



St Aloysius College (Autonomous)
Mangaluru

Re-accredited by NAAC “A++” Grade
Course structure and syllabus of
B.Sc.
ECONOMICS

Under NEP Regulations, 2021

ÀÖvÀ C`ÉÆÃ²AiÄÄ,ï PÁ`ÉÃdÄ
(,ÁéAiÄÄvÀÛ)

ÄÄÄÖUÀ¼ÄÆgÄÄ- 575 003, PÄÉÁðIPÄ
www.stalloysius.edu.in



ST ALOYSIUS COLLEGE (AUTONOMOUS)

P.B. NO. 720, MANGALURU - 575 003, KARNATAKA, INDIA

Phone: +91- 0824-4117701, 4117702, 4117703, 4117704

Email: principal@stalloysius.edu.in

alloysius.principal@gmail.com

Re-accredited by NAAC with 'A++' Grade with CGPA 3.67/4 (Cycle 4)
Recognised as Centre for Research Capacity Building under UGC-STRIDE Scheme
Recognised under DBT - BUILDER Scheme, Government of India
College with "STAR STATUS" Conferred by DBT, Government of India
Recognised by UGC as "College with Potential for Excellence"

Date: 21-02-2022

NOTIFICATION

Sub: Syllabus of **B.Sc. ECONOMICS** under NEP Regulations, 2021.
(As per Mangalore University guidelines)

- Ref: 1. Decision of the Academic Council meeting held on 18-12-2021 vide
Agenda No: 6
2. Decision of the Academic Council meeting held on 09-07-2022 vide
Agenda No. 14
3. Decision of the Academic Council meeting held on 02-09-2023 vide
Agenda No. 3
4. Office Notification dated 21-02-2022
5. Office Notification dated 17-08-2022
6. Office Notification dated 26-09-2023

Pursuant to the above, the Syllabus of **B.Sc. ECONOMICS** under NEP Regulations, 2021 which was approved by the Academic Council at its meeting held on 18-12-2021, 09-07-2021 & 02-09-2023 is hereby notified for implementation with effect from the academic year **2021-22**.


PRINCIPAL




REGISTRAR

To:

1. The Chairman/Dean/HOD.
2. The Registrar Office
3. Library

The BoS in Economics was held on 20 November 2021.

Sl. No	Category	Name/Address
a)	Chairperson	Dr Priya S. Shetty
b)	Members of the Department	Dr Norbert Lobo Mr Alwyn Stephen Misquith Mr Reji P. John Mrs Kavitha B
c)	Subject expert	Dr Jayakumar Shetty Head, Department of Economics, SDM College, Ujire-574240 Email: ajkshetty@sdmcujire.in Mob: 9448154001 Dr Purushothama K V Principal, Pompei College, Kinnigoli Aikala- 574141 Email: purushothamakv@yahoo.co.in Mob:8217292402
d)	Vice-Chancellor's Nominee (10.12.2019)	Dr Laxminarayana Bhat Principal Besant Evening College, Mangalore Email: laxminbhat64@gmail.com Mob: 481976995
e)	Representative from Industry / Corporate Sector / Allied Area	Mr Norbert M Shenoy Managing Director, Arunanjali Securities Poonam Anand Nikethan,, Ground Floor, 8th cross, Gandhinagar,Urwa Mangalore - 575003 Email: arunanjali@yahoo.com Mob: 9019787658
f)	Meritorious Alumnus	Dr Prakash Rao Head, Department of Economics Poorna Prajna College, Udupi. Email: rao.pra@gmail.com Mob:9448027072
g)	Student Representative	1. Ms Dafne Julia Menezes Reg No: 193071, III B.Sc 2. Ms Joicy Olvita Pinto, Reg No; 191321, III B. A

The BoS in Economics was held on 18 June 2022.

Sl. No	Category	Name/Address
a)	Chairperson	Dr Priya S. Shetty
b)	Members of the Department	Dr Norbert Lobo Mr Alwyn Stephen Misquith Mr Reji P. John Mrs Kavitha B
c)	Subject expert	Dr Jayakumar Shetty Head, Department of Economics, SDM College, Ujire-574240
d)	Vice-Chancellor's Nominee	Dr Laxminarayana Bhat Principal Besant Evening College, Mangalore
e)	Representative from Industry / Corporate Sector / Allied Area	Mr Norbert M Shenoy Managing Director, Arunanjali Securities Poonam Anand Nikethan,, Ground Floor, 8th cross, Gandhinagar,Urwa Mangalore - 575003
f)	Meritorious Alumnus	Dr Prakash Rao Head, Department of Economics Poorna Prajna College, Udupi.
g)	Student Representative	1. Ms Dafne Julia Menezes Reg No: 193071 III B.Sc 2. Ms Joicy Olvita Pinto, Reg No; 191321, III B. A

The BOS in B.A (Economics) was held on 10 June 2023 2023. The syllabus for V and VI Semester B.Sc. which has been designed tabled in the meeting. After the elaborate discussion and as per the guidelines of the State Higher Education Council and Mangalore University BOS has finalized the syllabus for the approval of the Academic Council St Aloysius College (Autonomous)

Board of Studies-Economics SAC (Autonomous)

Sl. No	Category	Name/Address
a)	Chairperson	Dr Manohar V. Serrao
b)	Members of the Department	Ms Kavitha B., Dr Florin S. Soans, Ms Vinola S. Sequeira, Mr Alwyn Misquith, Mr Reji John, Mr Avinash N, Ms Carrel Sharel Pereira
c)	Subject Experts	*Dr Laxminarayana Bhat, Principal Besant Evening College, Mangalore *Dr Radhakrishna Shetty Principal and Associate Professor of Economics, Sri Mahaveera First Grade College, Kodangallu Moodbidre
d)	Vice-Chancellor's Nominee	Dr Arun Prakash, Assistant Professor & Head, Department of Economics, Vivekananda College, Puttur
e)	Representative from Industry / Corporate Sector / Allied Area	Mr Keshav Patali, Senior manager and HR MRPL, SEZ Unit Aromatic Complex, MSEZ, Permude, Mangaluru
f)	Meritorious Alumnus	Dr Bipin Sony, Assistant Professor, Dr B R Ambedkar School of Economics, Jnanabharathi University, Main Road, Nagarbhavi, Bangalore
g)	Student Representative	1. Nandana , BA, Reg No. 201260 2. Nishant Rodrigues, B.Sc, Reg No. 203041

PREAMBLE

Education is the key to empower mankind. A holistic approach to educate people enables development of new knowledge, creates employable skill sets, right attitude and overall personality development. Educated citizens are the wealth of a nation. National Education Policy 2020 paves the way to make an attempt in this direction. Economics is a discipline which though speaks about household management, gives a greater horizon. It deals with the everyday aspects influencing consumption, production, exchange, distribution, trade and so on. Study of Economics is not only helpful to increase the standard of living of the individual and their households and also in the policy decisions for the economic development. This syllabus in tune with the goals of NEP adheres to the current needs of the students in the discipline of Economics. Overall, the objective of Economics is to improve well-being of nation and thereby developing Indian Economy, since it serves as a centre for developing ideas and innovations. It seeks to create students with the capacity of analytical thinking, model building, team work, collaboration, problem solving. It is hoped that a student after a rigorous training in the BA/B.Sc. Economics degree will have host of employment opportunities and will be an asset to the nation.

B.SC ECONOMICS

Bachelor of Arts and Science (B.A./B.Sc Basic/Honors) in Economics programme is designed with an option for multiple entry and exit. The students will be taught theory as well as the practical aspects of Economic Science. They would begin with fundamental concepts and then as they progress to higher semesters they would be introduced to more sophisticated and intricate concepts.

PROGRAMME OUTCOMES

- PO 1: Facilitate the understanding of basic economic theories.
- PO 2: A comprehensive understanding of the various courses in the discipline.
- PO 3: Enable to apply quantitative techniques suitable for the discipline.
- PO 4: Analyse the policies of the government in solving economic problems.
- PO 5: Develop skills required to blend the subject learned and the real life situations.
- PO 6: Able to evaluate the working of the economy, its interconnection with the social, political, cultural, environmental, ethical issues in a comprehensive manner.

PROGRAMME SPECIFIC OUTCOMES

PSO 1: Enable the students with the knowledge of Economics both theoretical and applied.

PSO 2: Develop a comprehensive understanding of the various aspects of the branches of Economics related to micro and macro aspects.

PSO 3: Understand the working of the domestic and foreign economy.

PSO 4: Enable the students to apply the theoretical knowledge of Economics in applying to the real life situations.

PSO 5: Analyse the issues related to various problems like unemployment, balance of payments, poverty, inequality, inflation facing the economy.

PSO 6: Develop skills to integrate and organise the inter linkages between and among the varied divisions of the economy.

PSO 7: Have a critical assessment of the working of the economy, the interconnections between the various sectors and the policies linked to the development.

**B.Sc. ECONOMICS
STRUCTURE UNDER NEP**

Course Code	Title of course	Category of course	Teaching hours per week	SEE	CIE	Total Marks	Credits
SEMESTER I							
G 513 DC1.1	MICRO ECONOMICS I	DSC	3+0+0	60	40	100	3
G 513 DC2.1	MATHEMATICS FOR ECONOMICS	DSC	3+0+0	60	40	100	3
G 513 OE1.1	DEVELOPMENT STUDIES	OEC	3+0+0	60	40	100	3
Total credit							9
SEMESTER II							
G 513 DC1.2	MACRO ECONOMICS I	DSC	3+0+0	60	40	100	3
G 513 DC2.2	STATISTICS FOR ECONOMICS	DSC	3+0+0	60	40	100	3
G 513 OE1.2	ECONOMICS OF BUSINESS ENVIRONMENT	OEC	3+0+0	60	40	100	3
Total credit							9
SEMESTER III							
G 513 DC1.3	MICRO ECONOMICS II	DSC	3+0+0	60	40	100	3
G 513 DC2.3	BASIC ECONOMETRICS	DSC	3+0+0	60	40	100	3
G 513 OE1.3	ECONOMICS OF INSURANCE	OEC	3+0+0	60	40	100	3
Total credit							9
SEMESTER IV							
G 513 DC1.4	MACRO ECONOMICS II	DSC	3+0+0	60	40	100	3
G 513 DC2.4	APPLIED ECONOMETRICS	DSC	3+0+0	60	40	100	3
G 513 OE1.4	ENTREPRENEURIAL ECONOMICS	OEC	3+0+0	60	40	100	3
Total credit							9
SEMESTER V							
G 513 DC1.5	Introduction to R Software	DSC	4+0+0	60	40	100	4
G 513 DC2.5	Public Economics	DSC	4+0+0	60	40	100	4
G 513 DC3.5	Development Economics	DSC	4+0+0	60	40	100	4
G 513 DC4.5	Indian Banking and Finance	DSC	4+0+0	60	40	100	4
Total Credit							12
SEMESTER VI							
G 513 DC1.6	Actuarial Economics	DSC	4+0+0	60	40	100	4
G 513 DC2.6	Indian Public Finance	DSC	4+0+0	60	40	100	4
G 513 DC3.6	International Economics	DSC	4+0+0	60	40	100	4
G 513 DC4.6	Environmental Economics	DSC	4+0+0	60	40	100	4
Total Credit							12

TEACHING METHODOLOGY:

- ❖ Emphasis to be given to teaching concepts.
- ❖ Theories and laws to be taught with the help of tables and diagrams or with mathematical expressions
- ❖ Discussions and workshops
- ❖ Oral presentations and Guest talks
- ❖ Assignments, seminars and project work
- ❖ Review Quizzes

PATTERN OF EXAMINATION

Pattern of **40:60** for CIA (Continuous internal assessment) and Semester End examinations

PATTERN OF EVALUATION	
Continuous Internal Evaluation (CIE)	Marks
Continuous & Comprehensive Evaluation (CCE)	20
Internal Assessment Tests (IAT)	20
Total of CIE (A+B)	40
Semester End Examination (SEE)	60
Total of CIE and SEE (A+B+C)	100

