., (2010), Environmental Economics, London: Oxford University Press.
2. Common, M. (1988), Environmental and Resource Economics: An Introduction, London: Longman Group UK Limited.
3. Conrad, J. M., (2010), Resource Economics, New York: Cambridge University Press.
4. Eugene, T., (2011), Environmental Economics, Delhi Vrinda Publication (P) Ltd.,
5. Field, B., and M, Field.,(2016), Environmental Economics: An Introduction, The McGraw-Hill Education, New York
6. Hanley, N., Shogren, J.F., and White. B., (2013). Introduction to Environmental Economics, London: Oxford University Press.
7. Hussen, Ahmed M. (2019); Principles of Environmental Economics and Sustainability, London: Routledge
8. Karpagam, M., (2012), Environmental Economics: A Text Book, New Delhi: Sterling Publishers.
9. Singh, Katar and Anil Shishodia., (2007), Environmental Economics: Theory and Applications, Sage
10. Muthukrishnan, S., (2015), Economics of Environment, New Delhi: Prentice Hall India Inc,
11. Pearce, D.W. and Turner, R. K., (2014). Economics of Natural Resources and the Environment, Baltimore: The Johns Hopkins University Press.

12. Perman, R., Ma, Yue., Common, M., Maddison, D., and McGilvray, J., (2011), Natural Resource and Environmental Economics, 4th Edition, Boston: Addison-Wesley (Pearson).

BA Hons. With Research Economics Semester-VII

ECOMJ83- Applied Econometrics (Major-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The aim of this course is to transmit the body of knowledge of applied econometrics at the undergraduate level. It offers, qualitative response model, advance time series models, panel data models and impact evaluation models using real economy data.

Learning Outcome: This course expects to empirically test the economic theories and models based on real data. The knowledge of applied econometrics is necessary for anyone seeking employment as an analyst in the academia and corporate world.

Course Content:

Unit -I: Qualitative response models: Probabilistic Choice Model, limited dependent variable model and Heckman improvement, Multinomial regression model. (10)

Unit -II: Advance time series and panel Models: ARCH, GARCH, VAR, ARDL; Dynamic Panel Regression Model- Lagged dependent variable model, GMM Estimation, Time Varying coefficient model, Simultaneous Equation model in Panel Data. (20)

Unit -III: Impact evaluation models: Impact Evaluation for Policy Decisions, Difference between process and outcome evaluation, identification of counterfactual, Experimental and quasi-experimental evaluation design, Average treatment effect model, Difference-in Difference method, Propensity score matching method, Quantile and distributional Treatment Effects. (15)

Suggested Readings

1. Pindyck, R. S., & Rubinfeld, D. L. (1990). *Econometric Models and Econometric Forecasts* (4th ed.). New York: McGraw-Hill.
2. Greene, W. H. (2002). *Econometric analysis*. Pearson Education India, 5th Edition.
- Enders, W. (2008). *Applied econometric time series*. John Wiley & Sons.
3. Baltagi, B. (2008). *Econometric analysis of panel data*. John Wiley & Sons.
4. Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics: methods and applications*. Cambridge university press.
5. Gertler, P. J., Martinez, S., Premand, P., Rawlings, L. B., & Vermeersch, C. M. (2016). *Impact evaluation in practice*. World Bank Publications.
6. Khandker, S. R., Koolwal, G. B., & Samad, H. A. (2009). *Handbook on impact evaluation: quantitative methods and practices*. World Bank Publications.

Vocational Minor Paper for Other Hons.

Paper Code	Paper Name (Minor)	Semester	Credit
ECOMN11	Introductory Microeconomics	I	3+1
ECOMN21	Introductory Macroeconomics	II	3+1
ECOMV31	Financial Market (Voc)	III	3+1
ECBMN41	Intermediate Macroeconomics	IV	3+1
ECBMV51	Environmental Impact Assessment (Voc)	V	3+1
ECBMV61	Survey Method and Project Evaluation (Voc)	VI	3+1
ECBMN71	Research Method	VII	3+1
ECBMN81	Environmental Economics	VIII	3+1

BA Hons. Economics Semester-I

ECOMN11- Introductory Microeconomics (Minor-4)

Course Objective: This course is designed to exhibit for basic understanding of Introductory Microeconomics. The emphasis will be on thinking like an economist. This course demonstrate how microeconomic concepts can be practically applied in real-life situations, making the learning experience more engaging and relatable.

Course Learning Outcomes: The course expects students basic understanding microeconomics concepts like: how individuals make decisions as consumers, laws and concept of utility, laws of the production function, and different types of costs along with distinguishing features of both product markets. Expected graphical explanation of markets and real-life problems.

Course Content:

UNIT-1: The Subject Matter of Economics: Definitions, Central Problems of Economy, Trade-off between Scarcity and choice, Micro vs Macro, Demand and Supply, Concept of Demand and Supply Elasticity. (8)

UNIT-2: Introduction to Consumer Behaviour & Producer Behaviour: Consumer equilibrium under Cardinal and ordinal Utility approach, Derivation of Demand curve through both approaches, Decomposition of Price Effect into Income and Substitution Effects. (Graphical Representation). Introduction to short run and long run production functions, producer equilibrium. Cost: Traditional and Modern theory of cost, relationship between cost, revenue and profit. (20)

UNIT-3: Product Market –Price and output determination under different market structures: long run and short run analysis; Monopoly Power and Dead weight Loss; Price Discrimination. (17)

Suggested Readings

1. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. The workbook by Varian and Bergstrom may be used for problems.
2. Koutsoyiannis, A. (1975). *Modern microeconomics*. Springer.
3. Mankiw, N.G. (2018) *Principle of Microeconomics*, 8th edition

4. Pindyck, R. S., & Rubinfeld, D. L. (2013). Microeconomics (8thed.). New York: Pearson Education.
5. C. Snyder & Nicholson, W. (2011). Fundamentals of Microeconomics (11thed.). New Delhi: Cengage Learning India.

BA Hons. Economics Semester-II

ECOMN21- Introductory Macroeconomics (Minor)-4

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: This course is designed to exhibit for basic understanding of Introductory concepts of Macroeconomics. This course demonstrate how economy will work and what are the major macroeconomic variable of interests.

Course Learning Outcomes: The course expects students basic understanding macroeconomics concepts like: how economy will work on employment, income, consumption and investment.

Course Content:

Unit-I National Income: Concept of Stock & Flow, Sectors of the economy; Circular Flow of Income in two, three and four Sector economy; National Income Accounting & Identities: Measurement of National Income, Problems of measurement of National income in India, Structure of Indian Economy through National Account Statistics; Measurement of Cost of Living: CPI, GNP Deflator. (9 Lectures)

Unit-II Theory of Employment and Income: Classical analysis of determination of Equilibrium output and Employment, Simple Keynesian theory of employment and income determination: With and Without Government Sector; Ricardian Equivalence- Impact and Efficacy of Policy Action, The Neo-Classical Synthesis- The IS-LM Model and the interaction of the Real and Monetary Sectors. IS-LM model in the open economy under fixed exchange rate without capital mobility. (12 Lectures)

Unit-III Consumption, Investment & Economic Fluctuations- Consumption Function: Keynes' Absolute Income Hypothesis, Theories of Consumption after Keynes- Relative Income Hypothesis, Permanent Income Hypothesis, Life Cycle Hypothesis, Consumption under Uncertainty; Investment Multiplier: Simple and Dynamic, Leakages and limitations; The principle of Acceleration, Interaction of Accelerator and Multiplier; Investment function: Types of investment, Concept of MEC and MEI, Neo-Classical Theory of Investment.

Economic Fluctuations: Trade Cycle: Nature and Characteristics; Theories of Trade Cycle: Samuelson, Hicks; Control of trade cycle, Recent Recession(s) in the World. (24 Lectures)

Suggested Readings:

9. Dernberg Thomas F (1985): Macroeconomics: Concepts, Theories and Policies, 7thEdition.
10. Dornbusch, Fischer & Startz (2005): Macroeconomics, Tata McGraw-Hil Publishing Co. Ltd
11. Shapiro Edward (2007): Macroeconomic Analysis, Galgotia Publications Pvt. Ltd.
12. Blanchard Olivier (2007): Macroeconomics, Ch-8,9, Pearson Education

13. Branson William (2006): Macroeconomics: Theory and Policy, AITBS
14. Rana, K.C. & Verma K.N: Macro Economic Analysis, Vishal Publishing House
15. Hejdra, B.J. and F.V. Ploeg (2001): Foundations of Modern Macroeconomics, Oxford University Press, Oxford.
16. Shapiro, Edward (2001) Macroeconomic Analysis, Galgotia Publications Private Limited, New Delhi

BA Hons. Economics Semester-III

ECOMV31-Financial Market (Minor Voc-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The aim of this course the students to understand the Financial Market structure and its operation. It covers financial market structure, derivatives and risk involved in the market.

Course Learning Outcomes: The course expects that student can know the financial market structure, derivatives and risk involved in the market

Course Content:

UNIT-1 Introduction to Financial Economics: Market, instruments, risk, return and diversification, investment process, financial decisions, finance-macro interlinkages; Financial Assets: characteristics, pricing, debt and equity. (10 lectures)

UNIT-2 Derivatives: – Use and Perspectives on Derivatives, Role of Financial Markets, Derivatives in Practice, Derivative instruments – Forward, Option and Swaps, Types of Financial Derivatives – Equity Derivatives, Foreign Exchange, Derivatives, Interest Rate Derivatives, Commodity Derivatives and Credit Derivatives. (20 lectures)

UNIT-3 Risk Management: Credit Risk, Market Risk, Operational Risk, Measurement and Management of risk, BASEL -1, 2 & 3. ((15 lectures)

Suggested Readings

1. Investment Science by David Luenberger, Oxford University Press, Second Edition, June 2013, ISBN-13:9780199740086
2. Investments, by Zvi Bodie, Alex Kane, Alan J Marcus, Pitabas Mohanty, Sixth Edition, The Mc Graw-Hill Publications, 2006.
3. Investments, by William Sharpe, Gordon J. Alexander, Jeffery V. Belly, 6th Edition, ISBN 0-13-010130-3, Prentice-Hall International (UK) Limited. London
4. Modern Portfolio Theory and Investment Analysis by Edwin J. Elton and Martin J. Gruber, Stephen J. Brown, William N. Goetzmann, 8th Edition, ISBN-13: 978-0470388327, Wiley Publications.
5. Investment Valuation by Aswath Damodaran, 3rd Edition, Wiley Finance, ISBN-13: 978-1118011522
6. The Economics of Financial Markets by R.E. Bailey, Cambridge University Press, 2005.

7. Fred D. Arditti, Derivatives: A Comprehensive Resource for Options, Futures, Interest Rate Swaps, and Mortgage Securities, Harvard Business School Press, ISBN: 0-87584- 560-6
8. Kerry Back, A Course in Derivative Securities: Introduction to Theory and Computation, Springer, ISBN: 3-540-25373-4
9. Peter Ritchken, Derivative Markets: Theory, Strategy, and Applications, HarperCollins, ISBN: 0-673-46017-7
10. Fundamentals of Future and Options Markets, John.C. Hull, Seventh Edition, Prentice Hall Publication, Published on March 14, 2010.
11. Options, Futures and Other Derivatives, John. C. Hull, Sankarshan Eighth Edition, Prentice Hall Publication, Published on February 12, 2011.
12. The Handbook of Equity Derivatives, Revised Edition, Jack Clark Francis, William W. Toy, and J. Gregg Whittaker, Wiley Series in Financial Engineering.

BA Hons. Economics Semester-IV

ECOMN41- Intermediate Macroeconomics (Minor-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: This course is a sequel to Introductory Macroeconomics and provide a deep understating of Classical, New Classical, Keynesian, New Keynesian and Post Keynesian macroeconomics models and Inter-temporal Decision Making of economy.

Course Learning Outcomes: The course expects from students to solve the problem related the economy as whole, especially related to money & inflation, Employment, Incime and Investment.

Course Content:

Unit-I Money & Inflation: - Post Keynesian Theories of Demand for Money-Baumol, Tobin and Patinkin-An Overview, Friedman and the Modern Quantity, Theories of Inflation- Structural and Monetarist Approaches; Phillips Curve Controversy, The Natural Rate of Unemployment Hypothesis-Adaptive Expectation and Rational Expectation models, NRU and full employment, NRU and NAIRU, Understanding Inflation in India. (14 Lectures)

Unit-II New Classical & New Keynesian Macroeconomics- New-Classical Model of Macroeconomics: Models of Income and Employment Determination: An Overview, New Classical Macroeconomics, The Real Business Cycle Theory –The Model of Kydland and Prescott, Understanding Recent Economic Crises.

New-Keynesian Model of Macroeconomics: -Wage and Price Stickiness- Normal Rigidities-Wage Contract Models, Real Rigidities- Search Models-An Elementary Treatment, Staggered Price Adjustment Model-Menu Cost Argument, Sources of Rigidity-Imperfect Information & Coordination Failure. (22 Lectures)

Unit-III Inter-temporal Decision Making & Macroeconomics Policies- Inter-temporal Decision Making: - Representative Agent Model of Ramsey and Overlapping Generation Model-Only Introduction OLG. Macro Policy- Coordination of Fiscal and Monetary Policy, Taylor Rule, Rules versus Discretion, Monetary Transmission Mechanism and Targeting. (9 Lectures)

Suggested Readings

10. Frisch, H: Theories of Inflation, Cambridge University Press
11. Dornbusch, Fischer & Startz, Macroeconomics, Tata McGraw-Hill Publishing Co. Ltd.
12. S. Brian and Richard V., 'Modern Macroeconomics' Edward Elgar Publishing House
13. Shapiro, Edward., Macroeconomic Analysis, Golgotia Publications Pvt.Ltd., New Delhi
14. Blanchard Olivier & Fischer Stanley. Lectures on Macroeconomics. Cambridge: MIT Press,
15. Mankiw, G & Romer D, "New Keynesian Economics" Vol-1 & 2 The MIT Press
16. Lewis M. K. and P.D.Mizen (2000) Monetary Economics, , 1st Edition, Oxford
17. Thorn, R.S. Edited (1976), "Monetary Theory and Policy" Praeger Publishers, New York
18. Levacic, R. and A. Rebman: Macroeconomics: An Introduction to Keynesian and Neo-Classical Controversies.

BA Hons. Economics Semester-V

ECOMV51 Environmental Impact Assessment (Minor Voc-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The "Environmental Impact Assessment (EIA)" course provides an in-depth understanding of the processes, methodologies, and principals involved in assessing environmental consequences of proposed projects or policies. Covering topics like environmental legislation, stakeholder engagement, risk assessment, and mitigation strategies.

Course Learning Outcomes: The course expect student using a multidisciplinary approach, drawing from environmental science, ecology, geography, and policy analysis. The students gain practical skills for conducting effective environmental assessments, identifying potential impacts, and developing monitoring and management strategies.

Course Content:

UNIT-1 Introduction to Environment Management & EIA: Introduction, understanding the need of EIA, Historical development and evolution of EIA, key principles and objectives of EIA, Linkages between EIA and Sustainable Development, Legal, Policy & Regulatory Framework: Legal & Regulatory Frameworks, national and international EIA Regulations, Compliance and Enforcement Mechanisms. (15 Lectures)

UNIT-2 EIA Procedure: Scoping & Screening and Establishing Baseline Conditions: Key definitions and examples of Screening and scoping, Key types of projects and the categories that require screening and scoping, Approaches to screening ad scoping in India. (15 Lectures)

UNIT-3 EIA Methodologies: EIA Process & Stakeholder Engagement, Stakeholder Identification and Engagement Strategies, EIA Methods & Techniques, Risk Assessment in EIA, Environmental and Social Impact Assessment, EIA Documentation & Reporting, Technology in EIA Documentation. (15 Lectures)

Suggested Readings

1. Wathern P., “Environmental Impact Assessment: Theory and Practice”, Routledge Publishers, 1990
2. Marriott B., “Environmental Impact Assessment: A Practical Guide”, McGraw-Hill Publication, 1997
3. Shrivastava A.K., Baxter Nicola, Grimm Jacob, “Environmental Impact Assessment”, APH Publishers, 2003
4. Anjaneyulu Y., Manickam Valli, “Environmental Impact Assessment Methodologies”, CRC Press 2011
5. Glasson J., Therivel Riki, Chadwick Andrew, “Introduction to Environmental Impact Assessment”, Oxford Brookes University 2012/ 4th edition
6. Zanzibar Environmental Consultancy (2006). Environmental and Social Impact Assessment for Upgrade and Extension of Zanzibar Beach Hotel and Resort.
7. World Bank. (2010). Definition of the scope of work for the EIA and feasibility study for regional SWM facilities. Washington: World Bank. Retrieved from
8. World Bank. (n.d.). Assessing Significance of Environmental Impact Annex 4C.3.

BA Hons. Economics Semester-VI

ECOMV61- Survey Method and Project Evaluation (Voc.Minor-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The aim of this course to deliver method of survey and project evaluation. This course covers the survey method, sampling techniques and project evaluation.

Course Learning Outcomes: The course expects the basic understanding of survey method, sampling techniques and project evaluation that would help employability in academia and research.

Course Content:

Unit-I Survey Methods - types of survey -objective and importance of socio - economic survey in India. Planning of socio-economic survey, pilot survey - documentary sources, secondary and primary data, census and sample survey – accuracy (10 lectures)

Unit-II Sampling Techniques: sampling distribution and standard error - confidence interval, - measure of efficiency of sampling design. Types of sampling design Questionnaire / Schedule - general principles of design - questionnaire Schedule - difference between questionnaire and schedule, meaning and types of interviewing – formal and informal interviewing, Processing of data - classification - tabulation - interpretation of table and relationship. (15 lectures)

Unit-III Project Evaluation: Project meaning, The Project Planning and Analysis, Project Evaluation, theoretical tools for estimating the costs and benefits. (20 lectures)

Suggested Readings

1. Claus Moser & G. Kalton; Survey Methods on Social Investigation.
2. Goode W.J. & Hatt P.K. - Methods in Social Research

3. Gaitung J. - Theory and Methods of Social Research
4. Cochran W.G. - Sampling Techniques
5. Glock C.Y., - Survey Research in Social Science
6. Leon Ikpe, (1999) Project Analysis and Evaluation. Lagos: Impressed Publishers

BA Hons. & Research Economics Semester-VII

ECOMN-701 Research Methods (Minor-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The aim of course is to provide a deep of research methods. It covers both qualitative and quantitative methods, research proposal, design, data collection and report writing.

Course Learning Outcomes: The course expects deep knowledge of research methods, techniques applied in social science research.

