

**Curriculum & Credit Framework for
4 Year B.A/B.SC. In ECONOMICS
&
Syllabus
For
Semester I and II
Effective from the Academic Session 2023-2024**



Department of Economics

Aliah University

(New Town Campus)

Syllabus for 4-yr B.A/B.Sc in Economics (Major & Minor) under NEP 2020

(W.e.f 2023-2024)

Department of Economics

Aliah University

Kolkata – 700160

Semester-I					
Sl. No.	Course Code	Course Title	Credit		
			Theory	Practical	Total
Major Courses					
1	ECOUGMCC1101	Introductory Microeconomics	4	0	4
2	ECOUGMCC1102	Introductory Macroeconomics	4	0	4
Minor Courses					
1	ECOUGMIN1101	Introductory Microeconomics	4	0	4
Multi-disciplinary					
1	UCCUGMDC1101	Arabic and Islamic Studies	3	0	3
Ability Enhancement Course (AEC)					
1	UCCUGAEC1101	Modern Indian Language (Bengali/Urdu/Hindi)	4	0	4
Skill Enhancement Course (SEC)					
1	ECOUGSEC1101	Data analysis using Excel	0	3	3
Total					22

Semester-II					
Sl. No.	Course Code	Course Title	Credit		
			Theory	Practical	Total
Major Courses					
1	ECOUGMCC1203	Basic Statistics for Economist	4	0	4
2	ECOUGMCC1204	Indian Economy	4	0	4
Minor Courses					
1	ECOUGMIN1202	Basic Statistics	4	0	4
Multi-disciplinary					
1	ECOUGMDC1202	Development Studies- I	3	0	3

Value Added Course (VAC)					
1	UCCUGVAC1201	Environmental Science	4	0	4
Skill Enhancement Course (SEC)					
1	ECOUGSEC1202	Economic Data Analysis	0	3	3
Total					22
Semester-III					
Sl. No.	Course Code	Course Title	Credit		
			Theory	Practical	Total
Major Courses					
1	ECOUGMCC2305	Intermediate Microeconomics-I	4	0	4
2	ECOUGMCC2306	Introductory Mathematical Economics	4	0	4
Minor Courses					
1	ECOUGMIN2303	Introductory Mathematical Economics	4	0	4
Multi-disciplinary					
1	ECOUGMDC2303	Development Studies	3	0	3
Ability Enhancement Course (AEC)					
1	UCCUGAEC2303	English	4	0	4
Skill Enhancement Course (SEC)					
1	ECOUGSEC2303	Statistical Computation	0	3	3
Total					22

Semester-IV					
Sl. No.	Course Code	Course Title	Credit		
			Theory	Practical	Total
Major Courses					
1	ECOUGMCC2407	Intermediate Macroeconomics I	4	0	4
2	ECOUGMCC2408	Intermediate Statistics	3	1	4
3	ECOUGMCC2409	Development Economics	4	0	4
Minor Courses					
1	ECOUGMIC2404	Development Economics	4		4
Value Added Courses (VAC)					
1	UCCUGVAC2402	Understanding India	4	0	4
Total					20

Semester-V					
Sl. No.	Course Code	Course Title	Credit		
			Theory	Practical	Total
Major Courses					
1	ECOUGMCC3510	Intermediate Microeconomics-II	4	0	4
2	ECOUGMCC3511	Intermediate Macroeconomics-II	4	0	4
3	ECOUGMCC3512	Intermediate Mathematical tools for Economist	4	0	4
Minor Courses					
1	ECOUGMIC3505	Intermediate Macroeconomics	4	0	4
Internship (SIP)					
1	ECOUGSIP3501		0	4	4
Total					20

Semester-VI					
Sl. No.	Course Code	Course Title	Credit		
			Theory	Practical	Total
Major Courses					
1	ECOUGMCC3613	International Economics	4	0	4
2	ECOUGMCC3614	Public Economics	4	0	4
Discipline Specific Elective (DSE)					
3	ECOUGMDS3601	Advance Statistics/ Gender Economics/ Introduction to Open Economy Macroeconomics	4	0	4
Minor Courses					
1	ECOUGMIC3606	Public Economics	4	0	4
Internship (SIP)					
1	ECOUGSIP3502		0	4	4
Total					20