Outline for continuous assessment activities for C1 and C2			
Activities	C1	C2	Total Marks
Session Test	10 marks	10 marks	20
Case study / Assignment / Field work / Project work/ Academic Quiz/ Review of the Book/ etc.	10 marks	---	10
Case study / Assignment / Field work / Project work/ Academic Quiz/ Review of the Book/ etc.	---	10 marks	10
Total	20 marks	20 marks	40

END – SEMESTER -QUESTION PAPER PATTERN

(From 2021 – 2022 onwards)

PART A: ANSWER ANY FIVE OF THE FOLLOWING: 5 X 2= 10

(Out of EIGHT ANY FIVE with at least one question from each module)

PART B: ANSWER ANY SIX OF THE FOLLOWING: 6X5=30

(Out of NINE ANY SIX with at least one question from each module)

PART B: ANSWER ANY TWO OF THE FOLLOWING: 2X10=20

(Out of FOUR ANY TWO with not more than one question from each module)

TOTAL = 60marks/ 2.30 hours duration

INTERNAL -QUESTION PAPER PATTERN

(From 2021 – 2022 onwards)

PART A: ANSWER ANY FIVE OF THE FOLLOWING: 5 X 2= 10

(Out of SEVEN ANY FIVE with at least one question from each module)

PART B: ANSWER ANY FOUR OF THE FOLLOWING: 4X5=20

(Out of SIX ANY FOUR with at least one question from each module)

PART B: ANSWER ANY TWO OF THE FOLLOWING: 2X10=20

(Out of FOUR ANY TWO with not more than one question from each module)

TOTAL = 50 marks/ 1.30 hours duration

B. Sc SEMESTER I
TITLE OF THE COURSE: G 513 DC1.1: MICRO ECONOMICS I
3 hours per week: Total hours: 42

COURSE OBJECTIVES:

- To acquire knowledge of some of the basic concepts, principles and theories of micro economics.
- To enable the students to appreciate the utility of economics in day – to day life.
- To enable students to understand different types of market structures and their working.

COURSE OUTCOME:

On Successful completion of the course, the student will be able to

1. Analyse the economic behaviour of the consumer and the firm.
2. Explain the relationship between various variables such as Input and output, cost and output, price of the product and quantity demand.
3. Product and Factor pricing under different market structure.

MODULE 1: INTRODUCTION TO ECONOMICS, DEMAND AND SUPPLY -14 hours

Chapter-1: Introduction to Economics: Nature, scope and definitions of economics, Basic concepts in economics, Importance of study of economics, Understanding the economy, Mankiw's ten principles of economics, Production possibility curve.

Chapter- 2: Demand: Meaning and determinants of demand, the Demand schedule, The Law of demand, Exceptions to the law of demand, Elasticity of demand: Meaning- Types: Price, Income and Cross Elasticity, Measurement of Elasticity of Demand.

Chapter- 3: Supply: Concept of Supply, the Law of supply, and Determinants of supply, Market equilibrium.

MODULE 2 : THEORY OF DEMAND AND PRODUCTION- 14 hours

Chapter-4: Cardinal Analysis: Utility: Law of diminishing marginal utility, equi-marginal utility, consumer's equilibrium, Consumer surplus and its application, N-M utility Index

Chapter-5: Ordinal analysis: Meaning of Indifference curves- Indifference schedule Indifference map, properties of indifference curves , Budget line- Consumer's equilibrium, Income, price and substitution effects -inferior goods v/s Giffen goods, Samuelson's Revealed Preference Theory.

Chapter-6: Production Function: Meaning, types of production function, The Law of Variable Proportion- the Law of Returns to Scale- Isoquants and its properties, iso-costline, Least cost combination of Inputs.

MODULE 3: COST, REVENUE, PRICE AND OUTPUT DETERMINATION UNDER DIFFERENT MARKETS **14 hours**

Chapter – 7: Cost Analysis: Cost concepts, Cost output relationship in the short-run and long- run.

Chapter – 8: Revenue Analysis: Total, Average and Marginal Revenue Curves

Chapter – 9: Price and Output determination under different markets: Meaning and features of perfect competitive market, Monopoly, Monopolistic competition and oligopoly, Price and Output determination under these markets.

REFERENCES

1. Ahuja H.L (2017) Advanced Economic Theory: Micro Economic Analysis, 21st Ed, New Delhi, S Chand and Co. Ltd.
2. Bilas, Richard A (2012) Microeconomic Theory: A Graphical Analysis, McGraw-Hill Book Co. Kogakusha Co. Ltd.
3. Case, K. E and Oster . S (2017) Principles of Economics, New Delhi, Pearson Education Pvt. Ltd.
4. Chauhan.S.P.S (2010), Micro Economics: An Advanced Treatise, PHI Ltd.
5. Deepashree (2011) Principles Of Micro Economics, 3rd Ed. Ane Books Pvt.Ltd
6. Dewett, KK (2012) Modern Economic Theory, New Delhi, Suthan Chand & Company Pvt Ltd.
7. Jhinghan, M.L (2016) Advanced Economic Theory: Micro and Macro Economics, 16th Ed., New Delhi,Vrinda Publications (P) Ltd.
8. Koutsoyiannis A (2016)Modern Micro Economics, 2nd edition, Hongkong, Macmillan Press.
9. Lipsey R G and K A Crystal (2011) Principles of Economics, 12th edition, New Delhi, Oxford University Press.
10. Maddala, G.S., and E. Miller, Microeconomics: Theory and Applications, Singapore, McGraw- Hill International Edition.

11. Pyndyck, R.S., and D.L. Rubinfeld (2012) Microeconomics, New Delhi, Pearson Education Singapore Pvt. Ltd.
12. Ronald Bracutigam David Besasko, Micro Economics, 4th Revised Ed.,Wiley India Pvt.Ltd.
13. Salvatore Dominick (2009) Micro Economics:Theory and Applications, Oxford University Press Ltd.
14. Samuelson PA and Nordhaus WD (2010), Economics 19th Ed., , New Delhi, Tata Ma.Graw Hill publishing company Ltd.
15. Seth ML(2005), Principles of Economics, 13th Ed., Agra, Lakshmi NarainAgarwal Education Publishers.
16. Varian, H.R., Intermediate Microeconomics: A Modern Approach, New Delhi, Affiliated East-West Press.

B.Sc SEMESTER I

TITLE OF THE COURSE: G 513 DC 2.1: MATHEMATICS FOR ECONOMICS

3 hours per week: Total hours: 42

COURSE OBJECTIVES:

- To acquaint the students with elementary knowledge of mathematical techniques in Economics.
- To train them to use mathematical techniques in economics.

COURSE OUTCOME:

On Successful completion of the course, the student will be able to

1. Perform basic operations in Vectors and Matrix algebra.
2. Calculate limits, derivatives and integrals of functions of multiple variables.
3. Calculate Optima for constrained and unconstrained optimization problems encountered in Economics.

MODULE 1: BASICS OF MATHEMATICAL ECONOMICS, VECTORS, MATRICES AND THEIR APPLICATIONS

- 14 hours

Chapter-1: Basics of Mathematical Economics: Nature of Mathematical Economics and its applications in Economic Analysis -Mathematical Model: Variables, Constants, Parameters, Equations and Identities- Sets: Set notation, operations, finite and infinite sets, laws of set operations.

Chapter-2: Relations and Functions: Ordered pairs, relations and functions - Meaning and types of functions- constant function, polynomial functions, rational functions and non-algebraic functions. Simultaneous Equations- **Vectors**-vector spaces, linear dependence.

Chapter-3: Matrices: Matrix Operations- Addition and Subtraction, Matrix Multiplication, Commutative, Associative and Distributive laws-Transpose - Inverse Matrix - Determinants: Properties, Rank of Matrix, Minor, Co-factor - Cramer's Rule, Derivation and its Applications in Economics

MODULE 2: COMPARATIVE STATICS AND DERIVATIVES

- 14 hours

Chapter- 4: Nature of Comparative Statics, Rate of Change and the Derivative –The concept of limit, limit theorems.

Chapter-5: Continuity and Differentiability of a function – rules of differentiation of a

function, Constant Functions, Linear, Power, Sums and Differences of Functions, Product of Functions, Quotient of Functions, Chain Rule, Exponential and Logarithmic Functions.

Chapter-6: Functions of two or more variables - Partial derivatives, Higher order partial derivatives, the Chain rule and total derivatives- Maxima and minima – One and two variables- Differential equations- First order linear differential equations- Nonlinear first order differential equations- Second order linear differential equations.

MODULE 3: INTEGRATION AND OPTIMISATION TECHNIQUES - 14 hours

Chapter – 7: Concept of Integration -Rules of Integration – Definite Integrals – Area and summation – Indefinite Integration.

Chapter-8: Applications integrations in Economic Analysis-Consumers Surplus- Producers surplus-Obtaining primitive function from marginal function.

Chapter-9: Concept of optimisation - Unconstrained Optimisation - Lagrangian Multiplier, Constrained optimisation.

REFERENCES

1. Allen, R.G.D. , (2007) Mathematical Analysis for Economists, Mumbai, Macmillan,
2. Bhardwaj, R.S(2007) Mathematics for Economics and Business, 2nd Ed, New Delhi, Excell Books.
3. Chiang(1985) Fundamental Methods of Mathematical Economics, London, McGraw Hill book Co.
4. Chiang, A.C(1985) Fundamental Methods of Mathematical Economics, 3rd Ed, Mumbai, McGraw Hill.
5. Dinwiddie, C(1967) Elementary Methods of Mathematical Economics, Oxford University Press.
6. Dowling, E.T(2005) Introduction to Mathematical Economics, 2nd Ed, Mumbai, Schaum's Outline Series, MacGraw Hill.
7. Halden, K. and A.W. Pearson(2002) Introductory Mathematics for Economics and Business, Delhi, Macmillan Press Ltd.
8. Mehta & Madnani (1992) Mathematics for Economists, New Delhi, S. Chand.
9. Simon, Carl P. and Lawrence Blume (2007) Mathematics for Economics, New Delhi, Viva Books Pvt Ltd.
10. Veerachamy(2008) Quantitative Methods for Economists, New Delhi, New Age International Publications.
11. Weber, Jean E(1982) Mathematical Analysis , Harper International.
12. Yamane, T.(2011) Mathematics for Economists, 2nd Ed, New Delhi, PHI Learning

B.Sc. SEMESTER I - OEC
TITLE OF THE PAPER: G 513 OE 1.1: DEVELOPMENT STUDIES
3 hours per week: Total: 42 hours

COURSE OBJECTIVES:

- To learn the basic concepts of growth and development.
- To know how the development process is made possible.
- To convey knowledge about theoretical framework of growth and development under different Schools of economic thought.
- This course exposes students to some of the key ideas and concepts in the areas of economic growth, human development and globalisation.

COURSE OUTCOMES

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

MODULE I: DEVELOPMENT: MEANING AND CURRENT CHALLENGES

-14 Hours

Chapter 1:Meaning of Growth: The concept of Growth-Distinction between Economic Growth and Economic Development Transition from quantitative to qualitative indices

Chapter 2:Modern economic growth: • Characteristics of modern economic growth: Scope of Modern Economic Growth -Modern Version of Economic Development-- Common characteristics and dissimilarities among developing countries.

Chapter3:Current Development Challenges- Poverty-Inequality- Migration- Conflict

MODULE II: APPROACHES TO DEVELOPMENT

14 Hours

Chapter 4: Development and Ethics-Concept and meaning-Principles and importance of Development Ethics

Chapter 5: - Measurement of Economic Development-PQLI-Gender Development Index-Multidimensional Poverty Index-HDI-Mathematical calculations related to Indexes

Chapter6:Theories of Development-: Adam Smith -Solow's Model of long-run growth, -Nurkse Theory of Disguised Unemployment -Shumpter -Leibenstein's Critical Minimum Effort Thesis; Feldman Model of Growth- Economic Growth and Income Distribution.