Course Content:

Unit-I Research: An Introduction- Introduction to Research: Distinction between social science research and science research, Research Methods V/s Methodology. Types and approaches of Research: Introduction to Descriptive, Analytical, Fundamental, Inductive and Deductive, Historical, Experimental and Ex Post Facto Research Approaches. Research Onion & Aspects of Research Process, Introductory Understanding of Research Paradigm. (15 Lectures)

Unit-II Problem, Proposal & Research Design- Formulation of a Research Problem, Writing of Research Proposal, Review of literature, Introduction to citation & reference style, Hypothesis, its Sources and Types. Research Design- Introduction to Quantitative, Qualitative & Mixed Method Research Designs. (15 Lectures)

Unit-III Data Collection & Report Writing- Sampling Methods: Probability & Non-probability sampling methods and their types, Preparation of Questionnaire/ Schedule, pilot survey, Reliability and Validity. Report writing: Structure of Research Report/dissertation, Plagiarism and ethics in research. (15 Lecturers)

Suggested Readings:

13. Kothari, C. R. (2004). Research methodology: Methods and techniques. New Age International.
14. Cooper, D. R., Schindler, P. S., & Sun, J. (2006). Business research methods (Vol. 9, pp. 1-744). New York: McGraw-Hill.
15. Ethridge, D. (2004). Research methodology in applied economics: organizing, planning, and conducting economic research (No. BOOK). Blackwell publishing.
16. Goode, W. J., & Hatt, P. K. (1952). Methods in social research.
17. Bryman, A. (2016). Social research methods. Oxford university press.
18. Jackson, S. L. (2015). Research methods and statistics: A critical thinking approach. Cengage Learning.

19. Lansing, J. B., & Morgan, J. N. (1971). Economic survey methods.
20. Medhi, J. (1992). Statistical methods: an introductory text. New Age International.
21. Lee, N., & Lings, I. (2008). Doing business research: a guide to theory and practice. Sage.
22. Panneerselvam, R. (2011). Research Methodology PHI Learning Private Limited New Delhi.
23. Sarangi, P. (2010). Research Methodology, Taxman Publications Private Limited, New Delhi.
24. Kumar, R. (2018). Research methodology: A step-by-step guide for beginners. Sage.

BA Hons. Economics Semester-VIII

ECOMN81- Environmental Economics (Minor-4)

Credit-4 (3L+1T)/ (60 Hours)

Course Objective: The aim of course is to provide a depth understanding of environmental economic. It covers introduction, theories of environment regulation, and valuation problem.

Course Learning Outcomes: The course expects the theoretical knowledge of environmental economic along with empirical methods for valuation of environment goods and services.

Course Content:

Unit-I Introduction to Environmental Economics: History and Origin, Economy and Ecology; Definition, Scope and Subject matter; Distinction between Ecological, Environmental and Natural Resources Economics. Economy and Environment Interaction; Biophysical Foundations of Economic activity; Ecosystems: Meaning and Functions; Sources and Sink functions of the ecosystem. Material Balance approach. The Economic Problem of Environmental Pollution; Market Failure, Pollution as Public Good or Bad, Role of Externality as the fundamental determinant. (15 Lectures)

Unit-II Theories of Environmental Regulation and Policy: The socially optimal level of pollution and attainment of optimal pollution. Command-and-control policies; Market based Incentives: Pigovian Taxes and Subsidies and Uniform Standards; Pollution fees and Tradable Permits; refundable deposits. (15 Lectures)

Unit-III Valuation of Environmental Goods and Services: Meaning, need and justification Total Economic Value: Components of Total Economic Value; Valuation methods (only an introductory approach). Sustainable Economic Development; Meaning and Definition, Evolution and Importance, The Components of Sustainable Development; Approaches and Indicators of Sustainable Development, SDGs. (15 Lectures)

Selected Readings

13. Charles, Kolstad., (2010), Environmental Economics, London: Oxford University Press.
14. Common, M. (1988), Environmental and Resource Economics: An Introduction, London: Longman Group UK Limited.

15. Conrad, J. M., (2010), Resource Economics, New York: Cambridge University Press.
16. Eugene, T., (2011), Environmental Economics, Delhi Vrinda Publication (P) Ltd.,
17. Field, B., and M. Field.,(2016), Environmental Economics: An Introduction, The McGraw-Hill Education, New York
18. Hanley, N., Shogren, J.F., and White. B., (2013). Introduction to Environmental Economics, London: Oxford University Press.
19. Hussen, Ahmed M. (2019); Principles of Environmental Economics and Sustainability, London: Routledge
20. Karpagam, M., (2012), Environmental Economics: A Text Book, New Delhi: Sterling Publishers.
21. Singh, Katar and Anil Shishodia., (2007), Environmental Economics: Theory and Applications, Sage
22. Muthukrishnan, S., (2015), Economics of Environment, New Delhi: Prentice Hall India Inc,
23. Pearce, D.W. and Turner, R. K., (2014). Economics of Natural Resources and the Environment, Baltimore: The Johns Hopkins University Press.
24. Perman, R., Ma, Yue., Common, M., Maddison, D., and McGilvray, J., (2011), Natural Resource and Environmental Economics, 4th Edition, Boston: Addison-Wesley (Pearson).

Elective Paper Hon. Sem VII & VIII

Sem-VII

	Optional Paper-I List-A		Optional Paper-II List-B
Major (4)	Advance Econometrics-I	Major (4)	Operations Research-I
Major (4)	Applied Microeconomics	Major (4)	Game theory-I
Major (4)	Behavioural Economics-I	Major (4)	Institutional Economics-I
Major (4)	Financial Economics -I	Major (4)	Financial Market-I
Major (4)	Natural Resource Economics	Major (4)	Economics of Natural Disaster-I
Major (4)	Agriculture-I	Major (4)	Industrial Economics-I
Major (4)	Population Studies-I	Major (4)	Health Economics-I
Major (4)	Labour Economics-I	Major (4)	Gender Economics -I
Major (4)	Political Economy-I	Major (4)	Human Development -I
Major (4)	Regional Economic-I	Major (4)	Indian Public Finance-I

Sem-VIII

	Optional Paper-I List-A		Option Paper-II List-B
Major (4)	Advance Econometrics-II	Major (4)	Operations Research-II
Major (4)	Applied Macroeconomics	Major (4)	Game theory-II
Major (4)	Behavioural Economics-II	Major (4)	Institutional Economics-II
Major (4)	Financial Economics-II	Major (4)	Financial Market-II
Major (4)	Energy Economics	Major (4)	Economics of Natural Disaster-II

Major (4)	Agriculture-II	Major (4)	Industrial Economics-II
Major (4)	Population Studies-II	Major (4)	Health Economics-II
Major (4)	Labour Economics-II	Major (4)	Gender Economics -II
Major (4)	Political Economy-II	Major (4)	Human Development -II
Major (4)	Regional Economics-II	Major (4)	Indian Public Finance-II

D. Optional Paper Hon with Research Sem VII

Course	Optional Paper-I (Theory)-C	Course	Optional Paper-II (Empirical)-D
Major (4)	Behavioral Economics	Major (4)	Impact Assessment
Major (4)	Political Economy	Major (4)	Large Sample Data Base
Major (4)	Indian Economic thought	Major (4)	Financial Economics
Major (4)	Heterodox Economics	Major (4)	Economics of Climate Change
Major (4)	Nobel Laurate contribution	Major (4)	Economics of Disaster management

LIST-A SEM-VII

BA HONS. ECONOMICS MAJOR ELECTIVE PAPERS

BA Hons. Economics Semester-VII

ECBM-703A Advance Econometrics-I (Major)-4

Course Objective: The aim of this course the students to specialized in advance econometrics models and its operation. It covers time series, spatial data, and Modeling Volatility Clustering.

Course Learning Outcomes: The course expects that student can know the advance econometric modeling and application in economics sciences.

Course Content:

UNIT-1 Time Series Data & Models -Recap of Distributed Lag and Autoregressive Models

Deterministic and stochastic trends, trend stationery and difference stationary process; Integrated process and random walk, random walk with drift, Unit root and tests for unit root- Dickey-Fuller and Augmented Dickey Fuller tests, Phillips-Perron Test and KPSS test, Unit Roots and Structural Breaks, Unit roots in regression residuals and spurious regression.

Time Series Models -Stationary time series models: AR, MA and ARMA processes – their properties, conditions for stationarity and invertibility, autocorrelation function (ACF), partial autocorrelation function (PACF), identification based on ACF and PACF, estimation, order selection and diagnostic tests. Non-stationary models: ARIMA model, Box-Jenkins Approach- Identification, estimation, diagnostic checking; Forecast function;

SARIMA Modeling for seasonal data. (16 Lectures)

UNIT-2 Spatial Data Models -*Spatial Data Models Linear Models for Spatial Data*- Modelling Spatial Data, Stationarity; Best Linear Unbiased Prediction of Spatial Data- Block Kriging;

Prediction Based on the Semivariogram; Measurement Error and the Nugget Effect; The Effect of Estimated Covariances on Prediction; Models for Covariance Functions and Semivariograms; Covariance Models for Lattice Data; Estimation of Covariance Functions and Semivariograms. *Difference in Differences Regression* -Treatment Effects, Examining the effects of discrete policy changes.

Cointegration and Error-correction Models -Linear Combinations of Integrated Variables, Cointegration and Common Trends, Cointegration and Error Correction, testing for Co integration -The Engle–Granger Methodology, Error Correction Model; Johansen Procedure, ARDL Bounds Testing Approach. *Causality*: Causal Relations in Bivariate Models; Causality Tests- Granger Causality test, Haugh Pierce Test, Hsiao Procedure, Toda-Yamamoto test; Causality Tests in a Multivariate Setting. (13 Lectures)

UNIT-3 Modeling Volatility Clustering-Volatility-Meaning and measurement, Volatility clustering, Econometric models of volatility, ARCH Processes; GARCH Processes, Properties of GARCH Processes, and Maximum Likelihood Estimation of GARCH Models.

Multi-equation Time-Series Models-Intervention Analysis, Transfer Function Models, Estimating a Transfer Function, Limits to Structural Multivariate Estimation, Introduction to VAR Analysis, Estimation and Identification, The Impulse Response Function, Testing Hypothesis, Structural VARs. The Blanchard and Quah Decomposition. *Forecasting* -Simple exponential smoothing, Holt-Winters method, minimum MSE forecast, forecast error, in-sample and out-of-sample forecast. *Frequency Domain Analysis of Time Series*-Spectral density function and its properties, Spectral density function of AR, MA and ARMA processes, and periodogram analysis. (16 lectures)

Suggested Readings

1. Gujarati, D. N., Porter, D. C., & Gunasekar, S. (2012). Basic econometrics. Tata McGraw-Hill Education.
2. Kirchgässner, G., Wolters, J., & Hassler, U. (2012). Introduction to modern time series analysis. Springer Science & Business Media.
3. Enders, W. (2008). Applied econometric time series. John Wiley & Sons.
4. Christensen, R. (2019). Advanced linear modeling: statistical learning and dependent data. Springer Nature.
5. Greene, W. H. (2003). Econometric analysis. Pearson Education India.
6. Hyndman, R. J., & Athanasopoulos, G. (2018). Forecasting: principles and practice. Texts
7. Brockwell, P. J., Brockwell, P. J., Davis, R. A., & Davis, R. A. (2016). Introduction to time series and forecasting. springer.
8. Chatfield, C. (2013). The analysis of time series: theory and practice. Springer. Introduction to Statistical Time Series: W. A. Fuller
9. Shumway, R. H., Stoffer, D. S., & Stoffer, D. S. (2000). Time series analysis and its applications (Vol.) New York: springer.
10. Maddala, G. S., & Kim, I. M. (1998). Unit roots, cointegration, and structural change.
11. Tsay, R. S. (2005). Analysis of financial time series (Vol. 543). John wiley & sons.
12. Hill, R. C., Griffiths, W. E., & Lim, G. C. (2018). Principles of econometrics. John Wiley & Sons.

13. Ward, M. D., & Gleditsch, K. S. (2018). Spatial regression models (Vol. 155). Sage Publications.

BA Hons. Economics Semester-VII

ECBM-704A Applied Microeconomics-I (Major)-4

Course Objective: The aim of this course the students to specialized in applied econometrics models and its uses. It covers the time series application in consumer demand theories, demand system, and in estimation of production & cost functions.

Course Learning Outcomes: The course expects that student can use econometric models for testing economic theories and problems.

Course Content:

UNIT-I Consumer Demand Theories-Preference and Utility Maximization, Duality and Consumer Demand, Restrictions in Consumer Demand, Static Versus Dynamic Demand Relation: Distributed Lag Demand Function, Nerlove's stock adjustment Principle, Short run and Long run demand function, Houthakker and Taylor's habit creation principle, The Cobb Douglas & Constant Elasticity of Demand Function, Nested CES Utility Function. (12 Lectures)

UNIT-2 Partial & Complete Demand System -*Partial Demand System:* Empirical Content (numerical estimates) to Various Partial Demand System – Engel Expenditure Model: marginal propensities to consume and income elasticities of demand, Estimates of various Engel Functions, Engel Expenditure Elasticities using Cross-section Data; Comparing Linear versus Log –Log Demand function, Consumption Expenditure Function: Estimation of MPC and Elasticity of Consumption Expenditure with respect to Level of Income using Time-series Data. *Complete Demand System:* Demand Function for Commodities –LES Demand, AIDS Model – Linear and Quadratic, Own Price, Cross Price and Income Elasticities of Demand. Application: Estimation of Demand function for India, some studies using the above models. (18 Lectures)

UNIT-3: Production Function & Cost Function Estimation-Production functions: Duality: Profit Maximization & Cost minimization, Estimation of Factor Demand, Cobb-Douglas, Leontief, CES, VES, Transcendental, Translog Production Function and Its Properties; Efficiency and Total Factor Productivity. *Derivation of Cost Function from Production Function, Empirical Cost Studies* – Polynomial Cost Function: Linear, Quadratic and Cubic Cost Functions. Application: Estimation of Production & cost function & TFP, some studies using the above models, Methods of measuring efficiency: Parametric and non-parametric. (15 Lectures)

Suggested Readings

1. Deaton, A. (1992). *Understanding consumption*. Oxford University Press.
2. Deaton, A., & Muellbauer, J. (1980). *Economics and consumer behavior*. Cambridge university press.

3. Deaton and Muellbauer. (1980). *An Almost Ideal Demand System*. American Economic Review 70 (3): 312-326.
4. Banks, Blundell and Lewbel. (1997). *Quadratic Engel Curves and Consumer Demand*. Review of Economics and Statistics 79(4): 527-539.
5. Pollak, R. A., & Wales, T. J. (1992). *Demand system specification and estimation*. Oxford University Press on Demand.
6. Barnett, W. A., & Serletis, A. (2008). *Consumer preferences and demand systems*. Journal of Econometrics, 147(2), 210-224.
7. Haque, M. O. (2006). *Income elasticity and economic development: Methods and applications* (Vol. 42). Springer Science & Business Media.
8. Phlips, L. (2014). *Applied consumption analysis: advanced textbooks in economics*. Elsevier.
9. Heathfield, D. F. (2016). *An introduction to cost and production functions*. Macmillan International Higher Education.
10. Stone, R. (1954). *Linear expenditure systems and demand analysis: an application to the pattern of British demand*. The Economic Journal, 64(255), 511-52.
11. Krishna, K. L. (Ed.). (1997). *Econometric Applications in India*. Oxford university press.
12. Radhakrishnan, R (2019). *Essay on the Econometrics of Consumer behavior*, Academic Foundation
13. Edgerton, D. L., Assarsson, B., Hummelose, A., Laurila, I. P., Rickertsen, K., & Vale, P. H. (1996). *The econometrics of demand systems: with applications to food demand in the Nordic countries* (Vol. 34). Springer Science & Business Media.
14. Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics: methods and applications*. Cambridge university press.
15. Keller, W. J. (1976). *A nested CES-type utility function and its demand and price-index functions*. European Economic Review, 7(2), 175-186.

BA Hons. Economics Semester-VII

ECBM-705A Behavioural Economics-I (Major)-4

Course Objective: The aim of this course the students to specialized behavioral economics and its operational problems. It covers introduction of behavioral economics, non-expected utility theories and spatial data, and time discontinuity and preference.

Course Learning Outcomes: The course expects that student can know behavioral economics theories and application problems.

Course Content:

UNIT-1 Introduction of Behavioural Economics-Past, Present, Future, The Historical Context of Behavioural Economics, The Methods of Behavioural Economics, Basic Concepts Intertemporal Choice, Time Discounting, Preference over Risky and Uncertain Outcomes, Fairness and Social Preferences. Endowment Effect, Bilateral Bargaining and Coase Theorem, Choices Between Goods, Mental Accounting-Mental Accounting Decision Making the Framing of Gains and Losses- The Value Function, Hedonic Framing, Transaction Utility, Payment Decoupling, Self-Control and Gift Giving, The Diversification Heuristic (12 Lectures)

UNIT-2 Non-Expected-Utility Theories: Choice Under Risk, Expected Utility Theory, The “Fanning-Out” Hypothesis, Non-Conventional Theories: The Procedural Approach and Reference Dependence, Nontransitive Preference Theory. Prospect Theory, The Equity Premium, The Disposition Effect, Asymmetric Price Elasticities of Consumer Goods, Savings and Consumption: Insensitivity to Bad Income News, Racetrack Betting: The Favourite-Longshot Bias (14 Lectures)

UNIT-3 Time Discounting and Time Preference: Discounted-Utility Model, Utility Independence, Consumption Independence, Stationary Instantaneous Utility, Discounted Utility Anomalies-Hyperbolic Discounting, the “Sign Effect”, The “Magnitude Effect”, The “Delay-Speedup” Asymmetry, Preference For Improving Sequences, Models of Hyperbolic Discounting, Self-Awareness, Explaining Bargaining Impasse, Psychological Research on the Self-Serving Bias, Theory and Experiment in the Analysis of Strategic Interaction.

Fairness as a Constraint on Profit Seeking: Reference Transactions, The Coding of Outcomes, Occasions for Pricing Decisions, Enforcement, Economic Consequences, Inequity-Aversion, Fairness, Retaliation, and Competition, Market Game with Responder Competition, Cooperation and Retaliation—Cooperation Games, Dictator and Gift Exchange Games, Incorporating Fairness into Game Theory and Economics. (19 Lectures)

Suggested Readings

- Akerlof, George A. 1991. “Procrastination and Obedience.” *American Economic Review*, 81(2): 1–19.
- Camerer, Colin F. 1987. “Do Biases in Probability Judgment Matter in Markets? Experimental evidence.” *American Economic Review*, 77: 981–97.
- Dreyfus, Mark K., and W. Kip Viscusi. 1995. “Rates of Time Preference and Consumer Valuations of Automobile Safety and Fuel Efficiency.” *Journal of Law and Economics*, 38(1): 79–105.
- Green, Jerry, and Bruno Jullien. 1988. “Ordinal Independence in Nonlinear Utility Theory.” *Journal of Risk Uncertainty*, 1: 355–87.
- Gul, Faruk. 1991. “A Theory of Disappointment in Decision Making under Uncertainty.” *Econometrica*, 59: 667–86.
- Hagen, Ole. 1979. “Towards a Positive Theory of Preferences under Risk.” In *Expected Utility Hypotheses and the Allais Paradox*, edited by M. Allais and O. Hagen. Dordrecht: Reidel.
- Hammack, Judd, and Gardner Mallard, Brown, Jr. 1974. *Waterfowl and Wetlands: Toward Bio-economic Analysis*. Baltimore: Johns Hopkins Press (for Resources for the Future).
- Kahneman, Daniel, Jack L. Knetsch, and Richard Thaler. 1986. “Fairness as a Constraint on Profit Seeking: Entitlements in the Market.” *American Economic Review*, 76 (September): 728–41.
- Marwell, Gerald, and Ruth Ames. 1981. “Economists Free Ride, Does Anyone Else? Experiments on the Provision of Public Goods, IV.” *Journal of Public Economics*, 15: 295–310.
- Olmstead, Alan L., and Paul Rhode. 1985. “Rationing Without Government: The West Coast Gas Famine of 1920.” *American Economic Review*, 75: 1044–55.