Semester-VII					
Sl. No.	Course Code	Course Title	Credit		
			Theory	Practical	Total
Major Courses					
1	ECOUGMCC4715	Advance Microeconomics	4	0	4
2	ECOUGMCC4716	Development Economics II	4	0	4
Discipline Specific Elective (DSE)					
1	ECOUGMDS4702	1.Labour Economics 2.Advancement in International Economics 3.Environment and Resource Economics	4	0	4
2	ECOUGMDS4703	1. Applied Econometrics- I 2. Economics of Social Sector- I 3. Economics of Finance- I	2	2	4
Minor Courses					
1	ECOUGMIN4707	Development Economics	4	0	4
Dissertation					
1	ECOUGPRJ01	Research Work			4
Total					24

Semester-VIII					
Sl. No.	Course Code	Course Title	Credit		
			Theory	Practical	Total
Major Courses					
1	ECOUGMCC4817	Advance Macroeconomics	4	0	4
2	ECOUGMCC4818	Research Methodology	3	1	4
Discipline Specific Elective (DSE)					
1	ECOUGMDS4805	1. Applied Econometrics- II 2. Economics of Social Sector- II 3. Economics of Finance- II	2	2	4
Minor Courses					
1	ECOUGMIN4808	Econometrics	3	1	4
Dissertation					
1	ECOUGPRJ01	(Continuation from Sem-VII)	0	0	8
Total					24

4-yrs UG honors without Research					
Semester-VII					
Sl. No.	Course Code	Course Title	Credit		
			Theory	Practical	Total
Major Courses					
1	ECOUGMCC4715	Advance Microeconomics	3	1	4
2	ECOUGMCC4716	Advance Mathematical Methods for Economics	3	1	4
Discipline Specific Elective (DSE)					
1	ECOUGMDS4702	1. Labour Economics – I 2. Advancement in International Economics -I 3. Environment and Resource Economics-I	3	1	4
2	ECOUGMDS4703	1. Applied Econometrics- I 2. Economics of Social Sector- I 3. Economics of Finance- I	3	1	4
3	ECOUGMDS4704	1. Game theory 2. History of Economic Thoughts 3. Open Economy Macroeconomics			4
Minor Courses					
1	ECOUGMIC4707	Econometrics	3	1	4
Total					24

Semester-VIII					
Sl. No.	Course Code	Course Title	Credit		
			Theory	Practical	Total
Major Courses					
1	ECOUGMCC4817	Advance Macroeconomics	3	1	4
2	ECOUGMCC4818	Advance issues in Indian Economics	3	1	4
Discipline Specific Elective (DSE)					
1	ECOUGMDS4805	1. Labour Economics – II 2. Advancement in International Economics -II	4	0	4

		3. Environment and Resource Economics-II			
2	ECOUGMDS4806	1. Applied Econometrics- II 2. Economics of Social Sector- II 3. Economics of Finance- II	2	2	4
3	ECOUGMDS4807	1. Growth Economics 2. Issues of Macroeconomics 3. Gender Economics	4	0	4
Minor Courses					
1	ECOUGMIC4808	Indian Economics	3	1	4
Total					24

Credit summary for 4-year B.A/ B.Sc Hons.
(Without Research degree)

Semester	Core	DSE	Minor	MD C	SE C	AEC	VA C	Dissertation /Research Work	Intern ship	Total
I	2 x 4 = 8		1 x 4	1 x 3	1 x 3	1 x 4				22
II	2 x 4 = 8		1 x 4	1 x 3	1 x 3		1 x 4			22
III	2 x 4 = 8		1 x 4	1 x 3	1 x 3	1 x 4				22
IV	3 x 4 = 12		1 x 4				1 x 4			20
V	3 x 4 = 12		1 x 4						1 x 4	20
VI	2 x 4 = 8	1 x 4	1 x 4						1 x 4	20
VII	2 x 4 = 8	3 x 4	1 x 4							24
VIII	2 x 4 = 8	3 x 4	1 x 4							24
	72	28	32	9	9	8	8		8	174

Credit summary for 4-year B.A/B.Sc Hons.
(With Research degree)

Semester	Core	DSE	Minor	MD C	SEC	AEC	VAC	Dissertati on/Resea rch Work	Intern ship	Total
I	2 x 4 = 8		1 x 4	1 x 3	1 x 3	1 x 4				22
II	2 x 4 = 8		1 x 4	1 x 3	1 x 3		1 x 4			22
III	2 x 4 = 8		1 x 4	1 x 3	1 x 3	1 x 4				22
IV	3 x 4 = 12		1 x 4				1 x 4			20
V	3 x 4 = 12		1 x 4						1 x 4	20
VI	2 x 4 = 8	1 x 4	1 x 4						1 x 4	20
VII	2 x 4 = 8	2 x 4	1 x 4					1 x 4		24
VIII	2 x 4 = 8	1 x 4	1 x 4					1 x 8		24
	72	16	32	9	9	8	8	12	2	174

Program Outcomes for 4 year B.A/ B.Sc. in Economics:

The aim of the 4 year B.A/ B.Sc Program is as follows:

PO1: Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

PO2: Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.