MODULE III: THEORIES AND CURRENT ISSUES IN DEVELOPMENT 14Hours

Chapter 7:Theories of Development: Theorizing Development –Modernization Theory, Dependency Theory- Capitalist World System- The evolution of thought on poverty reduction-Colonial Regimes and Their Legacies

Chapter8: The Industrial Revolution: Genesis and Spread-International specialization of Labour/Industry- Industrial Labour ILO and its activities to promote labour standards

Chapter9: Sustainable development; Increasing degradation of natural environment – water and air pollution and deforestation-Depletion of global commons-Sustainable development –concept and measures- SDGs- Climate Change – Causes, Impact, Measures of Mitigation and Adaptations

REFERENCES:

1. Agrawal, R.C(2015) *Economics of Development and Planning*, Agra, Lakshmi NarainAgrawal Publishers.
2. Ahuja H. L (2016) *Development Economic: A critical study of economic growth, development and environment*, New Delhi, S. Chand Publications.
3. Baldwin R E, *Economic Development: Theory, History, Policy*, Asia Publishing House
4. Debaraj Ray (2009) *Development Economics*, New Delhi, Oxford University Press.
5. DebrajRay(1998)*Development Economics*, New Jersey, Princeton University Press.
6. JhinganM.L.(2011)*Economics of Development and Planning*, 40th Ed, New Delhi, Vrinda Publications
7. Lekhi, R.K and JoginderSingh(2014)*Economics of Development and Planning*, Ludhiana, Kalyani Publishers.
8. Lekhi, R.K and JoginderSingh(2015) *Agricultural Economics*, Ludhiana, Kalyani Publishers.
9. Meir, G.M(2000)*Leading Issues in Economic Development*7th Ed, New Delhi, Oxford University Press.
10. Meir, G.M. & Baldwin R.E(1970) *Economic Development, Bombay, Asia Publishing House*,
11. Misra, S.K. and V.K. Puri (2016) *Economics of Development and Planning*, 16th Ed., New Delhi, Himalaya Publishing House.
12. Misra, S.K. and V.K. Puri(2012)*Economics of Development and Planning*, New Delhi, Himalaya Publishing House.

13. Shankaran S (2004) *Environmental Economics*, 3rd Ed, Madras, Margham Publications,
14. Todaro M.P (1985) *Economic Development in the Third World*, New York, Longman
15. Todaro M.P, and Stepan C Smith (2006) *Economic Development*, New York, Addison – Wesley Series in Economics.
16. Recent Human Development Reports
- 17 Subrata Ghatak (2003), *Introduction to Development Economics*, Routledge
- 18 Daron Acemoglu and James Robinson, (1994), *Economic Origins of Dictatorship and Democracy*, Cambridge University Press

B.Sc SEMESTER II

TITLE OF THE COURSE: G 513 DC1.2: MACRO ECONOMICS I

3 hours per week: Total hours: 42

COURSE OBJECTIVES:

- To enable the students to understand the working of the economy at the aggregate level.
- To train students in basic macroeconomic concepts and theories.
- To equip the students with appropriate tools of analysis to deal with issues and problems of macroeconomic policy.

COURSE OUTCOME:

On Successful completion of the course, the student will be able to

- Explain the concept of National Income and methods of its estimation
- Analyse the relationship between Macroeconomic variables
- Understand the determination of income and employment under Classical and Keynesian framework

MODULE 1: INTRODUCTION TO MACROECONOMICS AND NATIONAL INCOME ACCOUNTING - 14 hours

Chapter-1: Introduction to Macroeconomics: Nature of macroeconomics and its significance, Indicators of macro economic activity - Key concepts: Stock and flow variables.

Chapter-2: Building Blocks of Macroeconomic Analysis: Aggregate Demand (AD) curve, Aggregate Supply (AS) curve, Sources of shift in AD and AS, Equilibrium in National Income and Price level, Unemployment and National Income, Inflation and Unemployment, Circular flow of Income, Goods market and Money Market.

Chapter-3: National Income Accounting: Measurement of macro variables and economic performance: National income accounting - Important Concepts: GNP, GDP, NNP, NDP, NI, PI, DPI- Real GDP versus Nominal GDP- GDP deflator- Method of estimating national income- Expenditure method- Income method- Value added or Net product method- Difficulties in national income accounting- Trends in GDP in India - GNP and Quality of Life - Net Economic Welfare - Green Income.

MODULE 2: CLASSICAL AND KEYNESIAN MACROECONOMICS - 14 hours

Chapter- 4: Classical Theory: Introduction to classical theory of employment - Basic assumptions of the classical school- Say's law of market- Determinants of output, employment, savings, investment, wages, prices, interest rate - Equilibrium output and employment- Implications of classical full- employment model- Critical evaluation.

Chapter - 5: Keynesian Macroeconomics: Principle of effective demand- Keynesian theory of output, income and employment- Equilibrium income and output in simple two sector model, Three sector & four sector models.

Chapter- 6: Keynes Psychological Law of Consumption: An Overview of Post Keynesian theories of consumption: absolute income, relative income, permanent income & life cycle hypothesis- Multiplier and Accelerator Analysis - Marginal efficiency of capital- Relevance and critique of Keynesian Macroeconomics.

MODULE 3: RECENT DEBATES IN MACROECONOMICS - 14 hours

Chapter - 7: Supply side Economics

Chapter - 8: Money market and goods market equilibrium- IS-LM model- Business cycle- Concept and theories.

Chapter- 9: Macroeconomic policies; Monetary policy and fiscal policy- Relative effectiveness of monetary and fiscal policies.

REFERENCES

1. Ahuja H.L (2014) Advanced Economic Theory: Micro Economic Analysis, 20th Ed., New Delhi, S Chand and Co. Ltd.
2. Bilas, Richard A, Microeconomic Theory: A Graphical Analysis, McGraw-Hill Book Co. Kogakusha Co. Ltd.
3. Burda Michael (2017) Macro Economics, 5th ed., Chennai, Oxford University Press.
4. Chauhan.S.P.S (2010) Micro Economics: An Advanced Treatise, PHI.
5. David Romer (2011) Advanced Macro economics, Irwin/McGraw-Hill.
6. Deepashree (2011) Principles Of Micro Economics, 3rd Ed., Ane Books Pvt.Ltd.
7. Dewett KK, M H Navalur & Bahl KK (2012) Modern Economic Theory, New Delhi, Suthan Chand & Company.
8. Dewett, KK (2012) Modern Economic Theory, New Delhi: Suthan Chand.
9. Jhinghan, M.L (2014) Advanced Economic Theory: Micro and Macro Economics, 12th Ed., New Delhi, Vrinda Publications (P) Ltd.

10. Koutsoyiannis A (2008) Modern Micro Economics, 2nd edition, Macmillan Press, Hongkong.
11. Lipsey R G and K A Crystal (2011) Principles of Economics, 12th edition, New Delhi Oxford University Press.
12. Maddala, G.S., and E. Miller (1989) Microeconomics: Theory and Applications, Singapore ,McGraw Hill International Edition.
13. Mankiw, N. Gregory (2006): Macroeconomics, New York, WH Freeman Ltd.
14. Salvatore Dominick (2009) , Micro Economics Theory and Applications, Oxford University Press Ltd.
15. Samuelson P. A and Nordhaus W.D (2017) Economics, 19th Ed., New Delhi, Tata McGraw Hill Publishing Company Ltd.
16. Samuelson PA and Nordhaus WD (2010) Economics 19th Ed., Tata Ma.Graw Hill publishing company ltd, New Delhi
17. Seth M.L (2014) Macro Economics, 30th Ed., Agra, Lakshmi Narayan Agarwal Educational Publishers.
18. Shapiro Edward (2016): Macroeconomic Analysis, 5th ed, New Delhi, Galgotia publications.
19. Vaish M.C.(2010) Macro Economic Theory, 14th Ed., New Delhi: Vikas Publishing House.

B.Sc SEMESTER II

TITLE OF THE COURSE: G 513 DC 2.2: STATISTICS FOR ECONOMICS

3 hours per week: Total hours: 42

COURSE OBJECTIVES:

- To train students in statistical techniques in order to understand economic problems.

COURSE OUTCOME:

On Successful completion of the course, the student will be able to

1. Calculate basic descriptive and inferential statistics.
2. Interpret descriptive and inferential statistics.
3. Explain the process of hypothesis testing.

MODULE - 1: BASICS OF STATISTICS FOR ECONOMICS, MEASURES OF CENTRAL TENDENCY AND DISPERSION - 14 hours

Chapter-1: Basics of Statistics for Economics: Importance of Statistics in Economics- Descriptive and Inferential statistics-Data - Elements, Variables, and Observations, Scales of Measurement - Qualitative and Quantitative Data- Cross-Sectional and Time Series data- Data sources - Computers and Statistical Analysis.

Chapter-2: Measures of Central Tendency: Arithmetic mean, median, mode, Geometric mean and Harmonic mean measurement and applications in Economics.

Chapter-3: Measures of Dispersion- Meaning and significance of measures of dispersion -Measurement and applications of range, quartile deviation, mean deviation, standard deviation, variance and coefficient of variation.

MODULE - 2 : CORRELATION, REGRESSION, TIME SERIES ANALYSIS AND INDEX NUMBERS - 14 hours

Chapter- 4 :Correlation and Regression: Meaning and types of correlation, methods of computation of correlation coefficient –Karl Pearson's method, Spearman's rank correlation method- **Regression**–meaning and importance of regression analysis, simple regression lines and equations and forecasting (two variables only).

Chapter – 5 : Time Series: Nature and Decomposition of Time Series - Analysis of Trend - Moving Average Method, Least-Square Method.

Chapter – 6: Index Numbers: Nature and Purpose of Index Numbers - Types of Index Numbers: Price Index - Quantity Index, Link and Chain Index - Simple and Aggregate Index Numbers - Laspeyre's Index, Paasche's Index, Marshall and Edgeworth's Index - Fisher's Index - Time- Reversal and Factor Reversal Tests-Deflation and Splicing of Index Numbers - Problems in the Construction of Index Numbers - Limitation of Index Numbers.

MODULE – 3 : INTRODUCTION TO PROBABILITY DISTRIBUTIONS AND HYPOTHESIS TESTING

- 14 hours

Chapter - 7 : Probability: Basic Concepts- Properties of Probability- Expected Values, Conditional Probability Random Variables: Discrete and Continuous.

Chapter – 8: Probability Distributions - Probability Density Functions and Cumulative Distribution Functions – Expected values and Moments - The Binomial Probability Distribution, Poisson and Normal Distribution.

Chapter – 9: Hypothesis Testing: Meaning of Hypothesis testing-Null and Alternative hypothesis, level of significance, One-tailed and two-tailed tests, Type I, Type II errors- Approaches to Hypothesis Testing - Confidence Interval Approach -Test of Significance Approach.

REFERENCES:

1. Douglas, A Lind, William G. Marchal, and Samuel A. Wathen(2012) Statistical Techniques in Business and Economics, 15th Ed, New Delhi, TMH.
2. Gupta, S.C. and V. K. Kapoor(2010) Fundamentals of Mathematical Statistics, 10th Ed, New Delhi, Sultan Chand and Sons.
3. Gupta, S.P(2011) Statistical Methods, Sultan Chand and Sons.
4. Nagar, A.L. & P.D. Sharma, Statistical Methods of Economic Analysis, New Delhi, S Chand & Co.
5. Pillai R.S.N. and V. Bagavathi(2013) Statistics: Theory and Practice, New Delhi, Sulthan Chand.

B.Sc. Economics OEC: SEMESTER II

TITLE OF THE COURSE: G 513 OE 1.2: ECONOMICS OF BUSINESS ENVIRONMENT

3 hours per week: Total: 42 hours

COURSE OBJECTIVES:

- To learn the basic concepts of Business Environment /.
- To know how the development process is made possible in Business.
- To convey knowledge about theoretical framework of Budget and Policies

COURSE OUTCOME:

At the end of the course the student should be able to:

- Explain the elements of Business environment.
- Identify the environmental constraints in the growth of a business firm.
- Analyze the ways to utilise the current environmental conditions to achieve higher business growth.

MODULE 1: INTRODUCTION TO BUSINESS ENVIRONMENT 14Hours

Chapter1: Introduction: Meaning and definition, objectives, importance and uses of study of business environment. Environmental analysis-Meaning, process of environmental analysis, limitations of environmental analysis, environmental factors-The Micro environment of business and the macro environment of business.