11. Prelec, Drazen, and Duncan Simester. 1998. "Always Leave Home without It." Working paper, MIT Sloan School.
12. Rabin, Matthew. 1998. "Risk Aversion, Diminishing Marginal Utility, and Expected-Utility Theory: A Calibration Theorem." Working paper, Department of Economics, University of California, Berkeley.
13. Shefrin, Hershey, and Meir Statman. 1985. "The Disposition to Sell Winners too Early and Ride Losers too Long." *Journal of Finance*, 40: 777–90.
14. Siegel, Jeremy, and Richard Thaler. 1997. "The Equity Premium Puzzle." *Journal of Economic Perspectives*, 11(Winter): 191–200.
15. ———. 2003. *Behavioural Game Theory: Experiments on Strategic Interaction*. Princeton: Princeton University Press.

BA Hons. Economics Semester-VII

ECBM-706A Financial Economics-I (Major)-4

Course Objective: The aim of this course the students to specialized financial economics and its operation. It covers.

Course Learning Outcomes: The course expects that student can know the financial economics theories, modeling and application.

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

BA Hons. Economics Semester-VII

ECBM-707A Natural Resource Economics-I (Major)-4

Course Objective: The aim of this course the students to specialized natural resource economics and its operation. It covers natural resource, capital theory, Exhaustible Resource Management, renewable resource and property rights.

Course Learning Outcomes: The course expects that student can know the natural resource economics and it application.

Course Content:

UNIT-1 Natural Resources and Elementary Capital Theory: Meaning, Types, Classifications (Renewable and Non-Renewable and Environmental; Energy and Mineral, Exhaustible and Inexhaustible); Resource Scarcity; Dimensions of Resource Scarcity: Physical Measures and Economic Measures- Mc. Kelvy Diagram.

Elementary Capital Theory: Discounting and choice of discount rate; social discount rate, Net Present Value, Internal Rate of Return, payback period, Resources and Asset Prices; Inter-temporal Choice: time preference.

Optimal Depletion of Exhaustible Resources: (a) A Simple Model of Optimal Depletion, (b) Cake Eating Theory, (c) Resource Substitution Theory, (d) Time Preference and Discounting. (20 Lectures)

UNIT-2 Exhaustible Resource Management: Conditions and Principles: User Cost, the Fundamental Principle: Hotelling's Rule, Backstop Substitute, Extraction and Price Paths, Exploration and Technological Progress, Resource Extraction and Environment Cost. Economics of coal, petroleum and natural gas; pricing of exhaustible resources; energy prices– theory and empirics; economic regulation of energy markets; electricity regulation and restructuring. (12 Lectures)

UNIT-3 Economics of Renewable Resources & Common Property: The Allocation Problem and the Method of Lagrange Multiplier. Economic models of fisheries: Net Biological growth: Functional Forms, Production Functions, The Yield-Effort Function, Models of Open Access:

Static and Dynamic Analysis. Economics of optimal harvest cycles of forests. *Common Property Resources and Management Issues: Tragedy of the Commons; Management Issues*. (13 Lectures)

Suggested Readings

1. Clark, Colin W., (2010), *Mathematical Bio economics: The Mathematics of Conservation*, New Jersey: Wiley–Blackwell
2. Common, M.S., (1996), *Environmental and resource economics: an introduction*, Essex, London: Longman Group UK Limited.
3. Conrad, J.M. and C. Clark (1987), *Natural Resource Economics – Notes and Problems*, New York: Cambridge University Press.
4. Conrad, Jon. M., & Rondeau, Daniel., (2020), *Natural Resource Economics: Analysis, Theory and Applications*, New York: Cambridge University Press.
5. Conrad, Jon. M., (2010), *Resource Economics*, New York: Cambridge University Press.
6. Dasgupta, P and Heal, G. M. (1979), *Economic Theory and Exhaustible Resources*. Cambridge: Cambridge University Press.
7. Grafton, Q., Adamowicz, W., Dupont, D., Nelson, H., Hill, R.J., Renzetti, S. (2004), *The Economics of Environment and Natural Resources*, New Jersey: Wiley-Blackwell.
8. Hanley, N. and Spash, C.L., (1993), *Cost Benefit Analysis and the Environment*, Cheltenham: Edward Elgar
9. Hoel. M. (2016), *Optimal control theory with applications to resource and environmental economics*, Memorandum no. 8, Department of Economics, University of Oslo.
10. Karp, L. and C. Traeger., (2013), Online, See homepage Traeger, *Dynamic Methods in Environmental and Resource Economics*.
11. Kneese, A.V., and J. Sweeney (1993), *Handbook of Natural Resource and Energy*, Volume 3, Amsterdam: North Holland Publishers.
12. Kula, E, (1992) *Economics of Natural Resources and the Environment*, Netherlands: Springer
13. Lewis, Lynne. & Tietenberg, Thomas H., (2019), *Natural Resource Economics: The Essentials*, London: Routledge.
14. Prato, T., (1999), *Natural Resource and Environmental Economics*, New Jersey: Wiley-Blackwell.
15. Tietenberg, T. H., (2018), *Environmental and Natural Resource Economics*, London: Routledge

BA Hons. Economics Semester-VII

ECBM-708A Agriculture Economics-I (Major)-4

Course Objective: The aim of this course the students to specialized in Agriculture economics and its operation. It covers theoretical models, land & water resource, and agriculture credit.

Course Learning Outcomes: The course expects that student can know the agriculture economics theories and their application.

Course Content:

UNIT-1 Conceptual Framework- Schultz model of transforming traditional agriculture, Boserup's theory of agrarian change, Mellor's theory of Agricultural Development, Overview of approaches to agricultural development (basic idea) – frontier model, conservation model, urban industrial impact model, diffusion model and high payoff input model. (13 Lectures)

UNIT-2 Land and water Resources in Agriculture: Land and it carrying capacity, Effects of urbanization on agricultural land use, Process of conversion of agricultural land to non-agricultural use; Peri Urban Agriculture Shift in cropping pattern, factors influencing it and its implications for food security, Economics of share tenancy.

Water Resources in Agriculture: Agricultural water use, Water Saving Technologies, Issues related to large and small irrigation works; Institutional arrangements in water allocation in agriculture: water rights (user groups, water users' cooperatives, Pani panchayat, Public- private participation), Water markets, Water pricing. (24 Lectures)

UNIT-3 Credit in Indian Agriculture: Sources of finance and changes in their respective share. Factors determining demand for credit, Imperfections in rural credit markets in India, recent policy changes in regard to farm credit and their implications. (8 Lectures)

Suggested Readings

Theodore W. Schultz, Transforming Traditional Agriculture, New Haven, Yale University Press, 1964

2. H.A Innis and D.C. North (Review of the above Book) , Institute of Developing Economies,
3. M. Nerlove, Transforming Economics: Theodore W Schultz, WP 98-28, Department of Agricultural and Resource Economics, The University of Maryland, 1998
4. Ester Boserup, The Conditions of Agricultural Growth: The economics of agrarian change under population pressure, Routledge, 1993 edition.
5. D. Grigg, Ester Boserup's theory of agrarian change: A critical Review,
6. John.W. Mellor, The economics of agricultural development, Cornell University press, 1966
7. Colin Clark (Review of the above book), The Economic journal, Volume 77, issue 307, 1967

9. John. W. Mellor, Agricultural Development and Economic Transformation: Promoting Growth with Poverty Reduction, Palgrave Mac Millian, 2017
10. V. W. Ruttan and Y. Hayami, Strategies for Agricultural Development, 1972
Land Resources in Agriculture
11. John. M. street, an evaluation of the concept of carrying capacity, the professional geographer, volume 21, 1969, issue 2, republished online March 15,2010
12. Yao Quian et. al, A Comparative Analysis on Assessment of Land Carrying Capacity with Ecological Footprint Analysis and Index System Method, PLoS One, published online June 29, 2015
13. Suman Patra et.al, Impacts of urbanization on land use /cover changes and its probable implications on local climate and groundwater level, Journal of Urban Management Volume 7, Issue 2, September 2018, Pages 70-84
14. Christopher Bryant, The Impact of Urbanization on Rural Land Use, Encyclopedia of Life Support Systems
15. D. Telentilo, F. Marshall and D.S Bhupal , Peri urban Agriculture, FAO
16. Urban and peri Urban Agriculture, FAO briefing Guide, July 2001.
17. Mruthyunjaya, and Praduman Kumar. "Crop Economics and Cropping Pattern Changes." Economic and Political Weekly, vol. 24, no. 51/52, 1989
18. FAO , Water for sustainable food and agriculture, 2017
19. Paolo D'Odorico et.al., The Global Value of Water in Agriculture, Proceedings of the national Academy of sciences, USA

BA Hons. Economics Semester-VII

ECBM-709A Population Studies-I (Major)-4

Course Objective: The aim of this course the students to specialized in population studies and its operation. It covers measurement of population data, nuptiality & fertility, mortality, morbidity and health

Course Learning Outcomes: The course expects that student can know the population studies and its application.

Course Content:

UNIT-1 Population, Data and its Measurement-Meaning and scope of Demography, Components of Population Growth and their interdependence, Measures of Population Change, Spatial and temporal changes in the size, composition and distribution of population: global perspective with special reference to India, Demographic, social and economic composition. *Sources of Population Data*-Demographic Events, Identification of the different sources of population data, Census, Registration of vital events, Demographic surveys and population Register, Importance and limitations of Population Data Census of India-2021: Operations & Challenges. (15 Lectures)

UNIT-2 Fertility and Nuptiality-Concept and measures of Nuptiality and Fertility, Nuptiality indicators – their computation and source of data, Marriage & divorce, Fertility indicators– their computation and sources of data, Crude birth rate (CBR), General Fertility rate (GFR), Age Specific Fertility Rate (ASFR), Total Fertility Rate (TFR), Gross Reproduction rate (GRR), Net Reproduction Rate (NRR), Cohort. (15 Lectures)

UNIT-3 Mortality, Morbidity and Health -Mortality concept and measures, Mortality indicators – their computation and sources of data, Crude Death rate (CDR), Age Specific death rate (ASDR), Infant Mortality Rate (IMR), Maternal Mortality rate (MMR), Causes of Death Statistics, Concept and definition of Health and Morbidity, Sources of Morbidity Data, Pandemic, Epidemic and Endemic. (15 Lectures)

Suggested Readings

1. Arthur Haupt and Thomas T Kane, Population Reference Bureau, Population Handbook, 5th edition (2004), ISBN 0-917136-12-8
2. Asha A Bhende, Tara Kanitkar, Himalaya Publishing House , ISBN 978-93-5051-415-3, 21st Edition (2011) , Principles of population Studies.
3. Bose, Ashish;(2006), Beyond Demography: Dialogue with People, B R Pub, ISBN: 81-7646-565-8
4. Gupta, Monica Das, Chen, Lincoln C, Krishnan, T.N, (Ed) Oxford India, ISBN 019564656-8, Health, Poverty & Development in India.

5. Hansraj – Fundamentals of Demography, Surjeet Publications, ISBN-81-229-0336-3
6. Krishnamurthy Srinivasan, Population Concerns in India: Shifting Trends, Policies and Programs, Sage Publication, 2017
7. Newell, Colin; (1990), Methods and Models in Demography.
8. Patra, Aditya Kumar and Panigrahy, Rajib Lochan;(Ed)., (2010), Population and Health, Discovery, ISBN : 81-8356-584-4
9. R.K.Jain, (2013) Textbook of Population Studies , Neha Publishers & Distributors, ISBN-10 - 9789382126331
10. Ramachandrudu, G. and Prasada, Rao M, (2004), (Ed)., Census 2001 and Human Development in India, Serials Pub, ISBN : 81-86771-45-X
11. Ranganathan, C.R., (2006), A First Course in Mathematical Models of Population Growth (With MATLAB Programs), Associated Pub, ISBN : 81-85211-63-9
12. Rawat, Ishwar Modi;(2001)(Ed)., Ageing and Human Development : Global Perspectives, ISBN : 81- 7033-686-4

BA Hons. Economics Semester-VII

ECBM-710A Labour Economics-I (Major)-4

Course Objective: The aim of this course the students to specialized in labour economics and its operation. It covers demand & supply of labour, theories of wages and labour institutions.

Course Learning Outcomes: The course expects that student can know the labour economics theories and their application.

Course Content:

UNIT-1 Supply and Demand of Labour- Meanings of Labour - Labour Process: Alternative Approaches. Concept of Labour Force, Determinants of Labour Force Participation, Unemployment, Issues relating to Quality of Labour and Human Capital, Migration. Theories of Labour Demand in the Short Run and the Long Run, Technological Change and Labour Demand; Reserve Army of Labour. (18 Lectures)

UNIT-2 Theories of Wages- Wage Differentials, Market Rigidities and Flexibilities, Internal Labour Markets, Segmented Labour Markets, Labour Market as a Social Institution. (12 Lectures)

UNIT-3 Labour Institutions- Labour Legislation, Collective Action, Trade Unions etc. and their implications for Wages, Employment Security and Efficiency; Linkage between Labour Institutions and Macro-Economic outcomes in general. (15 Lectures)

Suggested Readings

1. Abraham, K.G. and R.B. Mckersie (eds.) (1990), New Developments in Labour Market: Towards a New Institutional Paradigm.
2. Akerlof, G.A. and J.L. Yellen (eds.) (1996), Efficiency Wage Models of the Labour Market.
3. King J.E. (1983), Labour Economics.
4. Smith R.S. & Ehrenberg R.G. (2012), Modern Labour Economics Theory and Public Policy.
5. Hicks, J.R.: The Theory of Wages
6. Berg Janine and David Kucera (eds.) (2008), In Defence of Labour Market Institutions: Cultivating Justice in the Developing World.

BA Hons. Economics Semester-VII

ECBM-711A Political Economy-I (Major)-4

Course Objective: The aim of this course the students to specialized in political economy and its operation. It covers theoretical approach, state & finance, and social dimension of globalization.

Course Learning Outcomes: The course expects that student can know the agriculture economics theories and their application.

Course Content:

UNIT-1 Introduction to Political Economy Perspective on political economy with a historical overview: capitalist development in the pre-second world war period, the golden age 'and later. Changing Dynamics of Capitalist Production, Organisational Form and Labour Process; Fordist and post-fordist production; changing dynamics of organisation of production, markets and labour process; the changing nature of job security and labour rights. (15 Lectures)

UNIT-2. The State in the Era of Globalisation and Changing role of Finance: Welfare, Development and Autonomy Globalisation and the limits of the welfare state, development and state autonomy. The Changing Role of Finance; The changing role of finance in capital accumulation and corporate structure; finance and globalisation - financialisation, financial liberalisation and financial crisis. ((18 Lectures))

UNIT-3 The Social Dimension Globalisation and uneven development – growth, inequality and exclusion. New Perspectives Gender in work, accumulation and globalisation; issues in environment and sustainability; alternatives ahead. (12 Lectures)

Suggested Readings

1. Michel Beaud, A History of Capitalism, 1500-2000, trans. by Tom Dickman and Anny Lefebvre, New York: Monthly Review Press, 2001.
2. Ash Amin (ed.), Post-Fordism: A Reader, Blackwell, 1994.
3. Fran Tonkiss, Contemporary Economic Sociology: Globalisation, Production, Inequality, Chapter 4 (Fordism and After), Routledge India 2008 reprint, 2006. 30
4. S. Hymer, "The Multinational Corporation and the Law of Uneven Development", in H. Radice (ed.) International Firms and Modern Imperialism, Penguin Books, 1975.
5. G. Gereffi, J. Humphrey and T. Sturgeon, 2005, —The Governance of Global Value Chains, Review of International Political Economy, Volume 12: 78–104.
6. Narasimha Reddy, —Economic Globalisation, Past and Present – The Challenges to Labour in Jomo K.S. & Khoo Khay Jin (ed.) Globalization and Its Discontents, Revisited, Sephis -Tulika Books, 2003.
7. David Harvey, A Brief History of Neoliberalism, OUP, 2005.

8. Andrew Glyn, —Challenges to Capitalism, in *Capitalism Unleashed: Finance, Globalization and Welfare*, Oxford: Oxford University Press, (Ch. One, pp. 1-24), 2006.
9. G Dumenil and D Levy, *The Crisis of Neoliberalism*, Harvard University Press, 2011.
10. K.S. Jomo (ed.), *The Long Twentieth Century: The Great Divergence: Hegemony, Uneven Development and Global Inequality*, OUP, 2006.
11. Gary Dymnsky, 2005, —Financial Globalization, Social Exclusion and Financial Crisis, *International Review of Applied Economics*, Vol. 19: 439–457.
12. E. Stockhammer, —Financialization and the Global Economy, in G. Epstein and M.H. Wolfson (ed.) *The Political Economy of Financial Crises*, Oxford University Press, 2010. Also, in *Working Paper Series*, No. 240, Political Economy Research Institute, University of Massachusetts Amherst
13. J.P. Smith and M.P. Ward, 1989, —Women in the Labour Market and in the Family, *Journal of Economic Perspectives*, Volume 3: 9-23.
14. Marilyn Power, 2004, —Social Provisioning as a Starting Point for Feminist Economics, *Feminist Economics*, Volume 10: 3-19.
15. John Bellamy Foster, *Ecology against Capitalism*, Monthly Review Press, 200

BA Hons. Economics Semester-VII

ECBM-712A Regional Economics-I (Major)-4

Course Objective: The aim of this course the students to specialized in regional economics and its operation. It covers concepts of regional economics, regional growth, and regional analysis.

Course Learning Outcomes: The course expects that student can know the regional economics theories and their application.

Course Content:

UNIT-1 Introduction to Regional Economics: Concepts – meaning and importance of regional economics; different types of regions; regional income; problems of estimation; indicators of regional development, Location of firms – one market one input case. More generalized version. Locational interdependence; Hotelling phenomena; general equilibrium; uncertainty; maximizing vs. satisficing. (15 lectures)

UNIT-2 Regional Growth – Neo – Classical growth models – cumulative causation model; Center – periphery model; growth pole analysis; convergence and divergence of disparities in per capita regional income. (10 Lectures)

UNIT-3 Techniques of regional analysis – regional and inter-regional input – output analysis; attraction model; Gravity model; Shift Share analysis; Impact studies. *Regional policy* – People prosperity versus place prosperity; formulation of inter-regional objectives; consistency between national and regional objectives; alternative regional policy measures; Historical evidence. Inter-regional differentials in India's development – Agriculture, Industry, physical infrastructure, social sector. Regional policy in India (20 Lectures)

Suggested Readings

1. Chand, M. *Regional Planning in India*, Allied Publishers, New Delhi
2. V.K. Puri, Hoover, E.M. *An Introduction to Regional Economics*, Alfred. A. Knopf, New York
3. Isard, W. *Methods of Regional Analysis*, MIT Press, Cambridge
4. Richardson, H.W. *Regional Economics*, Weidenfield and Nicolson, London
5. Dholakia, R.H. *Regional Disparity in Economic Growth in India*, HPH, Bombay
6. Friedman, J. *Regional Policy Readings in Theory & Application*, MIT Press W. Alonso (Eds)
7. Rao, H. *Regional Disparities & Development in India*, Ashish Publishing House, New Delhi
8. Richardson, H.W. *Input – Output and Regional Economics*, John Wiley, New York
9. Seth, V.K. *Industrialization in India; A Spatial Perspective*, Commonwealth Publishers, New Delhi
10. Siebert, H. *Regional Economic Growth; Theory & Policy*, International Textbook Company, Scranton

LIST-II SEM-VII

BA HONS. ECONOMICS MAJOR ELECTIVE PAPERS

BA Hons. Economics Semester-VII

ECBM-703B Operation Research-I (Major)-4

Course Objective: The aim of this course the students to specialized in operation research and its operation. It covers introduction OR, linear and non-linear programming, transportation and assignment problems.

