



**HINDUSTAN**

INSTITUTE OF TECHNOLOGY & SCIENCE  
(DEEMED TO BE UNIVERSITY)

**ANNEXURE - 28**

**SCHOOL OF LIBERAL ARTS AND APPLIED SCIENCES**

**CURRICULUM AND SYLLABUS**

**Under Choice Based Credit System**

**(Applicable for Students admitted from Academic Year 2020-21)**

**B.A. ECONOMICS**

BA ECONOMICS									
SEMESTER – I									
SL. NO.	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
1.	Core 1	ENB1101	Principles of Economics	3	1	0	3	0	4
2.	Core 2	ENB1102	Indian Economy	3	1	0	3	0	4
3.	Core 3	ENB1103	Statistics for Economics – 1	3	1	0	3	0	4
4.	Core 4	ENB1104	Mathematical Methods for Economics – 1	3	1	0	3	0	4
5.	General Elective 1		Other than Economics	3	0	0	3	0	3
6.	AELC		a. English b. Modern Indian Language	1 1	0 0	0 0	1 1	0 0	1 1
<b>Total</b>				<b>17</b>	<b>4</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>21</b>
SEMESTER – II									
SL. NO.	COURSE CATEGORY	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
7.	Core 5	ENB1116	Microeconomics – I	3	1	0	3	0	4
8.	Core 6	ENB1117	Macroeconomics – I	3	1	0	3	0	4
9.	Core 7	ENB1118	Statistics for Economics – II	3	1	0	3	0	4
10.	Core 8	ENB1119	Mathematical Methods for Economics – II	3	1	0	3	0	4
11.	General Elective 2		Other than Economics	3	0	0	3	0	3
12.	AECC		Environmental Studies	2	0	0	2	0	2
<b>Total</b>				<b>17</b>	<b>4</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>21</b>

<b>SEMESTER – III</b>									
<b>SL. NO.</b>	<b>COURSE CATEGORY</b>	<b>COURSE CODE</b>	<b>NAME OF THE COURSE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>S</b>	<b>TCH</b>
13.	Core 9	ENB1201	Microeconomics – II	3	1	0	3	0	4
14.	Core 10	ENB1202	Macroeconomics – II	3	1	0	3	0	4
15.	Core 11	ENB1203	History of Economic Thought	3	1	0	3	0	4
16.	Core 12	ENB1204	Development Economics – I	3	1	0	3	0	4
17.	General Elective 3		Other than Economics	3	0	0	3	0	3
18.	Skill Enhancement 1	ENA1201	Research Methodology	2	0	0	2	0	2
<b>Total</b>				<b>17</b>	<b>4</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>21</b>
<b>SEMESTER – IV</b>									
<b>SL. NO.</b>	<b>COURSE CATEGORY</b>	<b>COURSE CODE</b>	<b>NAME OF THE COURSE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>S</b>	<b>TCH</b>
19.	Core 13	ENB1216	Indian Political Economy	3	1	0	3	0	4
20.	Core 14	ENB1217	Monetary Economics	3	1	0	3	0	4
21.	Core 15	ENB1218	Econometrics – I	3	1	0	3	0	4
22.	Core 16	ENB1219	Agricultural Economics	3	1	0	3	0	4
23.	General Elective 4		Other than Economics	3	0	0	3	0	3
24.	Skill Enhancement 2	ENA1216	Applied Statistics using R, SPSS, Stata, and E-Views	2	0	0	2	0	2
<b>Total</b>				<b>17</b>	<b>4</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>21</b>

<b>SEMESTER – V</b>									
<b>SL. NO.</b>	<b>COURSE CATEGORY</b>	<b>COURSE CODE</b>	<b>NAME OF THE COURSE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>S</b>	<b>TCH</b>
25.	Core 17	ENB1301	Financial Markets	3	1	0	4	0	4
26.	Core 18	ENB1302	Econometrics – II	3	1	0	4	0	4
27.	Core 19	ENB1303	International Economics	3	1	0	4	0	4
28.	Core 20	ENB1304	Banking Systems	3	1	0	4	0	4
29.	DSE 1	ENC1351	a. Indian Economic History (1857-1947)	3	0	0	3	0	3
30.	DSE 2	ENC1352	b. Comparative Economic Development	3	0	0	3	0	3
		ENC1353	c. Environmental Economics						
		ENC1354	d. Public Economics						
<b>Total</b>				<b>18</b>	<b>4</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>22</b>
<b>SEMESTER – VI</b>									
<b>SL. NO.</b>	<b>COURSE CATEGORY</b>	<b>COURSE CODE</b>	<b>NAME OF THE COURSE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>S</b>	<b>TCH</b>
31.	Core 21	ENB1316	Development Economics - II	3	1	0	4	0	4
32.	Core 22	ENB1317	Behavioural Economics	3	1	0	4	0	4
33.	DSE 3	ENC1366	a. Indian Economy after Independence	3	0	0	3	0	3
34.	DSE 4	ENC1367	b. Applied Econometrics	3	0	0	3	0	3
		ENC1368	c. Industrial Economics						
		ENC1369	d. Health Economics						
35.	Core 23		Project	0	0	10	10	0	10
<b>Total</b>				<b>12</b>	<b>2</b>	<b>10</b>	<b>24</b>	<b>0</b>	<b>24</b>

## SYLLABUS FOR CORE SUBJECTS

### SEMESTER – I

<b>COURSE TITLE</b>	<b>PRINCIPLES OF ECONOMICS</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENB1101</b>	<b>Course Category</b>	<b>CORE 1</b>	<b>L:T:P:S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2&amp;3</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Understanding the scope and definitions of Economics				
2.	Understanding the functioning of markets				
3.	Understanding the law of demand and consumer surplus				
4.	Analysing the Law of Supply and Factors of Production.				
5.	Understanding the Cost and Revenue analysis.				
<b>Prerequisites: Basic concepts of Economics</b>					
<b>MODULE – 1: INTRODUCTION TO ECONOMICS, MARKETS AND WELFARE</b>					<b>9</b>
Definitions of Economics– Microeconomics and Macroeconomics –Principles of Economics – Thinking like an Economist – Interdependence and Gains from Trade – The Market Forces of Supply and Demand – Elasticity and its Application – Supply, Demand, and Government Policies – Consumer, Producers, and the Efficiency of Markets – Applications					
<b>MODULE – 2: FUNCTIONING OF MARKETS</b>					<b>9</b>
Types of Markets – Market Forces of Supply and Demand – Elasticity and its Application – Supply, Demand, and Government Policies – Consumer, Producers, and the Efficiency of Markets – Applications					
<b>MODULE – 3: DEMAND ANALYSIS</b>					<b>9</b>
Demand Analysis – Law of Demand – Elasticity of Demand – Types and Degrees – Measurement – Factors Influencing Elasticity of Demand – Uses – Consumer Surplus.					

<b>MODULE – 4: SUPPLY ANALYSIS</b>		<b>9</b>
Law of Supply – Elasticity of Supply – Factors of Production – Land, Labour, Capital, and Organization – Laws of Returns – Law of Variable Proportion – Returns to Scale.		
<b>MODULE – 5: COST ANALYSIS</b>		<b>9L</b>
Cost and Revenue – Cost Concepts – Relationship between AC and MC – Short Term and Long Term Cost – Opportunity Costs – Revenue Curves – Relationship between AR And MR and its Importance.		
<b>TEXT BOOKS</b>		
1.	N. Gregory Mankiw, <b>Principles of Economics</b> , 7 <sup>th</sup> Edition, Cengage India Learning, 2015.	
2.	Paul A. Samuelson and William D. Nordhaus, adapted by Sudip Chaudhuri, and Anindya Sen, <b>Economics</b> , 20 <sup>th</sup> Edition, McGraw Hill, 2019.	
<b>REFERENCE BOOKS</b>		
1.	NigarHashimzade, Gareth Myles, and John Black, <b>A Dictionary of Economics</b> (Oxford Quick Reference), Fifth Edition, Oxford University Press, 2016.	
2.	Tom Butler-Bowdon, <b>50 Economics Classics: Your Shortcut to the Most Important Ideas on Capitalism, Finance, and the Global Economy</b> , Nicholas Brealey Publishing, 2017.	

<b>COURSE TITLE</b>	<b>INDIAN ECONOMY</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENB1102</b>	<b>Course Category</b>	<b>CORE 2</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2&amp;3</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Be able to have an overview of the Indian Economy, and the role of Agriculture, Rural Economy, and Natural Resources				
2.	To understand issues relating to Indian industry and infrastructure				
3.	To understand issues relating to services sector including financial sector				
4.	To understand issues relating to External Sector and government policy				
5.	To understand issues relating to population, labour, employment, and human development				
<b>Prerequisites :</b> Basic concepts of Economics					
<b>MODULE – 1: OVERVIEW, AGRICULTURE, RURAL ECONOMY, NATURAL RESOURCES</b>					
Overview of Indian Economy – Role of Agriculture in Indian Economy – Need for Food Security in India – Irrigation and Agricultural Input Pricing Policies in India – Rural Land Reforms policies in India – Agricultural Output Pricing Policies in India – History of Economic Planning in India – Objectives of Five year Plans – Policy of Mixed Economy and its relevance – An analysis of the last two five year plans – Sectoral Growth under Economic Planning – Limitations of Indian Planning Techniques – Role of NITI Aayog					
<b>MODULE – 2: INDUSTRY AND INFRASTRUCTURE</b>					
Role of Industries in Indian Economic Development - Small vs Large Scale Industries - Reasons for Industrial Sickness in India - Industrial growth in the last two five year plans – Industrial policy of Government of India since 1948 – Public sector – Disinvestment					
<b>MODULE – 3: SERVICES AND FINANCIAL SECTOR</b>					
State of services sector in India - Role of different modes of Transport in Indian Economic Development - Need for Government intervention in the provision of Health and Education					

in India - Performance of Indian Capital Markets– Banking Sector Problems and Reforms – Role of RBI, SEBI, IRDA, PFRDA, and NFRA	
<b>MODULE – 4: EXTERNAL SECTOR, GOVERNMENT POLICY</b>	
India’s Trade Policy – Balance of Payments and Balance of Trade – Composition of India’s foreign Trade –Foreign Direct Investment – Multilateral and Bilateral Trade Arrangements (RCEP, etc.) – Government Policy – Impact of WTO in India	
<b>MODULE – 5: POPULATION, LABOUR, EMPLOYMENT, HUMAN DEVELOPMENT</b>	
An analysis on recent population census - Theory of Demographic transition - Good and Bad effects of rising population in India - Family planning policy in India under five year plans - National Population Policy in recent years. – Unemployment – Labour Reforms – Human Development and HDI	
<b>TEXT BOOKS</b>	
1.	Kaushik Basu and Annemie Maertens (ed.), <b>The Concise Oxford Companion to Economics in India</b> , Oxford University Press, 2011.
2.	Uma Kapila (ed.), <b>Indian Economy Since Independence: A Comprehensive and Critical Analysis of India's Economy, 1947-2018</b> , 30 <sup>th</sup> Edition, Academic Foundation, 2019.
<b>REFERENCE BOOKS</b>	
1.	Kaushik Basu and Annemie Maertens (ed.), <b>The New Oxford Companion to Economics in India (Two Volumes)</b> , Oxford University Press, 2011.
2.	Ashima Goyal (ed.), <b>A Concise Handbook of the Indian Economy in the 21<sup>st</sup> Century</b> , Oxford University Press, 2015.
3.	Arvind Panagariya, <b>India: The Emerging Giant</b> , Oxford University Press, 2010.
<b>ONLINE RESOURCES</b>	
1.	Reserve Bank of India, <b>Handbook of Statistics on Indian Economy</b> , Latest Issue ( <a href="http://www.rbi.org.in">www.rbi.org.in</a> )
2.	Government of India, <b>Economic Survey</b> , Most recent two to three years. Available online at <a href="https://www.indiabudget.gov.in/economicsurvey/">https://www.indiabudget.gov.in/economicsurvey/</a>



<b>COURSE TITLE</b>	<b>STATISTICS FOR ECONOMICS – I</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENB1103</b>	<b>Course Category</b>	<b>CORE 3</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,3,4,5,6</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Understanding the distinction between population and samples				
2.	Understanding basic probability				
3.	Analysing the various correlation and distributions				
4.	Analysing the techniques of survey				
5.	Understanding population parameters				
<b>Prerequisites</b> :Basic concept of Economics.					
<b>MODULE – 1: MEASURES OF CENTRAL TENDENCY</b>					<b>12</b>
Introduction and Overview – Distinction between population and sample, and between population parameters and sample statistics –Frequency Distribution – Graphical and Tabular Representation of Data – Measures of Central Tendency (Arithmetic Mean, Geometric Mean, Harmonic Mean, Median, Mode, and their properties, Percentiles, Quartiles, Deciles)					
<b>MODULE – 2: MEASURES OF DISPERSION</b>					<b>12</b>
Measures of Dispersion (Range, Quartile Deviation, Mean Deviation, Standard Deviation, Coefficient of Variation, Coefficient of Mean Deviation, Coefficient of Quartile Deviation, Lorenz Curve, and Gini Coefficient) – Population moments and their sample counterparts – Skewness and Kurtosis – Correlation and Regression					
<b>MODULE – 3: PROBABILITY THEORY AND PROBABILITY DISTRIBUTIONS</b>					<b>6</b>
Elementary Probability Theory – Samplespaces and events –Probability axioms and properties - Counting techniques –Conditional probability – Theorem of Compound Probability – Bayes’ Theorem and Applications – Random Variable (Discrete and Continuous)					

<b>MODULE – 4: PROBABILITY DISTRIBUTIONS</b>		<b>6</b>
Probability Distributions – Expected values of Random Variables – Properties of commonly used discrete and continuous distributions – Binomial, Poisson, and Normal distributions (derivation of pmf/pdf, mean, variance, moments, moment generating functions, problems) – Joint distribution functions of random variables		
<b>MODULE – 5: SAMPLING</b>		<b>9</b>
Principal steps in sample survey – Methods of sampling – SRSWR – SRSWOR – Stratified Sampling – Multi-stage Sampling – Sampling distribution of sample mean and sample proportion – Mean and standard error – Standard normal, chi-square, Student’s t and F distributions – Definitions and important properties (mean and variance)		
<b>TEXT BOOKS</b>		
1.	A.M. Gun, M.K. Gupta, and B. Dasgupta, <b>Fundamentals of Statistics, Volume I</b> , World Press, 2016	
2.	A.M. Gun, M.K. Gupta, and B. Dasgupta, <b>Fundamentals of Statistics, Volume II</b> , World Press, 2016	
<b>REFERENCE BOOKS</b>		
1.	David R. Anderson, Dennis J. Sweeney, Thomas A. Williams, Jeffrey D. Camm, and James J. Cochran, <b>Statistics for Business and Economics</b> , 13 <sup>th</sup> Edition, Cengage, 2019.	
2.	Lind, Marchal, and Wathen, <b>Basic Statistics for Business and Economics</b> , Seventh Edition, McGraw Hill Education, 2017.	
3.	Derek Rowntree, <b>Statistics Without Tears: An Introduction for Non-Mathematicians</b> , Penguin, 2018.	
<b>ONLINE RESOURCES</b>		
1.	<a href="https://www.coursera.org/specializations/business-statistics-analysis">https://www.coursera.org/specializations/business-statistics-analysis</a>	
2.	<a href="https://www.coursera.org/specializations/social-science">https://www.coursera.org/specializations/social-science</a>	
3.	<a href="https://nptel.ac.in/courses/110/107/110107114/">https://nptel.ac.in/courses/110/107/110107114/</a>	

<b>COURSE TITLE</b>	<b>MATHEMATICAL METHODS FOR ECONOMICS – I</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENB1104</b>	<b>Course Category</b>	<b>CORE4</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,3,4,5</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Understand the role of mathematics in Economics and economic modelling				
2.	Understand partial and general equilibrium in Economics.				
3.	Apply linear algebra and matrix algebra in real life situations in Economics				
4.	Analyse general function models				
5.	Understand optimisation models and their role in Economics				
<b>Prerequisites:</b> Basic concept of Economics.					
<b>MODULE – 1: MATHEMATICAL ECONOMICS AND ECONOMIC MODELS</b>					<b>9</b>
Nature of Mathematics Economics – Mathematical vs. Nonmathematical Economics – Mathematical Economics vs. Econometrics – Economic Models: Ingredients of a Mathematical Model – Real Number System – Concept of Sets – Relations and Functions – Types of Function – Functions of Two or More Independent Variables – Levels of Generality					
<b>MODULE – 2: EQUILIBRIUM ANALYSIS IN ECONOMICS</b>					<b>9</b>
The Meaning of Equilibrium – Partial Market Equilibrium: Linear and Nonlinear Models – General Market Equilibrium – Equilibrium in National Income Analysis					
<b>MODULE – 3: LINEAR MODELS AND MATRIX ALGEBRA</b>					<b>9</b>
Matrices and Vectors – Matrix Operations – Vector Operations – Commutative Associative and Distributive Laws – Identity Matrices and Null Matrices – Transposes and Inverses – Finite Markov Chains – Conditions for Nonsingularity of a Matrix – Properties of Determinants – Inverse Matrix – Cramer’s Rule – Application to Market and National Income Models – Leontief Input-Output Models					
<b>MODULE – 4: COMPARATIVE STATIC ANALYSIS OF GENERAL FUNCTION</b>					

