

GOA UNIVERSITY
Taleigao Plateau, Goa 403 206

REVISED MINUTES

of the 9th Special Meeting of the

X ACADEMIC COUNCIL

Day & Date

Saturday, 30th July, 2022

Time

10.00 a.m.

**Council Hall
Goa University**

	Courses in English language. - The Course Codes for the programmes to be revised/changed. - The suggested titles of the courses to be checked. MRDSOC 204 to be removed. - Number of hours for each module to be clearly specified. - The Chairperson, Board of Studies was requested to resubmit the syllabus incorporating the suggestions. The Vice-Chancellor was authorized to approve the same on behalf of the Academic Council. The proposed syllabus/Structure for Semester III and Semester IV was deferred by the house. (Action: Assistant Registrar Academic – PG)
D 3.34	The minutes of the Board of Studies in Economics meeting held on 27.07.2022. The Academic Council approved the minutes of the Board of Studies in Economics meeting held on 27.07.2022 with the suggestion to revise/change the Course Codes for the Programme. (Action: Assistant Registrar Academic – PG)
D 3.35	Minutes of the Board of Studies in Konkani meeting held on 27.07.2022. The Academic Council approved the minutes of the Board of Studies in Konkani meeting held on 27.07.2022 with the following suggestions: - The Course Codes for the PG Programme to be revised/Changed. - The Chairperson, Board of Studies was requested not to indicate the titles of the Courses in English language. - The suggested titles for some of the courses to be checked for correctness. - The Discipline Specific Core Course (KKC 502 Research Methodology) to be offered as RSE. - Course Objectives and Learning outcomes in the syllabus to be clearly indicated. - The Chairperson, Board of Studies was requested to resubmit the syllabus incorporating the suggestions. The Vice-Chancellor was authorized to approve the same on behalf of the Academic Council. The proposed syllabus/structure for Semester III and Semester IV was deferred by the house. (Action: Assistant Registrar Academic – PG)
D 3.36	Minutes of the Board of Studies in Commerce PG meeting held on 02.06.2022. The Academic Council approved the minutes of the Board of Studies in Commerce PG meeting held on 02.06.2022 with the following suggestions: - The Course Codes for the PG Programme to be revised/changed. - The word 'Course' to be replaced with 'Programme'. - The Paragraphs on 'Duration of the Programme', 'Credits' and 'Scheme of Teaching' to be deleted. 'Need of the Course' to be replaced with 'prerequisites for the Course'.

GOA UNIVERSITY
Taleigao Plateau, Goa 403 206

FINAL UPDATED AGENDA

For the 9th Special Meeting of the

X ACADEMIC COUNCIL

Day & Date

30th July, 2022

Time

10.00 a.m.

Venue
Conference Hall
Administration Block

Date: 27.07.2022
Place: Goa University

Sd/-
Signature of the Dean

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D 3.34	The minutes of the Board of Studies in Economics meeting held on 27/07/2022. Part A. i. Recommendations regarding courses of study in the subject or group of subjects at the undergraduate level: There was a specific request for consideration of changes and need for clarity in the B. A. (GENERAL/HONOURS) ECONOMICS (Semester-IV) Data Analysis - II [Course Code: ECS102]. After due deliberation, the members decided that one module of the course would be altered. The revised syllabus of this paper is appended herewith. The assessment could have a component of practical in the course and this can be assessed for the ISA. The SEA will be theoretical. ii. Recommendations regarding courses of study in the subject or group of subjects at the postgraduate level: 1. The courses in MA Economics have been revised to comply with 1 credit to 15 hours format. 2. Further, there has been a revision of the list of core courses. There were two courses in Microeconomics and Macroeconomics previously. Now there will be one course in Microeconomics and Macroeconomics. Introductory Econometrics and International Trade which were earlier elective courses will now be a core courses. All courses have been updated to take into account recent developments. 3. The economics discipline in GBS placed a proposal to start a 5-year integrated programme leading upto a MA degree in Economics with multiple entry and exit options as per NEP. The members discussed the pros and cons of the same. The Chairperson pointed out the proposal of the new programme was approved by the GBS school council based on which this proposal was being placed for consideration of the BoS. The members approved of the idea of the new programme for implementation from the academic year 2023-24 subject to necessary approval of the statutory bodies. The details of each course would be presented along with the Ordinances once there is more clarity on the NEP format which is in finalisation stages at a future meeting of the BoS. iii Recommendations regarding courses of study in the subject or group of subjects at the PhD level: The members felt that the Research Methodology course for PhD students needs further deliberation as it is a common paper. This can be approved by circulation if necessary.
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Further, members felt that the paper on research ethics should be adopted as per UGC guidelines. UGC model syllabus is placed in appendix for consideration. However, clarity is required for conduct of the course and its evaluation.

Part B

- i) Scheme of Examinations at undergraduate level: Not on agenda
- ii) Panel of examiners for different examinations at the undergraduate level: Not on agenda
- iii) Scheme of Examinations at postgraduate level: Not on agenda
- iv) Panel of examiners for different examinations at post-graduate level: Not on agenda

Part C.

- 1. Recommendations regarding preparation and publication of selection of reading material in the subject or group of subjects and the names of the persons recommended for appointment to make the selection:
Not on agenda

Part D

- i. Recommendations regarding general academic requirements in the Departments of University or affiliated colleges: Not on agenda
- ii. Recommendations of the Academic Audit Committee and status thereof: Not on agenda

Part E.

- i. Recommendations of the text books for the course of study at undergraduate level:
Not on agenda
- ii. Recommendations of the text books for the course of study at post graduate level: Not on agenda

Part F.

Important points for consideration/approval of Academic Council

- i. The important points/recommendations of BoS that require consideration/approval of Academic Council (points to be highlighted) as mentioned below
 - a. Revision of B. A. (GENERAL/HONOURS) ECONOMICS (Semester-IV) Data Analysis - II [Course Code: ECS102]. [\(Annexure I 1282 to Annexure III\)](#)
 - b. Revision of MA (Economics) courses
 - i) To comply with 1 credit: 15 hours format
 - ii) Re-organisation of core and optional courses
 - iii) Proposal to start 5-year integrated programme in Economics as per NEP from 2023-24. [\(Annexure II\)](#)
 - c. Approval of PhD Research Ethics paper. Research methods course to be adopted at school level. [\(Annexure III\)](#)

- ii. The declaration by the Chairperson that the minutes were readout by the Chairperson at the meeting itself.

The minutes were readout by the Chairperson at the meeting

Date : 27.07.2022

Sd/-
(Professor Pranab Mukhopadhyay)
Signature of the Chairperson

Part G. The Remarks of the Dean of the Faculty

- i. The minutes are in order.
- ii. The minutes may be placed before the Academic Council with remarks if any.
- iii. May be recommended for approval of Academic Council.
- iv. Special remarks if any.

Place: (Goa Business School)

Date : 27.07.2022

Sd/-
Signature of the Dean
Goa Business School

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D 3.35

Minutes of the Board of Studies in Konkani Meeting held on 27.07.2022.

Part A.