Chapter 2: Economic Environment: Meaning of Economic Environment-Characteristics of Indian economy -Impact of Liberalization Privatization & Globalization of Indian Business. Monetary policy-Meaning, objectives-Fiscal policy-Meaning, objectives, budget and importance-EXIM policy -meaning and objectives-Industrial policy-meaning, objectives (Latest Policy Measures).

Chapter3: Global Business Environment: Meaning: Globalization: Nature and Impact of globalization: Challenges of international business: GATT and WTO and its implications on Indian economy.

Practicum

1. Identification of the impact of business environment through surveys
2. Group discussion on WTO and its impact on Indian business

MODULE II: NON-ECONOMIC ENVIRONMENT 14 Hours

Chapter 4: Social and Cultural Environment: Business and Society- Social Objectives of Business-Corporate Social Responsibility- Consumer Rights& Corporate Governance-Business Ethics

Chapter 5: Technological Environment: Meaning-Technological changes– R&D in India- Public and Private Investment in R and D.

Chapter 6: Financial Environment: Introduction and Meaning-An Over view of Indian Financial System-Financial Institutions and their Roles-Role of Foreign Direct Investment and its impact on Indian Business

Practicum: Students are expected to analyze the major economic and financial indicators Such as GDP, Inflation, CPI, BSE, NSE, Currency, Gold rate, Oil barrel price etc., for a particular period of time and submit the report on the same.

MODULE III: GOVERNMENT AND BUSINESS IN INDIA 14 Hours

Chapter 7: Political Environment: Introduction and Meaning Political Environment and the Economic system-Government and Business Relationship in India- Provisions of Indian Constitution for Business

Chapter 8: Legal Environmental Business: Indian Company Law-Contract law- Competition policy and law- Patents& Trademarks- Industrial Policy-An overview Labor Laws & Social Security, Environmental Laws.

Chapter 9: Current Issues: Ease of Doing Business-Performance of MSMEs-Make in India,-Development of economic and social infrastructure National Monetisation Pipeline

(latest policies of the government)

Practicum: Students are expected to give a report on how the economic environment has affected the performance of any five large Indian Business Houses.

REFERENCES:

1. Adhikari M. (2018): Economic Environment of Business, Sulthan Chand and Sons, New Delhi.
2. Agarwal, Raj (2018): Business Environment, Excel Publications, New Delhi.
3. Fernando, A C.(2011):Business Environment, Pearson Education India, Delhi.
4. Francis Cherunilam (2017): Business Environment, Himalaya Publishing House, Mumbai.
5. Pailwar V.K (2014): Business Environment, Prentice Hall India Learning Ltd, Delhi.
6. Sivayya K.V and V B M Das. (2013): Indian Industrial Economy, Sulthan Chand Publications, Delhi.

B.Sc. SEMESTER III

TITLE OF THE COURSE: G 513 DC 1.3: MICRO ECONOMICS II

3 hours per week: Total hours: 42

COURSE OBJECTIVES:

- To help students to acquire knowledge of some of the basic concepts, principles and theories of Micro Economics.
- To provide the foundation for the study of other branches of Economics.
- To develop analytical, reasoning and graphical presentation of skills.
- To enable the students to appreciate the utility of economics in day – today life.
- To enable students to understand different types of market structures and their working.
- To help students to understand the concept of distribution.

COURSE OUTCOMES:

- Identify the facets of an economic problem.
- Learn basic economic concepts and terms.
- Explain the operation of a market system.
- Analyze the production and cost relationship of a business firm.
- Evaluate the market decisions under different structure.
- Use basic cost benefit calculations as a means of decision making.

MODULE I: Basic Concepts in Economics: -14 Hours

Chapter 1: Nature and Scope of Micro Economics: Meaning, definitions, nature, scope, uses and limitations of micro economics. Concepts of equilibrium - Stable and unstable, static and dynamic, partial and general.

Chapter 2: Thinking like Economist: Thinking like an economist, the economist as scientist, the economist as policy adviser, Economic policy.

Chapter 3: Economic Systems: Types of economic activities- organization of economic activities- Circular flow of economic activities. Evaluation of the present economic system.

MODULE II: Theories of Distribution: - 14Hours

Chapter 4: Theories of Rent: Theories of Distribution: Functional and Personal Distribution- Rent: Ricardian theory of rent – Modern Theory of Rent – Concept of Quasi-rent.

Chapter 5: Theories of Wages and Interest: The marginal productivity theory of wages, Interest: Loanable Funds Theory of Interest – Keynes' Liquidity Preference Theory of Interest.

Chapter 6: Theories of Profit: The Innovations Theory of Profit – The Dynamic Theory of Profit - The Risk theory of profit - Uncertainty Theory of Profit.

MODULE III: Market Theories & Behavioural Economics: - 14Hours

Chapter 7: Market Theories: Perfect and imperfect markets, Kinked demand curve, Cournot's and Bertrand model, price leadership and cartels.

Chapter 8: Uncertainty Economics: Individual behavior toward risk, Expected utility and uncertainty equivalence approaches, N-M utility index, prospect theory, risk and risk aversion, sensitivity analysis. Gambling and insurance, cost and risk, risk pooling and risk spreading.

Chapter 9: Behavioural Economics: Asymmetric information: market for lemons, moral hazard and adverse selection, signaling and screening. The efficient market hypothesis, role of time and emotions in economic decision: role of constraints and information, satisficing and bounded rationality.

REFERENCES:

1. Ahuja H.L. (2009) *Principles of Micro Economics*, 17th Ed, New Delhi, S Chand and Co. Ltd.
2. Ahuja H.L. (2014) *Advanced Economic Theory : Micro Economic Analysis*. 21th Ed. New Delhi: S Chand and Co. Ltd.
3. Case, K. E and Oster. S (2017) *Principles of Economics*, New Delhi, Pearson Education Pvt. Ltd.
4. Chauhan (2009) *Macro economics part II*, New Delhi, PHI learning Pvt. Ltd.
5. Dewett, KK (2012) *Modern Economic Theory* New Delhi, Sathan Chand & Company.
6. Jhinghan, M.L (2004): *Advanced Economic Theory: Micro and Macro Economics*. 12th Ed.. New Delhi: Vrinda Publications (P) Ltd.
7. Jhinghan, M.L (2016) *Advanced Economic Theory: Micro and Macro Economics*, 16th Ed., New Delhi, Vrinda Publications (P) Ltd.

8. Koutsoyiannis A(1983) : *Modern Micro Economics*, 2nd edition, Hongkong, Macmillan Press Ltd.
9. Koutsoyiannis A(2016) *Modern Micro Economics*, 2nd edition, London, Macmillan Press Ltd.
10. Lipsey R G and K A Crystal (2011) *Principles of Economics*, 12th edition, New Delhi OUP.
11. Pyndyck, R.S., and D.L. Rubinfeld (2012) *Microeconomics*, New Delhi, Pearson Education Singapore Pvt. Ltd.
12. Salvatore Dominick (2009) , *Micro Economics- Theory and Applications*, Oxford University Press.
13. Samuelson PA and Nordhaus WD(2009): *Economics* 19th Ed. , Tata Ma.Graw Hill Publishing Company ltd, New Delhi
14. Seth ML(1996): *Principles of Economics* 13th Ed, Agra, Lakshmi Narain Agarwal Education Publishers.
15. Varian, H.R.(2019), *Intermediate Microeconomics: A Modern Approach*, New Delhi, Affiliated East-West Press.

B.Sc SEMESTER III

TITLE OF THE COURSE: G 513 DC 2.3: BASIC ECONOMETRICS

3 hours per week: Total hours: 42

COURSE OBJECTIVES:

- To equip the students with basic theory of econometrics and relevant applications of the methods.

COURSE OUTCOME:

- To know the basic knowledge of Econometrics.
- To understand the concepts like multicollinearity, heteroscedasticity. Autocorrelation and their applications.
- Helps the students to solve analytical problems related to regression.

MODULE I: NATURE OF ECONOMETRICS

14Hours

Chapter 1: Introductory to Econometrics: Nature, meaning and scope of econometrics, Relationship between Economic Theory, Statistics, Mathematics and Econometrics – Goals of Econometrics - Methodology of Econometrics .

Chapter 2: Linear Regression Model: Two variable linear regression model — assumptions, estimation through OLS, properties of estimators — Mean and Variance of the Ordinary Least-squares Parameters -Finding Out Estimators Using Cramer's Rule - Gauss-Markov theorem - Measure of goodness of fit – Adjusted & Multiple R^2 – The Sampling Distribution of the Least Squares Estimates – Mathematical Problems Related to Estimators Using Normal Equations and Cramer's Rule.

Chapter 3: Testing of Hypothesis: Type 1 and Type 2 Error - Standard Error Test, Z Test, Students t Test, F test and Chow test, chi-square test - Interpretation of Model – Practical's – using Excel and SPSS.

MODULE II: REGRESSION ANALYSIS

14 Hours

Chapter 4 : Classical Linear Regression Model: Meaning, Assumption- The Assumption of Randomness, zero mean, constant variance and normality of the disturbance variable –

Chapter 5: Homoscedasticity: Assumptions and Consequences of the Violation of Homoscedasticity - Heteroscedasticity – Reasons, Tests – Mathematical Problems related to Spearman's Rank Correlation, Goldfeld-Quandt & BPG - Generalized Least Square: Derivation from classical linear regression to GLS -Mean and Variance of Generalised least square – Difference between OLS and GLS

Chapter 6: Autocorrelation: Nature, Mean and Variance, tests – Mathematical problems related to Run ,Von – Neumann Ratio and Durbin – Watson test , consequences and remedial measures.

MODULE III: MULTIPLE REGRESSION MODEL

14 Hours

Chapter 7: Multiple Regression Model: Meaning, Assumptions, Mean and Variance – Derivation of Normal Equations - General Linear Regression Model — Assumptions, estimation and properties of estimators.

Chapter 8: Multicollinearity: Nature, test, consequences and remedial measures – Practicals – using SPSS and AMOS

Chapter 9: Non – Linear Equations: Estimation of non-linear equations and some specific functions like parabolic, exponential, geometric, hyperbolic, modified exponential; geometry and logistic functions.

REFERENCES:

1. Baltagi, B.H. (1998) *Econometrics*, New York, Springer.
2. Bridge, J.L (1971) *Applied Econometrics*, North Holland Publishing Co.
3. C R Kothari, (1988) *Research Methodology: Methods and Techniques*, 2nd Ed., New Age International Ltd.
4. Green, W. (2000) *Econometrics*, New Delhi, Prentice Hall of India.
5. Gujarati, D.N (2016) *Basic Econometrics*, 5th Ed., New Delhi, McGraw Hill.
6. Hatekar N. R (2016) *Econometrics*, New Delhi, Sage Publications India Pvt. Limited.

7. Intrilligator, M.D. and Z. Griliches (2017) *Handbook of Econometrics*, Vol. I & II, North Holland, Amsterda.
8. Johnston, J. (1991) *Econometric Methods* 3rdEdn., London, McGraw Hill.
9. Johnston, J. and J. Di Nardo (1997) *Econometric Methods*, McGraw Hill.
10. Kidder, L. H. and Judd, C.M (1986) *Research Method in Social Relations*, CBS College Publishing.
11. Kmenta, J. (1997) *Elements of Econometrics*, New York, University of Michigan Press.
12. Koutsoyannis, A. (1977) *Theory of Econometrics*, 2nd Ed., London, The Macmillan Press Ltd.
13. Kurian, C. T (1973) *A Guide to Research in Economics*, Madras, Sangam Publishers.
14. Labovitz, S and Haggedorn, R (1971) *Introduction to Social Science Research*, New York, McGraw Hill Company .
15. Maddala, G.S. (1997) *Econometrics*, New York, McGraw Hill.
16. Pindyek, R.S. and D.L. Rubinfeld (1976) *Econometric Models and Economic Forecasts*, Tokyo, McGraw Hill-Kogakusha.
17. Theil, H. (1981) *Introduction to Econometrics*, New Delhi, Prentice Hall of India.