<b>MODELS</b>		<b>9</b>
Differentials – Total Differentials – Rules of Differentials – Total Derivatives – Derivatives of Implicit Functions – Comparative Statics of General Function Models – Limitations of Comparative Statics		
<b>MODULE – 5: INTRODUCTION TO OPTIMISATION</b>		<b>9</b>
Optimum Values and Extreme Values – Relative Maximum and Minimum: First Derivative Test – Second and Higher Derivatives – Second-Derivative Test – Maclaurin and Taylor Series – Nth-Derivative Test for Relative Extremum of a Function of One Variable		
<b>TEXT BOOKS</b>		
1.	Alpha C. Chiang and Kevin Wainwright, <b>Fundamental Methods of Mathematical Economics</b> , Indian Edition, Fourth Edition, McGraw Hill Education, 2017.	
2.	Knut Sydsaeter and Peter J. Hammond, <b>Mathematics for Economic Analysis</b> , Pearson Education, 2002.	
<b>REFERENCE BOOKS</b>		
1.	Michael Hoy, John Livernois, Chris McKenna, Ray Rees, and Thanasis Stengos, <b>Mathematics for Economics</b> , Third Edition, Prentice Hall India, 2012.	
<b>ONLINE RESOURCES</b>		
1.	<a href="https://www.coursera.org/learn/mathematics-for-economists">https://www.coursera.org/learn/mathematics-for-economists</a>	

## SEMESTER II

<b>COURSE TITLE</b>	<b>MICROECONOMICS – I</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENB1116</b>	<b>Course Category</b>	<b>CORE5</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2&amp;3</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Understand the basics of microeconomics and its basic terms				
2.	Analyse the role of producers and consumers in a competitive market				
3.	Understand how market players exercise choice under conditions of risk				
4.	Analyse what contributes to costs of production in an economy				
5.	Understand how profits are maximised in competitive markets				
<b>Prerequisites :</b> Basic concepts of Economics					
<b>MODULE – 1: INTRODUCTION</b>					<b>6</b>
Use and Limitations of Microeconomic Theory – Positive vs. Normative Analysis – Why Study Microeconomics – Competitive and Non-competitive Markets – Market Price – Real vs. Nominal Prices – Market Mechanism – Supply and Demand – Elasticities of Supply and Demand – Short-Run vs. Long-Run Elasticities – Effects of Changing Market Conditions – Effects of Government Intervention – Price Controls					
<b>MODULE – 2: PRODUCERS CONSUMERS AND COMPETITIVE MARKETS</b>					<b>9</b>
Consumer Behaviour – Consumer Preferences – Indifference Curves – Ordinal vs. Cardinal Rankings – Marginal Rate of Substitution – Perfect Substitutes and Perfect Complements – Budget Constraints – Budget Line and Effects of Changes in Income and Prices – Consumer Choice – Revealed Preference – Utility and Marginal Utility – Individual and Market Demand – Price Changes – Demand Curve – Income Changes – Engel Curves – Substitutes and Complements – Income and Substitution Effects – Giffen Goods – Point and Arc Elasticities of Demand – Consumer Surplus – Negative Externalities – Bandwagon and Snob Effects – Empirical Estimation of Demand					
<b>MODULE – 3: CHOICE UNDER RISK</b>					<b>6</b>
Describing Risk – Probability – Expected Value – Variability – Decision Making – Preferences Toward Risk – Reducing Risk – Diversification – Insurance – Value of Information – Demand for Risky Assets – Trade-off between Risk and Return – Investor’s Choice Problem					

<b>MODULE – 4: PRODUCTION AND ITS COST</b>	<b>12</b>
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Technology of Production – Isoquants – Short Run vs. Long Run – Production with One Variable Input: Average and Marginal Products – Law of Diminishing Returns – Labour Productivity – Production with Two Variables: Diminishing Returns – Substitution among Inputs – Production Functions – Returns to Scale – Measuring Cost of Production – Economic Costs vs. Accounting Cost – Sunk Costs – Costs in Short Run – Determinants – Shapes of the Cost Curve – Costs in the Long Run: Cost-Minimising Input Choice – Isocost Line – Choosing Inputs – Cost Minimisation with Varying Output Levels – Long-Run vs. Short-Run Cost Curves – Inflexibility of Short-Run Production – Long-Run Average Cost – Economies and Diseconomies of Scale – Relationship between Short-Run and Long-Run Cost – Production with Two Outputs: Economies of Scope – Dynamic Changes in Costs: Learning Curve – Estimating and Predicting Cost – Cost Minimisation – Marginal Rate of Technical Substitution – Duality in Production and Cost Theory – Cobb-Douglas Cost and Production Function	
<b>MODULE – 5: PROFIT MAXIMISATION AND COMPETITIVE MARKETS</b>	
<b>12</b>	
Profit Maximisation – Do Firms Maximise Profits – Marginal Revenue, Marginal Cost, and Profit Maximisation for Competitive Firm – Choosing Output in Short Run – Competitive Firm’s Short Run Supply Curve – Short-Run Market Supply Curve – Elasticity of Market Supply – Producer Surplus in Short Run – Choosing Output in Long Run – Evaluating Gains and Losses from Government Policies – Consumer and Producer Surplus – Efficiency of Competitive Market – Minimum Prices – Price Supports – Production Quotas – Import Quotas and Tariffs – Impact of Tax or Subsidy	
<b>TEXT BOOKS</b>	
1.	Robert Pindyck and Daniel Rubinfeld, <b>Microeconomics</b> , Eighth Edition, Pearson, 2017.
2.	N. Gregory Mankiw, <b>Principles of Microeconomics</b> , Seventh Edition, Cengage, 2015.
<b>REFERENCE BOOKS</b>	
1.	Paul A. Samuelson and William D. Nordhaus, adapted by Sudip Chaudhuri, and Anindya Sen, <b>Economics</b> , 20 <sup>th</sup> Edition, McGraw Hill, 2019.
2.	Hal R. Valerian, <b>Intermediate Microeconomics: A Modern Approach</b> , Springer, 2010.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/learn/microeconomics">https://www.coursera.org/learn/microeconomics</a>
2.	<a href="https://nptel.ac.in/courses/110/104/110104093/">https://nptel.ac.in/courses/110/104/110104093/</a>
3.	<a href="https://nptel.ac.in/courses/109/104/109104125/">https://nptel.ac.in/courses/109/104/109104125/</a>

<b>COURSE</b>	<b>MACROECONOMICS – I</b>	<b>CREDITS</b>	<b>3</b>
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TITLE					
Course Code	ENB1117	Course Category	CORE 6	L-T-P-S	3:1:0:0
CIA	40%			ESE	60%
LEARNING LEVEL	BTL – 1,2&3			ASSESSMENT MODEL	
	COURSE OUTCOMES				PO
1.	Understand Macroeconomics and the IS-LM Model				
2.	Understand the labour market and the AS-AD Model				
3.	Analyse unemployment, inflation, and the financial crisis				
4.	Be able to appreciate issues relating to growth, savings, capital accumulation, and output				
5.	Study the relationship between technological progress and growth				
<b>Prerequisites</b> :Basic concept of Micro economics.					
<b>MODULE – 1: GOODS AND FINANCIAL MARKETS: THE IS-LM MODEL</b>					<b>12</b>
Aggregate output – Unemployment Rate – Inflation Rate – Output, Unemployment, and the Inflation Rate: Okun’s Law and Philips Curve – Short Run, Medium Run, and Long Run – Composition of GDP – Demand for Goods – Determination of Equilibrium Output – Investment Equals Savings – Goods-Market Equilibrium – Demand for Money – Determining the Interest Rate – Alternative ways of looking at the Equilibrium – Goods Market and the IS Relation – Financial Markets and the LM Relation – IS-LM Model – Using a Policy Mix – Does the IS-LM Model Fit the Facts?					
<b>MODULE – 2: THE LABOUR MARKET AND AS-AD MODEL</b>					<b>6</b>
Labour Market – Movements in Unemployment – Wage Determination – Price Determination – Natural Rate of Unemployment – AS-AD Model – Aggregate Supply – Aggregate Demand – Equilibrium in Short and Medium Run – Effects of a Monetary Expansion – Decrease in Budget Deficit – Increase in Price of Oil – Short Run vs Medium Run – Shocks and Propagation Mechanisms					
<b>MODULE – 3: UNEMPLOYMENT, INFLATION, AND FINANCIAL CRISIS</b>					<b>9</b>
Phillips Curve, Natural Rate of Unemployment – Neutrality of Money – Variations in Natural Rate across Countries and over Time – Disinflation, Credibility, and Unemployment – High					

Inflation, Deflation, and the Phillips Curve Relation – Financial Crisis, 2007-09 – Housing Prices and Subprime Mortgages – Role of Banks – Policy Responses – Limits of Monetary Policy – Liquidity Trap – Limits of Fiscal Policy – High Debt – Recovery	
<b>MODULE – 4: GROWTH, SAVING, CAPITAL ACCUMULATION, AND OUTPUT</b> 9	
Measuring Standard of Living – Growth in Rich countries, and across time and space – Growth: A Primer – Saving, Capital accumulation, and Output – Interactions between Output and Capital – Implications of Alternative Savings Rates – Getting a Sense of Magnitudes – Physical vs. Human Capital	
<b>MODULE – 5: TECHNOLOGICAL PROGRESS AND GROWTH</b> 9	
Technological Progress and Rate of Growth – Determinants of Technological Progress – Facts of Growth Revisited – Productivity, Output, and Unemployment in the Short Run – Productivity and the Natural Rate of Unemployment – Technological Progress, Churning, and Distribution Effects – Institutions, Technological Progress, and Growth	
<b>TEXT BOOKS</b>	
1.	Olivier Blanchard and David R. Johnson, <b>Macroeconomics</b> , Sixth Edition, Pearson, 2017.
<b>REFERENCE BOOKS</b>	
1.	N. Gregory Mankiw and Mark P. Taylor, <b>Macroeconomics</b> , Fourth Edition, Cengage, 2017.
2.	Rudiger Dornbusch, Stanley Fischer, and Richard Startz, <b>Macroeconomics</b> , 12 <sup>th</sup> Edition, McGraw Hill, 2018.
3.	Richard T. Froyen, <b>Macroeconomics: Theories and Policies</b> , Tenth Edition, Pearson, 2013.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/learn/principles-of-macroeconomics">https://www.coursera.org/learn/principles-of-macroeconomics</a>
2.	<a href="https://www.coursera.org/learn/macroeconomic-factors">https://www.coursera.org/learn/macroeconomic-factors</a>
3.	<a href="https://nptel.ac.in/courses/109/104/109104073/">https://nptel.ac.in/courses/109/104/109104073/</a>

<b>COURSE TITLE</b>	<b>STATISTICS FOR ECONOMICS – II</b>		<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENB1118</b>	<b>Course Category</b>	<b>CORE 7</b>	<b>L-T-P-S</b>
				<b>3:1:0:0</b>



CIA	40%	ESE	60%
LEARNING LEVEL	BTL – 1,2,3,4,5	ASSESSMENT MODEL	
COURSE OUTCOMES			PO
1.	Understand the basics of statistical inference		
2.	Understand how index numbers are constructed and their use in India		
3.	Analyse and carry out forecasting		
4.	Understand the basics of non-parametric tests		
5.	Design sample frameworks and carry out surveys		
<b>Prerequisites :</b> Basic concept of Economics.			
<b>MODULE – 1: STATISTICAL INFERENCE</b>			<b>9</b>
Point Estimation – Properties of a good estimator – Basic principles of Ordinary Least Square, Maximum Likelihood Method, Method of Moments – Interval estimation – Confidence level and Confidence interval – Testing of hypothesis – Null and Alternative hypotheses – Type I and Type II errors – Power of a test – p-Value			
<b>MODULE – 2: INDEX NUMBERS</b>			<b>9</b>
Statistics in Practice –Economic Statistics in India – Role of Central Statistics Office – Price Indices – Consumer Price Index – Price Indices in India – Deflating a Series – Selection of Items – Selection of a Base Period – Quality Changes – Quantity Indexes			
<b>MODULE – 3: FORECASTING</b>			<b>9</b>
Components of a Time Series: Trend Component – Cyclical Component – Seasonal Component – Irregular Component – Smoothing Methods: Moving Averages – Weighted Moving Averages – Exponential Smoothing Averages – Trend Projection – Trend and Seasonal Components: Multiplicative Model – Calculating Seasonal Indexes – Deseasonalising the Time Series – Using Deseasonalised Time Series to Identify Trend – Seasonal Adjustments – Models Based on Monthly Data – Cyclical Component – Regression – Qualitative Approaches: Delphi Method – Expert Judgement – Scenario Writing – Intuitive Approaches			
<b>MODULE – 4: NON-PARAMETRIC METHODS</b>			<b>6</b>
Sign Test: Small-Sample Case – Large-Sample Case – Hypothesis Test About a Median – Mann-Whitney-Wilcoxon Test – Kruskal-Wallis Test – Rank Correlation			
<b>MODULE – 5: SAMPLE SURVEY</b>			<b>12</b>
Terminology used in Sample Surveys – Types of Surveys and Sampling Methods – Survey Errors: Non-sampling Error – Sampling Error – Simple Random Sampling: Population Mean – Population Total – Population Proportion – Determine Sample Size – Stratified Random Sampling: Population Mean – Population Total – Population Proportion – Determining Sample Size – Cluster Sampling: Population Mean – Population Total – Population Proportion – Determining Sample Size – Systematic Sampling.			

<b>TEXT BOOKS</b>	
1.	David R. Anderson, Dennis J. Sweeney, Thomas A. Williams, Jeffrey D. Camm, and James J. Cochran, <b>Statistics for Business and Economics</b> , 13 <sup>th</sup> Edition, Cengage, 2019.

2.	A.M. Gun, M.K. Gupta, and B. Dasgupta, <b>Fundamentals of Statistics, Volume I</b> , World Press, 2016
3.	A.M. Gun, M.K. Gupta, and B. Dasgupta, <b>Fundamentals of Statistics, Volume II</b> , World Press, 2016
<b>REFERENCE BOOKS</b>	
1.	Lind, Marchal, and Wathen, <b>Basic Statistics for Business and Economics</b> , Seventh Edition, McGraw Hill Education, 2017.
2.	Derek Rowntree, <b>Statistics Without Tears: An Introduction for Non-Mathematicians</b> , Penguin, 2018.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/specializations/business-statistics-analysis">https://www.coursera.org/specializations/business-statistics-analysis</a>
2.	<a href="https://www.coursera.org/specializations/social-science">https://www.coursera.org/specializations/social-science</a>
3.	<a href="https://nptel.ac.in/courses/110/107/110107114/">https://nptel.ac.in/courses/110/107/110107114/</a>

<b>COURSE TITLE</b>	<b>MATHEMATICAL METHODS FOR ECONOMICS – II</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENB1119</b>	<b>Course Category</b>	<b>CORE 8</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,3,4,5</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Learn and apply exponential and logarithmic functions.				
2.	Understand optimisation where there is more than one choice variable.				
3.	Understand optimisation involving equality constraints.				
4.	Understand and apply dynamic analysis in economic contexts.				
5.	Understand and apply higher order differential and difference equations in economic contexts.				
<b>Prerequisites</b> :Basic concept of Economics. Mathematics for Economics – Part I.					
<b>MODULE – 1: OPTIMISATION: EXPONENTIAL AND LOGARITHMIC FUNCTIONS 9</b>					
The Nature of Exponential Functions – Natural Exponential Functions and the Problem of Growth – Logarithms – Logarithmic Functions – Derivatives of Exponential and Logarithmic Functions – Optimal Timing – Further Applications					

<b>MODULE – 2: OPTIMISATION: MORE THAN ONE CHOICE VARIABLE 9</b>				
Differential Version of Optimisation Conditions – Extreme Values of a Function of Two Variables – Quadratic Forms – Objective Functions with More than two Variables – Second Order Conditions in Relation to Concavity and Convexity – Economic Applications –				

Comparative Static Aspects of Optimisation					
<b>MODULE – 3: OPTIMISATION: EQUALITY CONSTRAINTS, ETC.</b>					<b>9</b>
Effects of a Constraint – Finding Stationary Values – Lagrange Multiplier, etc. – Second Order Conditions – Quasi-concavity and Quasi-convexity – Utility Maximisation and Consumer Demand – Homogenous Functions –Cobb-Douglas Production Function – Least-Cost Combination of Inputs – Non-Linear Programming and Kuhn-Tucker Conditions – Constraint Qualification – Economic Applications – Sufficiency Theorems – Maximum Value Functions and the Envelope Theorem – Duality and the Envelope Theore					
<b>MODULE – 4: DYNAMIC ANALYSIS</b>					<b>9</b>
Dynamics and Integration – Indefinite Integrals – Definite Integrals – Improper Integrals – Economic Applications – Domar Growth Model – First-Order Linear Differential Equations with Constant Coefficient and Constant Term – Dynamics of Market Price – Variable Coefficient and Variable Term – Exact Differential Equations – Non-linear Differential Equations of the First Order and First Degree – Qualitative Graphic Approach – Solow Growth Model					
<b>MODULE – 5: HIGHER ORDER DIFFERENTIAL AND DIFFERENCE EQUATIONS</b>					<b>9</b>
Second Order Linear Differential Equations with Constant Coefficients and Constant Term – Complex Numbers and Circular Functions – Analysis of the Complex-Root Case – Market Model with Price Expectations – Interaction of Inflation and Unemployment – Differential Equations with a Variable Term – Higher-Order Linear Differential Equations –First Order Difference Equations – Cobweb Model – Higher Order Difference Equations – Economic Applications					
<b>TEXT BOOKS</b>					
1.	Alpha C. Chiang and Kevin Wainwright, <b>Fundamental Methods of Mathematical Economics</b> , Indian Edition, Fourth Edition, McGraw Hill Education, 2017.				
2.	Knut Sydsaeter and Peter J. Hammond, <b>Mathematics for Economic Analysis</b> , Pearson Education, 2002.				
<b>REFERENCE BOOKS</b>					
1.	Michael Hoy, John Livernois, Chris McKenna, Ray Rees, and Thanasis Stengos, <b>Mathematics for Economics</b> , Third Edition, Prentice Hall India, 2012.				
<b>ONLINE RESOURCES</b>					
1.	<a href="https://www.coursera.org/learn/mathematics-for-economists">https://www.coursera.org/learn/mathematics-for-economists</a>				