- i. Recommendations regarding courses of study in the subject or group of subjects at the undergraduate level: NIL
- ii. Recommendations regarding courses of study in the subject or group of subjects at the postgraduate level:
 - a) SEMESTER WISE FLOW CHART OF COURSES FOR M.A. PROGRAMME IN KONKANI FOR SEMESTER: I TO SEMESTER IV. (Refer Enclosed [ANNEXURE: I to Annexure VI](#)) refer page no.1330
 - b) REVIEW OF SYLLABUS AND CLASS HOURS FROM 48 & 24 TO 60 & 30 (04 AND 02 CREDITS RESPECTIVELY) - FOR 08 DISCIPLINE SPECIFIC CORE COURSES (DSCC) : KKC 501, KKC 502, KKC 503, KKC 504, KKC 505, KKC 506, KKC 507, KKC 508. (Refer Enclosed ANNEXURE: II)
 - c) REVIEW OF SYLLABUS AND CLASS HOURS FROM 48 & 24 TO 60 & 30 HRS (04 AND 02 CREDITS RESPECTIVELY) FOR OPTIONAL COURSES UNDER DISCIPLINE SPECIFIC OPTIONAL COURSE (DSOC).
(Refer Enclosed ANNEXURE: III)
 - d) REVIEW OF SYLLABUS AND CLASS HOURS FROM 48 & 24 TO 60 & 30 HRS (04 AND 02 CREDITS RESPECTIVELY) FOR OPTIONAL COURSES UNDER, RESEARCH SPECIFIC OPTIONAL COURSE (RSOP)
(Refer Enclosed ANNEXURE: IV)

INTRODUCTION OF TWO OPTIONAL COURSES IN RESEARCH SPECIFIC
OPTIONAL COURSE (RSOC) CATEGORY : KKO 615 - STUDY OF KONKANI TIATR,
KKO 616 - ECO CRITICISM.
(Refer Enclosed ANNEXURE: IV)

D 3.34 Minutes of the Board of Studies in Economics meeting held on 27.07.2022

Annexure I

B. A. (GENERAL/HONOURS) ECONOMICS (Semester-IV)

Data Analysis - II

[Course Code : ECS102]

Credits:04

Lectures: 60 (1 hour each)

Objective: *To train the students in basic statistical tools and techniques using suitable software*

1. Index Numbers (15 Lectures)
Introduction, Uses, Types, Methods of Construction: (Simple aggregate method, Weighted aggregate method, simple Average of price relatives and Weighted average of price relatives); Tests of Consistency (Unit, Time reversal, Factor reversal and Circular); Base shifting, Splicing and Deflating of Index numbers; and Limitations.
2. Probability Distributions (15 Lectures)
Introduction to Probability; Discrete and Continuous Distributions: Binomial, Poisson, Normal, Standard Normal, Student-t, Chi-Square, F-distribution
3. Parametric and Non Parametric Tests (15 Lectures)
Introduction to Hypothesis Testing. Parametric and Non Parametric tests: t test, chi-square tests ; Fisher Exact Probability test ; Mann-Whitney Test; Wilcoxon Signed-Rank Test; Kruskal-Wallis Test and Friedman Test.
4. Analysis of Variance (ANOVA) (15 Lectures)
Introduction, Assumptions, One-way classification, construction of ANOVA table, hypothesis testing for more than two means.

Main Text:

Gupta S.C. (2016): Fundamentals of Statistics, 7 th Edition, Himalaya Publishing House Pvt. Ltd, Mumbai

Joseph F. Hair, William C. Black, Barry J. Babin and Rolph E. Anderson (2014): Multivariate Data Analysis, 7 th edition; Pearson Education India

References:

G.C. Beri (2005): Business Statistics, 2nd Edition, Tata McGraw Hill Publishing Company Ltd, Delhi

Ron C. Mittelhammer (2013): Mathematical Statistics for Economics and Business, 2 nd Edition, Springer

Gerald Keller (2017): Statistics for Management and Economics, 11th Edition, Cengage Learning, USA.

Annexure II

**SYLLABUS OF M.A. ECONOMICS PROGRAMME UNDER CBCS (Post
NEP 2022-23)**

COURSES CODES

Sl.No.	Codes	Paper	Number of Credits (4 credits-60 hours)
		CORE COURSES (8)	
1	ECC 111	Microeconomics	4
2	ECC 112	Macroeconomics	4
3	ECC 113	Public Economics and Public Policy	4
4	ECC 114	Economic Growth and Development	4
5	ECC 115	Mathematics For Optimisation	4
6	ECC 116	Statistics For Economic Analysis	4
7	ECC 117	International Trade and Finance	4
8	ECC 118	Introduction to Econometrics	4
		OPTIONAL COURSES	
1	ECO 111	Indian Economy	4
2	ECO 112	Introduction to Spatial Economics	4
3	ECO 113	Introduction to Geo-spatial Techniques	4
4	ECO 114	Environmental Economics	4
5	ECO115	Introduction to Game Theory	4

6	ECO 116	Economics of Regional Integration	4
7	ECO 117	Indian Public Finance	4
8	ECO 118	Human Resource Development	4
9	ECO 218	Time Series Econometrics	4

Programme: M. A. Economics

Course Code: ECC 111

Title of the Course: Microeconomics

Number of Credits: 4

Effective from AY: 2022-23

<u>Prerequisites for the course:</u>	Graduate in any discipline.	Hours Per Module
<u>Objective:</u>	The objective of the course is to expose the students the applications of modern theories demand, production and the complex decision making problems faced by the firms.	

<u>Content:</u>	Module 1 Theory of Consumer Behaviour Consumer's tastes. Indifference Curves-Consumer's choice and equilibrium- Income and substitution effects- Derivation of demand curve Applications of Indifference curves - Revealed preference theorem- market demand models-constant elasticity and distributed lag models. Developments in the theory demand- Constant elasticity demand function- Dynamic versions of demand functions-Nerlove, Houthakker and Taylor-Linear expenditure system. Module 2 Theory of Production and Costs Technology of production. Production function: short run and long run- isoquants-Elasticity of substitution, Homogenous and Homothetic -Cobb Douglas Production function - CES,VES production functions-Recent developments-Technical progress and production function- Returns to scale - Choice of least cost combination of inputs. Costs- Short and long run-The L shaped cost curve. Derivation of cost function -Duality of cost and production function Module 3 Introduction to perfect and imperfect markets. Chamberlin's model of monopolistic competition.Oligopoly Market Structure Uncertainty and interdependence- Non Collusive Oligopoly models - Cournot, Bertrand, Chamberlin, Sweezy and Stackelberg models-Collusive models-Cartels and Price leadership models-Managerial Theories of Firm ; Baumol's sales revenue maximisation- Marris maximum rate of growth and profits hypothesis- Williamson's discretion model -Behavioural model of Cyert and March Firm's demand for factors in the short run and long run- factor shares-Technological progress and factor shares-	15 15 15
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Product Exhaustion theorems

15

Module 4

General Equilibrium- General equilibrium in production and exchange -Walrasian Model- Existence, uniqueness and stability of General Equilibrium. Information Economics-Adverse Selection and Moral hazards-Market for Lemons-Pooling and separating equilibrium-signaling and screening-Principal-agent Problem.

<u>Pedagogy:</u>	● Chalk and talk aided by ICT enabled lectures ● PC lab exercises ● Assignments and presentations ● Group activity ● MOOC (or similar) Component	
<u>References/Readings</u>	Core Readings C1. Koutsoyannis,A(1983),Modern Microeconomics Macmillan, London. C2. Varian, H.R.(2010), <u>Intermediate Microeconomics: A Modern Approach</u>, W.W. Norton, New York. Additional readings A1. Zerloff.J.M.(2020), <u>Microeconomics</u>, Theory and Applications with Calculus, Pearson. A2. Pindyck, Robert, Daniel .Rubinfeld (2017) <u>Microeconomics</u>, Pearson Education	
<u>Learning Outcomes</u>	Students will be able to explain decision making by : a) Households to maximise utility b) Firms to maximize profits	

Programme: M. A. Economics

Course Code: ECC 112

Number of Credits: 4

Title of the Course: Macroeconomics

Total Contact Hours: 60

Effective from AY: 2022-23

<u>Prerequisites for the course:</u>	Graduate in any discipline.	
<u>Objective:</u>	To understand the role of effective demand in determining employment, output, prices and interest rates.	Contact Hours