PO3: Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.

PO4: Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.

PO5: Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

PO6: Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.

PO7: Self-directed and Life-long Learning: Acquire the ability to engage in independent and life- long learning in the broadest context socio-technological changes.

Economics Core Course I
Code: ECOUGMCC1101
Introductory Microeconomics
Marks: 100 Credits: 4

No. of Lecture hours (Th): 45

Tutorial Hours: 15

[For Semester-I]

Course Objectives: (CO)

CO1: The students will be able to recognize the basic theories of how individuals and firms interact within markets, when markets fail, and how government policy may improve outcomes for society.

CO2: The course is designed to develop an understanding of the framework that economists use to analyse choices made by individuals in response to incentives and to consider how these choices can also serve the social interest.

CO3: Students will learn to apply the basic economic theory and principles to understand current microeconomic issues .

CO4: Students will develop thinking capabilities like an economist and the course will illustrate how microeconomic concepts can be applied to analyse real-life situations.

CO5: Students will be able to evaluate public policies and can be able to formulate appropriate solution to address socio-economic issues.

Learning Outcomes (LO)

At the end of the course a student will be able to :

LO1: Understand the basic theories of individual and firm.

LO2: Able to understand the role of market and government in the economic domain.

LO3: Able to understand the basic microeconomic issues.

LO4: Relate real life problems and formulate solutions.

Unit 1: Exploring the subject matter of Economics

5 lecture hours

1.1 Scope and Method of Economics: Wants, Scarcity, Competing Ends and Choice - Defining Economics.

Thinking like an economist: Basic Economics Questions, Households and firms, Demand and Supply, Basic

concepts of Utility, basic concepts of production-Production function, Definition of Average and Marginal Product, Microeconomics and Macroeconomics, Normative Economics and Positive Economics.

1.2 Principles of Microeconomics – principles of individual decision making and principles of economic interactions – trade off, opportunity cost, efficiency, marginal changes and cost-benefit, trade, market economy, property rights, market failure, externality and market power.

1.3 Interdependence and the Gains from Trade- production possibilities frontier and increasing costs, absolute and comparative advantage, comparative advantage and gains from trade.

Unit 2: Utility Theory

20 lecture hours

(Focus on intuitive explanation and diagrams. Learning to analyze without using calculus a must)

2.1 Cardinal and Ordinal Approach.

2.2 Utility in Cardinal Approach- Utility and choice, Total Utility and Marginal Utility, Utility and choice maximization, marginal utility, theory of demand

2.3 Ordinal utility: Assumptions on preference ordering, Indifference curve (IC), Marginal rate of substitution and convexity of IC, Budget constraint, Consumers ‘equilibrium-interior and corner. Nature of ICs in pathological(nonstandard) cases(brief idea only)

Unit 3: Demand and Supply: How Markets Work 8 lecture hours

3.1 Elementary theory of Demand: Factors influencing household demand and market demand, the demand curve, movement along and shift of the demand curve

3.2 Elementary theory of Supply: factors influencing supply, the supply curve, movement along and shift of the supply curve

3.3 The Elementary theory of market price: Determination of equilibrium price in a competitive market.

3.4 Exceptions to law of demand and supply

Unit 4: Market and Adjustments 4 lecture hours

4.1 The Evolution of Market Economies, Price System and the Invisible Hand

4.2 The Decision-takers - households, firms and central authorities

4.3 The Concepts of Markets- individual market, separation of individual markets, interlinking of individual markets. Difference among markets- competitiveness, goods and factor markets, free and controlled markets. Market and non-market sectors, public and private sectors, economies- free market, command and mixed.