### SEMESTER III

<b>COURSE TITLE</b>	<b>MICROECONOMICS – II</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENB1201</b>	<b>Course Category</b>	<b>CORE 9</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>

CIA	40%	ESE	60%
LEARNING LEVEL	BTL – 1,2&3	ASSESSMENT MODEL	
COURSE OUTCOMES			PO
1.	Understand how market players behave in conditions of monopoly and monopsony		
2.	Analyse how market players act in conditions of monopolistic competition and oligopoly		
3.	Understand the basics of game theory and competitive strategies		
4.	Analyse the markets for labour and capital inputs		
5.	Understand the role of information in markets, why markets fail, and how government policy intervention overcomes such failures		
<b>Prerequisites :</b> Principles of Economics and Microeconomics - I			
<b>MODULE – 1: MONOPOLY AND MONOPSONY</b>			<b>9</b>
Monopoly and Monopsony – Average Revenue and Marginal Revenue – Monopolist’s Output Decision – Rule of Thumb for Pricing – Shifts in Demand – Effect of Pricing – Monopoly Power – Sources of Monopoly Power – Social Costs of Monopoly Power – Monopsony – Monopsony Power – Limiting Market Power: Anti-trust Laws – Pricing with Market Power - Capturing Consumer Surplus – Price Discrimination – Intertemporal Price Discrimination and Peak-Load Pricing – Two-Part Tariff – Bundling – Advertising			
<b>MODULE – 2: MONOPOLISTIC COMPETITION AND OLIGOPOLY</b>			<b>9</b>
Makings of Monopolistic Competition – Equilibrium in the Short Run and Long Run – Monopolistic Competition and Economic Efficiency – Oligopoly – Equilibrium in an Oligopolistic Market – Cournot Model – First Mover Advantage: Stackelberg Model – Price Competition – Bertrand Model – Differentiated Products – Competition vs. Collusion: Prisoners’ Dilemma – Price Rigidity – Price Signalling and Price Leadership – Dominant Firm Model – Cartels – Analysis of Cartel Pricing			
<b>MODULE – 3: GAME THEORY AND COMPETITIVE STRATEGY</b>			<b>9</b>
Gaming and Strategic Decisions – Non-cooperative vs. Cooperative Games – Dominant Games – Nash Equilibrium – Maximin Strategies – Mixed Strategies – Repeated Games – Sequential Games – Extensive Form of a Game – Advantage of Moving First – Threats, Commitments, and Credibility – Empty Threats – Entry Deterrence – Strategic Trade Policy and International Competition – Bargaining Strategy			
<b>MODULE – 4: MARKETS FOR FACTOR INPUTS: LABOUR AND CAPITAL</b>			<b>9</b>
Competitive Factor Markets – Demand for Factor Input when One or Several Inputs are Variable – Market Demand Curve – Supply of Inputs to a Firm – Market Supply of Inputs – Equilibrium in a Competitive Factor Market – Economic Rent – Factor Markets with Monopsony Power – Marginal and Average Expenditure – Input Purchasing Decision of Firm – Factor Markets with Monopoly Power – Monopoly Power over Wage Rate – Two Sector Model of Factor Deployment – Bilateral Monopoly in Labour Market – Market for Capital – Stock vs. Flow – Present Discounted Value – Valuing Payment Streams – Value of a Bond – Net Present Value Criterion for Capital Investment Decisions – Adjustments for Risk – How are Interest Rates Determined			
<b>MODULE – 5: INFORMATION, MARKET FAILURE, ROLE OF GOVERNMENT</b>			<b>9</b>

General Equilibrium Analysis – Efficiency in Exchange – Advantages of Trade – Edgeworth Box Diagram – Efficient Allocations – Contract Curve – Consumer Equilibrium in Competitive market – Equity and Efficiency – Efficiency in Production – Production Possibilities Frontier – Gains from Free Trade – Efficiency of Competitive Markets – Why Markets Fail – Asymmetric Information – Market for “Lemons” – Market Signalling – Moral Hazard – Principal-Agent Problem – Managerial Incentives in an Integrated Firm – Public Goods – Externalities – Correcting Market Failure – Externalities and Property Rights – Common Property Rights – Private Preferences for Public Goods	
<b>TEXT BOOKS</b>	
1.	Robert Pindyck and Daniel Rubinfeld, <b>Microeconomics</b> , Eighth Edition, Pearson, 2017.
2.	N. Gregory Mankiw, <b>Principles of Microeconomics</b> , Seventh Edition, Cengage, 2015.
<b>REFERENCE BOOKS</b>	
1.	Paul A. Samuelson and William D. Nordhaus, adapted by Sudip Chaudhuri, and Anindya Sen, <b>Economics</b> , 20 <sup>th</sup> Edition, McGraw Hill, 2019.
2.	Hal R. Valerian, <b>Intermediate Microeconomics: A Modern Approach</b> , Springer, 2010.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/learn/microeconomics">https://www.coursera.org/learn/microeconomics</a>
2.	<a href="https://nptel.ac.in/courses/110/104/110104093/">https://nptel.ac.in/courses/110/104/110104093/</a>
3.	<a href="https://nptel.ac.in/courses/109/104/109104125/">https://nptel.ac.in/courses/109/104/109104125/</a>

<b>COURSE TITLE</b>	<b>MACROECONOMICS – II</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENB1202</b>	<b>Course Category</b>	<b>CORE 10</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2&amp;3</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Analyse the role of expectations in financial markets				
2.	Analyse the interactions between expectations, real markets, and policy				
3.	Understand the behaviour of financial and goods markets in an open economy				
4.	Understand and analyse the interplay between output, interest rates, and exchange rates				
5.	Analyse the role of fiscal and monetary policy				
<b>Prerequisites</b> :Principles of Economics and Macroeconomics - II.					
<b>MODULE – 1: FINANCIAL MARKETS AND EXPECTATIONS</b>					<b>6</b>
Nominal vs. Real Interest Rates – Nominal and Real Interest rates, and the IS-LM Model – Money Growth, Inflation, Nominal and Real Interest Rates – Expected vs. Discounted Values – Financial Markets and Expectations – Bond Prices and Bond Yields – Stock Market and					

Movement in Stock Prices – Risk, Bubbles, Fads, Fundamentals, and Asset Prices.	
<b>MODULE – 2: EXPECTATIONS, REAL MARKETS, AND POLICY</b>	<b>6</b>
Expectations – Consumption – Current Income, Expectations, and Consumption – Investment – Volatility of Consumption and Investment – Expectations, Output, and Policy – Expectations and Decisions – Monetary Policy, Expectations, and Output – Short Nominal Rate to Current and Expected Real Rates – Deficit Reduction, Expectations, and Output – Role of Expectations	
<b>MODULE – 3: OPEN ECONOMY, AND THE GOODS AND FINANCIAL MARKETS</b>	<b>9</b>
Openness in Goods Markets – Exports and Imports – Choice between Domestic Goods and Foreign Goods – Nominal Exchange Rates – Real Exchange Rates – Bilateral to Multilateral Exchange Rates – Openness in Financial Markets – Balance of Payments – Choice between Domestic and Foreign Assets – Interest Rates and Exchange Rates – Goods Market in an Open Economy – IS Relation in the Open Economy – Demand for Domestic Goods – Determinants of C, I, and G – Determinants of Imports and Exports – Equilibrium Output and Trade Balance – Increases in Domestic and Foreign Demand – Depreciation and Trade Balance – Marshall-Lerner Condition – Effects of Depreciation – Combining Exchange Rate and Fiscal Policies – Looking at Dynamics: The J-Curve – Savings, Investment, and the Current Account Balance	
<b>MODULE – 4: OUTPUT, INTEREST RATE, AND EXCHANGE RATE REGIMES</b>	<b>12</b>
Equilibrium in Goods and Financial Markets – Putting Goods and Financial Markets Together – Effects of Monetary and Fiscal Policy in an Open Economy – Fixed Exchange Rates – Pegs, Crawling Pegs, Banks, the EMS, and the Euro – Pegging Exchange Rate and Monetary Control – Fiscal Policy under Fixed Exchange Rates – Exchange Rate Regimes – Aggregate Demand under Fixed Exchange Rates – Equilibrium in the Short Run and Medium Run – Case for and against Devaluation – Exchange Rate Crises under Fixed Exchange Rates – Exchange Rate Movements under Flexible Exchange Rates – Exchange Rates and the Current Account – Exchange Rates and Current and Future Interest Rates – Exchange Rate Volatility – Choosing between Exchange Rate Regimes – Common Currency Areas – Hard Pegs, Currency Boards, and Dollarisation	
<b>MODULE – 5: FISCAL AND MONETARY POLICY</b>	<b>12</b>
Uncertainty and Policy – What Macroeconomists Know – Uncertainty and Restraints – Expectations and Policy Establishing Credibility – Time Consistency and Restraints on Policy Makers – Politics and Policy – Games between Policy Makers and between Policy Makers and Voters – Politics and Fiscal Restraints – Fiscal Policy: What Have We Learned – Government Budget Constraint: Deficit and Debt – Current vs. Future Taxes – Debt to GDP Ratio – Ricardian Equivalence, Deficits, Output Stabilisation, and Cyclically Adjusted Deficit – Wars and Deficits – Dangers of High Debt: Default Risk, Vicious Cycles, Debt Default, Money Finance – Monetary Policy: What Have We Learned – Optimal Inflation Rate – Costs and Benefits of Inflation – Design of Monetary Policy Money Growth Targets and Target Ranges – Inflation Targeting – Interest Rate Rules – Challenges from the Financial Crisis: Liquidity Trap, Macro Prudential Regulation – Story of Macroeconomics: Keynes and the Great Depression, Neoclassical Synthesis, Rational Expectations Critique, Developments in Macroeconomics up to the 2009 Crisis, Lessons for Macroeconomists from the Crisis	
<b>TEXT BOOKS</b>	
1. Olivier Blanchard and David R. Johnson, <b>Macroeconomics</b> , Sixth Edition, Pearson, 2017.	
<b>REFERENCE BOOKS</b>	

1.	N. Gregory Mankiw and Mark P. Taylor, <b>Macroeconomics</b> , Fourth Edition, Cengage, 2017.
2.	Rudiger Dornbusch, Stanley Fischer, and Richard Startz, <b>Macroeconomics</b> , 12 <sup>th</sup> Edition, McGraw Hill, 2018.
3.	Richard T. Froyen, <b>Macroeconomics: Theories and Policies</b> , Tenth Edition, Pearson, 2013.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/learn/principles-of-macroeconomics">https://www.coursera.org/learn/principles-of-macroeconomics</a>
2.	<a href="https://www.coursera.org/learn/macroeconomic-factors">https://www.coursera.org/learn/macroeconomic-factors</a>
3.	<a href="https://nptel.ac.in/courses/109/104/109104073/">https://nptel.ac.in/courses/109/104/109104073/</a>

<b>COURSE TITLE</b>	<b>HISTORY OF ECONOMIC THOUGHT</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENB1203</b>	<b>Course Category</b>	<b>CORE 11</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,4</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Be able to understand the nature of economic thought and importance of classical economic theories				
2.	Be able to appreciate the importance of neo-classical theories				
3.	Be able to appreciate the contribution of Institutionalism, Welfare Economics, and Keynesianism				
4.	Be able to understand Monetarism and Post-Keynesian economic theories				
5.	Be updated as to the recent developments and trends in Economic thought				
<b>Prerequisites :</b> Basic concept of Economic thought					
<b>MODULE – 1: CLASSICAL ECONOMIC THEORIES</b>					<b>9</b>
Nature and Importance of Economic thought – Approaches of Economic Thought – Scholastics – Mercantilism, French and English – Thomas Munn – Scientific Method and the French Physiocrats – Quesnay – The Classical School – Adam Smith – Division of Labour– Ricardo and Theory of Rent – Comparative Cost Theory – Stationary State – Malthus and Theory of Population and Theory of Gluts					
<b>MODULE – 2: NEO-CLASSICAL ECONOMIC THEORIES</b>					<b>9</b>
Neo-Classical – Marginal Revolution – Alfred Marshall and the Cambridge School – Utility Theory – Consumer’s Surplus – Elasticity of Demand – Concept of Representative Firm – Marxian Economics – Labour Theory of Value – Theory of Surplus Value– Marx’s Theory of Money, Distribution, Capital Accumulation, and Crises					
<b>MODULE – 3: EARLY 20<sup>TH</sup> CENTURY</b>					<b>9</b>

American Institutionalism– AC Pigou and Welfare Economics –Hayek and the Austrian School – Keynes and the General Theory of Employment, Interest, and Money – Capitalism – Socialism and Mixed Economy– New Institutionalism – Common Pool Resources	
<b>MODULE – 4: POST-KEYNESIAN ECONOMICS AND MONETARISM</b> <b>9</b>	
Friedman and Monetarism –Stagflation of 70s – Rational Expectations Theories – Financial Crises and their Impact on Economic Thinking	
<b>MODULE – 5: RECENT TRENDS</b> <b>9</b>	
Game Theory – Behavioural Economics – Experimental Economics	
<b>TEXT BOOKS</b>	
1.	Robert L. Heilbroner, <b>The Worldly Philosophers</b> , Seventh Revised Edition, Simon and Schuster, 2003.
2.	Gianni Vaggi and Peter Groenewegen, <b>A Concise History of Economic Thought– From Mercantilism to Monetarism</b> , Palgrave Macmillan, 2003.
<b>REFERENCE BOOKS</b>	
1.	Mark Blaug, <b>Economic Theory in Retrospect</b> , Cambridge University Press, 1997.
2.	Jonathan Conlin, <b>Great Economic Thinkers: From Adam Smith to Amartya Sen</b> , Speaking Tiger Publishing, 2018.
3.	Henry Spiegel, <b>The Growth of Economic Thought</b> , Duke University Press, 1983.
4.	Sylvia Nasar, <b>Grand Pursuit: The Story of Economic Genius</b> , Simon and Schuster, 2011.
5.	Linda Yueh, <b>The Great Economists: How Their Ideas Can Help Us Today</b> , Viking, 2018.
<b>ONLINE RESOURCES</b>	
1.	<a href="http://cepa.newschool.edu/het/home.htm">http://cepa.newschool.edu/het/home.htm</a>
2.	<a href="http://netec.wustl.edu/~adnetec/WebEc/webecb.html">http://netec.wustl.edu/~adnetec/WebEc/webecb.html</a>

<b>COURSE TITLE</b>	<b>DEVELOPMENT ECONOMICS - I</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENB1204</b>	<b>Course Category</b>	<b>CORE 12</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,3,4</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Understand economic development and how it varies across countries				
2.	Appreciate classical theories and contemporary models of economic development				



3.	Be able to articulate issues and challenges in poverty, inequality, and population growth	
4.	Analyse human capital issues relating to urbanisation, rural-urban migration, education, and health	
5.	Understand development issues in agriculture, rural sector, and environment	
<b>Prerequisites:</b> Macroeconomics – I		
<b>MODULE – 1: COMPARATIVE ECONOMIC DEVELOPMENT</b>		<b>9</b>
How the other half lives – Economics and Development Studies – Growth vs. Development – Nature of Development Economics – Why Study Development Economics – Important Role of Values – Economies as Social Systems – What do we mean by development? – “Capability” Approach – Core Values and Objectives of Development – Case Study: Brazil – Defining the Developing World – Basic Indicators of Development: Real Income, Health, and Education – Holistic Measures of Living Levels and Capabilities – Characteristics of the Developing World: Diversity within Commonality – How Low-Income Countries Today Differ from Developed Countries in their Earlier Stages – Are Living Standards of Developing and Developed Nations Converging? – Long-Run Causes of Comparative Development – Case Studies		
<b>MODULE – 2: CLASSIC THEORIES AND CONTEMPORARY MODELS</b>		<b>9</b>
Classic Theories of Economic Development: Four Approaches – Development as Growth and the Linear-Stages Theories – Structural-Change Models – International-Dependence Revolution – Neoclassical Counterrevolution: Market Fundamentalism – Reconciling the Differences – Underdevelopment as Coordination Failure – Multiple Equilibria – Big Push – Multiple Equilibria – Michael Kremer’s O-Ring Theory of Economic Development – Economic Development as Self-Discovery – Hausmann-Rodrik-Velasco Growth Diagnostics Framework – Case Studies: South Korea, Argentina, China		
<b>MODULE – 3: POVERTY, INEQUALITY, POPULATION GROWTH, AND DEVELOPMENT</b>		<b>9</b>
Measuring Inequality – Measuring Absolute Poverty – Poverty, Inequality, and Social Welfare – Absolute Poverty: Extent and Magnitude – Economic Characteristics of High-Poverty Groups – Policy Options on Income Inequality and Poverty – Relative Factor Prices – Increasing Assets of the Poor – Progressive Income and Wealth Taxes – Direct Transfer Payments and Public Provision of Goods and Services – Population Growth and Economic Development – Demographic Transition – Causes and Consequences of High Fertility in Developing Countries: Malthusian and Household Models – Some Policy Approaches – Case Studies: China and India		
<b>MODULE – 4: HUMAN CAPITAL: URBANISATION, RURAL-URBAN MIGRATION, EDUCATION AND HEALTH</b>		<b>9</b>
Urbanisation: Trends and Living Conditions – Role of Cities – Urban Giantism Problem – Urban Informal Sector – Migration and Development – Economic Theory of Rural-Urban Migration – Comprehensive Urbanisation, Migration, and Employment Strategy – Case Study: India and Botswana – Central Roles of Education and Health – Investing in Education and Health: Human Capital Approach – Child Labour – Gender Gap: Discrimination in Education and Health – Educational Systems and Development – Health Measurement and Disease Burden – Health, Productivity, and Policy – Case Study: Mexico		
<b>MODULE – 5: AGRICULTURE, RURAL DEVELOPMENT, AND ENVIRONMENT</b>		<b>9</b>
Imperative of Agricultural Progress and Rural Development – Agricultural Growth: Past Progress and Current Challenges – Structure of Agrarian Systems in the Developing World –		