<u>Content:</u>	Module 1 National Accounts System: UN system of accounts, India's Accounting system, Green Accounting Classical System: Classical model introduction – Employment, labour, supply – Equilibrium output and employment Money prices and interest under classical system, quantity theory of money (Fisher and Cambridge) Module 2: Keynesian system: Simple Keynesian Model – Equilibrium income and changes in equilibrium income. Consumption function & Investment function; IS-LM model: Fiscal and Monetary Policy effects on IS-LM model. Open economy macroeconomics under fixed and flexible exchange rate (Mundell-Fleming model) Module 3: Monetarists, New Classical Economics and New Keynesian: Friedman's restatement of quantity theory, National Rate of Unemployment Theory-- Philips Curve – short run and long run, Rational Expectations Theory. New Keynesian Model – Sticky price, efficiency wage and Insider – Outsider model. Module 4: Monetary Policy Goals and targets-strategies for monetary policy Targeting monetary aggregates-Interest rate targeting Intermediate targeting- Money stock versus interest rates. Money supply in India, Money multiplier-model of money supply determination-	15 15 15 15
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<u>Pedagogy:</u>	● Chalk and talk aided by ICT enabled lectures ● PC lab exercises ● Assignments and presentations ● Group activity ● MOOC (or similar) Component	
<u>References/Readings</u>	Core Readings C1. R.T. Froyen (2014) Macroeconomics: Theories and Policies, Pearson, New Delhi Additional References A1. N. Gregory Mankiw, 2015, Macroeconomics , Macmillan, New Delhi A2. R. Dornbusch, S. Fishser, R.Startz, 2020, Macroeconomics, Mcgraw Hill, New Delhi A3. Frederic S. Mishkin, 2016, Macroeconomics: Policy & Practice. Pearson, New Delhi A4. Annual Report, Reserve Bank of India, Mumbai	
<u>Learning Outcomes</u>	Students will be able to 1. analyse the relationships between different macroeconomic variables like aggregate income, employment, interest rate and prices 2. predict consequences of fiscal and monetary policy in a closed economy	

Programme: M. A. Economics

Course Code: ECC 113
Policy

Title of the Course: Public Economics and Public

Number of Credits: 4

Contact Hours: 60

Effective from AY: 2022-2023

<u>Prerequisites for the course:</u>	Graduate in any discipline	
<u>Objective:</u>	This course will provide students a basic understanding of welfare economics, market failure, tax, and public expenditure	Contact Hours
Content	Module 1 Public Economics- Nature and need. Role of Government – effect of the intervention. Policy Debates over Social Security, Health Care, and Education. Fundamental theorems of welfare. Social Welfare Functions. Economic efficiency, and Pareto optimality, Dalton’s Principle of maximum social advantage, Pigou’s concept of welfare.	15
	Module 2: Market Failure - causes, Externalities – types, Private-Sector Solutions to Negative Externalities, Public-Sector Remedies for Externalities, information asymmetry and Third Best Policies. Optimal Provision of Public and private Goods, Free rider Problem, Voting – majority voting, Arrow’s Impossibility Theorem, Median Voter Theory	15
	Module 3: Principles of Taxation –Principle of Fiscal Neutrality, Excess Burden, Doctrine Principle of Equity, Benefit Principle, Bowen and Lindhal Models, Ability to pay Principle. Meaning, types and Measurements of Tax Capacity, Incidence of Tax- Issues in Efficiency and Equity, Deadweight losses. Theory of Optimal taxation	15
	Module 4: Nature and composition of public expenditure, Criterion for Public Expenditure- Social Cost-Benefit Analysis. Wagners Law of	15

Expanding state activity, The Tiebout Model. Fiscal Federalism in India -Devolution of resources and grants

Pedagogy:

- Chalk and talk aided by ICT enabled lectures
- PC lab exercises
- Assignments and presentations
- Group activity
- MOOC (or similar) Component

<u>References/Readings</u>	Core readings C1. Gruber, J. (2005). Public Finance and Public Policy. Worth Publishers. Additional References A1. J. V. M. Sarma (2018). Public Finance: Principles and Practices. Oxford University Press, New Delhi A2. Raghbendra Jha (1998) Modern Public Economics, Routledge, London A3. Gareth D. Myles (1995) Public Economics, Cambridge University Press, Cambridge	
<u>Learning Outcomes</u>	The students will be able to understand the fundamental theories of public economics, reasons for market failure, and taxation.	

Programme: M. A. Economics

Course Code: ECC 114
Development

Title of the Course: Economic Growth and

Number of Credits: 4

Total Contact Hours:60

Effective from AY: 2022-23

<u>Prerequisites for the course:</u>	Graduate in any discipline	
<u>Objective:</u>	To introduce students to the theories and empirics of growth and development and to enhance the students' knowledge of economic problems facing developing countries.	Hours

Content	Module 1	15
	Economic growth and Development – meaning and criteria, Measurements of development - GDP; Human development index, Per Capita Income and human development.	
	Structural characteristics of developing countries – demographic, occupational and production, rural-urban migration. Agrarian change and industrial transformation, Post-industrial society	
	Economic inequality – meaning, Criteria for inequality measurement - Anonymity principle, Population principle, Relative income principle and the Dalton principle, The Lorenz curve, Complete measures of inequality - the range, the Kuznets ratios, the mean absolute deviation, the coefficient of variation and the Gini coefficient.	
	Module 2	15
	Rostow's Stages of Growth- Big Push- Balanced and Unbalanced Growth- Critical Minimal Effort- Ranis Fei, Joan Robinson golden age theory.	
	Module 3	15
	Growth models Keynesian model: Harrod – Domar growth model, Neo-classical model: Solow's model of economic growth, Convergence – Conditional and Unconditional. Convergence and explaining differences in growth rates	
	Module 4	15
	New growth theories	
	Romer Model, The Final-Goods Sector, The Intermediate-Goods Sector, The Research Sector	
	Basic Elements of the Schumpeterian Model, Growth in the Schumpeterian Model	
	The "AK" Model, Externalities and AK Models, Evaluating Endogenous Growth Models	

	Role of international trade in growth and development	
<u>Pedagogy:</u>	● Chalk and talk aided by ICT enabled lectures ● PC lab exercises ● Assignments and presentations ● Group activity ● MOOC (or similar) Component	
<u>References/ Readings</u>	Core Reading C1. Ray, Debraj, (2010), Development Economics, OUP, Delhi. Additional References A1. Cypher, J. M., & Dietz, J. L. (2009). The process of economic development, Routledge, London A2. Charles I. Jones and Dietrich Vollrath, (2013) Introduction To Economic Growth, Viva Books Pvt. Ltd., New Delhi	
<u>Learning Outcomes</u>	Students will be able to a) Evaluate development and growth processes especially in developing countries. b) Explain the transition of economies based on their phase of growth	

Programme: M. A. Economics

Course Code: ECC 115
Analysis

Title of the Course: Mathematics for Economic

Number of Credits: 4

Total Contact Hours:60

Effective from AY: 2022-23

<u>Prerequisites for the course:</u>	Graduate in any discipline	
<u>Objective:</u>	To learn the mathematical tools and concepts that aid in analysing economic optimisation.	Contact Hours
<u>Content:</u>	Module 1: Vectors and Matrices Vectors, Vector Spaces, Linear Dependence, Basis. Elementary operations with Matrices, Equivalence, Determinants, Inverse of Matrix, Rank of a Matrix, Cramer's Rule. Introduction to Input-Output techniques. Module 2: Set Theory: Sets, Set operations, Finite and Infinite Sets, Non-denumerable sets, Cartesian Product, Relations, Functions, Ordered Sets, Linear Point Sets. Functions & Limits: Limit of a function, continuity, Necessary and sufficient conditions. Module 3: Differentiation: Rules of differentiation: Total derivatives and Partial derivatives. Maxima and minima, points of inflexion. Integration: Reimann integral, Fundamental Theorem of the calculus, Techniques of integration and Definite integrals. Applications in economics: Theory of the firm (cost) & Growth Module 4: Optimisation: Unconstrained & Constrained Application to economics: cost curves, demand curves, Theory of the consumer and Theory of the Firm under Perfect and Imperfect Competition.	15 15 15 15

<u>Pedagogy:</u>	● Chalk and talk aided by ICT enabled lectures ● PC lab exercises ● Assignments and presentations ● Group activity ● MOOC (or similar) Component	
<u>References/ Read ings</u>	Core reading C1. K. Sydsaeter, P. Hammond, Strom and Carvajal (2018), Essentials of Mathematics for Economics Analysis, Pearson. Fifth Edition Additional References A1. Simon, Carl P. & L. Blume (2018) Mathematics for Economists W.W. Norton, New York A2. A.C. Chiang and K. Wainwright (2017) Fundamental Methods in Mathematical Economic McGraw Hill, New York	
<u>Learning Outcomes</u>	Solve problems involving optimisation in Microeconomics including Utility and Production theory	