4.4 Different goods: Public goods, Private goods, Common resources and Natural Monopolies.

Unit 5: Market Sensitivity and Elasticity

8 lecture hours

5.1 Importance of Elasticity in Choice-Decisions

5.2 Method of Calculation- Arc Elasticity, Point Elasticity-definition

5.3 Demand and supply Elasticities-types of elasticity and factors affecting elasticity, Demand Elasticity and Revenue, Long run and Short run elasticities of Demand and Supply. Total Expenditure method of measuring elasticity of demand

5.4 Income and Cross Price Elasticity

5.5 Applications: Case studies – OPEC and Oil Price

Texts:

1. G.Mankiw. 2007, Economics: Principles and Applications, India edition by South Western, Cengage Learning
2. P Samuelson and W.Nordhaus, Economics, McGraw hill International Edition (14th edition or later edition)

References

1. Lipsey, R. and Chrystal, A. 2007 Economics, OUP
2. Pindyck, Rubinfeld and Mehta, Microeconomics, Pearson
3. J.E.Stiglitz and C.E.Walsh, Principles of Economics, WW Norton and Company, NY, (3rd edition or later edition).
4. Hal. R Varian , Intermediate Microeconomics, A modern Approach, WW Norton and Company, 8th edition, 2010 (T)
5. Ryan, W.J.L. and Pearce : Price Theory and Applications , Macmillan Education, UK
6. Ferguson, C.E. and Gould, J.P. : Microeconomic Theory, Aitbs Publishers and Distributors, New Delhi.

Economics Core Course II
Code: ECOUGMCC1102
Introductory Macroeconomics
Marks: 100 Credits: 4
No. of Lecture hours (Th): 45
Tutorial Hours: 15
[For Semester-I]

Course Objectives: (CO)

CO1: To help the students comprehend the basic concepts of macroeconomics.

CO2: To introduce the preliminary concepts of determination and measurement of national income and other macroeconomic aggregate variables like savings, investment, money, inflation, balance of payments, etc.

CO3: To explain the preliminary theories of income fluctuations in the short run

CO4: To analyze different economic policies and its limitations.

CO5: To evaluate real life macroeconomic issues and develop their own understanding about working of an economy.

Learning Outcomes: (LO)

LO1: The students will be able to comprehend the basic concepts of macroeconomics, which deals with the aggregate economy.

LO2: Students will be able to explain the preliminary concepts of determination and measurement of national income and other macroeconomic aggregate variables like savings, investment, money, inflation, balance of payments, etc.

LO3: Students will be able to explain the preliminary theories of income fluctuations in the short run

LO4: Students will be able to analyze different economic policies and its limitations.

LO5: Students will be able to evaluate real life macroeconomic issues and develop their own understanding about working of an economy.

1.National Income Accounting

Lecture hours 12

1.1 Macroeconomic data- Basic concepts of National Income accounting. The circular flow (three sector).

1.2 Concepts of GNP, GDP, NNP, and NDP at market price and at factor cost- Real and Nominal, -Implicit deflator.

1.3. The problem of double counting. The three approaches of measurement of National Income and their equivalence .

1.4 The role of Government. Concepts of Corporate Income, Corporate Savings, Personal Income, Personal Disposable Income and Personal Savings.

1.5 Saving-Investment gap and its relation with budget deficit and trade surplus. National Income accounting and cost of living.

2. Income Determination in the Short Run (Part-I):

The Simple Keynesian Model in a Closed Economy

Lecture hours 12

2.1 Consumption Function; the Keynesian Saving Function; stability of equilibrium; the concept of effective demand- the concept of demand-determined output

2.2 Equilibrium Income determination in SKM; the Simple Keynesian Multiplier ; the paradox of thrift; the SKM in a Closed Economy with Government; Government expenditure and Tax

2.3 Balanced Budget Multiplier

3. Basic theory of Investment Lecture hour 3

3.1 Investment function: Determinants of investment. -Concepts of Marginal productivity of capital

3.2 Marginal efficiency of capital (MEC) and Marginal efficiency of investment (MEI).

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4. The Classical system

Lecture hours 12

4.1 Basic ideas of Classical Macroeconomics; Say 's Law and Quantity Theory of Money

4.2 Loanable fund theory

4.3 The Classical Theory of Income and Employment determination

4.4 Full Employment and wage-price flexibility; Neutrality of Money

4.5 Classical Dichotomy (Basic Concept).

5. Inflation

Lecture hours 6

5.1 Concepts and types - Inflationary Gap, Demand pull vs. Cost push inflation,

5.2 Anti-inflationary policy

Text/ References:

1. Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.