Important Role of Women – Microeconomics of Farmer Behaviour and Agricultural Development: Subsistence to Commercial Farming, Subsistence Farming, Sharecropping, Mixed or Diversified Farming, divergence to Specialisation – Core Requirements of a Strategy of Agricultural and Rural Development – Case Study: Kenya - Environment and Development: Basic Issues – Economics and Environment – Sustainable Development and Environmental Accounting – Natural Resource-based Livelihoods – Domestic Origin Environmental Degradation – Environmental Deterioration in Villages – Global Warming and Climate Change – Economic Models of Environmental Issues – Urban Development and Environment – Local and Global Costs of Rain Forest Destruction – Policy Options in Developing and Developed Countries – Case Studies.	
<b>TEXT BOOKS</b>	
1.	Michael P. Todaro and Stephen C. Smith, <b>Economic Development</b> , 12 <sup>th</sup> Edition, Pearson Education, 2017.
<b>REFERENCE BOOKS</b>	
1.	A.P. Thirlwall, <b>Economics of Development</b> , Ninth Edition, Palgrave, 2011.
2.	Debraj Ray, <b>Development Economics</b> , Oxford University Press, 1998.
3.	Abhijit Banerjee and Esther Duflo, <b>Poor Economics: Rethinking Poverty and the Ways to End it</b> , Penguin, 2013.
4.	Abhijit Banerjee, Roland Benabou, and Dilip Mookerjee, <b>Understanding Poverty</b> , Oxford University Press, 2006.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/learn/sustainable-development">https://www.coursera.org/learn/sustainable-development</a>
2.	<a href="https://www.coursera.org/learn/political-economy">https://www.coursera.org/learn/political-economy</a>
3.	<a href="https://nptel.ac.in/courses/110/103/110103093/">https://nptel.ac.in/courses/110/103/110103093/</a>

## SEMESTER – IV

<b>COURSE TITLE</b>	<b>INDIAN POLITICAL ECONOMY</b>		<b>CREDITS</b>	<b>3</b>	
<b>Course Code</b>	<b>ENB1216</b>	<b>Course Category</b>	<b>CORE 13</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>		<b>ESE</b>	<b>60%</b>	
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,4</b>		<b>ASSESSMENT MODEL</b>		
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Understand the basics of political economy and its historical overview				
2.	Analyse the modes of production in capitalist economies				

3.	Articulate issues relating to globalisation and the changing role of finance	
4.	Understand the social dimensions of political economy of India	
5.	Understand the new perspectives relating to political economy of India	
<b>Prerequisites:</b> Indian Economy, Macroeconomics – I and II		
<b>MODULE – 1: INTRODUCTION AND HISTORICAL OVERVIEW</b>		<b>9</b>
Perspective on political economy with a historical overview: capitalist development in the pre-second world war period, the golden age and later -		
<b>MODULE – 2: CAPITALIST PRODUCTION, ORGANISATIONAL FORM AND LABOUR PROCESS</b>		<b>9</b>
Fordist and Post-Fordist Production – Changing Dynamics of Organisation of Production, Markets and Labour Process – The Changing Nature of Job Security and Labour Rights – Indian Situation.		
<b>MODULE – 3: GLOBALISATION AND CHANGING ROLE OF FINANCE</b>		<b>9</b>
Globalisation and the Limits of the Welfare State, Development and State Autonomy – The Changing Role of Finance in Capital Accumulation and Corporate Structure – Finance and Globalisation – Financialisation, Financial Liberalisation and Financial Crisis – Indian Experience.		
<b>MODULE – 4: SOCIAL DIMENSION</b>		<b>9</b>
Analysing Social Change in Historical Perspective – The Method of Historical Materialism - The Transition from Feudalism to Capitalism - Capitalism as a Historical Process – Alternative Perspectives – Globalisation and Uneven Development – Growth, Inequality and Exclusion – Indian Experience		
<b>MODULE – 5: NEW PERSPECTIVES</b>		<b>9</b>
Gender in Work, Accumulation and Globalisation - Issues in Environment and Sustainability – Alternatives Ahead - Capitalism as an Evolving Economic System – Basic Features – Accumulation and Crisis – The Modern Corporation - Monopoly Capitalism – Alternative Perspectives - The State in Capitalism – The State and the Economy – Contestation and Mutual Interdependence – State as an Arena of Conflict – Imperialism: Basic Foundations – Indian Experience		

<b>TEXT BOOKS</b>		
1.	Pranab Bardhan, <b>The Political Economy of Development in India</b> , Expanded Edition, Oxford University Press, 1998.	
2.	Francine R. Frankel, <b>India's Political Economy: 1947-2004</b> , Oxford University Press, 2005.	
<b>REFERENCE BOOKS</b>		
1.	Paul M. Sweezy, <b>The Theory of Capitalist Development</b> , Monthly Review Press, 1942.	
2.	Oskar Lange, <b>Political Economy</b> , Vol. 1 (Chapters 1 and 2), 1963.	
3.	Joseph Stiglitz, <b>Globalisation and its Discontents Revisited – Anti-Globalization in the Era of Trump</b> , WW Norton and Company, 2017.	

4.	Jagdish Bhagwati, <b>In Defense of Globalization: With a New Afterword</b> , Oxford University Press, 2007.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.indiabudget.gov.in">https://www.indiabudget.gov.in</a>

<b>COURSE TITLE</b>	<b>MONETARY ECONOMICS</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENB1217</b>	<b>Course Category</b>	<b>CORE 14</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,4</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	To understand the interlinkages between money, prices, output, transactions, and public finance				
2.	To understand money in the short run, and time inconsistency				
3.	To study Neo-Keynesian monetary economics and monetary policy in an open economy				
4.	To study the role of financial markets, and different operating procedures				
5.	To study the functioning of monetary policy in India				
<b>Prerequisites :</b> Economics, Macroeconomics					
<b>MODULE – 1: MONEY, PRICES, OUTPUT, TRANSACTIONS, PUBLIC FINANCE</b>					<b>9</b>
Introduction to Money – Some Basic Correlations – Estimating Effect of Money on Output – Money-in-the-Utility Function – Welfare Cost of Inflation – Dynamics in an MIU Model – Money and Transactions – Resource Costs of Transacting – CIA Models – Money and Public Finance – Budget Accounting – Money and Fiscal Policy Frameworks – Deficits and Inflation – Fiscal Theory of the Price Level – Optimal Taxation and Seigniorage – Friedman’s Rule Revisited – Non-indexed Tax Systems					
<b>MODULE – 2: MONEY IN THE SHORT RUN, AND TIME INCONSISTENCY</b>					<b>9</b>
Informational Frictions – Limited Participation and Liquidity Effects – Sticky Prices and Wages – Nominal Rigidities – Intertemporal Nominal Adjustment – Imperfect Competition – Time-Dependent and State-Dependent Pricing Models – Alternatives: Microeconomic Evidence, New Keynesian Phillips Curve, Sticky Prices vs. Sticky Information – Discretionary Policy and Time Inconsistency – Inflation under Discretionary Policy – Solutions to Inflation Bias: Reputation, Preference, Contracts, Institutions, Targeting Rules					
<b>MODULE – 3: NEO-KEYNESIAN MONETARY ECONOMICS, OPEN ECONOMY</b>					<b>9</b>
Basic Model – Linearised New Keynesian Model – Monetary Policy Analysis in New Keynesian					

Models – Money and the Open Economy – Obstfeld-Rogoff Two-Country Model – Policy Coordination – Small Open Economy – Open-Economy Models with Optimising Agents and Nominal Rigidities – Imperfect Pass-Through	
<b>MODULE – 4: FINANCIAL MARKETS AND OPERATING PROCEDURES</b> <span style="float: right;"><b>9</b></span>	
Interest Rates and Monetary Policy – Term Structure of Interest Rates – Macrofinance – Financial Frictions in Credit Markets: Adverse Selection, Moral Hazard, Monitoring Costs, Agency Costs, Macroeconomic Implications – Does Credit Matter? – Bank Lending and Broad Credit Channels – Monetary Policy Operating Procedures – From Instruments to Goals – Instrument Choice Problem – Operating Procedures and Policy Measures – Operating Procedures in the US and other countries	
<b>MODULE – 5: MONETARY AND FINANCIAL STABILITY IN INDIA</b> <span style="float: right;"><b>9</b></span>	
History of Monetary Policy in India – SukhamoyChakravorty Committee Report on Monetary System – Urjit Patel Committee – Alternatives to Inflation Targeting – Fiscal Policy – Financial Regulatory and Supervisory Policy – Regulatory Coordination – Shadow Banking Sector – Reinforcing Prudential Standards – Market Incentives for Prudent Behaviour – Reducing Cost of Financial Failures – Macro-prudential Regulation – Narasimham Committee, HPEC, CFSR and FSLRC Reports – Principles vs. Rules-Based Regulation – Regulatory and Supervisory Independence	
<b>TEXT BOOKS</b>	
1.	Carl E. Walsh, <b>Monetary Theory and Policy</b> , Third Edition, Prentice Hall India, 2016.
2.	Dilip M. Nachane, <b>Critique of the New Consensus Macroeconomics and Implications for India</b> , Springer 2018.(Chapters 15 and 16)
3.	Partho Ray, <b>Monetary Policy</b> , Oxford University Press, 2013.
<b>REFERENCE BOOKS</b>	
1.	Niall Fergusson, <b>The Ascent of Money: A Financial History of the World</b> , Penguin, 2018.
2.	Ben S. Bernanke, Timothy F. Geithner, and Henry M. Paulson, Jr., <b>Firefighting: The Financial Crisis and its Lessons</b> , Profile Books, 2019.
3.	Chetan Ghate and Kenneth M. Kletzer, <b>Monetary Policy in India: A Modern Macroeconomic Perspective</b> , Springer, 2016.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/learn/monetary-policy-asia-pacific?">https://www.coursera.org/learn/monetary-policy-asia-pacific?</a>

<b>COURSE TITLE</b>	<b>ECONOMETRICS - I</b>		<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENB1218</b>	<b>Course Category</b>	<b>CORE 15</b>	<b>L-T-P-S</b>
<b>CIA</b>	<b>40%</b>		<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,3,4</b>		<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>			<b>PO</b>
1.	Understanding the basics of econometrics and regression			
2.	Use single equation regression models			

3.	Analyse with the aid of multiple regression	
4.	Use dummy variable regression models	
5.	Understand the impact of relaxing regression assumptions relating to multicollinearity, heteroscedasticity, and autocorrelation	
<b>Prerequisites :</b>		
<b>MODULE – 1: INTRODUCTION TO ECONOMETRICS AND REGRESSION</b>		<b>6</b>
What is Econometrics? – Why a separate discipline? – Methodology of Econometrics – Types of Econometrics – Nature of Regression Analysis – Statistical vs. Deterministic Relationships – Regression vs. Causation – Regression vs. Correlation – Terminology and Notation – Nature and Sources of Data for Economic Analysis		
<b>MODULE – 2: SINGLE EQUATION REGRESSION MODELS</b>		<b>12</b>
Two Variable Regression Analysis: Some basic ideas – Population Regression Function – Stochastic Disturbance Term – Sample Regression Function – Ordinary Least Squares Method – Classical Linear Regression Model – Assumptions - Precision or Standard Errors of Least Squares Estimates – Properties of Least Squares Estimators – Gauss-Markov Theorem - Coefficient of Determination $r^2$ : A Measure of Goodness of Fit – Classical Normal Linear Regression Model – Normality Assumption – Maximum Likelihood Method – Interval Estimation and Hypothesis Testing – Confidence Intervals – Hypothesis Testing – Tests of Significance – Regression Analysis and Analysis of Variance – Reporting and Evaluating Regression Results – Extensions of Two-Variable Linear Regression Model		
<b>MODULE – 3: MULTIPLE REGRESSION ANALYSIS</b>		<b>12</b>
Three-Variable Model: Notation and Assumptions – Interpretation of Multiple Regression Equation – Partial Regression Coefficients – OLS and ML Estimation of Partial Regression Coefficients – Multiple Coefficient of Determination $R^2$ and Coefficient of Correlation $R$ – Specification Bias – $R^2$ and Adjusted $R^2$ – Cobb-Douglas Production Function – Polynomial Regression Models – Partial Correlation Coefficients – Problem of Inference – Hypothesis Testing – Individual Regression Coefficients – Overall Significance of Sample Regression – Equality of Two Regression Coefficients – Restricted Least Squares – Chow Test – Prediction with Multiple Regression – Likelihood Ratio, Wald, and Lagrange Multiplier Tests – Choosing between Linear and Log-Linear Regression Models		
<b>MODULE – 5: DUMMY VARIABLE REGRESSION MODELS</b>		<b>6</b>
Nature of Dummy Variables – ANOVA Models – ANOVA Models with two Qualitative Variables – Regression with a Mixture of Quantitative and Qualitative Regressors: The ANCOVA Models – Dummy Variable Alternative to the chow Test – Use of Dummy Variables in Seasonal Analysis – Piecewise Linear Regression – Panel Data Regression Models – Some Technical Aspects of the Dummy Variable Technique – Examples		
<b>MODULE – 5: RELAXING CLASSICAL MODEL ASSUMPTIONS</b>		<b>9</b>
Multicollinearity: Nature, Estimation with Perfect Multicollinearity, and High but Imperfect Multicollinearity, Theoretical and Practical Consequences, Detection, Remedial Measures, Whether Bad, Examples – Heteroscedasticity: Nature, OLS Estimation in the Presence of Heteroscedasticity, Method of Generalised Least Squares, Consequences of Using OLS in the Presence of Heteroscedasticity, Detection, Remedial Measures, Overreacting to Heteroscedasticity, Examples – Autocorrelation: Nature, OLS Estimation and BLUE Estimator with Autocorrelation, Consequences, Detection, Remedial Measures, Model Mis-specification vs. Pure Autocorrelation, Correcting for Pure Autocorrelation (GLS), Newey-West Method, OLS		

vs. FGLS and HAC, Examples.	
<b>TEXT BOOKS</b>	
1.	Damodar Gujarati, Dawn Porter, and Sangeetha Gunasekar, <b>Basics of Econometrics</b> , Fifth Edition, McGraw Hill Education, 2017.
2.	James H. Stock and Mark W. Watson, <b>Introduction to Econometrics</b> , Pearson, 2017.
<b>REFERENCE BOOKS</b>	
1.	Dilip M. Nachane, <b>Econometrics: Theoretical Foundations and Empirical Perspective</b> , Oxford University Press, 2006.
2.	William H. Greene, <b>Econometric Analysis</b> , Pearson, 2018.
3.	Joshua D. Angrist and Jorn-steffenPischke, <b>Mostly Harmless Econometrics: An Empiricist's Companion</b> , Princeton University Press, 2009.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/learn/erasmus-econometrics">https://www.coursera.org/learn/erasmus-econometrics</a>
2.	<a href="https://www.coursera.org/learn/enjoyable-econometrics">https://www.coursera.org/learn/enjoyable-econometrics</a>

COURSE TITLE		AGRICULTURAL ECONOMICS		CREDITS	3
Course Code	ENB1219	Course Category	CORE 15	L-T-P-S	3:1:0:0
CIA	40%			ESE	60%
LEARNING LEVEL	BTL – 1,2,4			ASSESSMENT MODEL	
	COURSE OUTCOMES				PO
1.	To understand the role of agriculture in development and specifically in India				
2.	To understand the role of agriculture in Indian economy				
3.	To study the role and importance of agriculture marketing				
4.	To study the process of transformation of agriculture and price determination				
5.	To understand the role of labour and international trade in agriculture				
<b>Prerequisites</b> :Basic concepts of Economics.					
MODULE – 1: INTRODUCTION					12
Agricultural Economics: Concept, Nature, Scope, Types, and Significance – Relationship with other Disciplines – IndustrialDevelopment and Agriculture - The Physiocrats – Limits on Growth – QuantityofLabour – Provisionof Industrial Raw Material – Market, Product and Factor Contributions: Labour and Capital – AgriculturalFundamentalism – DecliningImportance ofAgriculture – Roleof Agriculture in India – Shareof Agriculture in National Income – SupplierofSubstantial Food and Fodder – Agricultureas aSource of Livelihood – Agricultureand Provisionof Employment – Agriculturaland IndustrialDevelopment – Agricultureand					