Programme: M. A. Economics

Course Code: ECC 116
Analysis

Title of the Course: Statistics For Economic

Number of Credits: 4

Total Contact Hours:60

Effective from AY: 2022-23

<u>Prerequisites for the course:</u>	Graduate in any discipline	
<u>Objective:</u>	To learn the statistical techniques and concepts that aid economic analysis and prepare the base for undertsiang econometric applications.	Contact Hours

<u>Content:</u>	Module 1: Probability Sampling methods, Sample Space, Random Variable, Addition and multiplication theorem-Conditional Probability, Bayes Theorem, Distribution Function, Mathematical Expectation, Exploratory Data analysis: Measures of central tendency and variance. Skewness and Kurtosis. Module 2: Probability Distributions : Discrete, Continuous and Sampling Distributions: Binomial, Poisson, Normal, Standard Normal, Student-t, Chi-Square, F distribution. Module 3: Testing of Hypotheses: Concepts & Applications Testing of Hypothesis; Null and Alternative Hypothesis, Type I & II errors. Levels of Significance. Testing mean, proportion - single and two populations. Testing t, z, F, chi-square test. Module 4: Correlation & Regression: Covariance, Pearson's Correlation, Rank Correlation. Introduction to Two Variable Regression.	15 15 15 15
<u>Pedagogy:</u>	● Chalk and talk aided by ICT enabled lectures ● PC lab exercises ● Assignments and presentations ● Group activity ● MOOC (or similar) Component	
<u>References Readings</u>	Core Reading C1. Mark L. Berenson, David M. Levine, Kathryn A. Szabat (2015), Basic Business Statistics, Pearson publication C2. David M. Levine, David F. Stephan, Kathryn A.	

	Szabat, (2017) Statistics For Managers Using Ms Excel, Pearson Additional References A1. David Spiegelhalter (2020) The Art of Statistics: Learning from Data, Pelican Books, UK A2. David Freedman, Robert Pisani, Roger Purves (2007) Statistics, W.W. Norton, New York	
<u>Learning Outcomes</u>	Solve problems relating to discrete and continuous probability distributions.	

Programme: M. A. Economics

Course Code: ECC 117

Title of the Course: International Trade and Finance

Number of Credits: 4

Effective from AY: 2022-23

Prerequisites for the course:	Students must have basic knowledge of international economics at the level.	Hours
Objective:	The Objectives of the course are ● to provide the students with a theoretical and analytical understanding of international trade and finance ● to expose the students to the factors affecting international trade, investment, exchange rate and regional trading blocs and critically evaluate their significance in the economy. ● to provide skill sets to the students to understand the complexities involved in formulating and implementing international trade policies.	
Content:	Module 1: Theories of International Trade Classical and Neo-Classical Models: Smith, Ricardo, Heckscher-Ohlin, Specific factors model, Stolper-Samuelson, Rybczynski theorem, and Factor Price Equalization Theorems; Empirical Evidence - the Leontief Paradox. New Theories: Economies of scale, Imperfect competition - trade based on product differentiation and intra-industry	15

	trade, dynamic technological differences-product cycle model and Technology-Gap Models. Module 2: Trade Policy Free trade and protection; Trade restriction-Tariffs (Partial and general equilibrium analysis), optimum tariff; Non –tariff barriers: Quotas, Voluntary export restraints, international cartels, dumping, export subsidies. Free Trade Areas versus Customs Union, Trade Creation and Trade Diversion under custom union; Static and dynamic benefit of regional integration, WTO and trade policy reforms in India Module 3: Balance of Payments The balance of payments: concepts and measurement – balance of trade and transfers, current and capital accounts – deficits and surpluses – national income and balance of payments. Balance of payments adjustments: types and causes of disequilibrium income approach, foreign trade multiplier, price approach, exchange rate changes, Marshall–Lerner condition of devaluation, empirical measurement of import and export demand elasticities, elasticity and absorption approaches, monetary approach and the terms of trade Module 4: International money and foreign exchange market Spot and forward market, demand and supply of foreign exchange, purchasing power parity theory, exchange rates (nominal, effective, real and shadow) The international capital market: nature and characteristics, Eurocurrency markets, international financial risk management, international capital movements, commercial borrowings of developing countries, external debt management, transfer problem.	15 15 15
Pedagogy:	● Chalk and talk aided by ICT enabled lectures ● PC lab exercises ● Assignments and presentations ● Group activity	

	MOOC (or similar) Component	
<u>References/Readings</u>	Core Readings C1. Salvatore, Dominick, International Economics, Prentice-Hall, 13th Edition (2019), John Wiley & Sons. C2. Robert C. Feenstra & Alan M. Taylor (2021), Fifth Edition, International Trade, Worth Publishers. Additional References A1. Paul R. Krugman, Maurice Obstfeld, and Marc Melitz (2017), International Finance: Theory and Policy, 11th Edition, Pearson. A2. E. Helpman (2011) Understanding Global Trade, Harvard University Press, MA A3. Giancarlo Gandolfo (2014) International Trade Theory and Policy, Springer-Verlag International Edition. A4. Keith Pilbeam (2013) International Finance, Palgrave Macmillan, Fourth Edition.	
<u>Learning Outcomes</u>	Upon successful completion of the course, students will be able to: - Understand the structure and pattern of trade based on the theories of international trade - Understand the role of international trade in economic development - Know the functioning of the international financial system - Role and function of international institutions shaping international trade and finance.	

Programme: M. A. Economics

Course Code: ECC 118

Title of the Course: Introduction to Econometrics

Number of Credits: 4

Total Contact Hours: 60

Effective from AY: 2022-23

<u>Prerequisites for</u>	Students must have basic knowledge of Statistical and Mathematical methods in Economics	
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the course:		
<u>Objective:</u>	To provide students exposure to regression analysis with cross-section data.	
<u>Content:</u>	Module 1: Econometrics and Economic Data The Structure of Economic Data; Cross-Sectional Data; Time Series Data; Pooled Cross Sections; Panel or Longitudinal Data; Causality in Econometric Analysis The Simple Regression Model Ordinary Least Squares Estimates and Properties, Goodness-of-Fit, Functional Form; Incorporating Nonlinearities, Expected Values and Variances of Estimators; Unbiasedness, Estimating the Error Variance Module 2: Multiple Regression Analysis: Estimation The Model with Two or more Independent Variables, Interpretation Comparison of Simple and Multiple Regression, Omitted Variable Bias, Multicollinearity; Variances in Misspecified Models, Efficiency of OLS: The Gauss-Markov Theorem Multiple Regression Analysis: Inference Testing Hypotheses of single and Multiple Linear Restrictions: The F Test; Testing Exclusion Restrictions; Relationship between F and t Statistics; The F Statistic for Overall Significance of a Regression, Reporting Regression Results Module 3: Multiple Regression Analysis: OLS Asymptotics Consistency; Deriving the Inconsistency in OLS; Asymptotic Normality and Large Sample Inference; Other Large Sample Tests: The Lagrange Multiplier Statistic; Asymptotic Efficiency of OLS	15 15 15