B.Sc. Economics OEC: SEMESTER III

TITLE OF THE COURSE:G 513 OE 1.3: ECONOMICS OF INSURANCE

3hours per week: Total: 42 hours

COURSE OBJECTIVES:

- This course attempts to give a fairly comprehensive view of the insurance the undergraduate students in Economics.
- The objective of the subject is to make the students acquainted with the insurance sector.

COURSE OUTCOME:

After the successful completion of the course, the student will be able to;

- Understand various types of Insurance
- Understand various risks and Benefits of Insurance

MODULE I: INTRODUCTION TO INSURANCE AND RISK MANAGEMENT 14Hours

Chapter 1: Introduction to Insurance: Meaning and Definition of Insurance- Features of Insurance -Functions of insurance – Types of Insurance –Fundamental Principles of Insurance -Importance of Insurance - Profile of Insurance Companies in India – General Insurance - Classification of General Insurance - Insurance and Economic Development.

Chapter 2: Introduction to Risk Management: Definition of Risk – Selection of Risk or Underwriting of Risk - Classification of risk - Tools of the Risk - Risk Management Process- Determination of Objectives- Identifying Risk exposures - Evaluating Risks - Consideration of Alternatives and Selection of the Risk Treatment Device.

Chapter 3: Essentials of Insurance Contract: Essentials of a Valid Contract – Is Insurance a Contract? - Principles of Insurable Interest – Principles of Contributions .

MODULE II: LIFE INSURANCE AND HEALTH INSURANCE 14 Hours

Chapter 4: Life Insurance: Meaning and Definition of Life insurance - - Features of Life Insurance – Advantages of Life Insurance-Fundamental Principles of Life Insurance- Procedure for effecting Life Insurance

Chapter 5: Meaning and Definition of Health Insurance- Types of Health Insurance Policies – Health Insurance schemes in India

Chapter 6: –Plans of Life Insurance -Individual plans - Group Insurance plans-Pension plans- Premium and its computation -Valuation and Distribution of surplus.

MODULE III :LEGAL DIMENSIONS OF INSURANCE AND INSURANCE MARKETING 14 Hours

Chapter 7: Legal Dimensions of Insurance and Growth of Insurance Business in India: Introduction- The Insurance Act, 1938 – Life Insurance Corporation Act, 1956 –

General Insurance Business (Nationalisation) Act, 1972 – Consumer Protection Act, 1986 – Insurance Regulation and Development Authority (IRDA) - Growth of General Insurance after Nationalisation - Issues concerning Growth of Insurance - Future Potential.

Chapter 8: Insurance Marketing: Introduction - Concept of Insurance Market - Concept of Insurance Marketing- Marketing Strategies of Insurance Companies - Benefits of Bank Assurance – Benefits of Bank Assurance – Steps in Personal Selling or Selling Process.

Chapter 9: Insurance and Economic Development: Risk Management and Insurance in Economic Development-Insurance Institutions as Financial Intermediaries- Insurance Institutions as Investment Institutions-Insurance Institutions in Indian Capital Market.

REFERENCES:

1. Bodla, B.S., Garg, M.C. and Singh K.R. (2004), *Insurance, Fundamentals, Environment, Procedures*, Deep and Deep Publications Pvt Limited, New Delhi.
2. Dharmaraj, E. (2009), *Elements of Insurance*, SIMRES Publishers, Chennai.
3. Dionne, Georges, Harrington, Scott E. (Eds.) (1992), *Foundations of Insurance Economics, Readings in Economics and Finance*, Springer Netherlands
4. Emmett J. Vaughan and Therese Vaughan, (2007), *Fundamentals of Risk and Insurance*, Pasupathi Printers P.Ltd, New Delhi.
5. Howard C Kunreuther (2013), *Insurance and Behavioural Economics*, Cambridge University Press.
6. Jyotsna Sethi and Nishwan Bhatia, (2008), *Elements of Banking and Insurance*, PHI Learning Pvt Limited, New Delhi.
7. K. Borch, Knut K. Aase and Agnar Sandmo (1990), *Economics Of Insurance*, North Holland, Bergen.
8. Kanika Mishra, (2010), *Fundamental of Life Insurance Theories and Applications*, PHI Learning Pvt Limited, New Delhi.
9. Madhukar Pawar, R. (2012), *Fundamentals of Insurance*, Chandralok Prakashan, Kanpur.
10. Muthy, A (2006), *Elements of Insurance*, Margham Publications, Chennai.
11. Periyasamy, P. (2005), *Principles and Practice of Insurance*, Himalaya Publishing House, Mumbai
12. Zweifel, Peter, Eisen, Roland (2012), *Insurance Economics*, Springer-Verlag, Berlin Heidelberg

B.Sc SEMESTER IV

TITLE OF THE COURSE: G 513 DC1.4: MACRO ECONOMICS II

3 hours per week: Total hours: 42

COURSE OBJECTIVES:

- To train students in basic macroeconomic concepts and theories.
- To enable the students to understand the working of the economy at the aggregate level.
- To equip the students with appropriate tools of analysis to deal with issues and problems of macroeconomic policy
- To assist the students to develop suitable solutions for practical policy purpose which are very much expected by the society.

COURSE OUTCOME:

- On successful completion of the course the student is expected to get
- a thorough understanding of the various theories behind pricing of products and factors in different market environment;
- Ability to identify and evaluate the main models of market structures and to appreciate the theories behind policy prescriptions.
- This course in Macroeconomics is expected to develop skill in economic reasoning. By the time, students complete this course, they would know the relevance of government decisions like Wage policy, monetary policy, the RBI policy, etc. in the day-to-day life.

MODULE I: MACROECONOMIC CONCEPTS: 14 Hours

-

Chapter 1: Macro economy: Macro Economics - Meaning - Branches of Macro Economics - Scope, Uses & Limitations of Macro Economics -Concept of Welfare Economics- Social welfare and Economic welfare-Problems in Measuring Welfare- Role of Value judgments in Welfare Economics.

Chapter 2: Monetary Economy: Characteristics, Functions of money, the demand for money, the supply of money, credit creation.

Chapter 3: Inflation: Definition of inflation - Classification of Inflation - Types of inflation - Demand Pull Inflation, Cost-Push inflation, Mark- up inflation – causes and Effects of inflation- calculation of inflation rate- Inflationary Gap – Deflation-meaning, causes and Effects.

MODULE II: MACROECONOMIC CHALLENGES AND POLICIES 14 Hours

Chapter 4: Macroeconomic Challenges: Meaning and types, causes, measurement of Unemployment. Economic growth, Business Cycles –Meaning– Features, types - Phases- causes and effects.

Chapter 5: Fiscal Policy: Public finance: meaning, subject matter, public finance vs private finance, fiscal function and role of government: allocation, distribution and stabilisation. Characteristics of public goods, rationale of public provision of public goods.

Chapter 6: Public Finance: Sources of Public Revenue – Taxes – Canons of Taxation – Classification of Taxes. Public expenditure - Causes for Increasing Public Expenditure – Canons of Public Expenditure.

MODULE III: PUBLIC POLICY AND GLOBALISATION: 14 Hours

Chapter 7: Poverty and Public Policy: Meaning, measurement and types of poverty, poverty alleviation strategies in India.

Chapter 8: International Trade: The economic basis for trade- absolute and comparative advantage, terms of trade, exchange rates, Trade barriers- tariffs, subsidies and quotas, Balance of payments: the current and capital account.

Chapter 9: Globalisation: meaning, importance, pros and cons of globalisation.

REFERENCES:

1. Ahuja H.L. (1988) *Modern Economics*, New Delhi, S Chand and Co.Ltd.
2. Ahuja, H.L.(2013) *Macro Economics : Theory and Policy.*, New Delhi, S Chnad and Co Ltd.
3. Ahuja, H.L.(2017), *Macro Economics : Theory and Policy.*, New Delhi, S Chand and Co Ltd.
4. Burda Michael (2017) *Macro Economics*, 5th ed., Chennai, Oxford University Press.
5. David Romer (2011) *Advanced Macro Economics*, Irwin/McGraw-Hill.
6. Deepashree(2011) *Principles Of Micro Economics*, 3rd Ed., Ane Books Pvt.Ltd.
7. Dornbsch, Fischer, Startz(2017), *Macroeconomics*, 11th Ed, Chennai, McGraw Hill education Pvt Ltd.
8. Jhinghan, M.L (2014) *Advanced Economic Theory: Micro and Macro Economics*, 12th Ed., New Delhi, Vrinda Publications (P) Ltd.
9. Jingan M.L.(1987) *Macro Economic- Theory*. New Delhi, Konark Publishers.

10. K K Dewett , M H Navalur & K KBahl (2012) *Modern Economic Theory*, New Delhi, Suthan Chand & Company.
11. Koutsoyiannis A(1983) *Modern Micro Economics*, 2nd edition, Hongkong, Macmillan Press.
12. Lipsey R G and K A Crystal (2011) *Principles of Economics*, 12th edition, New Delhi Oxford University Press.
13. Samuelson P.A and Nordhaus W.D (2017) *Economics*, 19th Ed., New Delhi, Tata McGraw Hill Publishing Company Ltd.
14. Samuelson P.A and Nordhaus W.D(2009) *Economics* 19th Ed. New Delhi, Tata McGraw Hill Publishing Company Ltd.
15. Seth ,M L(2009):*Micro and Macro Economics*, Agra, Lakshmi Narayan Agarwal Education Publishers.
16. Seth M.L (2014) *Macro Economics*, 30th Ed. Agra, Lakshmi Narayan Agarwal Educational Publishers.
17. Shapiro Edward (2003): *Macro Economic Analysis* 5th Ed. New York, Harcourt Brace Jovanovich, Inc.
18. Shapiro Edward (2016): *Macro Economic Analysis*, 5th Ed, New Delhi, Galgotia Publications.
19. Soumyen Sikdar(2009) *Principles of Macro Economics*, New Delhi, Oxford University Press.
20. Vaish M.C.(2010) *Macro Economic Theory* 14th Ed. New Delhi: Vikas Publishing House.

B.Sc. SEMESTER: IV

TITLE OF THE COURSE: G 513 DC 2.4: APPLIED ECONOMETRICS

3 hours per week: Total hours: 42

COURSE OBJECTIVES:

- To equip the students with application of Econometrics and the methods in real life problems.

COURSE OUTCOME:

- To know the basic knowledge of Econometrics.
- To understand the dynamic econometric models.
- Helps to improve analytical skills.

MODULE I: DYNAMIC ECONOMETRIC AND SIMULTANEOUS EQUATIONS MODEL
14 Hours

Chapter 1: Dynamic Econometric Model: Autoregressive and distributed lag models —Koyck's approach, partial adjustment and adaptive expectations model, instrumental variables.

Chapter 2: Autocorrelation : Problem of auto-correlation — Application; Almon approach to distributed-lag models, Introduction to Time Series Analysis.

Chapter 3: Simultaneous Equations Model : Nature of simultaneous equations, simultaneous equations bias and inconsistencies of OLS estimation – the identification problem, rules of identification, Indirect Least Square Methods (ILS) , Method of Two stage least squares(2SLS).

MODULE II : LOGISTIC REGRESSION MODEL

14 Hours

Chapter 4: Dummy variable and Non – Linear Equations: Testing structural stability of regression models. Dummy variable trap, Regression with dummy independent variables — ANOVA and ANCOVA – Dummy Variable as an alternative to the Chow Test – Dummy Variable in Seasonal Analysis – Mathematical Problems Related to Dummy variable.

Chapter 5: Logistic Model: Concepts related to logistic model - Assumptions of logistic regression - Logit and Logistic transformation- Model for Logistic Model- Inference for logistic regression-Confidence interval and Significance test – Fitting regression model

Chapter 6 : Multiple Logistic Model: Meaning, Methods, Assumptions, Model diagnostics and Running model on SPSS.