International Trade	
<b>MODULE – 2: ROLE OF AGRICULTURE IN INDIAN ECONOMY</b>	<b>15</b>
<p>Role of Land in Agriculture – Food and Fibre Production – Pastures and Grazing Lands – Role of Forests – Land as Factor of Production – Non-agricultural Uses of Land – Peculiarities of Land – Law of Diminishing Returns – Limited Supply of Land – Heterogeneity of Land Quality – Possibilities of Expanding Land Area – Modern Indian Agriculture: Land Use, Harvesting, Water and Soil Conservation, Machinery and Implements, Protection of Plants, Animal Husbandry, Census of Agriculture, Recent Trends and Developments – Indian Agricultural Policy: Reforms, Fiscal Adjustment, Structural Adjustment, Globalisation and Agriculture, Multinational Companies – Derivative trading in Agricultural Commodities</p>	
<b>MODULE – 3: AGRICULTURE MARKETING</b>	<b>12</b>
<p>Agricultural Marketing: Definition, Significance, Special Problems, Functions – Assembling, Processing, Dispersion, Secondary Services, Standardisation and Grading, Packaging, Transportation, Storage, Financing, Risk Bearing, Selling – Marketing Margin – Market Structure: Local Assembling and Processing Markets, District Concentration and Processing Markets, Central Markets, Seaboard Markets, Wholesale Distribution Markets, Retail Markets, Online Markets - Cooperative Marketing Societies: Advantages, Progress – Agricultural Marketing in India – Existing System of Agricultural Marketing – Defects in Agricultural Marketing – Government Measures for Agricultural Marketing – Three Categories</p>	
<b>MODULE – 4: TRANSFORMING AGRICULTURE, AND PRICE DETERMINATION</b>	<b>3</b>
<p>The Problem – Old Doctrines - Unsettled Questions – Attributes of Traditional Agriculture – Allocative Efficiency – Zero Marginal Productivity – High Returns to Low Capital – Development of Traditional Agriculture – Farmers as Demanders of New Factors – Price Determination under Perfect Competition – Exceptions in Agriculture – Cob-web Model – Price Determination under Imperfect Competition - Most Profitable Price - Price Support - Long-term Considerations – Agricultural Prices in India – Agricultural Price Policy: Objectives and Evaluation – Agricultural Prices and Terms of Trade</p>	

<b>MODULE – 5: LABOUR AND FOREIGN TRADE</b>	<b>3</b>
<p>Role of Labour in Agriculture – Supply of Labour – Theories of Population Growth – Labour Force: Demand, Efficiency, Size, and Quality – Level of Technology – Agricultural Wages – Export Competitiveness – Foreign Trade in Indian Agriculture – Export Performance – Future Strategy – Indian Agriculture and WTO</p>	
<b>TEXT BOOKS</b>	
1.	Pranav K. Desai, <b>Agricultural Economics</b> , Biotech Books, 2010.
2.	S. Subba Reddy, P. Raghu Ram, T.V. Neelakanta Sastry, and I. Bhavani Devi, <b>Agricultural Economics</b> , Second Edition, Oxford University Press, 2008.
3.	R. Prabina, <b>Commodity Derivatives and Risk Management</b> , Prentice Hall India, 2014.
4.	Indian Institute of Banking and Finance, <b>Commodity Derivatives</b> , 2007.
<b>REFERENCE BOOKS</b>	
1.	C.B. Mamoria and B.B. Tripathi, <b>Agricultural Problems of India</b> , Kitab Mahal, 2013.



**ONLINE RESOURCES**1. [https://swayam.gov.in/nd1\\_noc20\\_hs02/preview](https://swayam.gov.in/nd1_noc20_hs02/preview)**SEMESTER V**

COURSE TITLE		FINANCIAL MARKETS		CREDITS	4
Course Code	ENB1301	Course Category	CORE 16	L-T-P-S	3:1:0:0
CIA	40%			ESE	60%
LEARNING LEVEL	BTL – 1,2,4			ASSESSMENT MODEL	
CO	COURSE OUTCOMES				PO
1.	Understand the importance and functions of financial institutions.				
2.	Study the role of central banks and monetary policy in India and abroad.				
3.	Examine the role of different types of financial markets, their functioning and instruments.				
4.	Study different types of financial and allied services.				
5.	Understand and study the role of risk management in financial markets.				
<b>Prerequisites:</b> Basic concepts of economy, management and finance.					
<b>MODULE – 1: FINANCIAL MARKETS AND INSTITUTIONS</b>					
Why study financial markets and institutions – Overview of financial system – Fundamentals of financial markets – Interest rates, their role, and relationship with risk and term structure – Are financial markets efficient? – Why do financial institutions exist – Why do financial crises occur – Why and how do they affect the economy					
<b>MODULE – 2: CENTRAL BANKS AND MONETARY POLICY</b>					
Central banks – Evolution and role – Major central banks in the world and their structure and functions – Monetary Policy – Central bank independence and relationship with the government – Reserve Bank of India – History, role and functions – Conduct of monetary policy: Tools, goals, strategy, and tactics					
<b>MODULE – 3: FINANCIAL MARKETS</b>					
Money market – Bond and government securities markets – Capital market – Foreign exchange market – Functioning of the markets, major instruments, participants, laws and regulations – Dematting – Mutual funds and other intermediaries					
<b>MODULE – 4: FINANCIAL SERVICES</b>					
Insurance sector, products, and regulation – Leasing and other allied financial services: Types of leases, leasing in India – Venture capital and private equity: Evolution, differences, and stages – Credit rating – Bill discounting, factoring, and forfaiting					

<b>MODULE – 5: INTRODUCTION TO RISK MANAGEMENT</b>	
What is risk – Risk-Return framework – Risks in financial institutions – Introduction to credit risk, market risk, operational risk, liquidity risk, and other risks – Identifying, measuring, monitoring, and mitigating risk – Introduction to derivative products	
<b>TEXT BOOKS</b>	
1.	Frederic S. Mishkin, Stanley G. Eakins, Tulsi Jayakumar, and R.K. Pattnaik, <b>Financial Markets and Institutions</b> , Eighth Edition, Pearson, 2017.
<b>REFERENCE BOOKS</b>	
1.	Anthony Saunders, <b>Financial Markets and Institutions – Indian Edition</b> , McGraw-Hill Education, 2018.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/learn/financial-markets-global">https://www.coursera.org/learn/financial-markets-global</a>
2.	MOOC courses by Robert Shiller (Yale), Ashwath Damodaran (NYU)

<b>COURSE TITLE</b>	<b>ECONOMETRICS - II</b>			<b>CREDITS</b>	<b>4</b>
<b>Course Code</b>	<b>ENB1302</b>	<b>Course Category</b>	<b>CORE 17</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,3,4,5,6</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Be able to create and use econometric models				
2.	Understand and use nonlinear and quantitative response models				
3.	Understand and use panel data and dynamic econometric models				
4.	Analyse using simultaneous equation models				
5.	Forecast with the aid of time series econometrics				
<b>Prerequisites : Econometrics – I</b>					

<b>MODULE – 1: ECONOMETRIC MODELLING</b>		<b>9</b>
Model Selection Criteria – Types of Specification Errors – Consequences – Tests of Specification Errors – Errors of Measurement – Incorrect Specification of Stochastic Error Term – Nested vs. Non-Nested Models – Tests of Non-Nested Hypotheses – Model Selection Criteria – Outliers, Leverage, and Influence – Recursive Least Squares – Chow’s Prediction Failure Test – Examples and Exercises using Econometric software (e.g., E-Views)		
<b>MODULE – 2: NONLINEAR AND QUALITATIVE RESPONSE MODELS</b>		<b>9</b>
Intrinsically Linear and Intrinsically Nonlinear Regression Models – Estimation of Linear and Nonlinear Regression Models – Estimating Nonlinear Regression Models: Trial and Error Method – Approaches to Estimating Nonlinear Regression Models – Nature of Qualitative Response Models – Linear Probability Model (LPM) – Application of LPM – Alternatives to LPM – Logit Model – Estimation of Logit Model – Grouped Logit Model – Logit Model for Ungrouped or Individual Data – Probit Model – Logit and Probit Models – Tobit Model – Modelling Count Data: Poisson Regression Model – Examples		
<b>MODULE – 3: PANEL DATA AND DYNAMIC ECONOMETRIC MODELS</b>		<b>9</b>
Why Panel Data – Illustrative Example – Pooled OLS Regression or Constant Coefficients Model – Fixed Effect Least-Squares Dummy Variable Model – Fixed-Effect Within-Group Estimator – Random Effects Model – Properties of Various Estimators – Fixed Effects vs. Random Effects Model: Some Guidelines – Panel Data Regressions: Some Concluding Comments – Autoregressive and Distributed Lag Models – Role of Time or Lag in Economics – Reasons for Lags – Estimation of Distributed Lag Models – Koyck Approach – Adaptive Expectations Model – Stock Adjustment or partial Adjustment Model – Combination of Adaptive Expectation and Partial Adjustment Models – Estimation of Autoregressive Models – Method of Instrumental Variables – Detecting Autocorrelation in Autoregressive Models: Durbin h Test – Almon Approach to Distributed Lag Models – Causality in Economics: Granger Causality Test – Examples		
<b>MODULE – 4: SIMULTANEOUS EQUATION MODELS</b>		<b>9</b>
Nature of Simultaneous Equation Models – Simultaneous-Equation Bias: Inconsistency of OLS Estimators – Identification Problem – Notations and Definitions – Rules for Identification – Test of Simultaneity – Tests for Exogeneity – Approaches to Estimation – Recursive Models and Ordinary Least Squares – Estimation of a Just Identified Equation: The Method of Indirect Least Squares – Estimation of an Overidentified Equation: Method of Two-Stage Least Squares – Illustrative Examples		
<b>MODULE – 5: TIME SERIES ECONOMETRICS</b>		<b>9</b>
Selected Economic Time Series – Key Concepts – Stochastic Processes – Unit Root Stochastic Process – Trend Stationary and Difference Stationary Stochastic Processes – Integrated Stochastic Processes – Phenomenon of Spurious Regression – Tests of Stationarity – Unit Root Test – Transforming Nonstationary Time Series – Cointegration: Regression of a Unit Root Time Series on Another Unit Root Time Series – Some Economic Applications – Approaches to Economic Forecasting – AR, MA, and ARIMA Modelling of Time Series Data – Box-Jenkins Methodology – Identification – Estimation of the ARIMA Model – Diagnostic Checking – Forecasting – Further Aspects of the BJ Methodology – Vector Autoregression – Measuring Volatility in Financial Time Series: The ARCH and GARCH Models – Examples of Forecasting		
<b>TEXT BOOKS</b>		
1.	Damodar Gujarati, Dawn Porter, and Sangeetha Gunasekar, <b>Basics of Econometrics</b> ,	

	Fifth Edition, McGraw Hill Education, 2017.
2.	James H. Stock and Mark W. Watson, <b>Introduction to Econometrics</b> , Pearson, 2017.
<b>REFERENCE BOOKS</b>	
1.	Dilip M. Nachane, <b>Econometrics: Theoretical Foundations and Empirical Perspective</b> , Oxford University Press, 2006.
2.	William H. Greene, <b>Econometric Analysis</b> , Pearson, 2018.
3.	Joshua D. Angrist and Jorn-steffen Pischke, <b>Mostly Harmless Econometrics: An Empiricist's Companion</b> , Princeton University Press, 2009.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/learn/erasmus-econometrics">https://www.coursera.org/learn/erasmus-econometrics</a>
2.	<a href="https://www.coursera.org/learn/enjoyable-econometrics">https://www.coursera.org/learn/enjoyable-econometrics</a>

<b>COURSE TITLE</b>	<b>INTERNATIONAL ECONOMICS</b>			<b>CREDITS</b>	<b>4</b>
<b>Course Code</b>	<b>ENB1303</b>	<b>Course Category</b>	<b>CORE 18</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,4</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Understanding the role of Foreign trade				
2.	Examining the importance of International Trade Theories				
3.	Understanding the BOP and BOT.				
4.	Analysing the terms of trade.				
5.	Understanding the role of International Financial Institutions.				
<b>Prerequisites : Macroeconomics – I and II, Development Economics - I</b>					
<b>MODULE – 1: INTRODUCTION AND INTERNATIONAL TRADE THEORY</b>					<b>9</b>
Globalisation of World Economy – Introduction to International Finance – International Trade Theory – Mercantilism – Absolute Advantage – Law of Comparative Advantage – Standard Theory of International Trade – Demand and Supply, Offer Curves, and Terms of Trade – Factor Endowments and Heckscher-Ohlin Theory – Factor-Price Equalisation and Income Distribution – Economies of Scale, Imperfect Competition, and International Trade – Economic Growth and International Trade – Rybczynski Theorem – Small country and Large country cases					
<b>MODULE – 2: INTERNATIONAL TRADE POLICY</b>					<b>9</b>
Trade Restrictions: Tariffs – Partial Equilibrium Analysis of a Tariff – Theory of Tariff Structure – Tariffs in Large and Small Countries – Optimum Tariff – Nontariff Trade Barriers – New Protectionism – Cartels and Dumping – GATT and WTO – Multilateral Trade Negotiations – Economic Integration: Customs Unions and Free Trade Areas –European Union – International Trade and Economic Development – International Resource Movements and Multinational Corporations					
<b>MODULE – 3: BALANCE OF PAYMENTS, FOREIGN EXCHANGE MARKETS, AND</b>					

<b>EXCHANGE RATES</b>					<b>9</b>
Balance of Payments – Balance of Trade – Foreign Exchange Markets – Foreign Exchange Rates – Spot and Forward Rates – Currency Swaps, Futures, and Options – Foreign Exchange Risks, Hedging, Speculation – Interest Arbitrage: Case of Carry Trade – Eurocurrency and Offshore Markets – Exchange Rate Determination – Purchasing-Power Parity Theory – Monetary Approach to Balance of Payments and Exchange Rates – Portfolio Balance Model and Exchange Rates – Exchange Rate Dynamics					
<b>MODULE – 4: OPEN ECONOMY MACROECONOMICS</b>					<b>9</b>
Price Adjustment Mechanism with Flexible and Fixed Exchange Rates – Effect of Exchange Rate on Domestic Prices and Terms of Trade – Stability of Foreign Exchange Markets – Elasticities in Real World – Adjustments under Gold Standard – Income Adjustment Mechanism and Synthesis of Automatic Adjustments – Adjustment Policies – Policy Mix and Price Changes – Direct Controls – Prices and Output in Open Economy – Flexible vs. Fixed Exchange Rates – Impossible Trinity – Optimum Currency Areas, EMS, EMU – Currency Boards – Dollarisation – Exchange Rate Bands, Adjustable Pegs, Crawling Pegs, and Managed Float – International Coordination					
<b>MODULE – 5: INTERNATIONAL MONETARY SYSTEM</b>					<b>9</b>
Gold Standard and Interwar Experience – Bretton Woods System: Evolution, Operation and Collapse – Present System – Role of IMF – Problems with present Exchange Rate Arrangements – Proposals for Reform – Financial Stability Issues in Advanced and Emerging Markets – Other Current International Economic Problems – Case studies					
<b>TEXT BOOKS</b>					
1.	Dominick Salvatore, <b>International Economics: Trade and Finance</b> , Eleventh Edition, Wiley Student Edition, 2014.				
<b>REFERENCE BOOKS</b>					
1.	Paul Krugman, Maurice Obstfeld, and Marc Melitz, <b>International Economics: Theory and Policy</b> , Pearson, 2017.				
<b>ONLINE RESOURCES</b>					
1.	<a href="https://nptel.ac.in/courses/109/104/109104035/">https://nptel.ac.in/courses/109/104/109104035/</a>				
2.	<a href="https://nptel.ac.in/courses/110/105/110105057/">https://nptel.ac.in/courses/110/105/110105057/</a>				
<b>COURSE TITLE</b>	<b>BANKING SYSTEMS</b>			<b>CREDITS</b>	<b>4</b>
<b>Course Code</b>	<b>ENC1304</b>	<b>Course Category</b>	<b>CORE 19</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,4</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	To understand the basics of banking structure and its regulation				
2.	To analyse the role of banks in the economy and major banking systems				
3.	To study the evolution and role of central banks across the world				
4.	To understand and analyse the history, role and functions of Reserve Bank of India				
5.	To study the role of banks in financial stability				