	Multiple Regression Analysis: Further Issues More on Functional Form; Models with Interaction Terms; Adjusted R-Squared; Prediction and Residual Analysis; Confidence Intervals for Predictions; Residual Analysis Multiple Regression Analysis with Qualitative Information: Binary (or Dummy) Variables Describing Qualitative Information; A Single Dummy Independent Variable; Interactions among Dummy Variables; Allowing for Different Slopes; Binary Dependent Variable: The Linear Probability Model; More on Policy Analysis and Program Evaluation; Interpreting Regression Results with Discrete Dependent Variables Module 4: Heteroskedasticity Consequences of Heteroskedasticity for OLS; Heteroskedasticity-Robust Inference, Testing for Heteroskedasticity; Feasible GLS More on Specification and Data Issues Functional Form Misspecification; RESET as a General Test Using Lagged Dependent Variables as Proxy Variables; Measurement Error in an Explanatory Variable; Missing Data, Nonrandom Samples, and Outlying Observations; Missing Data; Nonrandom Samples; Outliers and Influential Observations; Least Absolute Deviations Estimation	15
<u>Pedagogy:</u>	• Chalk and talk aided by ICT enabled lectures • PC lab exercises • Assignments and presentations • Group activity • MOOC (or similar) Component	
<u>References/Readings</u>	<u>Core Reading</u> C1. Wooldridge (2019), <u>Introductory Econometrics</u>, 7th edition, South Western College Publishing, Singapore. <u>Additional References</u>	

	A1. Florian Heiss (2020) <u>Using R for Introductory Econometrics, 2nd edition</u>; Germany, ISBN: 979-8648424364 A2. Florian Heiss and Daniel Brunner (2020) <u>Using Python for Introductory Econometrics</u>, 1st edition, Germany, ISBN: 979-8648436763	
<u>Learning Outcome</u>	The students will be able to develop, estimate and interpret econometric models using cross-section data and to draw the policy implications to help decision makers.	

Programme: M. A. Economics

Course Code: ECO 111

Title of the Course: The Indian Economy

Number of Credits: 4

Contact Hours: 60

Effective from AY: 2022-2023

<u>Prerequisites for the course:</u>	Graduate in any discipline	
<u>Objective:</u>	This course is intended to provide students a comprehensive understanding of India's economic development in recent years and to familiarize students with the growth, development and contribution of various sectors to the Indian economy.	

<u>Content:</u>	Module 1 Indian economy since independence (1947 -1990), New Economic Policy (1991) – stabilization and structural adjustment packages: fiscal reforms, financial sector reforms, and trade reforms; Role of Planning Commission and NITI Aayog, Demonetisation, GST. Module 2 Agricultural sector - Gross Value Added (GVA) trends, Allied Sectors: Animal Husbandry, Dairying, and Fisheries; Agricultural Research & Education; Food Management. Industrial sector – Gross Value Added (GVA) trends, Index of Industrial Production (IIP), Credit in Industry, FDI in Industries, Performance of Central Public Sector Enterprises, Sector Wise Performance and Issues in Industry Module 3 Services – Gross Value Added (GVA) trends, Services Sector share at the State and UT level, FDI Inflows into Services Sector, Major Services: Sub-Sector Wise Performance and Recent Policies. Developments in India's Merchandise Trade, Trade in Services, Developments In India's Balance of Payment (BOP), Initiatives Taken By Government To Boost Exports Module 4 Current Debates on India's development process. Demographic dividend, Employment, Inequality, Poverty, Inflation, Sustainable Development Goals, and Climate Change.	15 15 15 15
<u>Pedagogy:</u>	● Chalk and talk aided by ICT enabled lectures ● PC lab exercises ● Assignments and presentations ● Group activity ● MOOC (or similar) Component	

<u>References/Readings</u>	Core Reading C1. Banerjee, A., Gopinath, G., Rajan, R., & Sharma, M. S. (2019). What the Economy Needs Now. Juggernaut Books, New Delhi C2. Economic Survey, Government of India, Ministry of Finance, New Delhi (various issues) C3. Annual Reports and Monthly Bulletins, Reserve Bank of India, Mumbai Additional References A1. Acharya Sankar and Rakesh Roshna (2010), India's Economy: Performance and Challenges, Oxford University Press, New Delhi. A2. Balakrishnan Pulapre (2010), Economic Growth in India: History and Prospect, Oxford University Press, New Delhi. A3. Ghate, C. (2012). The Oxford Handbook of the Indian economy. Oxford Univ. Press. New Delhi A4. Panagariya, Arvind (2010), India the emerging Giant, Oxford University Press, New Delhi A5. India Development Report, Oxford University Press, New Delhi	
<u>Learning Outcomes</u>	1. The students will become familiar with the landscape of Indian economy and know data sources of the Indian economy. 2. The students will know the overall sectoral development in Indian economy.	

Programme: M. A. Economics

Course Code: ECO 112 **Title of the Course:** Introduction to Spatial Economics

Number of Credits: 4 **Contact Hours :** 60

Effective from AY: 2022-23

<u>Prerequisites for the course:</u>	Basic knowledge of development studies and familiarity with use of spreadsheets.	
<u>Objective:</u>	Introduce students to understanding the role of the spatial dimension in economic analysis. This will provide students an integrative approach that bridges the conventional analytical notions of development with tools of GIS (Geographic Information System) and Remote sensing.	
<u>Content:</u>	Module 1 Concepts in Spatial analysis Geographic Information System-remote sensing, Multiscale analysis, Data models and scales of measurement- Raster imagery and Vector Data – Meaning and its objects- Base model- Scale of measurement, Spatial variation. Land use land cover classification method	15
	Module 2 Remote sensing application in socio-economic planning Principles of Socio-Economic studies using remote sensing technologies, Socio-Economic information estimation-estimation of Population, Employment, GDP and Electric power consumption, Socio-Economic activity modelling, Advantages and limitations of remote sensing technologies in socio-economic application.	15
	Module 3 Sustainable planning Sustainable demographic growth, Change analysis, Dynamic spatial modelling, case study, Vulnerability analysis: Conceptual framework, GIS – remote sensing place based modelling	15

	Module 4 Ecological mapping and monitoring GIS & Remote sensing for ecological mapping & monitoring, Use of GIS data ecological application- gradient analysis, climate, topography, Remote sense data for ecological application, spectral enhancements, land cover, Habitat Structure, Biophysical process, Species distribution model, Biodiversity mapping, change detection	15
<u>Pedagogy:</u>	● Chalk and talk aided by ICT enabled lectures ● PC lab exercises ● Assignments and presentations ● Group activity ● MOOC (or similar) Component	
<u>References/Readings</u>	Core Reading C1. Mesev, Victor (2007)- Integration of GIS and Remote Sensing-Wiley Additional References Martin Wegmann, Benjamin Leutner, Stefan Dech (2016), Remote Sensing GIS for Ecologists: Using Open Source Software, Pelagic Publishing A2. What uses Geographical Information Systems in Spatial Economics? https://www.newyorkfed.org/medialibrary/media/research/conference/2009/jrs/Overman.pdf A3. Robert Nash Parker, Emily K. AsencioJay, D. Gatrell, Ryan R. Jensen(2009), Planning and Socioeconomic Applications, Springer, Dordrecht. A4. Quantum Geographic Information System (QGIS) training manual https://docs.qgis.org/3.10/en/docs/training_manual/index.html A5. Otto Huisman, Rolf A. de (2009), Principles of geographic information systems: an introductory textbook, The International Institute for Geo-Information Science and Earth Observation (ITC), Netherlands. A6. J. M. Pogodzinski, Richard M. Kos(2013), Economic Development & GIS, Esri Press.	

	A7. Jay D. Gatrell, Ryan R. Jensen (2009), Planning and Socioeconomic Applications, Springer Science & Business Media.	
	A8. Fahui Wang (2014), Quantitative Methods and Socio-Economic Applications in GIS, CRC Press.	
<u>Learning Outcomes</u>	The students will be able to extract and process Satellite images using open source software and use it to study economic and demographic change.	