MODULE III: RESEARCH METHODOLOGY

14 Hours

Chapter 7 : Introduction to Research Methodology: The Meaning of 'Research' – Specific Features of Research in Social Sciences as Opposed to Physical and Natural Sciences – Objectivity in Research - Basic Categories In Scientific Method – Facts – Concepts – Causality – Uncertainty – Probability. Steps in Research – Formulation of a Research problem – Guiding principles in the choice of a Research topic.

Chapter 8: Interpretative Paradigms of Qualitative Research: Strategies of Qualitative Enquiry – Methods of Qualitative Research – PRA and RRA Techniques- Compilation of Qualitative Data- Formatting and Processing of Qualitative Data – Analysis and Presentation of Qualitative Data.

Chapter 9: Game Theory and its Applications The 2-person, Zero sum game – Nash Equilibrium – Prisoners' Dilemma - Significance and Limitations of Game Theory – Formation of Input output model and application in Economic analysis.

REFERENCES:

1. Baltagi, B.H. (1998) *Econometrics*, New York, Springer.
2. Bridge, J.L (1971) *Applied Econometrics*, North Holland Publishing Co.
3. C R Kothari, (1988) *Research Methodology: Methods and Techniques*, 2nd Ed., New Age International Ltd.
4. Green, W. (2000) *Econometrics*, New Delhi, Prentice Hall of India.
5. Gujarati, D.N (2016) *Basic Econometrics*, 5th Ed., New Delhi, McGraw Hill.
6. Hatekar N. R (2016) *Econometrics*, New Delhi, Sage Publications India Pvt. Limited.
7. Intrilligator, M.D. and Z. Griliches (2017) *Handbook of Econometrics*, Vol. I & II, North Holland, Amsterda.
8. Johnston, J. (1991) *Econometric Methods* 3rdEdn., London, McGraw Hill.
9. Johnston, J. and J. Di Nardo (1997) *Econometric Methods*, McGraw Hill.
10. Kidder, L. H. and Judd, C.M (1986) *Research Method in Social Relations*, CBS College Publishing.
11. Kmenta, J. (1997) *Elements of Econometrics*, New York, University of Michigan Press.
12. Koutsoyannis, A. (1977) *Theory of Econometrics*, 2nd Ed., London, The Macmillan Press Ltd.
13. Kurian, C. T (1973) *A Guide to Research in Economics*, Madras, Sangam Publishers.

14. Labovitz, S and Haggedorn, R (1971) *Introduction to Social Science Research*, New York, Mc.Graw Hill Company .
15. Maddala, G.S. (1997) *Econometrics*, New York, McGraw Hill.
16. Pindyek, R.S. and D.L. Rubinfeld (1976) *Econometric Models and Economic Forecasts*, Tokyo, McGraw Hill-Kogakusha.
17. Theil, H. (1981) *Introduction to Econometrics*, New Delhi, Prentice Hall of India.

B.Sc. Economics OEC: SEMESTER IV

TITLE OF THE COURSE: G 513 OE 1.4: ENTREPRENEURIAL ECONOMICS

3hours per week: Total: 42 hours

COURSE OBJECTIVES:

- To provide knowledge about the Entrepreneurship
- To equip the students to understand the Entrepreneurial Environment

COURSE OUTCOME: After the successful completion of the course, the student will be able to;

- Understand various concepts of entrepreneurship
- Absorb Skills of entrepreneurship
- Understand various sources of financing project

MODULE I: INTRODUCTION TO ENTREPRENEUR

14 Hours

Chapter –I: Entrepreneur–meaning and definition –Nature of Entrepreneur- Risk faced by an Entrepreneur–Qualities of an Entrepreneur - Functions -and kinds of Entrepreneurs-Role of Entrepreneur-Difference between Entrepreneur and manager – Case study.

Chapter -2 Entrepreneurial Class: Societal Perspective of Entrepreneurial growth – Socio-Economic variables of Entrepreneurs- Socio-Economic origins of Entrepreneurship in India - Case study.

Chapter-3 Economic System and Entrepreneurial Behaviour: Nature of Economic System-Determinants of Economic System-Criteria for Economic System-Capitalism – Features of Capitalism-Merits of Capitalism-Limitation of Capitalism-Socialism – Definition of Socialism-Features of Socialism-Merits of Socialism-Limitation of Socialism-Mixed Economy –Features of Mixed Economy- Economic System and Entrepreneurial Behaviour-Case Study

MODULE II: THEORIES OF ENTREPRENEURSHIP AND ENTREPRENEURIAL ENVIRONMENT **14Hours**

Chapter-4:Entrepreneurship: Concept of Entrepreneurship-Definition of Entrepreneurship-Characteristics of Entrepreneurship-Entrepreneur and Entrepreneurship- Intrapreneurship-Economic and Social Benefits of Entrepreneurship- Role of Entrepreneurship in Developing Economy –Barriers of Entrepreneurship-Case study.

Chapter-5: Theories of Entrepreneurship: Innovation Theory –Need for Achievement Theory –Critical Evaluation –Status Withdrawal Theory - Critical Evaluation-Theory of Social Change - Critical Evaluation-Theory of Social Behaviour- Critical Evaluation-Theory of Leadership - Critical Evaluation-Theory of Systematic Innovation - Critical Evaluation-Case study.

Chapter-6: Entrepreneurial Environment: Political Environment-Legal Environment- Economic Environment-Technological Environment-Social Environment-Cultural Environment-International Environment-Case Study.

MODULE-III: SMALL SCALE INDUSTRY AND FINANCIAL ANALYSIS 14 Hours

Chapter 7: Steps for Starting a Small Scale Industry - selection of types of organization -Export and Import - State Trading Corporation - Liberalization - Privatization- Small Scale Industry - Problems and sickness of small scale industry - Government Policy.

Chapter 8: Women Entrepreneur - Concept of women entrepreneur - Growth and Development of entrepreneurs - Functions - Rural women entrepreneurs -Problems of Women Entrepreneur - Role of Women's Association.

Chapter 9: Financial Analysis - Social Cost and Benefit Analysis - Sources of Project Finance - Institutions helping entrepreneurs - Role of Commercial Banks -New Entrepreneurial Development Agencies

REFERENCES:

1. Bhatia B.S. and Batra G.S.(2006)“*Entrepreneurs and Small BusinessManagement*”, Regal Publications Kerala.
 2. CharantimathP.M.(2005).“*Entrepreneurship Development in Small Business Enterprises*”, Publisher, Pearson Education India.
 3. Desai, Vasant (2013)“*Dynamics of Entrepreneurship Development in Management*”, Himalayan Publication,New Delhi
 4. Dollionger(2003)“*Entrepreneurship Development*”, Pearson Education India
 5. Khanka S C & Gupta (2017) “*Entrepreneurship & Small Business Management*” Sultan Chand and Sons Publications New Delhi.
 6. M.B.Shukla (2009): “*Entrepreneurship and Small Business Management* ”, Kitab Mahal, Delhi.
 7. Saji Kumar (2009) “*Impact of Globalisation on SMEs Industries*”, ICFAI
 8. Singh B.N.T. (2009)“*Industrial Development under Structural adjustment Programme*”, D.D. Publication.
- [Virendra Sanghavi](#)(2021) “*Spirit of Entrepreneurship: The Journey of an Entrepreneur*” Embassy Books Mumbai Maharashtra.

Program Name	B.Sc. in Economics	Semester	Fifth Semester
Course Title	Introduction to R Software		
Course Code:	G 513 DC1.5	No. of Credits	4
Contact hours	60 Hours	Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40	Summative Assessment Marks	60

Course Outcome: After the successful completion of the course, the student will be able to:

- CO1. Enables to do programming in R
- CO2. Students can able to gain skill in analysing the data.
- CO3. To acquaint with the recent advances in R

Modules	Description	60 Hours
Module I	Introduction to R	10
	Installation Procedure - Help - Demo Examples - Packages and Libraries -Command Line - Data Editor - R Studio.	
Practicum	Develop an R script and execute it	
Module II	Basics in Calculations	16
	Basics and R as a Calculator - Multiplication and Division - Addition and Subtraction Built in Functions and Assignments - Matrix Operations - Creation of a Matrix - Properties - Transpose - Multiplication - Addition and Subtraction - Submatrices - Inverse.	
Practicum	Solve a problem on Submatrices - Inverse	
Module III	Missing Data and Logical Operations	16
	Missing Data - Logical Operations and Comparisons - Control Statements - Loops - Conditional Execution - Sequences - Repeats, Sorting and Ordering - Lists - Vector Indexing - Data Management with Strings - Display and Formatting.	
Practicum	Group Discussion on Missing Data and Logical Operations	

Module IV	Descriptive Statistics and Functions in R	18
	Frequencies - Absolute and Relative, Partition Values - Quartile - Decile - Percentile, Graphics - Bar Plots - Pie Chart - Histogram - Scatter Plot, Descriptive Statistics - Mean - Median - Mode - Variability - Variance - Range - Standard Deviation, Statistical Distribution - Skewness - Kurtosis, Statistical Functions - Correlation - Regression - Regression Line - Goodness of Fit.	
Practicum	Presentation on Descriptive Statistics and Functions in R	
References		
1	Alain F. Zuur, Elena N. Ieno, Erik H.W.G. Meesters (2009), A Beginner's Guide to R (Use R),Springer Cham Publications.	
2	Gareth James, Daniela Witten, Trevor Hastie, and Robert Tibshirani, (2013), Introduction toStatistical Learning with Applications in R, Springer Cham Publications.	
3	Christian Heumann, Michael Schomaker, Shalabh (2017), Introduction to Statistics and DataAnalysis - With Exercises, Solutions and Applications in R, Springer Cham Publications.	
4	McKinney, W. (2012). Python for data analysis: Data wrangling with Pandas, NumPy, and IPython,O'Reilly Media, Inc.	

Program Name	B.Sc. in Economics	Semester	Fifth Semester
Course Title	Public Economics		
Course Code:	G 513 D C2.5	No. of Credits	4
Contact hours	60 Hours	Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40	Summative Assessment Marks	60

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

CO1. Understand introductory Public Finance concepts.

CO2. Study the causes of market failure and corrective actions CO3. Understand the impact, incidence and shifting of tax

CO4. Study the Economic Effects of tax on production, distribution and other effects CO5. Enable the students to know the Principles and Effects of Public Expenditure

CO6. Understand the Economic and functional classification of the budget; Balanced and Unbalanced budget

CO7. Understand the Burden of Public debt and know the Classical/ Ricardian views, Keynesian and post-Keynesian views

CO8. To acquaint with the advantages and disadvantages of Deficit Financing

MODULES	DESCRIPTION	60 Hours
Module I	Introduction to Public Economics	15
	Public Economics: Meaning, definitions, Scope and Significance, Public Finance and Private Finance: Meaning, and Distinction; Public good and private good: Meaning, Characteristics, and Distinction, Principle of Maximum Social Advantage, Market Failures: Meaning, causes-role of externalities; Market failure and role of government; Corrective actions.	
Practicum	Group Discussions on Public Finance and private finance; public good and private good Assignment on Market failure and government intervention	