<b>Prerequisites</b> :Basic concepts of Economics.	
<b>MODULE – 1: INTRODUCTION TO BANKING</b>	
Economic Analysis of Financial Structure – Banking and Management of Financial Institutions – Banking Industry: Structure and Competition – Economic Analysis of Banking Regulation	
<b>MODULE – 2: ROLE OF BANKS</b>	
History of banks – Bank balance sheet – Risks in banking – Financial intermediation – Credit function – Deposits – Money multiplier – Payment system – Development role – Banks and the economy – Impact of bank failures – Banking system in US, UK, Europe, Japan, Australia, Canada, Russia, Brazil, China, Singapore, New Zealand.	
<b>MODULE – 3: CENTRAL BANKING</b>	
History of Central Banks – Riksbank – Bank of England – Evolution of Central Bank functions – Central Bank balance sheet – Currency and Banker to Government – Banker to Banks – Custodian of gold and forex reserves – Lender of Last resort – Financial crisis of 2007-09 and Market Maker of Last Resort – Multiple Deposit Creation and the Money Supply Process – Determinants of Money Supply – Tools of Monetary Policy – Conduct of Monetary Policy: Goals and Targets Monetary Policy instruments – Payment system – Development role of central banks – Central Bank Independence – Major central banks: Federal Reserve System, European Central Bank, Bank of Japan, People’s Bank of China, Bank of Russia, Reserve Bank of Australia, Reserve Bank of New Zealand	
<b>MODULE – 4: RESERVE BANK OF INDIA</b>	
History of central banking in India – Reserve Bank of India Act, 1934 – History of RBI – Monetary Policy function – Banker to banks – Banker to governments - Regulation of currency – Banker to government – Custodian of cash reserves – Lender of last resort – Custodian of foreign exchange reserves – Exchange rate management – Banking regulation and supervision – Deposit insurance – Regulation of payment systems – Regulation of foreign exchange markets – Financial inclusion – Research and Statistics – Annual Report and other publications of RBI	
<b>MODULE – 5: BANKING AND FINANCIAL STABILITY</b>	
Banks and financial crises – Great Depression – Great Recession of 2007-09 – International Coordination – Cross-border cooperation in bank supervision – Global Systemically Important Banks – IMF, World Bank, and Financial Sector Assessment Programme – Role of BIS, BCBS and Financial Stability Board – Reserve Bank of India’s Financial Stability Report	
<b>TEXT BOOKS</b>	
1.	Frederic S. Mishkin, <b>The Economics of Money, Banking, and Financial Markets</b> , Eleventh Edition, Pearson, 2019.
2.	Stephen G. Cecchetti and Kermit L. Schoenholtz, <b>Money, Banking, and Financial Markets</b> , Third Global Edition, McGraw-Hill, 2011.
<b>REFERENCE BOOKS</b>	
1.	Centre for Financial Learning, <b>Banking Systems</b> , Second Edition, South-Western Cengage Learning, 2009.
2.	Maxwell J. Fry, Charles A.E. Goodhart, and Alvaro Almeida, <b>Central Banking in Developing Countries: Objectives, Activities and Independence</b> , Routledge, 1996.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/learn/money-banking">https://www.coursera.org/learn/money-banking</a>
2.	<a href="https://www.coursera.org/learn/global-financial-crisis">https://www.coursera.org/learn/global-financial-crisis</a>

3.	www.rbi.org.in (various publications, speeches, and reports)
4.	<a href="https://www.bankofengland.co.uk/-/media/boe/files/ccbs/resources/understanding-the-central-bank-balance-sheet.pdf?la=en&amp;hash=0475942A8BE465179CF4CFB4996AF44CDACB1662">https://www.bankofengland.co.uk/-/media/boe/files/ccbs/resources/understanding-the-central-bank-balance-sheet.pdf?la=en&amp;hash=0475942A8BE465179CF4CFB4996AF44CDACB1662</a>

COURSE TITLE	INDIAN ECONOMIC HISTORY (1857-1947)		CREDITS	3
Course Code	ENC1351	DSE 1	L-T-P-S	3:0:0:0
CIA	40%		ESE	60%
LEARNING LEVEL	BTL – 1,2,4		ASSESSMENT MODEL	
	<b>COURSE OUTCOMES</b>			<b>PO</b>
1.	Understanding the History of Economic Planning in India.			
2.	Examining the Place of Agriculture in Indian Economy			
3.	Understanding the role of Industries in Indian Economic Development			
4.	Analysing the Population and Indian Economy			
5.	Understanding the role of service sector & Indian Economy Development			
<b>Prerequisites</b> :Basic concept of Economics.				
<b>MODULE – 1: INTRODUCTION</b>				
Theories of Economic History – Competing Narratives on India – Beyond Competing Narratives – Transition to Colonialism: 1707 to 1857 –South Asia, 1857-1947 – Growth and Structural Change: 1857 to 1947 – Measuring Change – Explaining Change – Globalisation and Patterns of Trade – Savings and Investment – Public Finance – Balance of Payments – Prices – The Great Depression				
<b>MODULE – 2: AGRICULTURE AND THE COMMONS</b>				
Trends in Production and Income – Resources and Techniques – Markets – Agriculture in Major Regions – Land, Labour, and Credit Markets – Effects of Market Expansion – Explaining Stagnation – Types of Common Land – Forests and Forest-dependent People – Village Commons and Pastures – Land-use Patterns				
<b>MODULE – 3: INDUSTRY</b>				
Types of Small-Scale Industry – Long-term Pattern of Industrialisation – Two Models of Transition in Handicrafts – Handloom Weaving – Other Small-Scale Industries – Labour and Capital – Modern Small-Scale Industry – Statistical Outline of Large-Scale Industry – Stages of Industrialisation – Major Industries – Labour – Finance for Industry – Entrepreneurship – Business Organization – Technology and Colonialism – Princely States				

<b>MODULE – 4: PLANTATION, MINES, BANKING, AND INFRASTRUCTURE</b>	
Tea and Coffee Plantations – Mines – Banking – Insurance – Impetus to Infrastructure Development – Irrigation – Railways – Road and Inland Waterways – Ports – Posts and Telegraph – Power – Legal System – Education – Healthcare	
<b>MODULE – 5: FISCAL AND MONETARY SYSTEMS, POPULATION AND LABOUR</b>	
Policymaking – Trade Policy – Fiscal System – Monetary System – Population – Famines – Labour Force – Conclusions	
<b>TEXT BOOKS</b>	
1.	Tirthankar Roy, <b>The Economic History of India, 1857-1947</b> , Third Edition, Oxford University Press, 2011.
<b>REFERENCE BOOKS</b>	
1.	Dharma Kumar and Tapan Raychaudhuri (eds.), <b>The Cambridge Economic History of India Vols. 1 and 2</b> , Cambridge University Press, 2007.
2.	B.R. Tomlinson, <b>The Economy of Modern India: From 1860 to the Twenty-First Century</b> , Cambridge University Press, 2013.

<b>COURSE TITLE</b>	<b>COMPARATIVE ECONOMIC DEVELOPMENT</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENC1352</b>	<b>Course Category</b>	<b>DSE 2</b>	<b>L-T-P-S</b>	<b>3:0:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,4</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	To understand different perspectives on economic development				
2.	To study and analyse cases studies on comparative economic development				
3.	To understand the comparative role of agriculture in economic development				
4.	To understand comparative role of industry and services in economic development				
5.	To study comparative role of the State and globalisation in economic development				



<b>Prerequisites:</b> Principles of Economics, Macroeconomics, Economic Development	
<b>MODULE – 1: INTRODUCTION AND PERSPECTIVES</b>	
Defining the Developing World – Demography and Development– Basic Indicators of Development: Real Income, Health, and Education – Holistic Measures of Living Levels and Capabilities –Characteristics of the Developing World: Diversity within Commonality – How Low Income Countries differ from Developed Countries in their Earlier Stages – Convergence of Living Standards – Long Run Causes of Comparative Development	
<b>MODULE – 2: OVERVIEW OF ECONOMIC DEVELOPMENT</b>	
Case studies: United Kingdom, USA, Europe – Russia (since 1917), Japan (since 1868), France, China (from 1949), South East Asian countries (from 1950s), India – Comparative Analysis of India, China and South East Asian countries	
<b>MODULE – 3: AGRICULTURE</b>	<b>9</b>
Agrarian surplus and the role of the peasantry in economic development–Comparative role of agriculture in development across countries – Role of government across countries	
<b>MODULE – 4: INDUSTRY AND SERVICES</b>	<b>9</b>
The industrial revolution in Britain – Industrialisation in late industrialisers – Division of labour, structure of industrial authority, organisation of work and industrial production –Comparative role of industry in development across countries	
<b>MODULE – 5: ROLE OF STATE AND GLOBALISATION</b>	<b>9</b>
Role of State in Development – Planning – Comparison across countries – Globalisation in historical perspective– the economics and politics of multilateral agreements; trade, production patterns and world inequality; financial instability in a globalized world.	
<b>TEXT BOOKS</b>	
1.	Michael P. Todaro and Stephen C. Smith, <b>Economic Development</b> , 12 <sup>th</sup> Edition, Pearson Education, 2017. (Chapter 2, and books/papers referred therein)
2.	Masahiko Aoki, Timur Kuran, and Gerard Roland, <b>Institutions and Comparative Economic Development</b> , Palgrave Macmillan, 2012.
3.	David S. Landes, <b>Wealth and Poverty of Nations: Why Some Are So Rich, and Some So Poor</b> , WW Norton, 1998.
<b>REFERENCE BOOKS</b>	
1.	Martin Ravallion, <b>The Economics of Poverty: History, Measurement, and Policy</b> , Oxford University Press, 2016.
2.	Abhijit Vinayak Banerjee, Roland Benabou, and Dilip Mookherjee, <b>Understanding Poverty</b> , Oxford University Press, 2006.
3.	Abhijit Banerjee and Esther Duflo, <b>Poor Economics: Rethinking Poverty and the Ways to End it</b> , Penguin 2013.
4.	Abhijit Banerjee and Esther Duflo, <b>Good Economics for Hard Times: Better Answers to Our Biggest Problems</b> , Penguin 2013.
5.	Angus Maddison, <b>Contours of the World Economy 1-2030 AD: Essays in Macroeconomic History</b> , Oxford University Press, 2007.
6.	Thomas Piketty, <b>Capital in the Twenty-First Century</b> , Harvard University Press, 2017.
7.	Daron Acemoglu and James A. Robinson, <b>Why Nations Fail: The Origins of Power, Prosperity, and Poverty</b> , Profile Books, 2013.
8.	S. Swamy, <b>Economic Development and Reforms in India and China: A Comparative</b>

	<b>Perspective</b> , Haranand Publications, 2010.
<b>ONLINE RESOURCES</b>	
1.	www.worldbank.org (World Development Indicators, World Development Reports)
2.	www.undp.org (Human Development Reports)

<b>COURSE TITLE</b>	<b>ENVIRONMENTAL ECONOMICS</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENC1353</b>	<b>Course Category</b>	<b>DSE 3</b>	<b>L-T-P-S</b>	<b>3:0:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,3,4</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	To understand the role of environmental economics and how to model solutions to environmental problems				
2.	To study the role of environmental economics in ensuring air quality				
3.	To study the role of environmental economics in ensuring water quality				
4.	To study the role of environmental economics in managing hazardous solid wastes and toxic substances				
5.	To study the role of environmental economics in managing global environment				
<b>Prerequisites:</b> Basic concepts of Economics, Statistics					
<b>MODULE – 1: INTRODUCTION</b>					<b>24</b>
Role of Environmental Economics – Theoretical Foundations - Modelling Environmental Problems – Role of Economics in Environment Management – Modelling Market Process: Review of Basics – Modelling Market Failure – Modelling Solutions to Environmental Problems – Conventional Solutions: Command-and-Control Approach – Economic Solutions: Market Approach – Analytical Tools – Environmental Risk Analysis – Assessing Benefits – Assessing Costs – Benefit-Cost Analysis in Environmental Decision Making					
<b>MODULE – 2: THE CASE OF AIR</b>					<b>3</b>
Defining Air Quality: Standard-Setting Process – Improving Air Quality: Controlling Mobile and Stationary Sources – Global Air Quality: Policies for Ozone Depletion and Climate Change					
<b>MODULE – 3: THE CASE OF WATER</b>					<b>3</b>
Defining Water Quality: Standard Setting Process – Improving Water Quality: Controlling Point and Nonpoint Sources – Protecting Safe Drinking Water					
<b>MODULE – 4: SOLID WASTES AND TOXIC SUBSTANCES</b>					<b>3</b>
Managing Hazardous Solid Waste and Waste Sites – Managing Municipal Solid Waste – Controlling Pesticides and Toxic Chemicals					

<b>MODULE – 5: GLOBAL ENVIRONMENT MANAGEMENT</b>		<b>12</b>
Population Growth, Resource Use, and Environment – Gender Issues – Sustainable Development: International Environmental Agreements and International Trade – Energy Consumption, Economic Growth and Welfare – Sustainable Approaches: Industrial Ecology and Pollution Prevention		
<b>TEXT BOOKS</b>		
1.	Scott J. Callan and Janet M. Thomas, <b>Environmental Economics and Management: Theory, Policy, and Applications</b> , Sixth Edition, Cengage Learning, 2012.	
2.	John Asafu-Adjaye, <b>Environmental Economics for Non-Economists</b> , World Scientific, 2000.	
3.	Charles D. Kolstad, <b>Intermediate Environmental Economics</b> , Second Edition, Oxford University Press, 2012.	
<b>REFERENCE BOOKS</b>		
1.	Peter Berck and Gloria Helfand, <b>The Economics of the Environment</b> , Pearson, 2015.	
2.	R.N. Bhattacharya, <b>Environmental Economics: An Indian Perspective</b> , Oxford University Press, 2002.	
<b>ONLINE RESOURCES</b>		
1.	<a href="https://swayam.gov.in/nd1_noc20_hs02/preview">https://swayam.gov.in/nd1_noc20_hs02/preview</a>	

<b>COURSE TITLE</b>	<b>PUBLIC ECONOMICS</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENC1354</b>	<b>Course Category</b>	<b>DSE 4</b>	<b>L-T-P-S</b>	<b>3:0:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,4</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	To understand basics of public finance, efficiency, and theories of public sector				
2.	To study how there could be departures from efficiency in public economics				
3.	To study the role of political economy, equity, and distribution in public economics				
4.	To understand the functioning of tax system and its principles, federalism, and intertemporal issues				
5.	To study how public finance is administered in India, especially in a federal system				
<b>Prerequisites</b> :Basic concept of Economics.					
<b>MODULE – 1: PUBLIC ECONOMICS, EFFICIENCY, AND GOVERNMENT</b>					<b>9</b>
Introduction to Public Economics – Methods – Analysing Policy – Economic Models –					

Competitive Economies – Efficiency of Competition – Lump-Sum Taxation – Assumptions – Public Sector Statistics – Theories of Public Sector – Justification for Public Sector – Public Sector Growth: Development Models, Wagner’s Law, Baumol’s Law, Political Model, Ratchet Effect – Excessive Government: Bureaucracy, Budget-Setting, Monopoly Power, Corruption, Government Agency, Cost Diffusion	
<b>MODULE – 2: DEPARTURES FROM EFFICIENCY</b> <span style="float: right;"><b>9</b></span>	
Public Goods – Private Provision – Mechanism Design – Fund-Raising – Club Goods and Local Public Goods – Externalities with Examples – Market Inefficiency – Pigouvian Taxation – Licenses – Internalisation – Coase Theorem – Nonconvexity – Imperfect Competition – Market Structure – Welfare – Tax Incidence – Specific and Ad valorem Taxation – Regulation of Monopoly – Regulation of Oligopoly – Unions and Taxation – Monopsony – Asymmetric Information – Hidden Knowledge and Hidden Action – Market Unravelling – Screening – Signalling – Moral Hazard – Public Provision of Health Care	
<b>MODULE – 3: POLITICAL ECONOMY, EQUITY AND DISTRIBUTION</b> <span style="float: right;"><b>9</b></span>	
Voting – Stability – Impossibility – Majority Rule – Alternatives to Majority Rule – Paradox of Voting – Alabama Paradox – Rent-Seeking – Rent-seeking Games – Social Cost of Monopoly – Equilibrium Effects – Government Policy – Informative Lobbying – Controlling Rent-Seeking – Equity and Distribution – Optimality and Comparability – Social Optimality – Lump-Sum Taxes – Impossibility of Optimality – Non-Tax Redistribution – Aspects of Pareto Efficiency – Social Welfare Functions – Arrow’s Theorem – Interpersonal Comparability – Comparability and Social Welfare – Inequality and Poverty – Measuring Income – Equivalence Scales – Inequality Measurement – Inequality and Welfare – Poverty – Poverty Line – Poverty Measures	
<b>MODULE – 4: TAXATION, FEDERALISM, AND ISSUES OF TIME</b> <span style="float: right;"><b>9</b></span>	
Commodity Taxation – Deadweight Loss – Optimal Taxation – Production Efficiency – Tax Rules – Equity Considerations – Applications: Reform, Optimality – Efficient Taxation – Public Sector Pricing – Income Taxation – Equity and Efficiency – Optimal Income Taxation – Laffer Curve – Tax Evasion – Tax Compliance – Compliance and Social Interaction – Multiple Jurisdictions – Fiscal Federalism – Fiscal Competition – Intertemporal Efficiency – Social Security – Types of System – Pensions Crisis – Ricardian Equivalence – Social Security Reform – Economic Growth – Exogenous Growth – Endogenous Growth – Policy Reform – Empirical Evidence	
<b>MODULE – 5: PUBLIC ECONOMICS IN INDIA</b> <span style="float: right;"><b>9</b></span>	
Constitutional Arrangements – Tax System: Structure and Reforms – Fiscal Responsibility and Budget Management Act – Budget, Deficits, and Public Debt – Fiscal Federalism in India – Role of Finance Commissions – Social Welfare Schemes – Objectives of Fiscal Policy in India – Government Budget – Major sources of Government Revenue in India – Trends in Government Revenue in India – Role of Fiscal Policy for Mobilisation of Resources for Economic Growth – Goods and Services Tax – Banking Arrangements with the Reserve Bank of India	
<b>TEXT BOOKS</b>	
1.	Jean Hindriks and Gareth D. Myles, <b>Intermediate Public Economics</b> , Second Edition, Prentice Hall, 2014.
2.	Richard Musgrave and Peggy Musgrave, <b>Public Finance in Theory and Practice</b> , Fifth Edition, McGrawHill, 2017.
<b>REFERENCE BOOKS</b>	
1.	Raghendra Jha, <b>Modern Theory of Public Finance</b> , New Age International Publishers,