Programme: M.A. in Economics

Course Code: ECO 113 Title of the Course: Techniques of Geo- spatial analysis

Number of Credits: 4

Total Contact Hours: 60

Effective from AY: 2022-23

Prerequisites for the Course:	Basic knowledge of mathematics and statistics	
Objective:	Understand the use of spatial data and its applications in economics	
Content:	Module 1: Use of spatial data in economic analysis- Introduction to QGIS - its graphical user interface. Fundamentals of Remote Sensing Signals, Electromagnetic Spectrum, Terms and Units of Measurement, Electromagnetic Radiation Laws, Resolution of a Sensor System,-Spatial, Spectral, Radiometric, Temporal and Angular resolution, sources of information remote sensing data	15 hours
	Module 2: Raster and Vector Data formats- Interacting with data - identifying features, measuring and selecting data, creating shapefile, snapping, topology, attribute table and field calculator, data joins, projections, clipping, analyzing elevation, terrain	15 hours
	Module 3:	

	Interpolation, buffer, Styling layers- raster, terrain, satellite images and landcover map, styling and labeling vector layers- point, line and polygon style, creating 3D map, print layout- map creation, 3D map view. Module 4: Analyzing raster data- raster calculator, Combining raster and vector data-converting between raster and vector and zonal statistics, Advanced raster and vector analysis with processing-Finding nearest neighbors, Converting between points, lines, and polygons, Calculating area shares within a region, regression, Reclassify raster layer.	15 hours 15 hours
Pedagogy:	• Chalk and talk aided by ICT enabled lectures • PC lab exercises • Assignments and presentations • Group activity • MOOC (or similar) Component	
Reference/ Readings:	Core reading C1. Andrew Cutts, Anita Graser(2018), Learn QGIS, Your Step-by-step Guide to the Fundamental of QGIS 3.4, Packt Publishing,4th Edition, Livery Place, UK. C2. Emilio Chuvieco (2016),Fundamentals of Satellite Remote Sensing An Environmental Approach,CRC Press Taylor & Francis Group C3. Quantum Geographic Information System (QGIS) training manual https://docs.qgis.org/3.10/en/docs/training_manual/index.html Additional References A1. Gary E. Sherman(2008), Desktop GIS mapping the planet with open source tools, Pragmatic Bookshelf, Raleigh, North Carolina Dallas, Texas. A2. Otto Huisman, Rolf A. de (2009), Principles of geographic information systems: an introductory textbook, The International Institute for Geo-Information Science and Earth Observation (ITC), Netherlands.	

	A3. Kurt Menke et.al (2016), Mastering QGIS, Packt Publishing, Livery Place, UK. A4. Erik Westra (2014), Building Mapping Applications with QGIS Create Your Own Sophisticated Applications to Analyze and Display Geospatial Information Using QGIS and Python, Packt Publishing, 4th Edition, Livery Place, UK. A5. Jay D. Gatrell, Ryan R. Jensen (2009), Planning and Socioeconomic Applications (Geotechnologies and the Environment), Springer Science & Business Media. A6. J. M. Pogodzinski, Richard M. Kos (2013), Economic Development & GIS, Esri Press.	
Learning Outcomes:	Candidates will be able to extract and process spatial images using open source GIS software for economic decision-making.	

Programme: M. A. Economics

Course Code: ECO 114

Economics

Number of Credits: 4

Hours: 60

Effective from AY: 2022-23

Title of the Course: Environmental

Total Contact

<u>Prerequisites for the course:</u>	Graduate in any discipline	
<u>Objective:</u>	To understand the implications of production and consumption outcomes on the environment and how market and non-market tools can be used in policy-making to move towards sustainable development.	Contact Hours

<u>Content:</u>	Module 1: Perspectives On The Environment Economics and the Environment; A Framework for Environmental Analysis; Environmental Microeconomics and Macroeconomics Resources, Environment, And Economic Development A Brief History of Economic Growth and the Environment; A Summary of Recent Growth; The Future of Economic Growth and the Environment; Sustainable Development The Theory Of Environmental Externalities The Theory of Externalities; Welfare Analysis of Externalities; Property Rights and the Environment Common Property Resources And Public Goods Common Property, Open Access, and Property Rights; The Environment as a Public Good; The Global Commons Module 2: Resource Allocation Over Time Allocation of Nonrenewable Resources; Hotelling's Rule and Time Discounting Valuing The Environment Total Economic Value; Overview of Valuation Techniques: Revealed Preference Methods, Stated Preference Methods; Cost-Benefit Analysis and its role in Policy Decisions Ecological Economics: Basic Concepts An Ecological Perspective; Natural Capital; Issues of Macroeconomic Scale; Long-Term Sustainability; Energy and Entropy Module 3: Ecosystem Management And Biodiversity The Economics of Biodiversity; Reconciling Economic and Ecological Principles Pollution: Impacts And Policy Responses The Economics of Pollution Control; Policies for Pollution Control; The Scale of Pollution Impacts; Assessing Pollution Control Policies; Pollution Control Policies in Practice	15 15 15
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	National Income And Environmental Accounting Greening the National Income Accounts; Environmentally Adjusted Net Domestic Product; Adjusted Net Saving; The Genuine Progress Indicator; The Better Life Index; Environmental Asset Accounts; The Future of Alternative Indicators Module 4: Global Climate Change Causes and Consequences of Climate Change; Responses to Climate Change; Economic Analysis of Climate Change; Adaptation and Mitigation; Climate Change Mitigation: Economic Policy Options; Climate Change: The Technical Challenge; Climate Change Policy in Practice; Economic Policy Proposals Institutions And Policies For Sustainable Development The Concept of Sustainable Development; The Economics of Sustainable Development; Reforming Global Institutions; New Goals and New Production Methods	15
<u>Pedagogy:</u>	● Chalk and talk aided by ICT enabled lectures ● PC lab exercises ● Assignments and presentations ● Group activity ● MOOC (or similar) Component	
<u>References/Readings</u>	Core Reading C1. Jonathan M. Harris and Brian Roach (2018) Environmental and Natural Resource Economics A Contemporary Approach, Fourth Edition, Taylor and Francis, New York C2. Partha Dasgupta (2021), The Economics of Biodiversity: The Dasgupta Review. Abridged Version. (London: HM Treasury) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957292/Dasgupta_Review_-_Abridged_Version.pdf C3. Lynne Lewis, Thomas H. Tietenberg (2020) Environmental Economics and Policy, Routledge, London	

	Additional References A1. Charles D. Kolstad (2012) Intermediate Environmental Economics, Oxford University Press, New Delhi A2. Stephen Smith (2011) Environmental Economics: A Very Short Introduction, Oxford University Press, Oxford	
<u>Learning Outcomes</u>	Students will be able to undertake basic environmental valuation, cost benefit analysis, and analyse environmental policy.	

Programme: M.A. in Economics

Course Code: ECO 115
Theory

Title of the Course: Introduction to Game

Number of Credits: 4

Total Contact Hours: 60

Effective from AY: 2020-21

<u>Prerequisites for the course:</u>	Students must have knowledge of economics and mathematics.	
<u>Objective:</u>	This course is intended to provide students with an Introduction to game theory and basic application in Economics	

<u>Content:</u>	Module 1 Introduction to Game Theory Nash Equilibrium: Theory, Strategic games, Best response functions, Dominated actions, Equilibrium in a single population: symmetric games and symmetric equilibria Module 2 Nash Equilibrium applications Illustrations; Cournot's model of oligopoly, Bertrand's model of oligopoly, Electoral competition, The War of Attrition, Auctions. Mixed Strategy Nash equilibrium, Dominated actions, Pure equilibria when randomization is allowed, Equilibrium in a single population, The ultimatum game and the holdup game, Stackelberg's model of duopoly Module 3 Extensive Games with Perfect Information Theory, Extensive games with perfect information, Strategies and outcomes, Nash equilibrium, Subgame perfect equilibrium, Finding subgame perfect equilibria of finite horizon games, backward induction Module 4 Extensive Games with Perfect Information: Extensions and Discussion, Allowing for simultaneous moves, Coalitional Games and the Core, Coalitional games, The core	15 Hours 15 Hours 15 Hours 15 Hours
<u>Pedagogy:</u>	● Chalk and talk aided by ICT enabled lectures ● PC lab exercises ● Assignments and presentations ● Group activity ● MOOC (or similar) Component	

<u>References/Readings</u>	Core Reading C1. Martine, Osborne . (2009), An Introduction to Game Theory, Oxford University Press, Oxford. Additional References A1. Dixit, Avinash.;Skeath, Susan and Reliey, David H. (2015), Games of Strategy, W. W. Norton & Company, New York. A2. Rasmusen, E. (2007), Games and Information, Blackwell, Maiden, M.A.	
<u>Learning Outcomes</u>	The students will be able to explain strategic behaviour of agents in a world of perfect information.	