2. N. Gregory Mankiw. Principles of Macroeconomics, Indian Imprint of South Western by Cengage India, 6th edition, 2015.
3. N. Gregory Mankiw. Macroeconomics, Worth Publishers, 2010.
4. Ghosh Chandana and Ghosh Ambar, Macroeconomics, PHI Learning Pvt Ltd, 2014.
5. Richard T. Froyen, Macroeconomics, Pearson Education Asia, 2nd edition, 2005.
6. Andrew B. Abel and Ben S. Bernanke, Macroeconomics, Pearson Education, Inc., 7th edition, 2011.
7. Venieris, Y.P. and Sebold F.D., Macroeconomics: Models and Policy, John Wiley and Sons, 1977.
8. Ackley Gardner (old), Macroeconomic Theory, Macmillan, 1961 [For classical system]
9. Ackley Gardner(new), Macroeconomics : Theory and Policy : Macmillan
10. J.R.Hicks. The Social Framework: An introduction to Economics, Clarendon Press, 3rd Edition, 1960
11. Sikdar Soumyen, Principles of Macroeconomics, Oxford University Press

Economics Skill Enhancement Course I

Code: ECOUGSEC1101

Data Analysis Using Excel

Credits: 3

[For Semester-I]

It is a Lab Based Practical Paper. The student shall learn the operations through Lectures, Hands-on Practical Training followed by practical tests.

1. Basic of Excel

Introduction to the basics of MS Excel, importing data, filtering, sorting , formatting and other ways of data cleaning.

2. Introduction to functions, hyperlinks and macros
3. Data Visualization using Excel
4. Solving Economic problems using excel, application of solver etc

References:

1. MS Office 2007 for Dummies – Wang Wallace, Wiley Publishing House
2. Data Analysis Using Microsoft Excel – Ash Narayan Sah Excel Books India
3. Excel 2010 For Dummies Colin Banfield, John Walkenbach

Economics Minor Course I

Code: ECOUGMIN1101

Introductory Microeconomics

Marks: 100 Credits: 4

No. of Lecture hours (Th): 45

Tutorial Hours: 15

[For Semester-I]

Course Objectives: (CO)

CO1: The students will be able to recognize the basic theories of how individuals and firms interact within markets, when markets fail, and how government policy may improve outcomes for society.

CO2: The course is designed to develop an understanding of the framework that economists use to analyse choices made by individuals in response to incentives and to consider how these choices can also serve the social interest.

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CO5: Students will be able to evaluate public policies and can be able to formulate appropriate solution to address socio-economic issues.

Learning Outcomes (LO)

At the end of the course a student will be able to :

LO1: Understand the basic theories of individual and firm.

LO2: Able to understand the role of market and government in the economic domain.

LO3: Able to understand the basic microeconomic issues.

LO4: Relate real life problems and formulate solutions.

Unit 1: Exploring the subject matter of Economics

5 lecture hours

1.1 Scope and Method of Economics: Wants, Scarcity, Competing Ends and Choice - Defining Economics,

Thinking like an economist: Basic Economics Questions, Households and firms, Demand and Supply, Basic

concepts of Utility, basic concepts of production-Production function, Definition of Average and Marginal Product, Microeconomics and Macroeconomics, Normative Economics and Positive Economics.

1.2 Principles of Microeconomics – principles of individual decision making and principles of economic interactions – trade off, opportunity cost, efficiency, marginal changes and cost-benefit, trade, market economy, property rights, market failure, externality and market power.

1.3 Interdependence and the Gains from Trade- production possibilities frontier and increasing costs, absolute and comparative advantage, comparative advantage and gains from trade.

Unit 2: Utility Theory

20 lecture hours

(Focus on intuitive explanation and diagrams. Learning to analyze without using calculus a must)

2.1 Cardinal and Ordinal Approach.

2.2 Utility in Cardinal Approach- Utility and choice, Total Utility and Marginal Utility, Utility and choice maximization, marginal utility, theory of demand

2.3 Ordinal utility: Assumptions on preference ordering, Indifference curve (IC), Marginal rate of substitution and convexity of IC, Budget constraint, Consumers 'equilibrium-interior and corner, ICs in pathological (non-standard) cases (brief idea only)

Unit 3: Demand and Supply: How Markets Work 8 lecture hours

3.1 Elementary theory of Demand: Factors influencing household demand and market demand, the demand curve, movement along and shift of the demand curve

3.2 Elementary theory of Supply: factors influencing supply, the supply curve, movement along and shift of the supply curve

3.3 The Elementary theory of market price: Determination of equilibrium price in a competitive market.

Unit 4: Market and Adjustments 4 lecture hours

- 4.1 The Evolution of Market Economies, Price System and the Invisible Hand
- 4.2 The Decision-takers - households, firms and central authorities
- 4.3 The Concepts of Markets- individual market, separation of individual markets, interlinking of individual markets. Difference among markets- competitiveness, goods and factor markets, free and controlled markets. Market and non-market sectors, public and private sectors, economies- free market, command and mixed.
- 4.4 Different goods: Public goods, Private goods, Common resources and Natural Monopolies.