Course Learning Outcomes: The course expects that student can know the operation research problems and their applications.

Course Content:

UNIT-1: Introduction to Operation Research: Definition, significance, scope and limitations of Operations Research, Basics of Mathematical Programming, Development of A Programming Problem; Linear and Nonlinear, Static and Dynamic, Single and Multiple Goals. Programming and Decision Making (lectures 8)

UNIT-2: Linear and Non-linear Programming: Assumptions, formulation and solution by graphic method and simplex methods; Duality in LP programming and its economic interpretation, difference between primal and dual, dual simplex method; Sensitivity analysis; Some special cases: unbounded solution, infeasibility, multiple optimal solution *Non-Linear programming:* Non-Linear programming, Mathematical formulation; Concepts of global minima and local minima; Lagrange multipliers and Kuhn-Tucker conditions; Duality in non-linear programming; Integer programming: Algorithms for integer programming. (27 lectures)

UNIT-3: Transportation Problem and Assignment Problem: Transportation problem, mathematical models for transportation problem, the transportation method, methods for finding initial solution, test for optimality, assignment problem: different approaches to find solution (10 lectures)

Suggested Readings

1. Sharma J.K.: "Operations Research:Theory and application",S. Chand, second edition
2. Chiang, Alpha C. (2005): "Fundamental Methods of Mathematical Economics", 4th edition, McGraw-Hill.
3. Natarajan, Balasubramani and Tamilarasi: "Operations research" Pearson
4. Col. D. S. Cheema (2006), Operations Research, Publisher: Laxmi
5. Frederick Hillier, Gerald Lieberman (Nov. 2005), Introduction to Operations Publisher: Tata Mcgraw Hill
6. Hillier (2001), Introduction to Operations Research, Seventh Edition (With CD), Publisher: Tata Mcgraw Hill Publishing Co Ltd
7. Nita Shah et al. (2007), Operations Research, Publisher: Prentice-hall Of India Pvt Ltd

8. R. Panneerselvam (2006), Operations Research, Publisher: Prentice-hall Of India Pvt Ltd

9. Taha (2008), Operations Research an Introduction 8e (s), Publisher: Pearson Education (Singapore)

BA Hons. Economics Semester-VII

ECBM-704B Game Theory-I (Major)-4

Course Objective: The aim of this course the students to specialized in game theory and its operation. It covers normal games, extensive forms games and Bayesian games.

Course Learning Outcomes: This course expects that student can know the different types of games and their application.

Course Content:

UNIT-1 Normal form games the normal form; dominant and dominated strategies; dominance solvability; mixed strategies; Nash equilibrium; symmetric single population games; applications (12 Lectures)

UNIT 2 Extensive form games with perfect information Extensive games with perfect information; strategies and outcomes; Nash equilibrium; subgame perfect equilibrium; backward induction in finite games; commitment; bargaining; Stackelberg's model of duopoly; a race; other illustrations (15 Lectures)

UNIT 3: Simultaneous move and Bayesian games: Entry into a monopolized industry; electoral competition with strategic voters; committee decision-making; exit from a declining industry. *Bayesian games* Strategies; Bayesian Nash equilibrium; Cournot's duopoly game with imperfect information; providing a public good; auctions; juries; other applications (18 Lectures)

Suggested Readings

1. Osborne, M. (2004). An introduction to game theory. Oxford University Press
2. Fudenberg, Drew, and Jean Tirole. *Game Theory*. MIT Press, 1991. ISBN: 9780262061414.

BA Hons. Economics Semester-VII

ECBM-705B Institutional Economics-I (Major)-4

Course Objective: The aim of this course the students to specialized in institutional economics and its operation. It covers introduction, institutional analysis, transaction cost and property rights.

Course Learning Outcomes: This course expects that student can know the institutional economics theories and their application.

Course Content:

UNIT-1 Introduction to Institutional Economics: The concept of institution in the New Institutional Economics: Adam Smith's The Theory of the Moral Sentiments. TB Veblen: The Theory of the Leisure Class. R Commons and JK Galbraith – formal (legalized) institutions, Scientific investigation methods. WC Mitchell- Establishment of Institutions. G Myrdal – interdependence of social, political, economic and institutional phenomena, modernization ideals. Religion as an institution. (15 Lectures)

UNIT-2 Institutional Analysis and Transaction Cost: Institutions and organizations. Interaction situations and the types of norms: prisoners' dilemma-type situation; co-ordination situation; inequality situation. Enforcement characteristics. Institutional structure of a society. Formal and informal institutions. *Transaction Cost:* The concept of transaction. Market and intra firm transactions. Transaction costs as friction in the economy Transaction costs and transformation costs. Interdependency between transaction costs and transformation costs, Transaction costs, the main types of economic exchange and their institutional structure. (15 Lectures)

UNIT-3 Economic Theory of Property Right: The definition of property rights. Property rights in different legal traditions. The property rights approach: some basic concepts. The Coase Theorem, Critic of Coase Alternative property rights regimes. Common property (open access), Exclusive property rights. The optimistic theory of the emergence of property rights (naïve model). The interest-group theory of property rights. The costs of collective action. The theory of rent-seeking. Interest-groups and rent-seeking in an economy. (15 Lectures)

Suggested Readings

1. Eggertson Thr. Institutions and Economic Behaviour.
2. North D. Institutions, Institutional Change and Economic Performance. Cambridge University Press, 1990,
3. Cooter R. The Theory of Market Modernization of Law. 16 International Review of Law and Economics, pp. 141-172 (1996).
4. Posner E. Social Norms and the Law, Harvard University Press, Cambridge, Mass., 2000; Ch.2 A Model of Cooperation and the Production of Social Norms.
5. Ullman-Margalit E. The Emergence of Norms. Oxford, Clarendon Press, 1977. Ch.1, 2, 3,4.

6. Young P. H. The Economics of Convention. 10 *Journal of Economic Perspectives*, pp. 105 - 122 (1996).
7. Coase R. The Nature of the Firm. 4 *Economica*, pp. 386-405 (1937).
8. Milgrom P., Roberts J. *Economics, Organization and Management*. - Prentice-Hall Int., 1992.
9. North D. *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, 1990, Ch.8.
10. Niehans J. Transaction Costs. In: *The Palgrave Dictionary of Economics*. London, Macmillan, 1987, pp. 676-679
11. North D. Integrating Institutional Change and Technical Change in Economic History. A Transaction Cost Approach. 150 *Journal of Institutional and Theoretical Economics*, pp. 609-624 (1994).
12. Williamson O. *The Economic Institutions of Capitalism*. The Free Press, N.Y. 1985, Ch.2, pp. 43-67.
13. Economic Theory of Property Rights (Main Reading)
14. Coase R.H. The Problem of Social Cost. 3 *Journal of Law and Economics* 1-44 (1960).
15. Kreps D. Corporate Culture and Economic Theory. In: *Perspectives on Positive Political Economy*. Cambridge: Cambridge University Press, 1990.
16. Menard C. Inside the Black Box: The Variety of Hierarchical Forms. In: *Transaction Cost Economics and Beyond*. ed. Groenewegen J. L., Kluwer Academic Publishers, pp.149-170.
17. Shelanski H., Klein P. Empirical Research in Transaction Cost Economics: A Review and Assessment. *Journal of Law, Economics and Organization*, 1995, Vol. 11, N 2., pp.335-361.
18. Williamson O. Comparative Economic Organization: The Analyses of Discrete Structural Alternatives. In: *Mechanisms of Governance*, Oxford University Press, 1996.
19. Williamson O. *The Economic Institutions of Capitalism*. The Free Press,
20. Kreps D. Corporate Culture and Economic Theory. In: *Perspectives on Positive Political Economy*. Cambridge: Cambridge University Press, 1990.
21. Eirik G. Furubotn and Rudolf Richter (1997), *Institutions and Economic Theory: The Contribution of*

BA Hons. Economics Semester-VII

ECBM-706B Financial Market-I (Major)-4

Course Objective: The aim of this course the students to specialized in financial market and its operation. It covers financial system, primary and secondary security market, derivative market and its instruments.

Course Learning Outcomes: The course expects that student can know the financial market and their application.

Course Content:

UNIT-1 Financial System & Its Components: Financial System and Economic Development, Reforms in Financial system, Money market & Capital Market-Its Instruments, Money market Derivatives, Reserve Bank of India and Money Market Regulation, Reforms in Capital market. (10 Lectures)

UNIT-2 Primary and Secondary Market for Securities: Book Building, Resource mobilization from International Market, Special Features of the Different Types of Equity and Debt Instruments, The Procedure and mechanism of trading in Capital Market including Dematerialization of Securities and Dematerialised Trading, Dividend Capitalization – Valuation and Listing of Security in India-BSE Index & Sensex, Stock Exchanges in India BSE, NSE and OTCEI, SEBI: Organization, Management, Functions and Powers, its Impact on the Working of Capital Market in India. (20 Lectures)

UNIT-3 Derivative Market & its Instruments: Derivatives- Meaning, types and uses; Mechanics of future markets and price determination, hedger, speculators, hedging strategies, Options and option pricing, the payoffs from buying and selling of options, put call ratio and parity, Mechanics and properties of stock options.

Role of Financial institutions & Insurance- Risk Management: Role of Non-Banking Financial Corporation's (NBFCs), Different Types of Foreign Capital Investment in India –NRI Investments and Deposits, Investment by Foreign Institutional Investors, Expansion and Growth of India's Financial Market, Measures of Financial Risk Management. (15 Lectures)

Suggested Readings

1. Paul, J. and P. Suresh (2008), Management of Banking and Financial Services, Pearson Education, Delhi.
2. Khan, M.Y. (2007): Financial Services, Tata McGraw Hill, New Delhi
3. Hull John (2002): Introduction to Futures and Options Market, Prentice Hall of India, New Delhi
4. E Gardon & K Natarajan: Financial Markets & Services.
5. Avadhani: Financial Services and Markets, Himalaya Publishing House
6. Sharma & Gupta, Financial Services, Kalyani Publishers
7. Vasantha Desai: The Indian Financial System, Himalaya Publishing House

BA Hons. Economics Semester-VII

ECBM-707B Economics of Natural Disaster-I (Major)-4

Course Objective: The aim of this course the students to specialized in economics of natural disaster and its operation. It covers credit.

Course Learning Outcomes: The course expects that student can know the economics of natural disaster and their application.

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

BA Hons. Economics Semester-VII

ECBM-708B Industrial Economics-I (Major)-4

Course Objective: The aim of this course the students to specialized in industrial economics and its operation. It covers principle of industrial management, practices and financial issues.

Course Learning Outcomes: This course expects that student can know the industrial economics and their application.

Course Content:

UNIT-1 Principles of Management - Concepts and significance of management, Roles and responsibilities, Principles of Management evolution, Introduction to Scientific Management- Contribution of Taylor, Fayol, Weber, Bernard and Elton Mayo, Indian v/s Western Management, Work Ethos and Values for Indian Managers- Relevance of Value Based Management in Global Change, Trans-Cultural Human Values. (12 Lectures)

UNIT-2 Management Practices: Planning and basic framework of Management By Objective (MBO), Framework of Ethical Decision-making-Duty, Rights based, consequence based, virtue based, Neutralization of behavior and decision-making, Strategic Business Units and Leading function, Empirical Indian cases from corporate bodies, Authority and Power, Staffing function and practices followed globally, Basic control process, Control techniques, MBE, Preventive control, Use of Information and Data Sciences in control. (12 Lectures)

UNIT-3 Financial Managemental and India: Meaning and Scope of Financial Management, Estimating Firm's financial requirements, Capital structure – Incentive, signaling and control arguments, Separation of ownership and control, cost of capital, size of working capital, capital market, institutional mechanism for Funds, Leasing and Sub-contracting, Investment Decisions: Criteria for investment appraisal, Risk analysis in Investment decisions. *India in the Global Setting:* Emergence of the New World Order in the 21st century, Globalization – traditional and modern viewpoints, India at the center-stage of Globalization, Challenges on the Macro and micro environment fronts, Indian concept of Globalization, Evolving management practices in MNCs and TNCs, Role of Indian Ethos in Managerial Practices (18 Lectures)

Suggested Readings

1. Pasad L.M. (2019) Principles and Practice of Management, Sultan Chand & Sons
2. Khan M.Y. & Jain P.K., (2018) Financial Management: Text, Problems and Cases, McGraw Hill Education
3. Bajpai Naval (2017) Business Research Methods, Pearson Education
4. Pandey, I.M., (2016) Financial Management, Vikas Publishing House
5. Kaul, Vijay Kumar, (2015) Principles and Practices of Management, Vikas Publishing House
6. Sengupta Partho S., (2010) Principles and Practices of Management, Vikas Publishing House
7. Pillai R.S.N., Kala S., (2013) Principles and Practice of Management, S Chand & Co.
8. J.P. Mahajan (2015): Managing Human Resources, Vikas Publishing House,
9. Shejwalkar and Ghanekar (2011) Principles and Practices of Management, 20th Edition.

19. P.K Saxena (2009), Principles & Practices of Management
11. Tim Hannagan, (2007) Management Concepts & Practices
12. Donald A. Hay & Derek J.Morris(1991) Industrial Economics and Organization: Theory and Evidence, Oxford University Press, Revised edition
12. S.A. Sherlekar(1990) Modern Business Organisation and Management: Systems-based Contingency Approach to the Organisation and Management of Business, Himalaya Publishing House
13. M.Y. Khan & Jain, Management Accounting, 1984, 3rd Edition.
14. Harold Koontz, (1972) Principles of Management: An Analysis of Managerial Functions,

BA Hons. Economics Semester-VII

ECBM-709B Health Economics-I (Major)-4

Course Objective: The aim of this course the students to specialized in health economics and its operation. It covers introduction to health economics, demand and supply of health services, valuing and damage of health.

Course Learning Outcomes: This course expects that student can know the health economics and its application.

Course Content:

UNIT-1 Introduction to Health Economics -The state and scope of health economics; Human capital and health; Health as a Social Indicator; Health and Economic Development: Inter-linkage, Determinants of health: Poverty, Malnutrition and Environmental quality; Change of health status over time; Components of economic appraisal of health programmes. (12 Lectures)

UNIT-2 Demand and supply of Health Services -Theoretical and empirical investigations; health insurance and demand for medical care, adverse selection, moral hazard and consumer incentive in health care. Supply of health and healthcare services, Relevance of production function, Issues and Challenges of healthcare production; Estimating a Household (health) health production functions. Factors affecting the supply of healthcare services; Public-Private Dichotomy in Providing Healthcare Services. (16 Lectures)

UNIT-3 Valuing and Damage of Health -Human capital approach: measurement of mortality: value of life, years of life lost; morbidity valuation: cost of illness, Burden of disease: Meaning and significance, DALY: A measure of the burden, The DALY framework: Components and postulates, DALY and QALY; The GBD assessment, BD and DALY: A critical appreciation. *Health Accounting*- National health accounts, from SNA to NHA, Health expenditure efforts. (17 Lectures)

Suggested Readings

1. Anthony J. Cuyler and Joseph P.(ed) (2000), Handbook of Health Economics, Newhouse, North Holland, Elsevier Science.

2. Clewar, Ann, and David Perkins. 1998. *Economics for Health Care Management*. London: Prentice Hall.
3. Folland, Sherman, Allen Goodman, and Miron Stano. 2001. *The Economics of Health and Health Care*. New York: Macmillan, Third Edition.
4. Rice, Thomas. 1998. *The Economics of Health Reconsidered*. Chicago: Health Administration Press.
5. Sherman Folland, Allen C. Goodman, and Miron Stano, (2004.), *The Economics of Health and Health Care, 4th Edition*, Prentice Hall.
6. Santerre and Neun, (2004) *Health Economics: Theories, Insights, and Industry Studies*, Thomson/South Western.
7. Feldstein, P. J., (1979), *Health Care Economics*, John Wiley & Sons, New York.
8. Folland, Goodman & Stano (1997), *The Economic of Health and Health Care*, Prentice Hall, New Jersey.
9. Musgrove P (1996), *Public and Private Roles in Health: Theory and Financing Patterns*, Discussion Paper No. 319, World Bank, Washington DC

BA Hons. Economics Semester-VII

ECBM-710B Gender Economics-I (Major)-4

Course Objective: The aim of this course the students to specialized in gender economics and its operation. It covers introduction to gender economics, gender issues under micro, macroeconomics and development economics.

Course Learning Outcomes: This course expects that student can know the gender economics and their application.

Course Content:

UNIT-1 Introduction to Gender Economics and Microeconomics: Exploitation vs. oppression – Issue of private property Access and control over economic resources. Gender and Microeconomics: Gender Bias in the Theories of Value and Distribution – issues and alternative theories of rationality, consumption, production and exchange – Gender critic of rational choice, externalities, social welfare function and welfare economics – Human capital and discrimination theories. [18 Lectures]

UNIT-2 Gender and Macroeconomics: Engendering macroeconomic perspectives, approaches and methodologies – political economy of macroeconomic modelling – Gendering fiscal and monetary policies – concept, critic and methods of gender budget analysis. [12 Lectures]

UNIT-3 Women and Development: Engendering developmental theories – Gender Development Index and Gender Empowerment Measures – Visibility of women and biases inherent in data system – Limitation of National Income Statistics - Mainstreaming gender into development policies – Gender planning techniques - Gender sensitive governance - Paradigm shifts from women's well-being to women's empowerment – Democratic decentralization (panchayats) and women's empowerment in India. [15 Lectures]

Suggested Readings

1. Government of India: Towards Equality — Report of the Committee on the Status of Women in India, Department of Social Welfare, Ministry of Education and Social Welfare, New Delhi.
2. ILO: Women's Participation in the Economic Activity of Asian Countries.
3. Kabeer, N. and R. Subrahmanyam (Ed.): Institutions, Relations and Outcomes: A Framework and Case Studies for Gender-aware Planning.
4. Kalpagam, U.: Labour and Gender: Survival in Urban India.
5. Krishnaraj, M., R.M. Sudarshan and A. Shariff: Gender, Population and Development.
6. Papola, T.S. and A.N. Sharma (Eds.): Gender and Employment in India

BA Hons. Economics Semester-VII

Human Development -I (Major)-4

Course Objective:

Course Learning Outcomes:

Course Learning Outcomes:

Course Content:

UNIT-I: Concept and Measure of Poverty and Welfare

UNIT-II: Poverty Lines and Measure of Poverty

UNIT-III: Dimension of Poverty: Income and Non-Income, National and Global Scenario: Great India Poverty Debates

Reference –

1. Anand, S., & Sen, A. (1994). Human Development Index: Methodology and Measurement.
2. Ravallion, M. (2015). The economics of poverty: History, measurement, and policy. Oxford University Press.
3. Ravallion, M. (2008). Poverty lines. The new palgrave dictionary of economics, 2.
4. Subramanian, S. (2019). Inequality and poverty: A short critical introduction. Springer.
5. Ravallion, M., & Datt, G. (2002). Why has economic growth been more pro-poor in some states of India than others. Journal of development economics, 68(2), 381-400.
6. Ravallion, M. (2004). Pro-poor growth: A primer. Available at SSRN 610283.
7. Human Development Report, UNDP
8. National Multidimensional Poverty Index, Niti Aayog

BA Hons. Economics Semester-VII

ECBM-712B Indian Public Finance-I (Major)-4

Course Objective: The aim of this course the students to specialized in Indian public finance and its operation. It covers public budget, tax structure, goods and services taxes in India.