Programme: MA Economics

Course Code: ECO 116

Title of the Course: **Economics of Regional Integration**

Number of Credits: 4

Total Contact Hours: 60

Effective from AY: 2022-23

Prerequisites for the Course:	Basic knowledge of International Economics at the under-graduate level	Contact Hours
Objective:	To provide a theoretical understanding on the rationale of forming regional economic grouping and their likely welfare implications, especially in the context of India. It will also introduce students to different databases, tools and techniques to understand regional grouping.	

Content:	Module 1 Theoretical foundations of Regional Economic Integration- definition, forms of regional integration. Basic Viner model, Modern static theory of regional integration – Regional integration with imperfect competition - Domino Theory and Reciprocity; Natural Trading Partners; Implications of Regionalism on the Global Trading system- Rules of Origin, Labour mobility, investment, services, Environment, trade facilitation, IPRs and Global Value Chains. Module 2 Emerging landscape of bilateral, regional and plurilateral trade agreements - growth of RTAs – three waves, proliferation of RTAs in the post WTO period, Notifications under GATT, GATS and enabling clause, bilateral and plurilateral agreements, north – south and south-south trade agreements; Regional groupings – SAFTA BIMSTEC, ASEAN, EU, NAFTA, RCEP and TPP. Module 3 Methods to assess Regional Economic Integration - database to analyse the RTAs – COMTRADE, DOTS, WITS, WTO, UNCTAD, WTC, WDIs. Tools and Techniques – Trade Indicators - Trade Intensity Index, Trade complementarity index, Revealed Comparative Advantage (RCA) index; Trade Models - Gravity Model, Structural Gravity Model; Simulation Techniques - WITS SMART analysis. Module 4 India's Engagements with regional trade agreements - India's bilateral trade agreements- Singapore, Korea, Japan, Thailand, UAE and Australia; India's trade agreements with regional groupings – SAFTA, ASEAN. Trade agreements currently initiated/under consideration. The political economy of Regional Trade Agreements.	15 15 15 15
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Pedagogy	1. Chalk and talk aided by ICT enabled lectures 2. Computer based exercise 3. Assignments and presentations 4. Group activity 5. MOOC (or similar) Component	
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Reference/Readings	Core Reading C1. DeRosa, Dean A. (2013) Regional Integration Arrangements: Static Economic Theory, Quantitative Findings, and Policy Guidelines, World Bank Policy Research Working Papers. C2. Panagariya, Arvind (2000) "Preferential Trade Liberalization: The Traditional Theory and New Developments." Journal of Economic Literature, 38(2):287-331 C3. Jean-Pierre Chauffour and Jean-Christophe Maur, eds. (2011) Preferential trade agreement policies for development. A handbook. World Bank. C4. A practical guide to trade policy analysis / contributing authors, Marc Bacchetta, Cosimo Beverelli, Olivier Cadot, Marco Fugazza, Jean-Marie Grether, Matthias Helble, Alessandro Nicita and Roberta Piermartini, Geneva: World Trade Organization: United Nations Conference on Trade and Development, 2012. C5. Ram Upendra Das, Piyadasa Edirisuriya and Anoop Swarup (2010) Regional Economic Engagements and the Free Trade Agreements - Analytical Insights and Policy Options, World Scientific Publishing Co. Pvt. Ltd. Chennai. Additional References A1. Baldwin, Richard and Venables, Anthony. 'Regional Economic Integration.' in (Gene Grossman and Kenneth Rogoff, eds). Handbook of International Economics, Vol. 3, Amsterdam: North Holland, 1996. A2. Biswajit Nag and Debashis Chakraborty, India's Trade Analytics - Patterns and Opportunities, First Edition, Sage Publishing, 2019. A3. Mia Mikic And John Gilbert, Trade Statistics In Policymaking - A Handbook Of Commonly Used Trade Indices And Indicators - Revised Edition, Economic And	
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Social Commission For Asia And the Pacific, United Nations publication, 2009.

A4. Ben Shepherd, The Gravity Model of International Trade:

A5. A User Guide, ARTNeT Gravity Modelling Initiative, UNESCAP, 2013.

<https://artnet.unescap.org/publications/books-reports/gravity-model-international-trade-user-guide-updated-version>.

A6. Peter A. G. van Bergeijk, Steven Brakman, The Gravity Model in International Trade: Advances and Applications, Cambridge University Press, 2010.

A7. Economic Survey (2019-20) Chapter 5, Ministry of Finance, Government of India, New Delhi

Learning Outcomes	Upon successful completion of this course, students should be able to analyse the: 1. dynamics of the integration process of various types of regional trade and investment agreements. 2. costs and benefits of various integration schemes in terms of trade creation and trade diversion.
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Programme: M. A. Economics

Course Code: ECO 117

Title of the Course: Indian Public Finance

Number of Credits: 4

Contact Hours: 60

Effective from AY: 2022-2023

<u>Prerequisites for the course:</u>	Graduate in any discipline	
<u>Objective:</u>	To familiarise the students with the budgetary process, documents and analyse Government's fiscal policy.	Hours

<u>Content:</u>	Module 1 Government Budget – Meaning and steps involved in the budget formation, Assessment of the Recent Central Government Budget. Fiscal federalism in India - division of function and resources, vertical and horizontal imbalance, devolution of resources from centre to state government, criteria for transfer of resources, and the role of the finance commission. Emerging challenges in India's fiscal federalism Module 2 Non-tax sources of revenue – types and trends, Taxes – Direct and Indirect taxes, Impact of taxation & tax evasion, Assessment of Indian tax system. Types of public expenditure and its trends, Effects of public expenditure. Module 3 Deficit Financing - Meaning and Objectives, effects of deficit financing, Trends in different types of deficit finance in India. Public debt - Classifications of public debt, sources and effects of government borrowings, burden and management of public debt. Module 4 Black Economy – meaning, Measurement, the macroeconomic linkages, causes and consequences of the black economy, and measures undertaken by the government to curb the black economy. Estimates of the black economy in India.	15 15 15 15
<u>Pedagogy:</u>	● Chalk and talk aided by ICT enabled lectures ● PC lab exercises ● Assignments and presentations ● Group activity ● MOOC (or similar) Component	

<u>References/Readings</u>	Core Readings C1. Union Budget, Government of India, Ministry of Finance, New Delhi (various issues) C2. Kumar, A. (2017). <i>The Black Economy in India</i> (Updated Edition). Penguin Random House India, New Delhi Additional References A1. Sarma, J. V. M. (2018). <i>Public Finance: Principles and Practices</i> (First edition). Oxford University Press. New Delhi A2. M. Govinda Rao (2022) <i>Studies in Indian Public Finance</i> . Oxford University Press. New Delhi A3. State Finance Report, Reserve Bank of India, Mumbai	
<u>Learning Outcomes</u>	The students will be able to understand the budgetary process, documents and analyse Government's fiscal policy.	