Unit 5: Market Sensitivity and Elasticity

8 lecture hours

- 5.1 Importance of Elasticity in Choice-Decisions
- 5.2 Method of Calculation- Arc Elasticity, Point Elasticity-definition
- 5.3 Demand and supply Elasticities-types of elasticity and factors affecting elasticity, Demand Elasticity and Revenue, Long run and Short run elasticities of Demand and Supply. Measuring elasticity of demand using total expenditure methods.
- 5.4 Income and Cross Price Elasticity
- 5.5 Applications: Case studies – OPEC and Oil Price

Texts:

1. G.Mankiw. 2007, Economics: Principles and Applications, India edition by South Western, Cengage Learning
2. P Samuelson and W.Nordhaus, Economics, McGraw hill International Edition (14th edition or later edition)

References

1. J.E.Stiglitz and C.E.Walsh, Principles of Economics, WW Norton and Company, NY, (3rd edition or later edition)
2. R.G. Lipsey. An Introduction to Positive Economics, ELBS (6th edition)
3. Lipsey, R. and Chrystal, A. 2007 Economics, OUP
4. Pindyck, Rubinfeld and Mehta, Microeconomics, Pearson
5. G.S.Maddala and E. Miller, 1989, Microeconomics, Prentice Hall, McGraw Hill International Editions

6. Karl e Case and Ray C Fair, Principles of Economics, Pearson Education, 8th Edition, 2007
7. Hal. R Varian , Intermediate Microeconomics, A modern Approach, WW Norton and Company, 8th edition, 2010 (T)
8. Ryan, W.J.L. and Pearce : Price Theory and Applications , Macmillan Education, UK
9. Ferguson, C.E. and Gould, J.P. : Microeconomic Theory, Aitbs Publishers and Distributors, New Delhi.

Economics Major Course III

Code: ECOUGMCC1203

Basic Statistics for Economist

Marks: 100 Credits: 4

No. of Lecture hours (Th): 45

Tutorial Hours: 15

[For Semester-II]

Course Objective: (CO)

CO1: To help students to identify and examine data

CO2: To equip the students the students with basic tools of analyzing, classifying and summarizing data.

CO3: To explain the students the basic of measures of central tendency and dispersions

CO4: To help the estudents understand various forms of bivariate relationships between variables

Learning Outcomes(LO)

After completion of the Course the students are expected to achieve the following objectives:

LO1: Students will be able to identify and examine the use of statistics in everyday life.

LO2: Students will be able to summarize and classify data using statistical methods.

LO3: Students will learn to calculate and apply measures of central tendency and measures of dispersion, skewness and kurtosis -- grouped and ungrouped data cases.

LO4: Students will be able to calculate and interpret the results of Bivariate and Multivariate Regression and Correlation Analysis, for forecasting.

LO5: The course will improve students' ability to summarize data and solve statistical problems.

1. Introduction of statistics

[No of Lectures 8]

What is Statistics?: Nature, Scope and Limitations of Statistics . Nature of statistical data: Data sources – Methods of collection of statistical data – Census – Sample Survey – Measurement of Scales – Nominal, Ordinal, Interval and Ratio scales . Collection and presentation of data – frequency and non-frequency data: Classification and Tabulation – Formation of frequency distribution – Cumulative frequency distribution – Diagrammatic and Graphical representation of data.

2. Measure of location & Variability

[No of lectures 16]

Measure of Central Tendency: Arithmetic mean, Median, Mode, Geometric mean and Harmonic mean for raw and grouped data – Properties – Quartiles, Deciles and Percentiles Measures of Dispersion: Absolute and relative measures of Dispersion – Range – Quartile deviation – Mean deviation - Standard deviation – Coefficient of Variation – Lorenz Curve

3. Measures of Skewness, Kurtosis and Moments

[No of lectures 16]

Measures of skewness, kurtosis and moments: Definition – Calculation of Karl Pearson's, Bowley's and Kelly's coefficient of Skewness – Moments – Raw and Central Moments – Relation between raw and central moments – Measures of Skewness and Kurtosis .