Course Learning Outcomes: This course expects that student can know the Indian public finance and their application.

Course Content:

UNIT-1 Introduction to Public Budget: Kinds of Budgets, Revenue and Capital Budgets, Economic and Functional Classification of Budget, Budgetary Procedure in India – Preparation, Enactment, Presentation and Execution of the Budget; Consolidated, Contingency Funds, Public Account, Votable and Non-Votable Items. Critical evaluation of the Recent Budget in India. (08 Lectures)

UNIT-2 Tax Structure in India: *Union Taxes:* Taxation of Income: Concept of Income, basis of liability to Tax, Rate Structure, Tax Incentive/Tax Expenditure, Double Taxation; Corporation Tax in India; trends in receipts from Income and Corporation Taxes in India, Taxation of Capital Gains. Taxes on Commodities and Services: Changing scenario in respect of receipts from Commodities and Services; Customs Duties; Union Excise Duties. Tax Revenue Receipts and Tax-GDP Ratios. *State Taxes:* Taxes on Income: Agriculture Income Tax, Tax on Professions. Taxes on Property and Capital transaction – Stamps and Registration Fees, Land Revenue, Urban Immovable Property Tax, State Excise Duties, Share in Central taxes. (20 Lectures)

UNIT-3 Goods and Services Tax (GST) and Non-Tax Revenue Sources: Evolution Goods GST and problems. Non-Tax Revenue Sources: Union Government– Contribution of PSUs, Interest Receipt, Fiscal Services, General Services, Social & Community Services, Economic Services. State Government - Contribution of PSUs, Interest Receipts, General Services, Social and Community Services, Economic Services, Grants from Centre. Major Issues in Taxes: Tax Reforms after 1991, Changes in Composition of Tax Structure, Tax Administration, Tax Avoidance and Evasion, GAAR, Proposed Direct Tax Code (DTC). (17 Lectures)

Suggested Readings

1. Annual Reports, Ministry of Finance, Government of India.
2. Bhargava, P.K. (1991), India's Fiscal Crisis, Ashish Publishing House, New Delhi.
3. Bhargava, R.N. (1971), The Theory and Working of Union Finance in India, Chaitanya Publishing House, Allahabad
4. Chelliah, Raja J. (1969), Fiscal Policy in Underdeveloped Countries, George Allen and Unwin Ltd., London
5. Chelliah, R.J. (Ed.) (1996), Towards Sustainable Growth: Essays in Fiscal and Financial Sectors Reforms in India, Oxford University Press, Bombay.
6. Gaur, A.K. (1988), Federal Finance in India, Deep & Deep Publications, New Delhi
7. Government of India, Ministry of Finance (2002), Reports of the Task Force on Direct and Indirect Taxes.
8. Government of India: Economic Survey, and Union Budget different years.
9. Jain, Anil Kumar & Parul Jain (2007), Reforms in Direct Taxes through Union Budgets: A Commentary, RBSA Publishers, Jaipur
10. Jha, Praveen (2011) (Ed.), Progressive Fiscal Policy in India, Sage Publications India Pvt. Ltd. New Delhi
11. Kumar, Arun (1999), The Black Economy in Indian, Penguin Books, New Delhi

- 12.Kumar, Arun (2017), Demonetization and the Black Economy, Penguin Books, New Delhi.
 13.Singh, Tejinder (2000), The Corporation Tax in India, Classical Publishing Company, New Delhi
 14.Srivastava, D.K. (Ed.): Fiscal Federalism in India.
 15.Srivastava, D.K. (2005), Issues in Indian Public Finance, New Century Publications, New Delhi.

A. Optional Paper Hon with Research Sem VII

Course	Paper-I List-C (Theory)	Course	Paper-II List-D (Empirical)
Major (4)	Behavioral Economics	Major (4)	Impact Assessment
Major (4)	Political Economy	Major (4)	Large Sample Data Base
Major (4)	Indian Economic thought	Major (4)	Financial Economics
Major (4)	Heterodox Economics	Major (4)	Economics of Climate Change
Major (4)	Nobel Economics Contribution	Major (4)	Economics of Disaster management

Option paper List-C

BA Hons. With Research in Economics Semester-VII

ECBM-803C Behavioural Economics (Major)-4

Course Objective: The aim of this course the students to specialized in behavioral economics and its operation. It covers

Course Learning Outcomes: This course expects that student can know the behavioral economics and their application.

Course Learning Outcomes:

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

BA Hons. With Research in Economics Semester-VII

ECBM-804C Political Economy (Major)-4

Course Objective: The aim of this course the students to specialized in political economy and its operation. It covers

Course Learning Outcomes: This course expects that student can know the political economy and their application.

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

BA Hons. With Research in Economics Semester-VII

ECBM-805C Indian Economic Thought (Major)-4

Course Objective: The aim of this course the students to specialized in Indian economic thought and its operation. It covers

Course Learning Outcomes: This course expects that student can know the Indian economic thought and their application.

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

BA Hons. With Research in Economics Semester-VII

ECBM-806C Heterodox Economics (Major)-4

Course Objective: The aim of this course the students to specialized in heterodox economics and its operation. It covers

Course Learning Outcomes: This course expects that student can know the heterodox economics and their application.

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

BA Hons. With Research in Economics Semester-VII

ECBM-806C Nobel Contribution in Economics (Major)-4

Course Objective: The aim of this course the students to specialized in Nobel convolution in economics and its relevance. It covers

Course Learning Outcomes: This course expects that student can know the nobel contribution in economics and their application.

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

Option List-D

BA Hons. With Research in Economics Semester-VII

ECBM-803D Impact Assessment (Major)-4

Course Objective: The aim of this course the students to specialized in impact assessment and its operation. It covers

Course Learning Outcomes: This course expects that student can know impact assessment and their application.

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

BA Hons. With Research in Economics Semester-VII

ECBM-804D Large Sample Data Base (Major)-4

Course Objective: The aim of this course the students to specialized in large sample data base and its operation. It covers

Course Learning Outcomes: This course expects that student can know the large sample data base and their application.

Course Content:

UNIT -I: Introduction to Household Survey Analysis and Understanding Unit level data of NSSO

UNIT-II : Analysing and Estimation using the Unit level data of CES, EUS , PLFS , AIDS , Social Consumption.

UNIT-III : Writing Report Using Unit level data Suggested Readings

Suggested Readings

BA Hons. With Research in Economics Semester-VII

ECBM-805D Financial Economics (Major)-4

Course Objective: The aim of this course the students to specialized in financial economics and its operation. It covers

Course Learning Outcomes: This course expects that student can know the financial economics and their application.

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

BA Hons. With Research in Economics Semester-VII

ECBM-806D Economics of Climate Change (Major)-4

Course Objective: The aim of this course the students to specialized in economics of climate change and its operation. It covers

Course Learning Outcomes: This course expects that student can know the economics of climate change and its application.

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

ECBM-807D Economics of Disaster Management (Major)-4

Course Objective: The aim of this course the students to specialized in economics of disaster management and its operation. It covers

Course Learning Outcomes: This course expects that student can know the economics of disaster management and their application.

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

SEM_VIII

LIST-A SEM-VIII

BA HONS. ECONOMICS MAJOR ELECTIVE PAPERS

BA Hons. Economics Semester-VIII

ECBM-804A Advance Econometrics-II (Major)-4

Course Objective: The aim of this course the students to specialized in advance econometric and its operation. It covers introduction to panel data, panel data models and dynamic panel data models.

Course Learning Outcomes: This course expects that student can know the advance econometrics and their application.

Course Content:

UNIT-1 Introduction to Panel data Analysis- Advantages of Panel data, Issues of Panel data, Non-stationarity, Panel Co-integration. (10 Lectures)

UNIT-2 Panel Data Models -Fixed and Random effect models: Specification, estimation and inference; Error components: A variance decomposition, GLS within groups and between groups, testing for correlated unobserved Heterogeneity, Arellano Specification test, Robust Alternative; Introduction to unbalanced Panel data models. (15 Lectures)

UNIT-3 Dynamic Panel Data Models and Non-Parametric Estimation -Lagged dependent variable model, GMM Estimation, Time Varying co-efficient model, Simultaneous Equation model in Panel Data. *Bayesian and Non-Parametric Estimation* -Non parametric estimation-theoretical bias and variance of Nadaraya – Watson estimators, confidence interval, Band width choice, treatment effect, Introduction to Bayesian Regression. (20 lectures)

Suggested Readings

1. Baltagi, B. (2008). *Econometric analysis of panel data*. John Wiley & Sons.
2. Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics: methods and applications*. Cambridge university press.
3. Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. MIT press.
4. Green, W. H. (1997). *Econometric analysis*. Maxwell Macmillan International
5. Baltagi, B. H. (Ed.). (2015). *The Oxford handbook of panel data*. Oxford Handbooks.
6. Arellano, M. (2003). *Panel data econometrics*. Oxford university press.
7. Baltagi, B. H., & Hashem Pesaran, M. (2007). Heterogeneity and cross section dependence in panel data models: theory and applications introduction.
8. Baltagi, B. H., & Song, S. H. (2006). Unbalanced panel data: A survey. *Statistical Papers*, 47(4), 493- 523.

9. Biørn, E. (2016). *Econometrics of panel data: Methods and applications*. Oxford University Press.
10. Breitung, J., & Pesaran, M. H. (2008). Unit roots and cointegration in panels. In *The econometrics of panel data* (pp. 279-322). Springer, Berlin, Heidelberg.
11. Edward W. Frees (2004): *Longitudinal and Panel Data*, Cambridge University Press.
12. Elhorst, P., Zandberg, E., & De Haan, J. (2013). The impact of interaction effects among neighbouring countries on financial liberalization and reform: A dynamic spatial panel data approach. *Spatial Economic Analysis*, 8(3), 293-313.
13. Hsiao, C. (2014). *Analysis of panel data* (No. 54). Cambridge university press.
14. Lee, L. F., & Yu, J. (2010). Some recent developments in spatial panel data models. *Regional Science and Urban Economics*, 40(5), 255-271
15. Pesaran, M. H. (2015). *Time series and panel data econometrics*. Oxford University Press

BA Hons. Economics Semester-VIII

ECBM-805A Applied Microeconomics-II (Major)-4

Course Objective: The aim of this course the students to specialized in applied microeconomics and its operation. It covers growth and regional disparities, aggregate demand estimation and other economic variables

Course Learning Outcomes: This course expects that student can know the applied microeconomics and their application.

Course Content:

UNIT-1 Growth and Regional Disparities: National Income: Method of Splicing a time series data, non-stationarity & Stationarity, Identification of Structural Breaks –Exogeneity & Endogeneity, Different test: Chow, Zivot- Andrew, Bai-perron Computation of Growth Rates – CAGR, Annual Average. Empirical Measurement of Regional Disparity – Sigma & Beta Convergence Analysis, Discussion on Literatures on Growth & Regional Disparities on India. (10 Lectures)

UNIT-2 Aggregate Demand Estimation: Consumption Function- Estimation of Consumption Function-Absolute Income, Life Cycle and Permanent Income Hypotheses, Investment: Estimation of Investment Function, Accelerator & Distributed Lag Models, Neoclassical Models, Endogeneity and Dynamic Models. Empirical Estimation of Demand Function for and Supply Function of Exports. (12 Lectures)

UNIT-3 Money, Inflation Dynamics and Macro Econometrics Models for India: Demand Function for Money-Short-run and long-run demand functions for money; Inflation targeting and Sacrifice Ratio, Estimation of Philips curve, Supply Response Function- estimates of linear, log-linear and short-run and longrun price elasticities.

Macro Econometrics Models for India: Evolution of Macro-econometric models for India, Estimating Macro-econometrics Models for Indian Economy, Structural Equation Models, Estimation of Interaction of different markets, Policy Simulation. (23Lectures)

Suggested Readings

1. Flaschel, P., Groh, G., Proaño, C., & Semmler, W. (2008). *Topics in applied macrodynamic theory* (Vol. 10). Springer Science & Business Media.
2. Hoover, K. D. (2011). *Applied intermediate macroeconomics*. Cambridge University Press.
3. Heijman, W. J. M. (2000). *Applied Macroeconomics*. Cereales.
4. Acemoglu, D. (2012). Introduction to economic growth. *Journal of economic theory*, 147(2), 545-550.
5. Mills, T., & Patterson, K. (Eds.). (2009). *Palgrave Handbook of Econometrics: Volume 2: Applied Econometrics* (Vol. 2). Springer.
6. Bårdsen, G., Jansen, E. S., Eitrheim, Ø., & Nymoen, R. (2005). *The econometrics of macroeconomic modelling*. OUP Oxford.

7. Balakrishnan, P. (2010). *Economic growth in India: History and prospect*. Oxford University Press.
8. Das, P. (2007). Economic growth and structural break in India: Testing unit root hypothesis. *The Journal of income and wealth*, 29(2), 29-43.
9. DeLong, J. B. (2003). India since independence: An analytic growth narrative. *In search of prosperity: Analytic narratives on economic growth*, 184-204.
10. Cherodian, R., & Thirlwall, A. P. (2015). Regional disparities in per capita income in India: convergence or divergence? *Journal of Post Keynesian Economics*, 37(3), 384-407.
11. Bakshi, S., Chawla, A., & Shah, M. (2015). Regional disparities in India: A moving frontier. *Economic and Political Weekly*, 44-52.
12. Ghosh, M. (2013). *Liberalization, growth and regional disparities in India*. Springer Science & Business Media.
13. Krishnamurthy, K. 2002. Macro-econometric models for India: Past, present and prospects. *Economic and Political Weekly* 37(42): 4295–4308.
14. Yoshino, N., Paramanik, R. N., & Gopakumar, K. U. (2020). An Aggregate-Level Macro Model for the Indian Economy.
15. Rangarajan, C., & Arif, R. R. (1990). Money, output and prices: A macro econometric model. *Economic and Political Weekly*, 837-852.
16. Jadhav, N., & Singh, B. (1990). Fiscal-Monetary Dynamic Nexus in India: An Econometric Model. *Economic and Political Weekly*, 159-165.
17. Bodkin, R. G., Klein, L. R., & Marwah, K. (1991). A history of macro-econometric model-building. *Books*.
18. Diebold, F. X. (1998). The past, present, and future of macroeconomic forecasting. *Journal of Economic Perspectives*, 12(2), 175-192.
19. Krishna, K. L., Krishnamurty, K., Pandit, V., & Sharma, P. D. (1991). Macro-econometric modelling in India: a selective review of recent research. *Econometric Modelling and Forecasting in Asia*.
20. Krishnamurty, K., & Pandit, V. (1984). Macro-econometric Modelling of the Indian Economy: An Overview. *Indian Economic Review*, 19(1), 1-15.
21. Pandit, V., & Bhattacharya, B. B. (1987). Resource Mobilization, Growth, and Inflation: A Trade-Off Analysis for India. *Asia pacific Economies: Promises and Challenges, Research in International Business and Management*, 6(Part A).
22. Padoan, P. C. (1990). Macro-econometric Modelling of the Indian Economy. *Studies on Inflation and Growth*.
23. Boumans, M., & Duarte, P. G. (2019). The History of Macro-econometric Modelling An Introduction. *History of Political Economy*, 51(3), 391-400
24. Kalirajan, K., & Bhide, S. (2017). *A disequilibrium macro-econometric model for the Indian economy*. Routledge.
25. Srivastava, D. K. (1981). Policy simulations with a macro-econometric model of the Indian economy. *Journal of Policy Modeling*, 3(3), 337-359.
26. Palanivel, T., & Klein, L. R. (1999). An econometric model for India with emphasis on the monetary sector. *The Developing Economies*, 37(3), 275-327

BA Hons. Economics Semester-VIII

ECBM-806A Behavioural Economics-II (Major)-4

Course Objective: The aim of this course the students to specialized in behavioral economics and its operation. It covers competitive game theory, fairness and relation and macroeconomics.

Course Learning Outcomes: This course expects that student can know the behavioral economics and their application.

Course Content:

UNIT-1 Behavioral and Cooperative Game Theory: Predicting Human Behaviour in Strategic Situations, Social Utility, Iterated Reasoning in First-Period Play and One-Shot Games, Judgment and Choice in Games, Framing, Coordination, and Representation Cooperative Game Theory, Evolutionary Game Theory, Signaling Games, Coordination Games, Unstructured Bargaining. (14 Lectures)

UNIT-2 Fairness and Retaliation: The Economics of Reciprocity, Positive and Negative Reciprocity, Public Goods to Social Norms, Reciprocity as a Contract Enforcement Device, Work Motivation and Performance Incentives, Wage Rigidity, Rent-Sharing, and Competition, Foundations of Incomplete Contracts, The Effect of Incentives and Punishments, Decision Theory. (12 Lectures)

UNIT-3 Applications in Macroeconomics: Mental Accounting, Saving, and Self-Control, Self-Control and Temptation, The Differential Marginal Propensity to Consume (MPC) Hypothesis, Pensions and Saving, Individual Retirement Accounts, Housing Wealth, Saving Adequacy, Nonproportionality, Policy Implications, Golden Eggs and Hyperbolic

Discounting, The Consumption Decision, Equilibrium Strategies. *Applications in Labour Economics:* The Fair Wage-Effort Hypothesis and Unemployment, Equity Theory, Relative Deprivation Theory, Social Exchange Theory, Wage-Salary Secrecy, Wage Patterns, Patterns of Unemployment. *Applications in Finance:* Money Illusion, Earnings, Transactions, Contracts, Money Illusion in Solow's Model of Efficiency Wages. (19 Lectures)

Suggested Readings

1. Crawford, Vincent, and Bruno Broseta. 1998. "What Price Coordination? The Efficiency-enhancing Effect of Auctioning the Right to Play." *American Economic Review*, 88: 198–225.
2. Crawford, Vincent, and Hans Haller. 1990. "Learning How to Cooperate: Optimal Play in Repeated Coordination Games." *Econometrica*, 58: 571–95.
3. Forsythe, Robert, John Kennan, and Barry Sopher. 1991. "An Experimental Analysis of Strikes in Bargaining Games with One-Sided Private Information." *American Economic Review*, 81: 253–70.
4. Friedman, Daniel. 1996. "Equilibrium in Evolutionary Games: Some Experimental Results." *Economic Journal*, 106: 1–25.