Course Code: ECO 118

Title of the Course: Human Resource Development

Number of Credits: 4

Total Contact Hours:60

Effective from AY: 2022-23

<u>Prerequisites for the course:</u>	Graduate in any discipline.	
<u>Objective:</u>	To familiarise students with designing, implementation and evaluation of HRD programmes in a corporate setting	Contact Hours
<u>Content:</u>	Module 1 Introduction to Human Resource Development The evolution of HRD - The relationship between HRD and HRM - HRD functions - Roles of an HRD Professional -	15

	Challenges to HRD Influence on Employee Behaviour External influences on Employee Behaviour - Motivation: An Internal influence on Employee Behaviour - Other Internal Factors that Influence Employee Behaviour -Environmental Influences on Employee Behaviour. Module 2 HRD needs and HRD Programs: Their Assessment HRD Needs: Definition and Purposes of Needs Assessment - Organisational Analysis - Task Analysis - Person Analysis - Prioritising HRD needs. Designing HRD Programs: Defining Program Objectives - Purchasing HRD Programs - Selecting the Trainer - Preparing a Lesson Plan - Selecting Training Methods Module 3 Implementation and Evaluation of HRD Programs Implementation of HRD Programs: Training Delivery Methods – On-the-Job Training Methods - Classroom Training Methods - Scheduling the Training Program - Implementing the Training Program. Evaluation of HRD Programs: The purpose of HRD Evaluation - Models of Evaluation - Data Collection for HRD Evaluation - Research Design - Ethical Issues of Evaluation research. Module 4 HRD Applications and Trainings HRD Applications: Introduction to Onboarding: Employee Socialization and Orientation- Socialization: The Process of Becoming an Insider-Variou Perspectives on the Socialization Process -The Realistic Job Preview HRD Skills and Technical Training: Introduction - Basic Workplace Competencies- Basic Skills/Literacy Programs- Technical Training-Interpersonal Skills Training	15 15 15
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<u>Pedagogy:</u>	● Chalk and talk aided by ICT enabled lectures ● PC lab exercises ● Assignments and presentations ● Group activity ● MOOC (or similar) Component	
<u>References/Readings</u>	Core Reading C1. DeSimone R.L. & Harris D.M. (2012), Human Resource Development, Cengage Learning, U.S.A. Additional References A1. Deb Tapomay (2012), Human Resource Development, Ane Books Pvt. Ltd., Mumbai. A2. Haldar U.K. (2009), Human Resource Development, OUP, New Delhi. A3. Mankin David (2009), Human Resource Development, OUP, New York. A4. Megginson D., (2001), Human resource Development, OUP, USA. A5. Rao T.V. (2010), Human Resource Development, Oxford and IBH Publishing Co.Pvt. Ltd., A6. Werner J.M., (2007), Human Resource Development, South Western Educational Publishing.	
<u>Learning Outcomes</u>	After completing the course, the students will be able to: 1. Explain the relationship between HRD and HRM 2. Assess HRD needs 3. Develop HRD programme 4. Implement and evaluate HRD programmes 5. Use HRD Applications 6. Implement skills and technical training.	

Course Code: ECO 218

Title of the Course: Time Series Econometrics

Number of Credits: 4 Total Contact Hours:60

Effective from AY: 2022-23

<u>Prerequisites</u> <u>for the course:</u>	Basic course in Introductory Econometrics	
<u>Objective:</u>	The objective of the course is to familiarize the students with advanced econometric analysis using time series and panel data.	Contact Hours

<u>Content:</u>	Module 1 Basic Regression Analysis with Time Series Data Static Models and Finite Distributed Lag Models; Finite Sample Properties of OLS under Classical Assumptions; Functional Form, Dummy Variables, and Index Numbers; Trends and Seasonality; Stationary and Weakly Dependent Time Series; Highly Persistent Time Series, Dynamically Complete Models and the Absence of Serial Correlation; Module 2 Serial Correlation and Heteroskedasticity in Time Series Regressions Properties of OLS with Serially Correlated Errors; Testing for Serial Correlation; Feasible GLS Estimation with AR(1) Errors; Comparing OLS and FGLS; Heteroskedasticity in Time Series Regressions; Autoregressive Conditional Heteroskedasticity Module 3 Pooling Cross Sections across Time: Panel Data Methods Pooling Independent Cross Sections across Time; The Chow Test for Structural Change across Time; Differencing with More Than Two Time Periods; Fixed Effects Estimation; The Dummy Variable Regression; Random Effects Models; Module 4 Advanced topics in Time Series Infinite Distributed Lag Models; The Geometric (or Koyck) Distributed Lag; Rational Distributed Lag Models; Testing for Unit Roots; Spurious Regression; Cointegration and Error Correction Models; Forecasting Trending, Seasonal, and Integrated Processes	15 15 15 15
<u>Pedagogy:</u>	● Chalk and talk aided by ICT enabled lectures ● PC lab exercises ● Assignments and presentations ● Group activity ● MOOC (or similar) Component	

<u>References/Readings</u>	<u>ANNEXURE</u>	
Course Title: • Research and Publication Ethics (RPE) – Course for awareness about the publication ethics and publication misconducts. Course Level: • 2 Credit course (30 hrs.) Eligibility: • M.Phil., Ph.D. graduate student Fees:	Core Reading C1. J. Wooldridge (2019). <u>Introductory Econometrics</u>, 7th edition, South Western College Publishing, Singapore. Additional References A1. Florian Heiss (2020) <u>Using R for Introductory Econometrics</u>, 2nd edition; Germany, ISBN: 979-8648424364 A2. Florian Heiss and Daniel Brunner (2020) <u>Using Python for Introductory Econometrics</u>, 1st edition, Germany, ISBN: 979-8648436763	to post
Learning Outcomes • As per University Rules • Interdisciplinary Studies	The students will be able to develop, estimate and interpret econometric models using time series data and to draw the policy implications to help decision makers.	

Qualifications of faculty members of the course:

- Ph.D. in relevant subject areas having more than 10 years' of teaching experience

About the course

Course Code: CPE- RPE

Overview

- This course has total 6 units focusing on basics of philosophy of science and ethics, research integrity, publication ethics. Hands-on-sessions are designed to identify research misconduct and predatory publications. Indexing and citation databases, open access publications, research metrics (citations, h-index, Impact Factor, etc.) and plagiarism tools will be introduced in this course.

Pedagogy:

- Class room teaching, guest lectures, group discussions, and practical sessions.

Evaluation

- Continuous assessment will be done through tutorials, assignments, quizzes, and group discussions. Weightage will be given for active participation. Final written examination will be conducted at the end of the course.

Course structure

- The course comprises of six modules listed in table below. Each module has 4-5 units.

Modules	Unit title	Teaching hours
Theory		
RPE 01	Philosophy and Ethics	4
RPE 02	Scientific Conduct	4
RPE 03	Publication Ethics	7
Practice		
RPE 04	Open Access Publishing	4
RPE 05	Publication Misconduct	4
RPE 06	Databases and Research Metrics	7
	Total	30

Syllabus in detail

THEORY

- RPE 01: PHILOSOPHY AND ETHICS (3 hrs.)**

1. Introduction to philosophy: definition, nature and scope, concept, branches
2. Ethics: definition, moral philosophy, nature of moral judgements and reactions

- RPE 02: SCIENTIFIC CONDUCT (5hrs.)**

1. Ethics with respect to science and research
2. Intellectual honesty and research integrity
3. Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)
4. Redundant publications: duplicate and overlapping publications, salami slicing
5. Selective reporting and misrepresentation of data

- RPE 03: PUBLICATION ETHICS (7 hrs.)**

1. Publication ethics: definition, introduction and importance
2. Best practices / standards setting initiatives and guidelines: COPE, WAME, etc.
3. Conflicts of interest
4. Publication misconduct: definition, concept, problems that lead to unethical behavior and vice versa, types
5. Violation of publication ethics, authorship and contributorship
6. Identification of publication misconduct, complaints and appeals
7. Predatory publishers and journals

PRACTICE

- RPE 04: OPEN ACCESS PUBLISHING(4 hrs.)**

1. Open access publications and initiatives
2. SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies
3. Software tool to identify predatory publications developed by SPPU
4. Journal finder / journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.

• **RPE 05: PUBLICATION MISCONDUCT (4hrs.)**

A. Group Discussions (2 hrs.)

1. Subject specific ethical issues, FFP, authorship
2. Conflicts of interest
3. Complaints and appeals: examples and fraud from India and abroad

B. Software tools (2 hrs.)

Use of plagiarism software like Turnitin, Urkund and other open source software tools

• **RPE 06: DATABASES AND RESEARCH METRICS (7hrs.)**

A. Databases (4 hrs.)

1. Indexing databases
2. Citation databases: Web of Science, Scopus, etc.

B. Research Metrics (3 hrs.)

1. Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
2. Metrics: h-index, g index, i10 index, altmetrics

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- National Academy of Sciences, National Academy of Engineering and Institute of Medicine. (2009). *On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition*. National Academies Press.
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