Module II	Public Revenue and Public Expenditure	17
	Meaning and sources of revenue; Taxation –Cannons of taxation, Characteristics of a sound tax system, Impact, Incidence- Division of Tax burden, Shifting of tax, Economic Effects of tax on production, distribution and other effects, Progressive and Regressive, Proportional Tax, Direct and Indirect Taxes –Merits and Demerits, Taxable Capacity: Meaning and determinants. Public Expenditure; Meaning, classification, principles, Types & Cannons, Reasons for the growth of public expenditure, Wagner’s law of increasing state activities, Peacock-Wiseman hypotheses, Effects of public expenditure: Production, Distribution & Other effects	
Practicum	Mini-project/study to ascertain the impact of GST on retailers/wholesalers in your vicinity A case study on the taxable capacity of the different sections of society in the vicinity Assignment on Effects of public expenditure: Production, Distribution & Other Effects	
Module III	Public Debt	13
	Public Debt: Meaning, Purpose, Types & Effects; Sources of Public Borrowing; Burden of Public Debt -Classical/ Ricardian views, Keynesian and post-Keynesian views; Intergenerational equity of public debt; Causes of the Rise in Public Debt; Methods of debt redemption; Debt management.	
Practicum	Studying the burden of public debt through a project/ case study Assignment on Debt Management	
Module IV	Public Budget, Fiscal Policy and Fiscal Deficit	15
	Budget: Meaning, process & Types of budget, Economic and functional classification of the budget; Balanced and unbalanced budget, Types of Budget Deficits; Fiscal Policy: Meaning, objectives & Tools; Fiscal deficit: Meaning, Computation, Deficit Financing: Meaning, Advantages and Disadvantages expenditure, Wagner’s law of increasing state activities, Peacock-Wiseman hypotheses, Effects of public expenditure: Production, Distribution & Other effects	
Practicum	Mini-project/study to ascertain the impact of GST on	

	retailers/wholesalers in your vicinity A case study on the taxable capacity of the different sections of society in the vicinity Assignment on Effects of public expenditure: Production, Distribution & Other Effects	
Module III	Public Debt	13
	Public Debt: Meaning, Purpose, Types & Effects; Sources of Public Borrowing; Burden of Public Debt -Classical/ Ricardian views, Keynesian and post-Keynesian views; Intergenerational equity of public debt; Causes of the Rise in Public Debt; Methods of debt redemption; Debt management.	
Practicum	Studying the burden of public debt through a project/ case study Assignment on Debt Management	
Module IV	Public Budget, Fiscal Policy and Fiscal Deficit	15
	Budget: Meaning, process & Types of budget, Economic and functional classification of the budget; Balanced and unbalanced budget, Types of Budget Deficits; Fiscal Policy: Meaning, objectives & Tools; Fiscal deficit: Meaning, Computation, Deficit Financing: Meaning, Advantages and Disadvantages	
Practicum:	Calculation of various types of budget deficit using the budget data Group discussion on the advantages and disadvantages of deficit financing	

References	
1	Lekhi R.K., Joginder Singh (2018) Public Finance, Kalyani publication, New Delhi
2	Tyagi B.P. (2014) Public Finance published by Jaya Prakash Nath and CO, Meerut
3	Hindriks J. and G. Myles (2006): Intermediate Public Economics, MIT Press.
4	Bhatia H L (2018): Public Finance. Vikas Publishing House.
5	Musgrave, R.A. (1989), The Theory of Public Finance, McGraw Hill
6	Musgrave, R.A. and P.B. Musgrave (1989), Public Finance in Theory and Practice, McGrawHill,

Program Name	B.Sc. in Economics	Semester	Fifth Semester
Course Title	Development Economics		
Course Code:	G 513 D C3.5	No. of Credits	4
Contact hours	60 Hours	Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40	Summative Assessment Marks	60

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

- CO1. Understand the basic concepts and measurements of Development.
- CO2. Learn some classical and partial theories of Development economics and identify the difference.
- CO3. Identify the difference between Developed and Developing Countries.
- CO4. Analyse and tackle the Development issues effectively.

MODULES	DESCRIPTION	60 Hrs
Module 1	Introduction to Economic Development	14
	Concept - Definitions - Distinction between Economic Growth and Development - Indicators of Growth and Development, Measures of Economic Development: Gross National Product (GNP) - Physical Quality of Life Index (PQLI), Human Development Index (HDI), Happiness Index, Inequality and Poverty: Meaning, causes, indicators - Gini Coefficient Index, Human Poverty Index (HPI).	
Practicum:	Assignment on various indicators of growth and development Group discussions about the characteristic features of different countries and their development levels	
Module 2	General Theories of Economic Growth and Development	16
	Adam Smith's Theory, David Ricardo's Theory, T.R. Malthus' Theory, Karl Marx's Theory, Schumpeter's Theory and Rostow's Growth Theory - Harrod-Domar Model.	
Practicum:	Assignment on different theories and their relevance to developing Countries, Debate on present stage of India's growth and estimated stage it may reach by 2047	

Module 3	Partial Theories of Economic Development	16
	Lewis Labour Surplus Model - Rodan's Big Push Theory - Lieberstein's Critical Minimum Effort Approach - Balanced Vs. Unbalanced Growth, Factors in the Development Process Capital Accumulation - Capital-Output Ratio - Technology and Economic Development.	
Practicum:	Group Discussion on Balanced and unbalanced growth strategies in Developed and developing countries Assignment on the Factors in the Development Process Capital Accumulation	
Module 4	Sustainable Development	14
	Inclusive Development - Millennium Development Goals - Sustainable Development Goals, Targets and Achievements with reference to India.	
Practicum	Seminar on MDGs and SDGs and the challenges	

References	
1	Higgins Benjamin & W.W. Norton Economic Development New York & Company. Inc.
2	Mishra S.K and Puri V.K, Economic Development and Planning, Himalaya Pub., House, Mumbai.
3	Taneja M.L. and Meier G. M, Economics of Development and Planning, S. Chand and Co, Delhi.
4	Thirlwall A.P. Growth and Development: With Special Reference to Developing Economies, Palgrave Macmillan, New York.
5	Todoaro. M.P & Orient Longman Economic Development in the Third World, United Kingdom
6	Sustainable Development Reports

Program Name	B.Sc. in Economics	Semester	Fifth Semester
Course Title	Indian Banking and Finance		
Course Code:	G 513 D C4.5	No. of Credits	4
Contact hours	60 Hours	Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40	Summative Assessment Marks	60

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

- CO1. Understand the structure of Indian banking and the role of banks in monetary policy.
- CO2. Analyze the functioning of banks and different types of accounts and other services offered by banks.
- CO3. Evaluate recent developments in the Indian banking sector, including digital banking, payment banks, and non-performing assets.
- CO4. Describe the overview of the Indian financial system, including financial markets, financial instruments, and financial regulation.
- CO5. Analyze the challenges faced by Indian banks and the implications of banking reforms for the Indian economy.
- CO6. Develop critical thinking and analytical skills in evaluating various financial products and services banks and capital markets offer.

MODULES	DESCRIPTION	60 Hrs
Module I	Introduction to banking: India	15
	Indian Banks: Evolution, structure, functions, types and features- Public sector, private sector, foreign, Cooperative, RRB, Small finance banks, payment banks; Role and importance of banks in the Indian economy; Credit creation and financial intermediation; Central Bank and banking regulation; Regulatory and supervisory powers; Monetary policy and banking channel of credit control; Policy rates and banking; repo, reverse repo, MCLR, Bank rate, CRR, SLR, MSF; Issues in	

	banking sector; NPA crisis; impact of global events on Indian banks.	
Practicum	Compare and contrast the different types of banks, highlighting their strengths and weaknesses- Presentation. Conduct a class discussion and compare and contrast the different scenarios on various loans, highlighting the risks involved and the measures taken by banks to manage these risks.	
Module II	Banking services	15
	Banking services: Bank deposits; Types and features of bank accounts; account opening and importance of KYC; Bank loans; types, features, documents required; eligibility, interest rates, maturity, loan default and consequences; Other services: Locker facility, payment and remittance services and channels; currency exchange; debit cards, credit cards, pre- paid cards; ATMs; internet and mobile banking; Modern banking products: Insurance on deposits and loans, Investment services in capital market- stocks, bonds and mutual funds; advisory services; retirement products.	
Practicum	Group discussion on bank accounts and loan products and making recommendation to different classes Comparison of banking services by visiting bank branches	
Module III	Modern Banking	15
	Modern banking facilities; Digital banking; Digital Wallets; Digital account opening; Biometrics; contact less payment system; instant payments; personal finance management tools; Use of artificial intelligence and machine learning in banks; Cyber security in banking; Credit scoring; Direct lending; Corporate banking; Investment Banking	
Practicum:	Survey bank customers to understand their usage and satisfaction levels with digital banking services. Analyze the adoption rates of digital banking services across	

	different age groups and demographic segments	
Module IV	Financial Market	15
	Introduction to Indian financial markets; Equity markets and stock exchanges; Debt markets and bond markets; Currency markets and forex trading; Commodity markets and trading; Derivatives markets; Mutual funds; Insurance products Investing in capital market products- access, channels; risk in capital market investments; Role of SEBI, Fintech and innovation in capital markets;	
Practicum	Debate: Investing in capital market products. Assignment on Indian financial markets	

References	
1	Khan, M. Y. (2019). Indian Financial System (11th ed.). McGraw Hill Education (India) Private Limited.
2	RBI (2022) report on the trend and Progress of Banking in India
3	Pathak, B. V. (2018). Indian financial system. Pearson Education
4	Principles and Practices of Banking (2023), Indian Institute of Banking & Finance (IIBF), MacMillan
5	Shekhar, K. C. & Shekhar, L. (2013). Banking Theory and Practice, 21st Edition
6	Taxman's Digital Banking, Indian Institute of Banking & Finance (IIBF), Bharati Law House
7	Reserve Bank of India. (2017). Basic Financial Literacy Guide. https://www.rbi.org.in/Scripts/BS_FlgGuidelines.aspx
8	Securities and Exchange Board of India. (2021). Handbook of Statistics on Indian Securities Market. https://www.sebi.gov.in/reports-and-statistics/publications/dec-2022/handbook-of-statistics-2021_66158.html
9	Financial Education Handbook (2021) National Centre for Financial Education (NCFE) https://www.ncfe.org.in/resources/downloads
10	Investor Education material by National Stock Exchange (https://www.nseindia.com/invest/how-to-invest-in-capital-market)

6th Semester

Program Name	B.Sc. in Economics	Semester	Sixth Semester
Course Title	Actuarial Economics		
Course Code:	G 513 DC1.6	No. of Credits	4
Contact hours	60 Hours	Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40	Summative Assessment Marks	60

Course Objective:

- To understand the basic actuarial techniques
- To understand the concepts of finance and its application in actuarial economics

Course Outcome: After the successful completion of the course, the student will be able to:

CO1. Enables understanding on Actuarial Economics and Insurance sector.

CO 2. To acquaint with advances in financial models

Modules	Description	60 Hours
Module I	Introduction to Actuarial Economics	10
	Principles of Actuarial Economics - Importance of Finance and Mathematics in Actuarial Economics - The concept of Insurance - Classification of Insurance - Types of Life Insurance - History of Insurance in India - Insurance regulatory and development Act.	
Practicum	Assignment on Principles and Importance of Finance and Mathematics in Actuarial Economics.	
Module II	Theory of Interest	18
Chapter 4	Time value of money - Simple interest, compound interest, depreciation, investing over a period. Cash flow models - Zero coupon bonds, fixed interest securities, index linked securities, equity, annuity, an interest on loan, repayment loan. Interest rates - Nominal rate, effective rate and force of interest.	
Practicum	Calculate Simple interest, compound interest, depreciation	

Module III	Theory of Uncertainty and Risk Models	18
	Axioms of choice under uncertainty; utility functions; expected utility theorem; measures of risk-absolute and relative risk aversions; measures of investment risk-variance of return, semi-variance of return Decision Theory: Zero-sum two- player games – Domination - The Minimax criterion - Saddle points.	
Practicum	Presentation on Theory of Uncertainty and Risk Models	
Module IV	Portfolio Theory	14
	Portfolio Theory - Benefits of Diversification, Models of Asset Returns: -Multifactor Models - The Single Index Model, Asset Pricing Models: - The Capital Asset Pricing Models (CAPM) – Limitations of CAPM.	
Practicum	Group discussion on Portfolio Theory and Benefits of Diversification	

References	
1	Stephen G. Kellison, The theory of interest. Irwin Mc Graw Hill, 2008.
2	John Hull, Futures, Options and financial derivatives, Prentice hall publication
3	Panjer, Harry, H. (1998), Financial economics with applications to investments, Insurance and pensions. The Actuarial foundation.