5. Fudenberg, Drew, and David Levine. 1998. *The Theory of Learning in Game*. Cambridge: MIT Press.
6. Fudenberg, Drew, and Jean Tirole. 1991. *Game Theory*. Cambridge: MIT Press.
7. Gale, John, Kenneth Binmore, and Larry Samuelson. 1995. "Learning to Be Imperfect: The Ultimatum Game." *Games and Economic Behaviour*, 8: 59–60
8. Goeree, Jacob, and Charles Holt. 1999. "Stochastic Game Theory: For Playing Games, Not Just for Doing Theory." *Proceedings of the National Academy of Sciences*, 96: 10564–567.
9. Holbrook, Robert. 1966. "Windfall Income and Consumption: Comment." *American Economic Review*, 56: 534–40.
10. Manchester, Joyce M., and James M. Poterba. 1989. "Second Mortgages and Household Saving." *Regional Science and Urban Economics*, 19: 325–46.
11. Rea, Samuel A., Jr. 1984. "Efficiency Implications of Penalties and Liquidated Damages." *Journal of Legal Studies*, 13: 147–67.
12. Runkle, David E. 1991. "Liquidity Constraints and the Permanent-Income Hypothesis." *Journal of Monetary Economics*, 27: 73–98.
13. Shea, John. 1995. "Union Contracts and the Life Cycle/Permanent-Income Hypothesis." *American Economic Review*, 58: 186–200.
14. Souleles, Nicholas. 1995. "The Response of Household Consumption to Income Tax Refunds." *Mimeo, MIT*.
15. Tidd, K. L., and J. S. Lochard. 1978. "Monetary Significance of the Affiliative Smile: A Case for Reciprocal Altruism." *Bulletin of the Psychonomic Society*, 11: 344–46.
16. Williamson, Oliver. 1985. *The Economic Institutions of Capitalism*. New York: Free Press.
- Valenzi, Enzo
R., and I. Robert Andrews. 1971. "Effects of Hourly Overpay and Underpay
17. Inequity When Tested with a New Induction Procedure." *Journal of Applied Psychology*, 55: 22–27.
18. Walster, Elaine, G. William Walster, and Ellen Berscheid. 1977. *Equity: Theory and Research*. Boston: Allyn and Bacon.
19. Yellen, Janet L. 1984. "Efficiency Wage Models of Unemployment." *American Economic Review*, 74: 200–05

BA Hons. Economics Semester-VIII

ECBM-807A Financial Economics-II (Major)-4

Course Objective: The aim of this course the students to specialized in financial economics and its operation. It covers

Course Learning Outcomes: This course expects that student can know the financial economics and their application.

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

BA Hons. Economics Semester-VIII

ECBM-808A Natural Resource Economics-II (Major)-4

Course Objective: The aim of this course the students to specialized in natural resource economics and its operation. It covers

Course Learning Outcomes: This course expects that student can know the natural resource economics and their application.

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

BA Hons. Economics Semester-VIII

ECBM-809A Agriculture Economics-II (Major)-4

Course Objective: The aim of this course the students to specialized in agriculture economics and its operation. It covers agriculture growth and policy, agriculture market and sustainable agriculture.

Course Learning Outcomes: This course expects that student can know the agriculture economics issues and their solutions.

Course Content:

UNIT-1 Agriculture Growth and Policy: Incentives and Disincentives, Resource allocation and its Impact on agricultural growth after 1991, Public and private investment in agriculture, Issues related to agricultural Subsidy. Agricultural Price Policy-Fixation of Prices, Terms of trade between agricultural and nonagricultural sectors, Supply Response in Indian Agriculture, Issues relating to misspecification of supply response function. (15 Lectures)

UNIT-2 Agricultural Markets and India: Regulated markets; Role of FPOs in agricultural marketing, Recent policies with respect to agricultural marketing, Political Economy of Indian Agriculture: Land reforms, The Farm size and productivity relation in Indian agriculture, Agricultural growth after 1991 and doubling farmers' income. (15 Lectures)

UNIT-3 Sustainable Agriculture and WTO: Meaning and importance, Indicators of Sustainable Agriculture, Issues related to genetically modified seeds in India, Legislation on Plant Varieties and Farmers' Rights Protection, Contract Farming - Present Status and Future directions, Organic farming in India, Climate change in agriculture. **WTO and Indian Agriculture:** Agreement on Agriculture, The issue of farm subsidies (North vs South Debate). (15 Lectures)

Suggested Readings

1. The World Bank (2005), Reenergizing the agricultural Sector to sustain growth and reduce poverty, OUP, New Delhi
2. Confederation of Indian Industry (1998) An Agenda for Reforms in Indian Agriculture Sector
3. Anjani Kumar et.al, (2020), Changing composition of private investment in Indian Agriculture and its relationship with public investment and input subsidies, IFPRI discussion paper 01905 (can be accessed from elibrary.IFPRI.org)
4. S. Bbisaliah & S. Mahendra Dev (2010), Private Capital Formation in Indian Agriculture, (can be accessed at FAO.org)
5. B.D Dhawan and S.S Yadav (1997), Public Investment in Indian Agriculture: Trends and Determinants, EPW Vol 32, No 14, April 1-05
6. N. Akber & K.R. Paltasingh, (2019) Is public investment complimentary to private investment in Indian Agriculture? Evidence from NARDL approach, Agricultural Economics, Vol 50, issue 05.

7. B. Ramaswamy (2019), Agricultural subsidies (Study prepared for XV Finance Commission) (accessible at fincomindia.nic.in)
8. M. Gautam (2015), Agricultural Subsidies, resurging Interest in a perennial debate, Indian Journal of Agricultural Economics, Vol 70, No 1, Jan -March
9. OECD (2018), Agricultural Policies in India (can be accessed at oecd-ilibrary.org)
10. S. Saini & A. Gulati, (2017), Price distortions in Indian Agriculture, IBRD, Washington (can be accessed at icrier.org)
11. M. Raghavan (2004), Terms of trade between Agriculture and non-agriculture in India, 1950/51 to 2000/01, Social Scientist, Vol 32, No 03/04, March-April
12. T. Palanivel (1995), Aggregate Supply Response in Indian Agriculture: Some Empirical Evidence and Policy Implications, Indian Economic Review, New Series, Vol XXX, No 02, July-December
13. G. Mmythili (2012), Supply response of Indian farmers: Pre and Post Reforms, WP-2006-009.pdf
14. (can be accessed at oii.igidr.ac.in)
15. M. Rao(1989) , Agricultural Supply Response: A Survey , Agricultural Economics, Vol 03, Issue 01, March
16. R. Chand (2020), New Farm Acts: Understanding the Implications, NITI Aayog (can be accessed at niti.gov.in)
17. NABARD (2020) , Farmer Producers' Organization (FPOs) : Status, Issues and Policy Reforms, National Paper PLP 2019-20 (can be accessed at nabard.org)
18. Ministry of Agriculture and Farmer's Welfare, GOI (2018), Report of the Committee on Doubling of Farmers' Income, Vol I and II
19. M. Ghatak & S. Roy (2007), Land reform and agricultural productivity in India: a review of the evidence, Oxford Review of Economic policy, Volume 23, Number 02 (can be accessed at personal.lse.ac.uk/ghatak)
20. P. Dorner (1972), Land reforms and economic development, Penguin
21. M.L Dantwala & C. H . Shah (1971) , Evaluation of land reforms, University of Bombay press
22. N.E Rada & K.O. Fuglie (2019), New perspectives on farm size and productivity, Food policy, Vol 84, April. (can be accessed at sciencedirect.com)
23. G.R. Saini (1969) , Farm size, productivity and returns to scale, EPW, Vol 04, No 26, June
24. C.H. Hanumantha Rao (1965), Agricultural Production Functions, Costs and Returns in India, Asia Publishing house, Bombay
25. G. Dyer (1998) , Farm Size and Productivity : A new look at the old debate revisited , EPW, Vol 33, No 26, June-July
26. FAO (2020) , Methodological Note on SDG indicator 2.4.1 (can be accessed at FAO.org)

BA Hons. Economics Semester-VIII

ECBM-810A Population Studies-II (Major)-4

Course Objective: The aim of this course the students to specialized in population economics and its operation. It covers theories of population studies, migration & urbanization and population movement.

Course Learning Outcomes: This course expects that student can know the population studies and their application.

Course Content:

UNIT-1 Theories of Pollution Studies -Theories of Population Growth – Malthus to Modern, Hebert Spencer, Pearl & Reed, Dumont, Karl Marx, Leibeinstein., Meadows, Enke, and Simon's view on Population, Limits to population Growth, Optimum theory of Population, Theory of Demographic Transition. (15 Lectures)

UNIT-2 Migration and Urbanization-Basic concepts and definition of Migration and Urbanization, Types of Migration – Internal and International, Determinants and Consequences of Migration, concept and definition of Urban, Trends and Patterns of Migration in India, Issues in Urbanization and Urban Problems in developing countries with focus in India. (15 Lectures)

UNIT-3 Population Movements-Basic Concept and Definition, Difference between Migration and Mobility, theories of Migration, Pull and Push Factors, lee's Theory of Migration, Ravenstein's Law of Migration, Stouffer's model of intervening opportunities and competing Migration, Gravity Model, Harris- Todaro Model of Migration, Rural – Urban Movement, Population projection. (15 Lectures)

Suggested Readings

BA Hons. Economics Semester-VIII

ECBM-811A Labour Economics-II (Major)-4

Course Objective: The aim of this course the students to specialized in labour economics and its operation. It covers labour-capital relation, labour market, and labour welfare.

Course Learning Outcomes: This course expects that student can know the labour economics and their application.

Course Content:

UNIT-1 Labour-Capital Relations -Historical trajectories of class formation, Taylorism, Fordism and Post-Fordism, New International Division of Labour, Globalization and Labour. (12 Lectures)

UNIT-2 Labour Market-Nature and characteristics of labour markets in developing countries; Paradigms of Labour Market Analysis- Classical, New Classical and dualistic economy; demand for labour in relation to size and pattern of investments; Supply of labour in relation to growth of labour force; Segmented labour markets –Discrimination in Labour market, Labour flexibility, Informal sector. (13 Lectures)

UNIT-3 Labour Welfare-Approaches to labour welfare – The Paternalistic Approach, The Industrial Efficiency Approach and Social Approach; Theories of labour welfare- Policy Theory, Religious Theory Public Relation Theory and the Functional Theory; ILO and labour welfare work. Decent Work- Concept, Measurement and Policy Response, Conditions of work Labour Questions-South-South, North-South, North-North Coordination. (20Lectures)

Suggested Readings

1. Bharadwaj, Krishna (1976), Classical Political Economy and Rise to Dominance of Supply and Demand Theories.
2. Bharadwaj, Krishna (1980), On Some Issues of Method in the Analysis of Social Change.
3. Bhattacharya S. and J. Lucassen (eds.) (2005), Workers in the Informal Sector: Studies in Labour History 1800-2000.
4. Bieler, Andreas et al (eds) (2008), Labour and the Challenges of Globalisation: What Prospects for Transnational Solidarity?
5. Boeri, Tito et al (eds) (2001), The Role of Unions in the Twenty-First Century.
6. Braverman, Harry (1974), Labour and Monopoly capital.
7. Burawoy, Michael (1985), The Politics of Production.
8. Cazes Sandrine and Verick Sher (eds.) (2013), Perspective on Labour Economics for Development.
9. Jha, Praveen et al (2021): Labour Questions in Global South

BA Hons. Economics Semester-VIII

ECBM-8112A Political Economy-II (Major)-4

Course Objective: The aim of this course the students to specialized in political economy and its operation. It covers, analysis of social change, capitalism and economy.

Course Learning Outcomes: This course expects that student can know the political economy and their application.

Course Content:

UNIT-1 Analysing Social Change in Historical Perspective The method of historical materialism; the transition from feudalism to capitalism; capitalism as a historical process – alternative perspectives. (15 Lectures)

UNIT-2. Capitalism as an Evolving Economic System Basic features; accumulation and crisis; the modern corporation; monopoly capitalism— alternative perspectives. (15 Lectures)

UNIT-3. The State in Capitalism and the economy – contestation and mutual interdependence; the state as an arena of conflict; imperialism – the basic foundations. (15 Lectures)

Suggested Readings

1. J. Gurley, "The Materialist Conception of History", Ch.2.1 in R. Edwards, M. Reich and T. Weisskopf (ed.), *The Capitalist System*, 2nd edition, 1978.
2. O. Lange, *Political Economy*, vol. 1, 1963, Chapters 1 and 2.
3. E.K. Hunt, *History of Economic Thought*, M.E. Sharpe, Indian edn, Shilpi Publications, 2004.
4. Irfan Habib, 1995, "Capitalism in History", *Social Scientist*, Vol. 23: 15-31.
5. R.L. Heilbroner, "Capitalism", in *The New Palgrave Dictionary of Modern Economics*, Macmillan, 1987. Also reprinted as Chapter 2 in *Behind the Veil of Economics* by R.L. Heilbroner, W.W. Norton, 1988.
6. P. Sweezy, *The Theory of Capitalist Development*, Monthly Review Press, 1942, 36 chapters 2, 4, 5, 6, 8 and 10.
7. Anwar Shaikh, Entries on "Economic Crises" and "Falling Rate of Profit" in T. Bottomore et al (eds.), *The Dictionary of Marxist Thought*, OUP, Indian edition, Maya Blackwell, 2000.
8. Vamsi Vakulabharanam, 2009, —*The Recent Crisis in Global Capitalism: Towards a Marxian Understanding*, *Economic and Political Weekly*, March 28, Vol. 44: 144-150.
9. J. Schumpeter, *Capitalism, Socialism and Democracy*, George Allen and Unwin 1976, Chapters 6, 7 and 8.
10. P. Baran (1957), *The Political Economy of Growth*, Chapter 3, Pelican edition, 1973.
11. R. Heilbroner, —*The Role of the State*, Ch.4 in *The Nature and Logic of Capitalism*, 1985.
12. M. Kalecki, —*Political Aspects of Full Employment*, in E.K. Hunt and J.G. Schwarz (eds.), *A Critique of Economic Theory*, Penguin Books, 1972.

13. Amit Bhaduri, —Nationalism and Economic Policy in the Era of Globalization, Ch. 2 in Deepak Nayyar (ed), *Governing Globalization: Issues and Institutions*, OUP, 2002 [also WIDER Working Paper no.188, WIDER website (2000)].
14. Prabhat Patnaik, —“Lenin’s Theory of Imperialism Today”, in K.S. Jomo (ed.) *The Long Twentieth Century: The Great Divergence: Hegemony, Uneven Development and Global Inequality*, OUP.
15. James O'Connor, "The Meaning of Economic Imperialism," in Robert Rhodes, ed., *Imperialism and Underdevelopment*, New York: Monthly Review Press, 1970, pages 101 to 111

BA Hons. Economics Semester-VIII

ECBM-813A Regional Economics-II (Major)-4

Course Objective: The aim of this course the students to specialized in regional economics and its operation. It covers regional inequality and rural development, regional development planning and management.

Course Learning Outcomes: This course expects that student can know the regional economics and their application.

Course Content:

UNIT-1 Regional Inequalities and Rural Development: Growth, density and spatial inequalities of population distribution, spatial patterns and characteristics of occupational types *Rural Development:* Meaning, scope and overview of rural development, Historical Perspective: Rural Development Programmes in India, Problem/perception and Identification, Rural area Planning-Programmes for Rural Development, their coverage and outcomes, Rural Infrastructure Development – Bharat Nirman, Rural Building Centers, PMGSY, IAY, Rajiv Gandhi Technology Mission, Central Rural Sanitation Programme, PURA, Rural Employment Schemes (15 Lectures)

UNIT-2 Regional Development Planning and Management: Role of Regional Planning Experience of regional planning in India, Five Year Plans, Integrated rural development programmes, Panchayati Raj and Decentralized Planning, Command Area Development, Watershed Management, Planning for backward area, desert, drought prone, hill, tribal area development, multilevel planning, development of island territories *Regional Planning and Management:* Planning for Rural Areas, Planning Challenges for Rural Areas and Mega Cities, Housing and Community Planning, Metropolitan Region Planning, Special Area Planning (20 Lectures)

UNIT-3 Regional Development Policies in India: Policies aimed at industrialization of lagging regions, development of irrigation agriculture and allied activities, providing infrastructural facilities, policy measures to abolish regional imbalance in India (10 Lectures)

Suggested Readings

1. Chand, M. *Regional Planning in India*, Allied Publishers, New Delhi

2. V.K. Puri, Hoover, E.M. *An Introduction to Regional Economics*, Alfred. A. Knopf, New York
3. Isard, W. *Methods of Regional Analysis*, MIT Press, Cambridge
4. Richardson, H.W. *Regional Economics*, Weidenfield and Nicolson, London
5. Dholakia, R.H. *Regional Disparity in Economic Growth in India*, HPH, Bombay
6. Friedman, J. *Regional Policy Readings in Theory & Application*, MIT Press W. Alonso (Eds)
7. Rao, H. *Regional Disparities & Development in India*, Ashish Publishing House, New Delhi
8. Richardson, H.W. *Input – Output and Regional Economics*, John Wiley, New York
9. Seth, V.K. *Industrialization in India; A Spatial Perspective*, Commonwealth Publishers, New Delhi
10. Siebert, H. *Regional Economic Growth; Theory & Policy*, International Textbook Company, Scranton

LIST-B SEM-VII

MAJOR ELECTIVE PAPERS

BA Hons. Economics Semester-VIII

ECBM-804B Operation Research-II (Major)-4

Course Objective: The aim of this course the students to specialized in operation research and its operation. It covers game theory, input-output analysis, and dynamic optimization.

Course Learning Outcomes: This course expects that student can know the operation research and their application.

Course Content:

UNIT-1 Introduction to Games theory: two person zero -sum game, pay off matrix, optimal strategy, maximin & mini-max strategies, value of game, pure strategy, dominance rule. Mixed strategy: Nash equilibrium, Solution of Game problems with Linear Programming: Graphical methods and Simplex method. (14 Lectures)

UNIT-2 Input-Output Analysis: Concepts, Features, Assumptions, Importance and Uses; Types of Input- Output Model: Static and Dynamic; Method of the Input-Output analysis: the Open Input-Output model, Input-Output Transaction Table, Input Coefficient, Input-Output Technological coefficient, Determination of Equilibrium Prices, the Hawkin-Simon Conditions, the Closed Input-Output model. (15 Lectures)

UNIT-3 Dynamic Optimisation & Optimal Control Theory: *Dynamic Optimisation:* Discrete time – Deterministic and Stochastic Model, Continuous Time. *Optimal Control Theory:* Calculus of variation and optimal control problem, control, state, and co-state variables, Hamiltonian – current value and present value, transversality conditions; Economic applications. (16 Lectures)

Suggested Readings

1. Sharma J.K.: "Operations Research:Theory and application",S. Chand, second edition

2. Chiang, Alpha C. (2005): “Fundamental Methods of Mathematical Economics”, 4th edition, McGraw-Hill.
3. Natarajan, Balasubramani and Tamilarasi: “Operations research” Pearson
4. Thijs Ten Raa (2006), The Economics of Input-Output Analysis, Publisher: Cambridge University Press
5. William Peterson (1991), Advances in Input-Output Analysis: Technology, Publisher: Oxford US.
6. Ronald E. Miller and Peter D. Blair (2009), Input-output Analysis: Foundations and Extensions, 2nd revised edition, Publisher: Cambridge University Press
7. Scott H. Bierman, Luis Fernandez (1998), Game Theory with Economic Applications, Publisher: Pearson Education
8. Jurgen Eichberger (1992), Game Theory for Economists, Publisher: Harcourt College
9. Martin J. Osborne and Ariel Rubinstein (1994), A Course in Game Theory, Publisher: MIT Press.
10. Fernando Vega-Redondo (2003), Economics and the Theory of Games, Publisher: Cambridge University Press
11. Osborne M J (2006), An Introduction to Game Theory, Oxford University Press New Delhi
12. Chiang, Alpha C. Elements of Dynamic Optimization. Long Grove, IL: Waveland Press, 1999. ISBN: 9781577660965.