	2019.
2.	Raja J. Chelliah, <b>Fiscal Policy in Underdeveloped Countries: With Special Reference to India</b> , Routledge, 2010.
3.	Amaresh Bagchi (ed.), <b>Readings in Public Finance</b> , Oxford University Press, 2005.
4.	Y.V. Reddy and G.R. Reddy, <b>Indian Fiscal Federalism</b> , Oxford University Press, 2019.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/learn/public-economics">https://www.coursera.org/learn/public-economics</a>
2.	<a href="https://nptel.ac.in/courses/109/104/109104071/">https://nptel.ac.in/courses/109/104/109104071/</a>
3.	Government of India, <b>Budget Documents and Economic Survey</b> , Most recent two to three years. Available online at <a href="https://www.indiabudget.gov.in/">https://www.indiabudget.gov.in/</a>

## SEMESTER VI

<b>COURSE TITLE</b>	<b>DEVELOPMENT ECONOMICS - II</b>			<b>CREDITS</b>	<b>4</b>
<b>Course Code</b>	<b>ENB1316</b>	<b>Course Category</b>	<b>CORE 20</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,4</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Understand development policy making and roles of market, state, and civil society				
2.	Appreciate the role of international trade in economic development				
3.	Analyse balance of payments, financial crises, and stabilisation policies				
4.	Understand the role of foreign finance, investment, and aid, in development				
5.	Analyse the role of finance and fiscal policy in development				
<b>Prerequisites:</b>					
<b>MODULE – 1: DEVELOPMENT POLICY MAKING AND THE ROLES OF MARKET, STATE, AND CIVIL SOCIETY</b>					
<b>9</b>					
A Question of Balance – Development Planning: Concepts and Rationale – Development Planning Process: Some Basic Models – Three Stages of Planning – Aggregate Growth Models – Multisector Models – Project Appraisal and Social Cost-Benefit Analysis – Government Failure and Preferences for Markets over Planning – Market Economy – Washington Consensus on Role					

of State in Development and its Subsequent Evolution – Sustainable Development Goals – Development Political Economy: Theories of Policy Formulation and Reform – Development Roles of NGOs and the Broader Citizen Sector – Trends in Governance and Reform: Corruption, Decentralisation, Development Participation	
<b>MODULE – 2: INTERNATIONAL TRADE AND DEVELOPMENT STRATEGY</b> 9	
Economic Globalisation – Some Key Issues in International Trade: Five Basic Questions, Importance of Exports, Demand Elasticities and Export Earnings Instability, Terms of Trade and the Prebisch-Singer Hypothesis – Traditional Theory of International Trade: Comparative Advantage, Relative Factor Endowments and International Specialisation, Neoclassical Model, Trade Theory and Development – Critique of Traditional Trade Theory – Traditional Trade Strategies and Policy Mechanisms for Development: Export Promotion vs. Import Substitution – Industrialisation Strategy Approach to Export Policy – South-South Trade and Economic Integration – Trade Policies of Developed Countries: Need for Reform and Resistance to New Protectionist Pressures – Case Study: Taiwan.	
<b>MODULE – 3: BALANCE OF PAYMENTS, DEBT, FINANCIAL CRISES, AND STABILISATION POLICIES</b> 9	
International Finance and Investment – Balance of Payments Account – Issue of Payments Deficits – Accumulation of Debt and Emergence of the Debt Crisis in the 1980s – Attempts at Alleviation: Macroeconomic Instability, Classic IMF Stabilisation Policies, and their Critique – Global Financial Crisis and Developing Countries: Causes and Challenges, Economic Impact, Differing Impact, Prospects, Opportunities.	
<b>MODULE – 4: FOREIGN FINANCE, INVESTMENT, AID AND CONFLICT</b> 9	
International Flow of Financial Resources – Private Foreign Direct Investment and the Multinational Corporation – Private Foreign Investment: Some Pros and Cons for Development – Private Portfolio Investment: Benefits and Risks – Role and Growth of Remittances – Foreign Aid: Development Assistance Debate – Conflict and Development – Case Studies.	
<b>MODULE – 5: FINANCE AND FISCAL POLICY FOR DEVELOPMENT</b> 9	
Role of the Financial System in Economic Development – Differences between Financial Systems of Developed and Developing Countries – Role of Central Banks and Alternative Arrangements – Functions of a Full-Fledged Central Bank – Role of Development Banking – Informal Finance and the Rise of Microfinance: Three Current Policy Debates, Limitations of Microfinance as a Development Strategy – Formal Financial Systems and Reforms – Financial Liberalisation – Fiscal Policy for Development: Macro-stability and Resource Mobilisation, Taxation: Direct and Indirect – State-Owned Enterprises and Privatisation – Theory and Experience of Privatisation – Case Study: Botswana.	
<b>TEXT BOOKS</b>	
1.	Michael P. Todaro and Stephen C. Smith, <b>Economic Development</b> , 12 <sup>th</sup> Edition, Pearson Education, 2017.
<b>REFERENCE BOOKS</b>	
1.	A.P. Thirlwall, <b>Economics of Development</b> , Ninth Edition, Palgrave, 2011.
2.	Debraj Ray, <b>Development Economics</b> , Oxford University Press, 1998.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/learn/sustainable-development">https://www.coursera.org/learn/sustainable-development</a>
2.	<a href="https://www.coursera.org/learn/political-economy">https://www.coursera.org/learn/political-economy</a>

3.	<a href="https://nptel.ac.in/courses/110/103/110103093/">https://nptel.ac.in/courses/110/103/110103093/</a>
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<b>COURSE TITLE</b>	<b>BEHAVIOURAL ECONOMICS</b>			<b>CREDITS</b>	<b>4</b>
<b>Course Code</b>	<b>ENC1317</b>	<b>Course Category</b>	<b>CORE 21</b>	<b>L-T-P-S</b>	<b>3:1:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,3,4</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	Understand the basics of behavioural economics				
2.	Analyse other-regarding preferences and behavioural time discounting				
3.	Understand behavioural game theory and behavioural models of learning				
4.	Understand emotions and bounded rationality				
5.	Appreciate behavioural welfare and neuroeconomics				
<b>Prerequisites</b> :Basic concepts of Economics.					
<b>MODULE – 1: BEHAVIOURAL ECONOMICS OF RISK, UNCERTAINTY, AND AMBIGUITY</b>					<b>9</b>
Antecedents of Behavioural Economics – Methodology in Economics – Experimental Method in Economics – Five Theoretical Approaches in Behavioural Economics – Evidence on Human Choice under Risk and Uncertainty – Behavioural Models of Decision Making – Rank Dependent Utility Theory – Prospect Theory – Applications of Behavioural Decision Theory – Human Behaviour Under Ambiguity – Neoclassical and Behavioural Models of Ambiguity					
<b>MODULE – 2: OTHER-REGARDING PREFERENCES AND BEHAVIOURAL TIME DISCOUNTING</b>					<b>9</b>
Evidence on Human Sociality – Ultimatum and Dictator Games – Gift Exchange and Trust Games – Public Goods Games – Models of Other-Regarding Preferences – Human Morality and Social Identity – Incentives and Other-Regarding Preferences: Moral Hazard, Incomplete Contracts, Reciprocity, Intrinsic, and Extrinsic Motivations – Behavioural Time Discounting – Evidence on Temporal Human Choice – Behavioural Models of Time Discounting – Applications of Present-Biased Preferences: Two Frameworks; Optimal Consumption under Hyperbolic Discounting; Endogenous Retirement Decisions; Procrastination and Preproperation; Interdependence, Multiple Activities and Competition; Optimal Sin Taxes; Investment and Leisure Goods; Other Applications of Hyperbolic Discounting					
<b>MODULE – 3: BEHAVIOURAL GAME THEORY AND BEHAVIOURAL MODELS OF LEARNING</b>					<b>9</b>
Evidence on Strategic Human Choice: Mixed Strategy Nash Equilibria; Coordination Games; Bargaining Games; Asymmetric Information, Signalling, and Cheap Talk; Public Signals and					

Coordinated Equilibria; Strategic Complements and Strategic Substitutes; Competitive Equilibrium Experiments – Models of Behavioural Game Theory – Evolutionary Game Theory – Models of Learning: Reinforcement Learning; Belief-based Models; Experience Weighted Attraction Model of Learning; Learning Direction Theories; Rule-based Learning; Multiple Games, Complexity, and Categorisation; Rational Learning – Stochastic Social Dynamics	
<b>MODULE – 4: EMOTIONS AND BOUNDED RATIONALITY</b>	
9	
Emotions and Human Behaviour – Visceral Influences and Rationality of Emotions – Cue-conditioned Behaviour and Habit Formation – Anticipation and Delay under Certainty – Fear and Anxiety under Uncertainty – Temptation Preferences – Happiness Economics – Emotions and Cognition – Judgement Heuristics – Mental Accounting – Bounded Rationality in Financial Markets – Efficient Markets Hypothesis – Noise Trader Risk – Limits to Arbitrage – Gradual Flow of Information – Stock Market Underreaction and Overreaction – Behavioural Corporate Finance	
<b>MODULE – 5: BEHAVIOURAL WELFARE AND NEUROECONOMICS</b>	
9	
Soft Paternalism – Regulation under Imperfect Self-Information – Choice and Non-Choice Data – Choice-Based Behavioural Welfare Economics – Revealed Preference under Limited Attention – Contractarian Approach – Behavioural Public Finance and Welfare – Neuroeconomics – Introduction to the Brain – Neuroeconomic Techniques – Neuroeconomics of Risky Decisions, Social Preferences, Time Preferences, Strategic Interaction – Pharmacoeconomics	
<b>TEXT BOOKS</b>	
1.	SanjitDhami, <b>The Foundations of Behavioural Economic Analysis</b> , Oxford University Press, 2016.
3.	Michelle Baddeley, <b>Behavioural Economics: A Very Short Introduction</b> , Oxford, 2017.
<b>REFERENCE BOOKS</b>	
1.	Richard H. Thaler and Cass Sunstein, <b>Nudge: Improving Decisions about Health, Wealth, and Happiness</b> , Penguin, 2009.
2.	Richard H. Thaler, <b>Misbehaving: The Making of Behavioural Economics</b> , Penguin, 2016.
3.	Daniel Kahneman, <b>Thinking, Fast and Slow</b> , Penguin, 2011.
4.	Dan Ariely, <b>Predictably Irrational: The Hidden Forces that Shape our Decisions</b> , Harper Collins, 2010.
5.	SanjitDhami, <b>The Foundations of Behavioural Economic Analysis: Volume I: Behavioural Economics of Risk, Uncertainty, and Ambiguity</b> , Oxford University Press, 2019.
6.	SanjitDhami, <b>The Foundations of Behavioural Economic Analysis: Volume II: Other Regarding Preferences</b> , Oxford University Press, 2019.
7.	SanjitDhami, <b>The Foundations of Behavioural Economic Analysis: Volume III: Behavioural Time Discounting</b> , Oxford University Press, 2019.
8.	SanjitDhami, <b>The Foundations of Behavioural Economic Analysis: Volume IV: Behavioural Game Theory</b> , Oxford University Press, 2019.
9.	SanjitDhami, <b>The Foundations of Behavioural Economic Analysis: Volume V: Bounded Rationality</b> , Oxford University Press, 2019.



10.	SanjitDhami, <b>The Foundations of Behavioural Economic Analysis: Volume VI: Behavioural Models of Learning</b> , Oxford University Press, 2019.
<b>ONLINE RESOURCES</b>	
1.	<a href="http://www.freakonomics.com">www.freakonomics.com</a>
2.	<a href="http://www.danariely.com">www.danariely.com</a>
3.	<a href="http://nudges.org/tag/behavioral-economics/">http://nudges.org/tag/behavioral-economics/</a>
4.	<a href="https://www.coursera.org/learn/duke-behavioral-finance">https://www.coursera.org/learn/duke-behavioral-finance</a>

<b>COURSE TITLE</b>	<b>INDIAN ECONOMY AFTER INDEPENDENCE</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENC1366</b>	<b>Course Category</b>	<b>DSE 5</b>	<b>L-T-P-S</b>	<b>3:0:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,4</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	To understand the state of Indian economy at independence and how it has grown and structurally changes through planning and other policy initiatives				
2.	To appreciate distributional issues in the Indian economy				
3.	To understand and analyse issues in Indian agriculture				
4.	To study and analyse issues in Indian industry, services sector, and infrastructure				
5.	To understand issues in India’s external sector				
<b>Prerequisites</b> :Basic concept of Economics.					
<b>MODULE – 1: PLANNING, GROWTH AND STRUCTURAL CHANGE</b>					
Indian Economy at Independence – Economic Growth in the Nehru Era – Planning, Market and the State – Economic Reforms: Looking Back and Agenda Ahead – Fiscal and Budgetary Developments – Demography and Development – Demographic Transition and Consequences for Development – Growth and Structural Change since 1950 – Pressing the Indian Growth Accelerator – Savings and Investment – Growth across States					
<b>MODULE – 2: DISTRIBUTIONAL ISSUES</b>					
Poverty, Inequality, and Unemployment – Measurement of Poverty – Access to Health Services – Labour, Employment and Inclusiveness					

<b>MODULE – 3: AGRICULTURE</b>	
Indian Agriculture: Developments, Issues, Policies and Agenda for Reform – Context and Conundrums of Contemporary Agriculture – Agrarian Performance and Food Price Inflation: Pre- and Post-Economic Liberalisation	
<b>MODULE – 4: INDUSTRY, SERVICES AND INFRASTRUCTURE</b>	
Industrial Development and Policies Since Independence – Economic Reforms and Manufacturing Sector Growth – Growth without Employment: Indian Manufacturing –Missing Middle – Strategies for Disinvestment and Privatisation – Competition Laws – Services in India’s Growth Process – Infrastructure and Economic Development – Indian Financial Sector: Structure and Trends	
<b>MODULE – 5: EXTERNAL SECTOR</b>	
India’s External Sector: Policies, Developments and Issues – External Sector Management – Foreign Trade Policy – Make in India – Foreign Direct Investments and Portfolio Investments – India and the WTO – Indian Economy Today: Overview and Comparative Perspective	
<b>TEXT BOOKS</b>	
1.	Uma Kapila (ed.), <b>Indian Economy Since Independence: A Comprehensive and Critical Analysis of India's Economy, 1947-2018</b> , 30 <sup>th</sup> Edition, Academic Foundation, 2019.