4. Correlation and regression

[No of lecture 18]

Measures of correlation: Definition of Correlation – Types of correlation – Methods of correlation – Scatter diagram – Karl Pearson's correlation coefficient – Spearman's rank correlation coefficient – Properties – Concurrent deviation method – Correlation coefficient for ungrouped and grouped bivariate data. – Multivariate Correlation.

Regression analysis: Meaning of Regression – Regression lines – Regression coefficients – Regression coefficients for ungrouped and grouped bivariate data – Properties of regression coefficient – Finding the two regression equations of X on Y and Y on X and estimating the unknown values of X and Y; concept of multivariate regression ; Multivariate Regression.

Suggested Reading:

Goon, A.M. , Gupta, M.K. , & Dasgupta, B. (2013). *Fundamentals of Statistics: Volume 1 & 2*. World Press Private Ltd. Kolkata.

Giri P.K & Banerjee J K(2021) : “Statistical Tools and And Techniques” Academic Publishers, Kolkata.

Gupta S. C., & Kapoor V. K. (2000). *Fundamentals of Mathematical Statistics*, (10th ed.). Sultan Chand and Sons. New Delhi.

Yule G.U & Kendall N.G (1961): “*An Introduction to theory of Statistics*” Charles Griffen and Co Ltd.

Hogg R. V., & Craig A. T. (2006). *Introduction to Mathematical Statistics*. MacMillan. London

Mukhopadhyay, P. (1999). *Applied Statistics*. Books and Allied (P) Ltd. Kolkata

Economics Major Course IV

Code: ECOUGMCC1204

Indian Economy

Marks: 100 Credits: 4

No. of Lecture hours (Th): 45

Tutorial Hours: 15

[For Semester-II]

Course Objective: (CO)

CO1: To enlighten the students on the major features of Indian economy post independence.

CO2: To help students understand the role of population and demographical structure of India.

CO3: To explain the students the impact of various macroeconomic policies on Indian Economy.

CO4: To explain the student the nature of agriculture and industry in India and the impact of government on such sectors.

Learning Outcomes(LO)

After completion of the Course the students are expected to achieve the following objectives:

LO1: The students shall have a picture of the major features of Indian economy post independence.

LO2: The students shall understand the role of population and demographical structure of India.

LO3: The students shall be able to locate the impact of various macroeconomic policies on Indian Economy.

LO4: The student shall have a clear idea of the nature of agriculture and industry in India and the impact of government on such sectors.

Detailed Syllabus

1. Economic Development since Independence

(Lectures:15)

Major features of the economy at independence; Planning: Evolution of India's development goals and strategies -Structural constraints and Indian development strategy: Debates between Growth and distribution, Public sector vs. Private sector, Consumer goods vs. Capital goods, Import substitution vs. Export promotion ; growth and development under different policy regimes— goals, constraints, institutions and policy framework; an assessment of performance— sustainability and regional contrasts; structural changes, savings and investment including the saving-investment paradox Population and Human Development .

2. Population and Human Development

(Lectures:10)

Demographic trends and issues; education; health and malnutrition

3. Development and Distribution

(Lectures:10)

Trends and policies in poverty including Sen's Entitlement Analysis; inequality and unemployment

4. Macroeconomic Policies and Their Impact

(Lectures:15)

Objectives of Fiscal Policy. Centre – State financial relation. Composition of govt. revenue and expenditure. Tax reforms since 1991. Public debt. Objectives of RBI's monetary policy. Structure of Indian money market. Bank Nationalization and its achievements. Banking and insurance sector reforms since1991. Capital market and its reforms since1991, Labour regulations Fiscal Policy; trade and investment policy; Financial and Monetary Policies

5. Policies and Performance in Agriculture

(Lectures:10)

Growth: productivity, agrarian structure and technology; capital formation; trade; pricing and procurement

6. Policies and Performance in Industry

(Lectures: 10)

Growth; productivity; diversification; small scale industries; public sector; competition policy; foreign investment

Text

- Dutt and Sundaram (latest Ed.) "Indian Economy"
- Misra and Puri (latest ed.) "Indian Economy"

Reference Books

- Bhagwati and Chakraborty "Contributions to Indian Economic Analysis"
- Dhingra,I.C "Indian Economy"

- Bhagwati and Chakraborty “Contributions to Indian Economic Analysis”
- Chakraborty “Development Planning: The Indian Experience”
- Wadhva “Some Problems of India’s Economic Policy”
- Lucas and Papanek “Indian Economy”
- Jalan “Indian Economic Crisis”
- Nayaar Dipak “On Economic Liberalization”
- Kapila Uma “Indian Economy”
- Rakesh Mohan, 2008, —Growth Record of Indian Economy: 1950-2008. A Story of Sustained Savings and Investment, Economic and Political Weekly, May.
- S.L. Shetty, 2007, —India’s Savings Performance since the Advent of Planning, in K.L. Krishna and A. Vaidyanathan, editors, Institutions and Markets in India’s Development. .
- Selected Journal articles to be provided to the students.