BA Hons. Economics Semester-VIII
ECBM-805B Game Theory-II (Major)-4

Course Objective: The aim of this course the students to specialized in game theory and its operation. It covers simultaneous move game, information economics and repeated games.

Course Learning Outcomes: This course expects that student can know the game theory and their application.

Course Content:

UNIT-1 Simultaneous move games with incomplete information Strategies; Strategies; Nash equilibrium; beliefs and sequential equilibrium; perfect Bayesian equilibrium; signaling games; applications. (16 Lectures)

UNIT-2 Information economics. Adverse selection; moral hazard; signaling game, Stable equilibrium, the intuitive criterion, iterated weak dominance, epistemic foundations (15 Lectures)

UNIT-3 Repeated Games: Payoffs, strategies, Nash equilibrium and subgame perfect equilibrium of repeated games (14 Lectures)

Suggested Readings

1. Martin J. Osborne, An Introduction to Game Theory, Oxford University Press, New Delhi, 2004
2. Fudenberg, Drew, and Jean Tirole. *Game Theory*. MIT Press, 1991. ISBN: 9780262061414.

BA Hons. Economics Semester-VIII

ECBM-806B Institutional Economics-II (Major)-4

Course Objective: The aim of this course the students to specialized in institutional economics and its operation. It covers theory of contract, institution theory of firms, theory of institutional change and state.

Course Learning Outcomes: This course expects that student can know the institutional economics and their application.

Course Content:

UNIT-1 Theory of Contract: The definition of a contract. Legal and economic approach to contracts. Freedom of contract, Bounded rationality and contractual incompleteness. Asymmetric information and opportunistic behaviour. Adverse selection and the closing of markets. Signaling, screening and self-selection. Principal-agent problem and agency costs. Attributes of transactions and the choice of a contract. Asset specificity, types of specific assets, Institutional environment and its role in the choice of contract. The role of trust. (15 Lectures)

UNIT-2 The Institutional Theory of The Firm: Explanations of the firm in the New Institutional theory (F.Knight, R. Coase, A. Alchian and H.Demsetz, O.Williamson,), The market and the firm. Comparative analyses of the alternative coordination forms. Internal market and influence costs. The boundaries of the firm. Ownership structure of the firm., Separation of ownership and control in the open corporation. Opportunistic behaviour of the managers and corporate control. (10 Lectures)

UNIT-3 The Theory of Institutional Change and State: Stability of institutions and institutional change. The main sources of institutional change. The role of the state in the process of institutional change. The problem of compensation of the disadvantaged groups. *The Institutional Theory of State:* Social mechanisms for constraining open access. Contractual theories of the state. Hobbes predatory theory of the state. North's model of the state. Corruption and its economics: the principal-agent framework; incentive structures; the threat system and the authority; collusion, Rent-seeking behaviour and free-riding. Basil model of corruption and its analysis. (20 Lectures)

Suggested Readings

1. Eggertson Thr. Institutions and Economic Behaviour.
2. North D. Institutions, Institutional Change and Economic Performance. Cambridge University Press, 1990,
3. Cooter R. The Theory of Market Modernization of Law. 16 International Review of Law and Economics, pp. 141-172 (1996).
4. Posner E. Social Norms and the Law, Harvard University Press, Cambridge, Mass., 2000; Ch.2 A Model of Cooperation and the Production of Social Norms.

5. Ullman-Margalit E. The Emergence of Norms. Oxford, Clarendon Press, 1977. Ch.1, 2, 3,4.
6. Young P. H. The Economics of Convention. 10 Journal of Economic Perspectives, pp. 105 - 122 (1996).
7. Coase R. The Nature of the Firm. 4 *Economica*, pp. 386-405 (1937).
8. Milgrom P., Roberts J. Economics, Organization and Management. - Prentice-Hall Int., 1992.
9. North D. Institutions, Institutional Change and Economic Performance. Cambridge University Press, 1990, Ch.8.
10. Niehans J. Transaction Costs. In: The Palgrave Dictionary of Economics. London, Macmillan, 1987, pp. 676-679
11. North D. Integrating Institutional Change and Technical Change in Economic History. A Transaction Cost Approach. 150 Journal of Institutional and Theoretical Economics, pp. 609-624 (1994).
12. Williamson O. The Economic Institutions of Capitalism. The Free Press, N.Y. 1985, Ch.2, pp. 43-67.
13. Economic Theory of Property Rights (Main Reading)
14. Coase R.H. The Problem of Social Cost. 3 Journal of Law and Economics 1-44 (1960).
15. Kreps D. Corporate Culture and Economic Theory. In: Perspectives on Positive Political Economy. Cambridge: Cambridge University Press, 1990

BA Hons. Economics Semester-VIII

ECBM-807B Financial Market-II (Major)-4

Course Objective: The aim of this course the students to specialized in financial market and its operation. It covers financial services and investment trusts, mutual funds, leasing, factoring and corporate restructuring.

Course Learning Outcomes: This course expects that student can know the financial market and their application.

Course Content:

UNIT-1 Financial Services and Investment Trusts: An overview: Concept of Financial Services, Organization and Growth of Financial Services in India. *Investment Trusts*- Meaning & Types. Merchant Banking, Concept, functions and regulation by SEBI, Issue Management Function, Merchant Banking in India, Underwriting of Capital Issues – Concept, Organisational Set-up and Regulation of Underwriting of Capital Issue, Recent Trends in Underwriting in India. (12 Lectures)

UNIT-2 Mutual Funds – Concept and Objectives, Types of Mutual Funds and Designing, Launching and Marketing of Mutual Fund Schemes, Regulation of Mutual Funds, Asset

Management Company, Income Funds, Gilt Funds, Open-ended and close ended schemes, Venture Capital Funds – Concept and Functions, Regulations of Venture

Capital Funds, Trends in Venture Capital Funds in India. (10 Lectures)

UNIT-3 Leasing, Factoring and Corporate Restructuring: Leasing Concept and Types of Leases, Leasing Services in India. Factoring and Forfaiting – Nature and Functions, Types of Factoring Services, Factoring Services in India. Insurance Services- Principles & Kinds of Insurance, Insurance Sector after Liberalisation, IRDA. *Corporate Restructuring*-Legal and Procedural Aspects of Mergers, Amalgamations and Acquisitions, Credit Rating and Depository Services: Credit Rating – Concept and Need for Credit Rating, Credit Rating Agencies in India – CRISIL, ICRA and CARE. Depository Services Need, Functions and Present Arrangement for Depository Services in India. (22 Lectures)

Suggested Readings

1. Paul, J. and P. Suresh (2008), Management of Banking and Financial Services, Pearson Education, Delhi.
2. Khan, M.Y. (2007): Financial Services, Tata McGraw Hill, New Delhi
3. Hull John (2002): Introduction to Futures and Options Market, Prentice Hall of India, New Delhi
4. E Gardon & K Natarajan: Financial Markets & Services.
5. Avadhani: Financial Services and Markets, Himalaya Publishing House
6. Sharma & Gupta, Financial Services, Kalyani Publishers
7. Vasantha Desai: The Indian Financial System, Himalaya Publishing House

BA Hons. Economics Semester-VIII

ECBM-808B Economics of Natural Disaster-II (Major)-4

Course Objective: The aim of this course the students to specialized in economics of natural disaster and its operation. It covers

Course Learning Outcomes: This course expects that student can know the economics of natural disaster and their application.

Course Content:

UNIT-1:

UNIT-2:

UNIT-3:

Suggested Readings

BA Hons. Economics Semester-VIII

ECBM-809B Industrial Economics-II (Major)-4

Course Objective: The aim of this course the students to specialized in industrial economics and its operation. It covers principles of management, practices, and financial management.

Course Learning Outcomes: This course expects that student can know the industrial economics and their application.

Course Content:

UNIT-1 Principles of Management - Concepts and significance of management, Roles and responsibilities, Principles of Management evolution, Introduction to Scientific Management- Contribution of Taylor, Fayol, Weber, Bernard and Elton Mayo, Indian v/s Western Management, Work Ethos and Values for Indian Managers- Relevance of Value Based Management in Global Change, Trans-Cultural Human Values. (12 Lectures)

UNIT-2 Management Practices: Planning and basic framework of Management By Objective(MBO), Framework of Ethical Decision-making-Duty, Rights based, consequence based, virtue based, Neutralization of behavior and decision-making, Strategic Business Units and Leading function ,Empirical Indian cases from corporate bodies, Authority and Power, Staffing function and practices followed globally, Basic control process, Control techniques, MBE, Preventive control, Use of Information and Data Sciences in control. (13 Lectures)

UNIT-3 Financial Management: Meaning and Scope of Financial Management, Estimating Firm's financial requirements, Capital structure – Incentive, signaling and control arguments, Separation of ownership and control, cost of capital, size of working capital, capital market, institutional mechanism for Funds, Leasing and Sub-contracting, Investment Decisions: Criteria for investment appraisal, Risk analysis in Investment decisions. Emergence of the New World Order in the 21st century, Globalization – traditional and modern viewpoints, India at the centre-stage of Globalization, Challenges on the Macro and micro environment fronts, Indian concept of Globalization, Evolving management practices in MNCs and TNCs, Role of Indian Ethos in Managerial Practices (20 Lectures)

Suggested Readings

1. Pasad L.M. (2019) Principles and Practice of Management, Sultan Chand & Sons
2. Khan M.Y. & Jain P.K., (2018) Financial Management: Text, Problems and Cases, McGraw Hill Education
3. Khan M.Y. & Jain P.K., (2018) Financial Management: Text, Problems and Cases | 8th Edition, McGraw Hill Education
4. Bajpai Naval (2017) Business Research Methods, Pearson Education
5. Pandey, I.M., (2016) Financial Management, Vikas Publishing House
6. Kaul, Vijay Kumar, (2015) Principles and Practices of Management, Vikas Publishing House
7. Sengupta Partho S., (2010) Principles and Practices of Management, Vikas Publishing House

8. Pillai R.S.N., Kala S., (2013) Principles and Practice of Managements Chand & Co.
9. J.P. Mahajan (2015): Managing Human Resources, Vikas Publishing House,
10. Shejwalkar and Ghanekar (2011) Principles and Practices of Management, 20th Edition.
11. P.K Saxena (2009), Principles & Practices of Management
12. Tim Hannagan, (2007) Management Concepts & Practices
13. Donald A. Hay & Derek J. Morris (1991) Industrial Economics and Organization: Theory and Evidence, Oxford University Press, Revised edition
14. S. A. Sherlekar(1990) Modern Business Organisation and Management: Systems-based Contingency Approach to the Organisation and Management of Business, Himalaya Publishing House
15. M.Y. Khan & Jain, Management Accounting, 1984, 3rd Edition.
16. Harold Koontz, (1972) Principles of Management: An Analysis of Managerial Functions,

BA Hons. Economics Semester-VIII

ECBM-810B Health Economics-II (Major)-4

Course Objective: The aim of this course the students to specialized in health economics and its operation. It covers resource allocation, cost-benefit of health services, financing of health services.

Course Learning Outcomes: This course expects that student can know the health economics and their application.

Course Content:

UNIT-1 Introduction to Health Economics and Resource Allocation: Arrow's Concept of the Health Care Consumer, The Demand for Medical Care: Conceptual Framework. The National and International Health Scenario- Health output and input indicators and their correlation with the level of economic development and with the public expenditure on health. Resource Allocation in Health Sector- Magnitude of Healthcare Needs/Expenditure: Implications for Resource Mobilisation; Resource Allocation problem in private and government hospitals, productivity, efficiency and equity considerations applied to the hospital sector, spatial distribution of health care facilities, Pricing of Health Services the problems of multiple services of a hospital and pricing of these services, the trade-off between quantity and quality. (20 Lectures)

UNIT-3 Costs and Benefits of Health Services-Private benefits and costs of providing health services, Impact of Technological Change on the Cost of Health Services; the failure of the market to provide essential health services, the provision of health services by the government, application of cost benefit analysis to public health and family planning projects, benefits and costs (both private and social) of training to professional manpower in health sector. (10 Lectures)

UNIT-3 Financing of Health Services-A review of per capita expenditure on health services over time and space, An analysis of the sources of public finance for health, Financing health services through specific (health cess) and general (direct and indirect taxes) local government revenue, the role of development financing institutions in financing health services, public private partnership in financing health care services, The need for general health insurance, the need for special health insurance for the poor, disabled and the aged. A review of the Indian National Health Policy and discussion of feasible alternatives. (15 Lectures)

Suggested Readings

1. Alexander S. Preker and others, (2000), 'Make or Buy' Decisions in the Production of Healthcare Goods and Services: New Insights from Institutional Economics and Theory", Bulletin of World Health Organisation, 78(6), pp 779-790.
2. O'Donnell, O., and others. (2005a), 'Who Pays for Health Care in Asia?', EQUITAP Working Paper 1, Erasmus University, Rotterdam and Institute for Policy Studies, Colombo.

3. O'Donnell, O., and others. (2005b), 'Who Benefits from Public Spending on Health Care in Asia?' EQUITAP Working Paper 3, Erasmus University, Rotterdam and Institute for Policy Studies, Colombo.
4. Pablo Gottret & George Schieber (2006), Health Financing Revisited – A Practitioner's Guide, The World Bank

BA Hons. Economics Semester-VIII

ECBM-811B Gender Economics-II (Major)-4

Course Objective: The aim of this course the students to specialized in gender economics and its operation. It covers women and work, decision making factors, and social security.

Course Learning Outcomes: This course expects that student can know the gender economics and their application.

Course Content:

UNIT-1 Women and Work: Valuation of women's work - Factors affecting female entry in labour market - Supply and demand for female labour - Wage differentials in female activities - Determinants of wage differentials - Impact of technology on women's work participation. [12 Lectures]

UNIT-2 Factors affecting decision making by women - Property rights, access to and control over economic resources and assets - Power of decision making at household, class, community level - Economic status of women and its effect on work-participation rate, income level, health, and education in developing countries and India - Female contribution to national income. [15 Lectures]

UNIT-3 Social Security of Women: Women and their access to nutrition - Health, education, and social and community resources. Entitlements - ensuring economic independence and risk coverage - Access to credit and insurance markets - Labour market biases and gender discrimination - Affirmative action for women and improvement in their economic and social status. [18 Lectures]

Suggested Readings

1. Government of India: Towards Equality — Report of the Committee on the Status of Women in India, Department of Social Welfare, Ministry of Education and Social Welfare, New Delhi.
2. ILO: Women's Participation in the Economic Activity of Asian Countries.
3. Kabeer, N. and R. Subrahmanyam (Ed.): Institutions, Relations and Outcomes: A Framework and Case Studies for Gender-aware Planning.
4. Kalpagam, U.: Labour and Gender: Survival in Urban India.
5. Krishnaraj, M., R.M. Sudarshan and A. Shariff: Gender, Population and Development.
6. Papola, T.S. and A.N. Sharma (Eds.): Gender and Employment in India.

BA Hons. Economics Semester-VIII

Human Development -II (Major)-4

Course Objective: The aim of this course the students to specialized in education economics and its operation. It covers

Course Learning Outcomes: This course expects that student can know the education economics and their application.

Course Content:

UNIT-I : Concept and Measure of Inequality and Opportunity

UNIT-II : Growth , Inequality and Poverty – Pro-poor and Inclusive Growth

UNIT-III: Human Development and Multidimensional Poverty Index

Reference –

1. Anand, S., & Sen, A. (1994). Human Development Index: Methodology and Measurement.
2. Ravallion, M. (2015). The economics of poverty: History, measurement, and policy. Oxford University Press.
3. Ravallion, M. (2008). Poverty lines. The new palgrave dictionary of economics, 2.
4. Subramanian, S. (2019). Inequality and poverty: A short critical introduction. Springer.
5. Ravallion, M., & Datt, G. (2002). Why has economic growth been more pro-poor in some states of India than others?. Journal of development economics, 68(2), 381-400.
6. Ravallion, M. (2004). Pro-poor growth: A primer. Available at SSRN 610283.
7. Human Development Report , UNDP
8. National Multidimensional Poverty Index, Niti Aayog

BA Hons. Economics Semester-VIII

ECBM-813B India Public Finance-II (Major)-4

Course Objective: The aim of this course the students to specialized in Indian public finance and its operation. It covers Indian public expenditure, fiscal policy and fiscal federalism.

Course Learning Outcomes: This course expects that student can know the Indian public finance and their application.

Course Content:

UNIT-1 Indian Public Expenditure: Union Government – Growth and Composition of Expenditure – Revenue and Capital, Development and Non-Development, reasons for growth in Public Expenditure, Subsidies: Explicit Subsidies of the Union Government and Problem of increasing Subsidies. State Government – Growth and Composition of states’ Expenditure, Non-Development and Development Expenditure, Revenue and Capital Expenditure, reasons for growth in States’ Public Expenditure. (12 Lectures)

UNIT-2 Fiscal Policy, Deficit and Public Debt: Revenue Deficit, Effective Revenue Deficit, Primary Deficit, Fiscal deficit, Trends in Deficit Indicators. Problem of increasing Deficit at the Central and State levels, Fiscal Sector Reforms in India–Fiscal Consolidation; Fiscal Responsibility and Budget Management Act-2003; Fiscal Crisis in India, Roadmap for future Fiscal reforms in India. *Public Debt:* Internal Public Debt: Trends in India’s Internal Public Debt, Composition of Public Debt of the Union and State Government, Public Debt Management in India. External Public Debt. (17 Lectures)

UNIT-3 Fiscal Federalism :A brief scenario of Federal Finance in India, Constitutional provisions and Statutory provisions relating to appointment of Finance Commission, issues and approaches of various Finance Commission, changing criteria for Transfer of Resources from Central to States, Devolution of Resources and Grants from Central to States; Problems of Horizontal and Vertical Imbalances, Increasing dependence of States on the Centre, Recommendations of the Fourteenth and Fifteenth Finance Commission- Criteria of Devolution, Move from Planning Commission to NITI Aayogz. (16 Lectures)

Suggested Readings

1. Bhargava, P.K. (1991), India's Fiscal Crisis, Ashish Publishing House, New Delhi.
2. Bhargava, R.N. (1971), The Theory and Working of Union Finance in India, Chaitanya Publishing House, Allahabad
3. Chelliah, Raja J. (1969), Fiscal Policy in Underdeveloped Countries, George Allen and Unwin Ltd., London
4. Chelliah, R.J. (Ed.) (1996), Towards Sustainable Growth: Essays in Fiscal and Financial Sectors Reforms in India, Oxford University Press, Bombay.
5. Gaur, A.K. (1988), Federal Finance in India, Deep & Deep Publications, New Delhi

6. Government of India, Ministry of Finance (2002), Reports of the Task Force on Direct and Indirect Taxes.
7. Jain, Anil Kumar & Parul Jain (2007), Reforms in Direct Taxes through Union Budgets: A Commentary, RBSA Publishers, Jaipur
8. Jha, Praveen (2011) (Ed.), Progressive Fiscal Policy in India, Sage Publications India Pvt. Ltd. New Delhi
9. Singh, Tejinder (2000), The Corporation Tax in India, Classical Publishing Company, New Delhi
10. Srivastava, D.K. (Ed.): Fiscal Federalism in India.
11. Srivastava, D.K. (2005), Issues in Indian Public Finance, New Century Publications, New Delhi

Others (36)*

Sem	Others Category Papers (36)*			
	MD	SEC (IT)	VAC	SEC
I	Understanding Economic development (3)	Data Analysis Using Excel (3)	Indian Budgetary Analysis (4)	
II	Indian Economic Development (3)	Statistical Analysis Using R Software (3)	Vedic Economics (2)	
III	Global Economy & Financial Issues (3)	Analyzing Qualitative and Quantitative Data (3)	Cultural Economics (2)	

Multidisciplinary Course (MD)

ECOMD11- Understanding Economic Development (MD-3) Sem-I

Course Objective: The aim of this course is to transform basic understanding of economic development concepts. This course covers growth and development, measurement and Indicators of economic development.