<b>REFERENCE BOOKS</b>	
1	Kaushik Basu and AnnemieMaertens (ed.), <b>The New Oxford Companion to Economics in India (Two Volumes)</b> , Oxford University Press, 2011.
2	Ashima Goyal (ed.), <b>A Concise Handbook of the Indian Economy in the 21<sup>st</sup> Century</b> , Oxford University Press, 2015.
<b>ONLINE RESOURCES</b>	
1	Kaushik Basu, <b>A Short History of India’s Economy: A Chapter in the Asian Drama</b> , available at <a href="https://www.wider.unu.edu/sites/default/files/Publications/Working-paper/PDF/wp2018-124.pdf">https://www.wider.unu.edu/sites/default/files/Publications/Working-paper/PDF/wp2018-124.pdf</a> .
2	<a href="https://www.undp.org/content/dam/india/docs/impact_of_the_financial_crisis_on_the_poor_in_india_some_initial_perspectives.pdf">https://www.undp.org/content/dam/india/docs/impact_of_the_financial_crisis_on_the_poor_in_india_some_initial_perspectives.pdf</a>

<b>COURSE TITLE</b>	<b>APPLIED ECONOMETRICS</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENC1367</b>	<b>Course Category</b>	<b>DSE 6</b>	<b>L-T-P-S</b>	<b>3:0:0:0</b>

CIA	40%	ESE	60%
LEARNING LEVEL	BTL – 1,2,3,4,5,6	ASSESSMENT MODEL	
COURSE OUTCOMES			PO
1.	Be able to apply basics of linear regression		
2.	Be able to do exercises involving relaxation of regression assumptions		
3.	To understand and analyse topics in cross-section data		
4.	To apply the principles in time series econometrics		
5.	To apply select topics in econometrics and use econometric software		
<b>Prerequisites :</b> Econometrics – I and II			
<b>MODULE – 1: OVERVIEW OF LINEAR REGRESSION</b>			<b>9</b>
Linear Regression Model – Nature and Sources of Data – Estimation of the Linear Regression Model – Classical Linear Regression Model – Variances and Standard Errors of OLS Estimators – Testing Hypotheses about the True or Population Regression Coefficients – $R^2$ : A Measure of Goodness of Fit of the Estimated Regression – Forecasting – Functional Forms of Regression Models – Log-linear, Double Log or Constant Elasticity Models – Testing Validity of Linear Restrictions – Log-lin or Growth Models – Lin-Log Models – Reciprocal Models – Polynomial Regression Models – Choice of Functional Form – Comparing Linear and Log-Linear Models – Regression on Standardised Variables – Regression through the Origin: Zero Intercept Model – Measures of Goodness of Fit – Qualitative Explanatory Variables Regression Models – Wage Function and its Refinement – Functional Form of Wage Regression – Dummy Variables in Structural Change and Seasonal Data – Expanded Sales Function – Piecewise Linear Regression – Examples and Exercises			
<b>MODULE – 2: REGRESSION DIAGNOSTICS</b>			
Consequences of Imperfect Collinearity – Detection and Remedial Measures – Method of Principal Components – Consequences of Heteroscedasticity – Detection and Remedial Measures – Tests of Autocorrelation – Remedial Measures – Model Evaluation – Model Specification Errors – Omission of Relevant Variables – Tests of Omitted Variables – Inclusion of Irrelevant or Unnecessary Variables – Misspecification of the Functional Form of a Regression Model – Errors of Measurement – Outliers, Leverage and Influence Data – Probability Distribution of the Error Term – Random or Stochastic Regressors – Simultaneity Problem – Dynamic Regression Models – Examples and Exercises			
<b>MODULE – 3: TOPICS IN CROSS-SECTION DATA</b>			
Linear Probability Model – Logit Model – Language of the Odds Ratio – Probit Model – Nature of Multinomial Regression Models – Multinomial Logit Model – Conditional Logit Model – Mixed Logit – Ordinal Regression Models – Ordered Multinomial Models – Estimation of Ordered Logit Model – Limitation of the Proportional Odds Model – Censored Regression Models – Maximum Likelihood Estimation of the Censored Regression Model: Tobit Model – Truncated Sample Regression Models – Poisson and Negative Binomial Regression Models – Illustrative Examples and Exercises			
<b>MODULE – 4: TIME SERIES ECONOMETRICS</b>			
Stationary and Nonstationary Time Series – Are Exchange Rates Stationary – Importance of Stationary Time Series – Tests of Stationarity – Unit Root Test of Stationarity – Trend Stationarity vs. Difference Stationary Time Series – Random Walk Model – Cointegration and Error Correction Models – Spurious Regression and its Simulation – Is the Regression of			

Consumption Expenditure on Disposable Income Spurious –When a Spurious Regression may not be Spurious – Tests of Cointegration – Cointegration and Error Correction Mechanism – Are 3-month and 6-month Treasury Bill Rates Cointegrated – AssetPrice Volatility: ARCH and GARCH Models – Extensions of the ARCH Model – Economic Forecasting with the Regression Models – Box-Jenkins Methodology: ARIMA Modelling – Vector Auto-Regression – Testing Causality using VAR: Granger Causality Test – Illustrative Examples and Exercises	
<b>MODULE – 5: SELECTED TOPICS AND SOFTWARE</b>	
<b>Panel Data Regression Models</b> – Pooled OLS Regression – Fixed Effects Least Squares Dummy Variable Model – and its Limitations – Fixed Effect Within Group Estimator – Random Effects Model or Error Components Model – Fixed Effects Model vs. random Effects Model – Properties of Various Estimators – Panel Data Regressions – <b>Survival Analysis</b> – Terminology – Modelling Recidivism Duration – Exponential Probability Distribution – Weibull Probability Distribution – Proportional Hazard Model – <b>Stochastic Regressors and Method of Instrumental Variables</b> – Endogeneity – Problem with Stochastic Regressors – correlation between Regressors and Error Term – Instrumental Variables – Monte Carlo Simulation of IV – Hypothesis Testing under IV Estimation – Test of e/ndogeneity of a regressor – How to find whether an Instrument is Weak or Strong – Multiple Instruments – Regression Involving more than one Endogenous Regressor – <b>Beyond OLS: Quantile RegressionModel</b> – Test of Coefficient Equality of Different Quantiles – <b>Multivariate Regression Models</b> – Joint Estimation – Estimation of MRM – Advantages of MRM – Technical Aspects of MRM – Illustrative Examples – Exercises on Gretl, STATA, E-Views, R and SPSS – Introduction to MATLAB, Python, C++	
<b>TEXT BOOKS</b>	
1.	Damodar Gujarati, <b>Econometrics by Example</b> , Second Edition, Palgrave Macmillan, 2015.
2.	Dimitrios Asteriou and Stephen Hall, <b>Applied Econometrics: A Modern Approach</b> , Palgrave Macmillan, 2007.
<b>REFERENCE BOOKS</b>	
1.	Dilip M. Nachane, <b>Econometrics: Theoretical Foundations and Empirical Perspective</b> , Oxford University Press, 2006.
2.	Joshua D. Angrist and Jorn-steffen Pischke, <b>Mostly Harmless Econometrics: An Empiricist’s Companion</b> , Princeton University Press, 2009.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/learn/erasmus-econometrics">https://www.coursera.org/learn/erasmus-econometrics</a>
2.	<a href="https://www.coursera.org/learn/enjoyable-econometrics">https://www.coursera.org/learn/enjoyable-econometrics</a>
3.	<a href="https://nptel.ac.in/courses/111/104/111104072/">https://nptel.ac.in/courses/111/104/111104072/</a>
4.	<a href="https://nptel.ac.in/courses/110/105/110105053/">https://nptel.ac.in/courses/110/105/110105053/</a>

<b>COURSE TITLE</b>	<b>INDUSTRIAL ECONOMICS</b>			<b>CREDITS</b>	<b>3</b>
<b>Course Code</b>	<b>ENC1368</b>	<b>Course Category</b>	<b>DSE 7</b>	<b>L-T-P-S</b>	<b>3:0:0:0</b>
<b>CIA</b>	<b>40%</b>			<b>ESE</b>	<b>60%</b>
<b>LEARNING LEVEL</b>	<b>BTL – 1,2,4</b>			<b>ASSESSMENT MODEL</b>	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	To understand different types of firm, size of firm and factors determining optimum firm				
2.	To understand market structure, innovation, productivity in industry				
3.	To study market conduct and efficiency in industry				
4.	To understand different theories of industrial location and pattern				
5.	To study and analyse Indian industrial growth, labour, and finance				
<b>Prerequisites</b> :Basic concept of Economics.					

<b>MODULE – 1: ORGANIZATIONAL FORM</b>	<b>9</b>
Organisational Forms – Types and Choice of Form of Organization – Firm – Size of the Firm – Measures of Size – Optimum Firm – Factors Determining Optimum Firm– Representative Firm Business Motives – Alternatives Types of Motives/Goals – Evaluation of Goals	
<b>MODULE – 2: ORGANIZATIONAL STRUCTURE AND PRODUCTIVITY</b>	<b>9</b>
Market Structure – Seller’s Concentration – Product Differentiation – Profitability – Innovation – Industrial Productivity – Measurement – Partial and Total Trends	
<b>MODULE – 3: MARKET CONDUCT AND EFFICIENCY</b>	<b>9</b>
Market Conduct–Theories of Product pricing - Investment Expenditure – Methods of Investment Expenditure - Theories and Empirical Evidence on Merger and Acquisition and Diversification – Economic Efficiency – Meaning of Efficiency – Industrial Productivity – Meaning and Definition, Importance - Factors Influencing Productivity – Rationalisation – Aspects of Rationalisation – Scientific Management – Automation – Benefits – Rationalisation in India	
<b>MODULE – 4: THEORIES OF INDUSTRIAL LOCATION AND PATTERN</b>	<b>9</b>
General determinants of industrial location – Approaches to Industrial Location Analysis – Alfred Weber’s Theory – Sergeant Florence’s Theory of Industrial Location - Market Area Theory – Central Place Theory of Losch – Industrial Imbalances – Causes and Remedies – Need for Balanced Regional Development of Industries – Government Policy and Approach for Development of Backward Regions in India.	
<b>MODULE – 5: INDIAN INDUSTRIAL GROWTH, LABOUR AND FINANCE</b>	<b>9</b>
Industrial Policy in India – Pre- and Post-Liberalisation Policies– New Industrial Policy and Economic Reforms – Role of Public and Private Sectors -Recent Trends in Indian Industrial Growth – Policies and Programme for Development of Small Scale Industries in India – Industrial Labour – Problems, Policies and Reforms in India - Industrial Legislation and Social	

Security Measures in India – Industrial Finance – Sources of Finance – Short Term and Long Term Finance – Choice of Funding – External vs. Internal Sources – Institutional Finance – Venture Capital and Private Equity – Financial Statement – Balance Sheet – Profit and Loss Account – Assessment of Financial Soundness – Industrial Disputes	
<b>TEXT BOOKS</b>	
1.	R.R. Barthwal, <b>Industrial Economics: An Introductory Text Book</b> , New Age International Pvt.Ltd., 2019.
2.	P.J. Devine, N. Lee, R.M. Jones, and W.J. Tyson, <b>An Introduction to Industrial Economics</b> , Fourth Edition, Routledge, 1985.
<b>REFERENCE BOOKS</b>	
1.	Jean Tirole, <b>Theory of Industrial Organization</b> , Prentice Hall India, 2007.
2.	Francis Cherunilam, <b>Industrial Economics: Indian Perspective</b> , Third Edition, Himalaya Publishing House, 1994.
3.	Louis Philips, <b>Applied Industrial Economics</b> , Cambridge University Press, 1998.
<b>ONLINE RESOURCES</b>	
1.	<a href="http://www.indianbudget.nic.in">www.indianbudget.nic.in</a> (Economic Survey – Recent years)

COURSE TITLE	HEALTH ECONOMICS			CREDITS	3
Course Code	ENC1369	Course Category	DSE 8	L-T-P-S	3:0:0:0
CIA	40%			ESE	60%
LEARNING LEVEL	BTL – 1,2,3,4			ASSESSMENT MODEL	
	<b>COURSE OUTCOMES</b>				<b>PO</b>
1.	To understand demand and supply in healthcare				
2.	To study the basics of information economics				
3.	To study economics of health innovation				
4.	To analyse health policy and public health economics				
5.	To study and analyse behavioural health economics				
<b>Prerequisites</b> :Basic concepts of Health Economics.					
<b>MODULE – 1: HEALTH AND HEALTH CARE: DEMAND AND SUPPLY</b>					<b>9</b>
Why Health Economics – Demand for Health Care – Demand for Health: Grossman Model – Socioeconomic Disparities in Health – Grossman Model and Health Disparities – Efficient Producer Hypothesis – Thrifty Phenotype Hypothesis – Direct Income Hypothesis – Allostatic Load Hypothesis – Productive Time Hypothesis – Time Preference: Fuchs Hypothesis – Labour Market for Physicians – Hospital Industry – Modern Hospital – Relationship between Hospitals and Physicians, Hospitals and Payers, and among Hospitals – Non-profits and Hospital Production					
<b>MODULE – 2: INFORMATION ECONOMICS</b>					<b>9</b>
Demand for Insurance – Declining Marginal Utility of Income – Uncertainty – Risk Aversion – Uncertainty and Insurance – Comparing Insurance Contracts – Adverse Selection: Akerlof's Market for Lemons – Rothschild-Stiglitz Model – Indifference Curves for the Robust and the Frail – Information Asymmetry and the Pooling Equilibrium – Can Markets Solve Adverse					

Selection – Adverse Selection in Real Markets – Predictions of Asymmetric Information Models – Adverse Selection in Health Insurance and Other Markets – What Prevents Adverse Selection – Moral Hazard – Graphical Representation – How to Limit Moral Hazard – Evidence in Health Insurance – Tradeoff between Moral Hazard and Risk Reduction – Upside of Moral Hazard?	
<b>MODULE – 3: ECONOMICS OF HEALTH INNOVATION</b> <b>9</b>	
Pharmaceuticals and the Economics of Innovation –Life Cycle of a Drug – Uncertainty and Costs of Drug Development – Patents – Induced Innovation – Regulation of Pharmaceutical Industry – Technology and Price of Health Care – Technology and Rise in Medical Expenditures – New Technology and Medical Inflation – Technology Overuse: Dartmouth Atlas – Explanatory Theories – Health Technology Assessment – Cost-Effectiveness Analysis – Evaluating Multiple Treatments: Cost-Effectiveness Frontier – Measuring Costs – Measuring Effectiveness – Cost-Benefit Analysis: Picking Optimal Treatment – Valuing Life	
<b>MODULE – 4: HEALTH POLICY AND PUBLIC HEALTH ECONOMICS</b> <b>9</b>	
Health Policy Conundrum – Arrow’s Impossibility Theorem – Health Policy Trilemma – How Should Health Insurance Markets Work? – How Should Moral Hazard be Controlled? – How Should Health Care Provision be Regulated – Comparing National Health Policies – Beveridge Model: Nationalised Health Care –Bismarck Model: Social Health Insurance – American Model: Employer-Sponsored Health Insurance –Population Aging, Policy Responses, and Future of Health Policy – Public Health Economics – Health Externalities – Pigouvian Subsidies and Taxes – Coase Theorem – Economics of Organ Transplantation – Economic Epidemiology – Obesity and Public Health Intervention	
<b>MODULE – 5: BEHAVIOURAL HEALTH ECONOMICS</b> <b>9</b>	
Modelling Decisions under Uncertainty – Misjudging Probabilities – Framing – Loss Aversion – Prospect Theory and Implications for Health Economics – Time Inconsistency and Health – Beta-Delta Discounting Model – Time-Consistent Preferences – Time-Inconsistent Preferences: Myopia and Hot Brains – Demand for Commitment Mechanisms – Behavioural Welfare Economics	
<b>TEXT BOOKS</b>	
1.	Jay Bhattacharya, Timothy Hyde, and Peter Tu, <b>Health Economics</b> , Palgrave Macmillan, 2014.
2.	Charles E. Phelps, <b>Health Economics</b> , Fourth Edition, Pearson, 2009.
3.	Frank A. Sloan and Chee-Ruey Hsieh, <b>Health Economics</b> , MIT Press, 2012.
<b>REFERENCE BOOKS</b>	
1.	Sherry Glied and Peter C. Smith, <b>The Oxford Handbook of Health Economics</b> , Oxford University Press, 2013.
2.	Sherman Folland, Allen C. Goodman, and MironStano, <b>The Economics of Health and Health Care</b> , Seventh Edition, Pearson, 2013.
<b>ONLINE RESOURCES</b>	
1.	<a href="https://www.coursera.org/specializations/healthcare-administration-management">https://www.coursera.org/specializations/healthcare-administration-management</a>
2.	<a href="https://nptel.ac.in/courses/110/104/110104095/">https://nptel.ac.in/courses/110/104/110104095/</a>

COURSE TITLE		PROJECT WORK			CREDITS	10								
COURSE CODE	BAB2341	COURSE CATEGORY	PC	L-T-P-S	0-0-10-0									
CIA	40%			ESE	60%									
LEARNING LEVEL	BTL – 2,3,4,5&6													
CO	COURSE OUTCOMES				PO									
1.	Understanding the concept the projects, applying the various concepts learned in the previous chapters and preparing a report based on the project undergone													
<b>Prerequisites:</b> Research Methods														
<b>MODULE – 1: INTRODUCTION</b>						<b>(1 MO)</b>								
<p>The main focus of the Project should be on the chosen area of Specialization such as General Management /Retail Management / Human Resource Management / Marketing Management / Financial Services Management / Psychology / Humanities / Sociology / Political Science for BBA &amp; BA Programs and projects with reference to their specialization.</p> <p>The project work may be carried out by identifying research / application problem in any one of the business / manufacturing / service organizations that suits the chosen area of the specialization</p> <p><b>Major Types of Project</b></p> <p>The project to be undertaken may be of various types:</p> <ul style="list-style-type: none"> <li>• <b>Exploratory type</b> The Students to explore the possible causes of a phenomena or status</li> <li>• <b>Descriptive</b> – to support or disprove existing facts with quantitative data <ul style="list-style-type: none"> <li>○ <b>Survey type</b> includes designing questionnaire for collection of data through field study, collecting data from target respondents, processing and analysing the data and arriving at conclusions</li> <li>○ <b>Experimental study</b> Conduct of experiments to find the cause and effect relations between experimental variables and dependent variables e.g. Impact of training programme on performance, impact of advertisements on sales</li> <li>○ <b>Desk research based on secondary data</b> Making use of published data, analysing and interpreting such data and arriving at meaningful conclusions.</li> </ul> </li> </ul> <p><b>Project evaluation</b></p> <p>For Project work, the assessment will be done on a continuous basis as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Review / Exam</th> <th>Weightage</th> </tr> </thead> <tbody> <tr> <td>First Review</td> <td>10%</td> </tr> <tr> <td>Second Review</td> <td>20%</td> </tr> <tr> <td>Third Review</td> <td>20%</td> </tr> </tbody> </table>							Review / Exam	Weightage	First Review	10%	Second Review	20%	Third Review	20%
Review / Exam	Weightage													
First Review	10%													
Second Review	20%													
Third Review	20%													



End - semester Exam	50%
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For end – semester exam, the student will submit a Project Report in a format specified by the Director (Academic). The first three reviews will be conducted by a Committee constituted by the Head of the Department. The end – semester examination will be conducted by a Committee constituted by the Registrar / Controller of examination. This will include an external expert.