Program Name	B.Sc. in Economics	Semester	Sixth Semester
Course Title	Indian Public Finance		
Course Code:	G 513 DC2.6	No. of Credits	4
Contact hours	60 Hours	Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40	Summative Assessment Marks	60

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

- CO1. Understand the structure of Indian Public Finance
- CO2. Enable the students to know the Source and nature of public revenue and expenditure
- CO3. Understand the Budget and different concept of deficits
- CO4. Know the Public debt and its management
- CO5. Understand the fiscal and monetary policy and their tools and importance
- CO7. To enable the students to know the Indian federal financing system and Financial Commissions

MODULES	DESCRIPTION	60 Hours
Module I	Public Revenue	18
	Direct Tax Revenue - Sources of Revenue-Tax and Non-Tax Revenue; Trends and Patterns of Tax Revenue in India; Direct and Indirect Taxes in India; Personal Income Tax Rates and Slabs; Corporate Tax- Tax Rate and Slabs; Indirect Tax Revenue - Indirect Taxes – Earlier Taxes-VAT and MODVAT; Goods and Services Tax (GST)- Objectives and Classification of GST, Tax Rates of GST; Trends and Patterns of GST; Impact of GST on Indian Economy; Tax Reform Commissions.	
Practicum	Collection and analysis of data on Direct tax Collection and analysis of GST from businesses.	

Module II	Public Expenditure	15
	Revenue Expenditure - Classification of Public Expenditure in India; Revenue Account Expenditure- Trends and Patterns; Capital Account Expenditure-Trends and Patterns; Fiscal Responsibility and Budget Management (FRBM) Act; Impact of Public Expenditure on Indian Economy; Expenditure Reforms Commission (ERC) in India; Union Budget and Its Analysis - Meaning and Classification of Budgets; Zero- Based Budget; Composition of Union Budget; Union Budget Analysis (current one); Different Concept of Deficits- Revenue, Fiscal, Primary Deficits.	
Practicum	Analysis of Union Budget (Current one)Group Discussion on Budget Deficits	
Module III	Public Debt and Its Management	14
	Public Borrowings and Debt - Meaning and Nature of Public Debt; Sources of Public Borrowings; Classification of Public Debt; Trends and Patterns of Central Government Debt; Main Characteristics of Indian Public Debt; Crowding out of Private Investment; Causes of Public Debt in India; Burden of Public Debt and Management in India - Meaning of Burden of Public Debt; Importance of Public Management; Principles of Public Debt Management; Repayment of Public Debt in India; Impact of Public Debt on Indian Economy; Finance Commissions in India	
Practicum	Assignment to write on Indian Public Debt and sources of repaymentGroup Discussion on Burden of Public Debt	
Module IV	Fiscal and Monetary Policies and Federal Finance in India	13
	Fiscal and Monetary Policy India - Meaning and Objectives of Fiscal Policy; Importance of Fiscal Policy; Tools of Fiscal Policy; Meaning and Objectives of Monetary Policy; Importance of Monetary Policy; Tools of Monetary Policy; Indian Federal Finance - Meaning and Importance- Stages of	

	Growth; Allocation of Resources- Division of Functions and Resources; Principles of Federal Finance; Shortcomings of Federal Financing; Finance Commission and Their Recommendations.	
Practicum	Group Discussion about the Role of Fiscal and Monetary Policies in controlling inflation Assignment to write the State List, Union List and Concurrent list	
Module III	Public Debt and Its Management	14
	Public Borrowings and Debt - Meaning and Nature of Public Debt; Sources of Public Borrowings; Classification of Public Debt; Trends and Patterns of Central Government Debt; Main Characteristics of Indian Public Debt; Crowding out of Private Investment; Causes of Public Debt in India; Burden of Public Debt and Management in India - Meaning of Burden of Public Debt; Importance of Public Management; Principles of Public Debt Management; Repayment of Public Debt in India; Impact of Public Debt on Indian Economy; Finance Commissions in India	
Practicum	Assignment to write on Indian Public Debt and sources of repayment Group Discussion on Burden of Public Debt	
Module IV	Fiscal and Monetary Policies and Federal Finance in India	13
	Fiscal and Monetary Policy India - Meaning and Objectives of Fiscal Policy; Importance of Fiscal Policy; Tools of Fiscal Policy; Meaning and Objectives of Monetary Policy; Importance of Monetary Policy; Tools of Monetary Policy; Indian Federal Finance - Meaning and Importance- Stages of Growth; Allocation of Resources- Division of Functions and Resources; Principles of Federal Finance; Shortcomings of Federal Financing; Finance Commission and Their Recommendations.	

Practicum	Group Discussion about the Role of Fiscal and Monetary Policies in controlling inflation Assignment to write the State List, Union List and Concurrent list	
References		
1	Bhatia H L (2021): Public Finance, S. Chand and Co., New Delhi.	
2	Lekhi R.K (2020): <i>Public Finance</i> , Kalyani Publishers, New Delhi.	
3	Musgrave R.A and Musgrave P.A (2017): <i>Public Finance in Theory and Practice</i> , McGraw- Hill Kogakusha, Tokyo.	
4	Om Prakash (2021): <i>Public Economics: Theory a practice</i> , Vishal Publishing Co. Ludhiana.	
5	S.K. Singh (2019): <i>Public Economics: Theory and Practice</i> S. Chand and Co., New Delhi.	
6	Tyagi, B.P (2018): <i>Public Finance</i> , Jai Prakash Nath and Company, Meerut, India.	

Program Name	B.Sc. in Economics	Semester	Sixth Semester
Course Title	International Economics		
Course Code:	G 513 DC3.6	No. of Credits	4
Contact hours	60 Hours	Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40	Summative Assessment Marks	60

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

- CO1. Understand the international trade theories and their application in international trade
- CO2. Explain the concept of terms of trade and demonstrate the effect of trade barriers; and display the ability to analyse the stages of economic integration
- CO3. Understand the concept of BoP and assess the BoP position and examine the changes in forex rate
- CO4. Analyse the role of International trade and financial institutions
- CO5. Demonstrate good inter-personal and communication skills through class participation and contributing to critical discussion on trade issues

MODULES	DESCRIPTION	60 Hours
Module I	International Trade Theories	15
	Meaning and Importance of International trade; Differences between Internal and International Trade; Trade Theories: Mercantilist view; Absolute cost and comparative cost advantage theories; Haberler's Opportunity cost theory; Heckscher-Ohlin theory; Leontief's paradox	
Practicum	Assignment on Ricardo's Comparative cost advantage and Leontief's paradox	
Module II	Terms of Trade and Commercial Policy	18
	Terms of trade- Concept and Types, Factors determining Terms of Trade; Commercial Policy: Free trade v/s Protection; Tariffs: Types and effects; Quotas; Anti-dumping; Economic Integration: Meaning and stages.	

Practicum	Debate: Free trade v/s Protection Mini project: Trace the evolution of India towards Economic Integration	
Module III	Balance of Payment and Capital Flow	12
	Balance of Payment: Concept, Components; Disequilibrium in Balance of Payment: Causes and Measures to correct disequilibrium; Foreign Exchange rate: Meaning and types; determination of Foreign exchange rate: Demand for and Supply of Forex; Purchasing Power Parity (PPP) theory; Capital Flow: Meaning and concept of Foreign Investment; Forms of FDI; Advantages and disadvantages of FDI.	
Practicum	Prepare India's Balance of Payment statement using recent Economic Survey Assignment on Forms of FDI	
Module IV	International Finance and Trade Institutions	15
	Bretton Woods Institutions: IMF and IBRD -IDA and IFC: Organization, Objectives, Functions and their role in developing countries; Evolution of WTO: GATT – principles and objectives; WTO: Organization, Objectives, Functions, Agreements and current issues; WTO and developing countries;	
Practicum:	Group Discussion: Effectiveness of IMF and IBRD in developing countries Seminar: Agreements of WTO or current issues of WTO	
References		
1	Sodersten. B. (1993): International Economics, MacMillan, 3 Edition, London,	
2	Salvatore, D. (2016): International Economies, 12 Edition, Wiley Publication	
3	Vaish, M. C. and Sudama Singh (1980): International Economics, 3 Edition, Oxford and IBH Publication, New Delhi.	
4	Carbaugh, R. J. (1999): International Economics, International Thompson Publishing, New York	
5	Dana, M. S. (2000): International Economics: Study Guide and work Book, 5. Edition, Routledge Publishers, London.	
6	Kenen, P. B. (1994). The International Economy, Cambridge University Press, London.	
7	Krugman, P.R. and M. Obstfeld (1994): International Economics: Theory and Policy Addison-Wesley Publications.	
8	Jackson, J.D. (1998) The World Trading System, Cambridge University Press, Mass. Cherunilam, International Economics, TMH, New Delhi.	

9	D M Mithani, International Economics, Himalaya, Mumbai.
10	Jhingan M.L.(2016): International Economics, Vrinda Publications Pvt Ltd-Delhi
11	Dwivedi D.N. (2013): International Economics Theory & Policy, Vikas Publishing House Pvt Ltd.
12	K.C. Rana & K.N. Verma (2017): International Economics ; Vishal Publishing Co.
13	Krishnamurthy H.R (2013) : Antararashtraya Arthashastra ; (Kannada version), Sapna, Bengaluru

Program Name	B.Sc. in Economics	Semester	Sixth Semester
Course Title	Environmental Economics		
Course Code:	G 513 DC4.6	No. of Credits	4
Contact hours	60 Hours	Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40	Summative Assessment Marks	60

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

- CO1. Understand how economic methods can be applied to environmental issues facing society
- CO2. Examine the linkages between Environmental Degradation and Economic Development
- CO3. Develop an informed view regarding the potential of economics to help societies achieve their environmental goals
- CO4. Demonstrate good inter-personal and communication skills through writing an essay and contributing to critical discussion
- CO5. Analyze environmental problems and to assess environmental policies

MODULES	DESCRIPTION	60 Hours
Module I	Environment and Ecology	15
	Meaning, Nature and Scope of Economics of Environment; Linkages between Environment and the Economy; Environmental Kuznets curve; Environmental Stress; Population and Environment; Poverty and Environment; Meaning and elements of ecology; Biotic and Abiotic components; Food, Hydrological and Carbon Cycles; Material Balanced Principle (Entropy law); Meaning and strategies to achieve Sustainable Development; Rio Summit; Green Accounting Introduction to SDGs.	
Practicum:	Making charts relating to SDGs or Assignments on environment-economy linkages at the local level.	
Module II	Natural Resources Scarcity and Conservation	15
	Meaning and Characteristics of Renewable and Non-renewable resources; Non-Renewable Resources and the problem of depletion and problem of overuse ; Resource Scarcity and Economic Growth (Limits to Growth Model); Energy and Economic Development; Energy resources and their Pricing; Alternative energy sources; Conservation of Natural Resources- 3Rs – Reduce, Reuse and Recycling Measures.	
Practicum :	Identifying local resources; Project on resource conservation (esp.water) at the College level; Discussion on Limits to Growth	
Module III	Environmental Pollution	15
	Environmental regulatory system in India; Pollution Control Boards and their Functions; Provisions of the Environmental Protection Act, 1986; Environmental Movements in India (Chipko); Role of Citizens and NGOs in Environmental Protection.	

Practicum:	visiting the Pollution Control Board office and observing its functions	
Module IV	Environmental Pollution and Regulation	15
	Environmental regulatory system in India; Pollution Control Boards and their Functions; Provisions of the Environmental Protection Act, 1986; Environmental Movements in India (Chipko); Role of Citizens and NGOs in Environmental Protection.	
Practicum:	Assignments on types of pollution in local areas; Seminars on climate change and its consequences; visiting the Pollution Control Board office and observing its functions	

References	
1	Bhattacharya, R.N (Ed) (2001), <i>Environmental Economics: An Indian Perspective</i> , Oxford University Press.
2	Karpagam M. (1993), <i>Environmental Economics</i> , Sterling Publishers, New Delhi.
3	Shankar, U, (2001), <i>Environmental Economics</i> , Oxford University Press, New Delhi.
4	Singh, Katar and Anil Shisodia (2007): <i>Environmental Economics: Theory and Applications</i> , Sage Publications, New Delhi
5	Mahajan V.S (2003): <i>Environmental Protection – Challenges & Issues</i> , Deep & Deep Publishers New Delhi
6	Sengupta, R.P. (Ed.) (2001), <i>Ecology and economics: An Approach to Sustainable Development</i> , Oxford University Press, New Delhi.
7	Nick Hanley, Jason F, Shogren and Ben White (2005): <i>Environmental Economics in Theory and Practice</i> , Macmillan India Ltd.