Course Learning Outcomes: The course expects from the students that they can understand the concepts of economic development in the domain of economics.

Course Content:

UNIT-1: Labour Market and trade: Trends, the role of changing demographics and population dynamic, Changing nature of Labour Market, Trade Liberalisation and its effect on Labour market in India, Cost of Labour force, Productivity and (15 lectures)

UNIT-2: Global Finance: Forecast, Inflationary trends, Financial Issues of Debt Money, Credit, Global Finance and De-finance, foreign capital and Investment. (15 lectures)

UNIT-3: Geopolitics: Growth of Digital technologies and structural transformation, Issues of climate change sustainability for and energy sector. India as a Global leader. (15 lectures)

Suggested Readings

1. Singh, Ramesh, (2024); Indian Economy, 16th Edition, Tata-McGraw Hill Publications, New Delhi.
2. Kapila, Uma (2023); Indian Economy: Performance and Policies, 24th Edition, Academic Foundation
3. Mishra S.K & Puri, V.K. & Garg Bharat (2023); Indian Economy, 41st Edition, Himalaya Publishing House.
4. Kapila, Uma (2022); Indian Economy Since Independence, 33rd Edition, Academic Foundation

5. Dhingra, I.C., (2020); March of the Indian Economy, Heed Publications Pvt. Ltd.
6. Dutt Gaurav and Nag Biswajit (2018); Datt and Sundaram's Indian Economy, 73rd Edition, S Chand & Co. Ltd. New Delhi.
7. Jalan, B.(ed.)(1993); The Indian Economy – Problems & Prospects, Penguin, New Delhi
8. Brahamananda, P.R. & V.R. Panchmukhi (Eds)(1987);The Development Process of the Indian Economy, Himalaya Publishing House, Bombay

ECOMD21- Indian Economic Development (MD-3) Sem-II

Course Objective: The aim of this course is to transform basic understanding of Indian economic development concepts. This course covers history of Indian economic development, sectoral performance and social sector.

Course Learning Outcomes: The course expects from the students that they can understand the concepts of Indian since independence, sectoral composition and social sector performance.

Course Content:

UNIT-1: Evolution of Indian Economy - Economic History of India; Emergence and development of Planning exercise in India, Plan models and shift in focus over time, Critique of Nehru – Mahalanobis Model; Crisis of 1991 & New Economic Reforms, Planning commission v/s NITI Aayog, Way Forward (15 lectures)

UNIT-2: Sectoral performance: Trend & growth of agriculture, industry and services sectors since Independence, Land Reforms – Genesis, Progress and current status; Green Revolution – Measures and its effects, Employment Structure and its Elasticity. (15 lectures)

UNIT-3: Social Sector: components and Its trends, Black money in India, social safety Net programme, PDS MNREGA and Right to Employment, Unemployment- trends, structure and types. (15 lectures)

Suggested Readings

1. Singh, Ramesh, (2024); Indian Economy, 16th Edition, Tata-McGraw Hill Publications, New Delhi.
2. Kapila, Uma (2023); Indian Economy: Performance and Policies, 24th Edition, Academic Foundation
3. Mishra S.K & Puri, V.K. & Garg Bharat (2023); Indian Economy, 41st Edition, Himalaya Publishing House.
4. Kapila, Uma (2022); Indian Economy Since Independence, 33rd Edition, Academic Foundation
5. Dhingra, I.C., (2020); March of the Indian Economy, Heed Publications Pvt. Ltd.

6. Dutt Gaurav and Nag Biswajit (2018); Datt and Sundaram's Indian Economy, 73rd Edition, S Chand & Co. Ltd. New Delhi.
7. Jalan, B.(ed.)(1993); The Indian Economy – Problems & Prospects, Penguin, New Delhi
8. Brahamananda, P.R. & V.R. Panchmukhi (Eds)(1987);The Development Process of the Indian Economy, Himalaya Publishing House, Bombay

ECOMD31- Global Economy and Financial Issues (MD-3) Sem-III

Course Objective: The aim of this course is to transform basic understanding of Indian economic development concepts. This course covers labour market and trade, global finance and geopolitics.

Course Learning Outcomes: The course expects from the students that they can understand on labour market and trade, global finance and geopolitics.

Course Content:

UNIT-1: Labour Market and trade: Trends, the role of changing demographics and population dynamic, Changing nature of Labour Market, Trade Liberalisation and its effect on Labour market in India, Cost of Labour force, Productivity and FDI. (15 lectures)

UNIT-2: Global Finance: Forecast, Inflationary trends, Financial Issues of Debt Money, Credit, Global Finance and De-finance, foreign capital and Investment. (15 lectures)

UNIT-3: Geopolitics: Growth of Digital technologies and structural transformation, Issues of climate change sustainability for and energy sector, India as a Global leader. (15 lectures)

Suggested Readings

1. Alexander Bulatov, World Economy and International Business Theories, Trends, and Challenges Textbook, Springer, 2023
2. Joseph P. Daniels, Global Economic Issues and Policies, I edition, Cengage Learning
3. Elainat R. Reed, A Comprehensive Guide to Understanding Economics Effortlessly, 2023
4. Adair Turner, Between Debt and Devil: Money, Credit and Fixing Global Finance, Princeton University Press, 2015
5. Adam Tooze, Crashed: How a Decade of Financial Crises changed the World, Penguin Books, 2019
6. Richard H. K. Vietor, How Countries Compete: Strategies, structure and Government in Global Economy, Harvard Business Review Press, 2007
7. Brett King, Bank 3.0: Why Banking Is No Longer Somewhere You Go But Something You Do, Wiley, 2012

Skill Enhancement Course (SEC)

ECOSE11 Data Analysis Using Excel (SEC-3) Sem-I

Course Objective: This course provides an introduction to computer usage with a focus on data analysis using Microsoft Excel. Students will learn the fundamental skills needed to effectively use Excel for data entry, manipulation, analysis, and presentation. The course covers a range of topics from basic spreadsheet operations to data analysis techniques.

Course Learning Outcomes: The course familiarizes students with the basics of computer operations and MS Office. Students will learn to use Microsoft Excel for data entry, formatting, and analysis and about the distinguishing features of MS PowerPoint.

Course Content

UNIT-1 Basics of Computer and Software Packages: Introduction to Computers and File Management; Text editors and word processor software packages; MS-word- Menus and Document formatting tools; Google Docs. (14 lectures)

UNIT-2 MS Excel and Basics of Data Analysis: Overview; Basic Spreadsheet Operations; Menus and Tools; Data Visualization- Creating Tables and Charts; Data Manipulation-Data Sorting and Filtering; Basic Formulas and their uses; Basics of Data Analysis- Descriptive statistics, Analyzing Data with PivotTables. (20 lectures)

UNIT-3 MS-Power Point: PowerPoint components; Creating a presentation using Slide Master; Transitions, Animations, and Slide Show; Insert Equations, Charts, Tables, and Videos. (11 lectures)

Suggested Readings

1. V. Rajaraman: Fundamentals of Computers, Prentice Hall (Ind.) New Delhi.
2. Kerns: Essentials of Microsoft windows, Word and Excel, Prentice Hall of India, New Delhi.
3. Lipschutz, M.M. & Lipschutz, S: Theory and Problems of Data Processing, Schaum's Outline series.
4. Formulas and functions with Microsoft Office Excel 2007 by Paul McFedries
5. Kenneth N. Berk and Patrick Carey, Data Analysis with Microsoft Excel, Brooks/Cole.

Stephen L. Nelson and E. C. Nelson, Excel Data Analysis For Dummies, 2nd Edition, John Wiley & Sons, Inc., Hoboken, New Jersey.

ECOSE21- Statistical Analysis Using R Software (SEC-3) Sem-II

Course Objective: The objective of the course is to provide students with a comprehensive understanding of the R programming language, focusing on data manipulation, visualization, and statistical analysis. The course aims to equip students with the skills necessary to analyze and visualize data effectively using R, enabling them to draw meaningful insights and make data-driven decisions.

Course Learning Outcomes: By the end of this course, students will be able to demonstrate proficiency in basic and advanced features of R, manage and analyze data using R, create and interpret various types of data visualizations in R, perform data entry, cleaning, and management in R, conduct descriptive statistics, Correlation, and Regression in R, and conduct Hypothesis Testing using R.

Course Content:

UNIT-1: An introduction to R: Overview of R Programming, working setup for R and its packages, data description, Basics of R, data type in R, data creation and curation, file handling, reading and writing data in various formats. (15 lectures)

UNIT-2: Graphics and data visualization: basic plots, scatter plot, 3-D scatter plot, interactive plotting, line plot, mat plot, combine multiple figures in same screen, bar plot, histogram, density plot, dot plot, pie plot, and Venn diagram. (15 lectures)

UNIT-3: Basic Statistics: Descriptive statistics in R, Correlation and Regression in R, Hypothesis Testing in R, and discrete and continuous distribution in R. (15 lectures)

Suggested Readings

1. "R for Data Science" by Hadley Wickham and Garrett Grolemund
2. "The Art of R Programming" by Norman Matloff
3. "Practical Statistics for Data Scientists: 50 Essential Concepts" by Peter Bruce and Andrew Bruce
4. "R in Action: Data Analysis and Graphics with R" by Robert I. Kabacoff

ECOSE31- Analyzing Qualitative and Quantitative Data (SEC-3) Sem-III

Course Objective: The objective of the course is to provide students with a thorough understanding of the principles and techniques involved in measurement, scaling, data collection, and data analysis. The course aims to equip students with the skills to analyze both qualitative and quantitative data effectively, employing various statistical methods and software tools to build and validate models for research purposes.

Course Learning Outcomes: By the end of this course, students will be able to Understand Measurement and Scaling, Analyze Qualitative and Quantitative Data, Apply Statistical Software for Data Analysis, and Conduct Qualitative Data Analysis

Course Content:

UNIT-1: Measurement and Scaling: Variables in Research, Measurement, and scaling – Different scales, Construction of instrument, Validity, and Reliability of instrument, Data Collection methods – primary and secondary data, Processing of Data: Editing of Data, Coding of Data, Classification of Data, Statistical Series. Qualitative vs Quantitative data analyses – Univariate, Bivariate and Multivariate statistical techniques. (15 lectures)

UNIT-2: Processing and Analysis of Quantitative Data: Measures of Central Tendency, Dispersion, correlation and Regression, Chi-square test: Applications, Steps, characteristics,

limitations, Analysis of Variance and Co-variance, Factor analysis – Discriminant analysis – cluster analysis – multiple regression and correlation – multidimensional scaling – Conjoint Analysis - Application of statistical software for data analysis. (15 lectures)

UNIT-3: Processing and Analysis Qualitative of Data: Fundamentals of Qualitative Data Analysis, Methods of Exploring, Describing, Ordering, Explaining and Predicting the Qualitative Data, Drawing and Verifying Conclusion. (15 lectures)

Suggested Readings

1. Cooper, D.R., Schindler, P.S. and Sun, J., 2006. Business research methods (Vol. 9). New York: McGraw-Hill Irwin.
2. Creswell, J.W. and Creswell, J.D., 2017. Research design: Qualitative, quantitative, and mixed methods approach. Sage publications.
3. Kothari, C.R., 2004. Research methodology: Methods and techniques. New Age International.
4. Krishnaswamy, K.N., 2006. Management Research Methodology: Integration of Principles, Methods and Techniques. Pearson Education India.
5. Sekaran, U. and Bougie, R., 2016. Research methods for business: A skill building approach. John Wiley & Sons.
6. Miles, M. B., & Huberman, A. M. (1994). Qualitative data analysis: An expanded sourcebook. sage.

Value added Course (VAC)

ECOVA11-Indian Budgetary Analysis (Credit-4)-Sem-I

Course Objective: The aim of this course the students can learn Indian budget formulation process and its operation. It covers

Course Learning Outcomes: This course expects that student can know the Indian budgetary analysis and their application.

Course Content:

UNIT-1 – Ancient Indian Tax Structure, Economy, Trade and Commerce, revenue system, craft and agriculture in Ancient, Medieval and Modern period (15 Lectures)

UNIT-2 Indian Tax Administration-Tax Reforms in India, Chelliah Committee Report – Kelkar committee report I &II -Recent-trends-DTC-Incidence of Major taxes in India - VAT - CENVAT-GST. Issues of subsidies in India and black money, Current Issues of India's Tax System (10 Lectures)

UNIT-3: Indian Budget- Preparation, Enactment of Budgetary process in India, Money Bill, Appropriation Bill, Analysis of Budget and Deficits; Tools of Budget Evaluation-Cost-Benefit Analysis, Performance Budgeting, Zero Based Budgeting (15 Lectures)

Suggested Readings

1. Rao, M., Kumar, S. (2017). Envisioning tax policy for accelerated development in India. Working Paper No. 190, National Institute of Public Finance and Policy.
2. Government of India. (2017); GST - Concept and status - as on 3rd June, 2017. Central Board of Excise and Customs, Department of Revenue, Ministry of Finance.
3. Hindriks, J., Myles, G. (2013). Intermediate Public Economics, 2nd ed. MIT Press.
4. Bagchi, Amaresh (2005): Readings in taxation, Oxford Press
5. Browning, Edgar K. and Browning, Jacqueline M. (2004): Public Finance and the Price System, Pearson Education Pvt. Ltd. Delhi.
6. Harberger, Arnold, C. (1966): Efficiency Effects of taxes on income from capital; Effects of corporation Income tax, Wayne State University press Detroit.

ECOVA21-Vedic Economics (Credit-2)-Sem-II

Course Objective: This Course intends to imbibe in learners, the great Indian traditional Value Systems and Economics practices as envisaged in Indian scriptures and texts, understand the pros and the cons of modern Globalization, and to develop an understanding of the global business environment and its impact on Indian Socio- Economic -cultural diversity.

Course Learning Outcomes: The learner should be able to decipher the emerging socio-cultural order in the light of Globalization and emerging business settings across the World.

Unit I: Ancient Indian Economic Conditions -Lessons drawn from Vedas, Upanishad, Smriti, Puran, Ramayana, Mahabharat, Manu, Shukra, Kautilya and Thiruvallur of Economy, Trade and Commerce, revenue system, craft and agriculture. (15 Lectures)

Unit II: Value System in Work Culture: Ethics and Economics in Vedic Period, Understanding the need for Ethics in Business, Ethical and Value-based leadership, Relevance of Value Based Management in Global Change. (5 Lectures)

Unit III: Management Practices in Ancient India: Management Lessons & practices from Vedas, Mahabharata, Ramayana and Kautilya, Impact of Values on Stakeholders. (10 Lectures)

Suggested Readings

1. Debnath, Arabinda & Phukan, Kriti (2022); Indian Ethos in Business: An Approach to Achieving Sustainability, Springer proceedings in Business and Economics
2. Towse, Ruth (2019); A Textbook of Cultural Economics, Cambridge University Press,
3. Thomas, David C., Peterson, Mark F. (2016); Cross-Cultural Management: Essential Concepts, Sage Publication
4. Wildman, Jessica L., Griffith, Richard L., Armon, Brigitte K., (2016); Critical Issues in Cross Cultural Management, Springer
5. Mignosa, Anna (2015); Handbook on the Economics of Cultural Heritage, Edward Elgar Publishing Ltd
6. Throsby, David (2012); The Economics of Cultural Policy, Cambridge University Press

7. Fernando, A.C., (2012); Business Ethics and Corporate Governance, Second Edition, Pearson Education India

ECOVA22-Cultural Economics (Credit-2)-Sem-I

Course Objective: This Course intends to imbibe in learners, the great Indian traditional Value Systems and Management practices as envisaged in Indian scriptures and texts, understand the pros and the cons of modern Globalization, and to develop an understanding of the global business environment and its impact on Indian cultural diversity.

Course Learning Outcomes: The learner should be able to decipher the emerging socio-cultural order in the light of Globalization and emerging business settings across the World

Course Content:

UNIT-1: Understanding Cultural Values in Business: Cultural Economics- scope and evolution, Cultural transformations as an outcome of Globalization, Transnational and Cultural Linkages, Culture as a strategic driver for corporate, institutional and social growth, Indian concept of Globalization & Multiculturalism and its Impact on macro- micro economic parameters. (15 Lectures)

UNIT-2: Value System in Work Culture: Understanding the need for Ethics in Business, Ethical Culture as an organizational USP, Ethical and Value-based leadership, Evolving management practices in MNCs and TNCs. (15 Lectures)

UNIT-3: Management Practices: Planning and basic framework of MBO, Framework of Ethical Decision-making – Duty and Rights based, The structure of cultural supply and demand, Institutional and regulatory features of cultural enterprises, The value of intangible heritage and the re-appropriation of urban spaces. (15 Lectures)

Suggested Readings

1. Steers, Richard M., Osland Joyce C. (2023); Management Across Cultures Challenges, Strategies, and Skills Fourth edition, Cambridge University Press
2. Chopra, P.N., Puri, B.N., Das. M.N., (2022); A Social Cultural and Economic History of India Vol-I, II, & III, Laxmi Publication
3. Debnath, Arabinda & Phukan, Kriti (2022); Indian Ethos in Business: An Approach to Achieving Sustainability, Springer proceedings in Business and Economics
4. Towse, Ruth (2019); A Textbook of Cultural Economics, Cambridge University Press,
5. Thomas, David C., Peterson, Mark F. (2016); Cross-Cultural Management: Essential Concepts, Sage Publication
6. Wildman, Jessica L., Griffith, Richard L., Armon, Brigitte K., (2016); Critical Issues in Cross Cultural Management, Springer
7. Mignosa, Anna (2015); Handbook on the Economics of Cultural Heritage, Edward Elgar Publishing Ltd
8. Throsby, David (2012); The Economics of Cultural Policy, Cambridge University Press
9. Fernando, A.C., (2012); Business Ethics and Corporate Governance, Second Edition, Pearson Education India

10. Snowball, Jeanette D., (2007); *Measuring the Value of Culture: Methods and Examples in Cultural Economics*, Springer-Verlag Berlin and Heidelberg