Economics Minor Course II

Code: ECOUGMCC1202

Basic Statistics

Marks: 100 Credits: 4

No. of Lecture hours (Th): 45

Tutorial Hours: 15

[For Semester-II]

Course Objective: (CO)

CO1: To help students to identify and examine data

CO2: To equip the students the students with basic tools of analyzing, classifying and summarizing data.

CO3: To explain the students the basic of measures of central tendency and dispersions

CO4: To help the estudents understand various forms of bivariate relationships between variables

Learning Outcomes(LO)

After completion of the Course the students are expected to achieve the following objectives:

LO1: Students will be able to identify and examine the use of statistics in everyday life.

LO2: Students will be able to summarize and classify data using statistical methods.

LO3: Students will learn to calculate and apply measures of central tendency and measures of dispersion, skewness and kurtosis -- grouped and ungrouped data cases.

LO4: Students will be able to calculate and interpret the results of Bivariate and Multivariate Regression and Correlation Analysis, for forecasting.

LO5: The course will improve students’ ability to summarize data and solve statistical problems.

Detailed Syllabus

1. Introduction of statistics

[No of Lectures 8]

What is Statistics?: Nature, Scope and Limitations of Statistics . Nature of statistical data: Data sources – Methods of collection of statistical data – Census – Sample Survey – Measurement of Scales – Nominal, Ordinal, Interval and Ratio scales . Collection and presentation of data – frequency and non-frequency data: Classification and Tabulation – Formation of frequency distribution – Cumulative frequency distribution – Diagrammatic and Graphical representation of data.

2. Measure of location & Variability

[No of lectures 16]

Measure of Central Tendency: Arithmetic mean, Median, Mode, Geometric mean and Harmonic mean for raw and grouped data – Properties – Quartiles, Deciles and Percentiles Measures of Dispersion: Absolute and relative measures of Dispersion – Range – Quartile deviation – Mean deviation - Standard deviation – Coefficient of Variation – Lorenz Curve

3. Measures of Skewness, Kurtosis and Moments

[No of lectures 16]

Measures of skewness, kurtosis and moments: Definition – Calculation of Karl Pearson's, Bowley's and Kelly's coefficient of Skewness – Moments – Raw and Central Moments – Relation between raw and central moments – Measures of Skewness and Kurtosis .

4. Correlation and regression

[No of lecture 18]

Measures of correlation: Definition of Correlation – Types of correlation – Methods of correlation – Scatter diagram – Karl Pearson's correlation coefficient – Spearman's rank correlation coefficient – Properties – Concurrent deviation method – Correlation coefficient for ungrouped and grouped bivariate data. – Multivariate Correlation.

Regression analysis: Meaning of Regression – Regression lines – Regression coefficients – Regression coefficients for ungrouped and grouped bivariate data – Properties of regression coefficient – Finding the two regression equations of X on Y and Y on X and estimating the unknown values of X and Y; concept of multivariate regression ; Multivariate Regression.

Suggested Reading:

Goon, A.M. , Gupta, M.K. , & Dasgupta, B. (2013). *Fundamentals of Statistics: Volume 1 & 2*. World Press Private Ltd. Kolkata.

Giri P.K & Banerjee J K(2021) : “Statistical Tools and And Techniques” Academic Publishers, Kolkata.

Gupta S. C., & Kapoor V. K. (2000). *Fundamentals of Mathematical Statistics*, (10th ed.). Sultan Chand and Sons. New Delhi.

Yule G.U & Kendall N.G (1961): “*An Introduction to theory of Statistics*” Charles Griffen and Co Ltd.

Hogg R. V., & Craig A. T. (2006). *Introduction to Mathematical Statistics*. MacMillan. London

Mukhopadhyay, P. (1999). *Applied Statistics*. Books and Allied (P) Ltd. Kolkata

Economics Multidisciplinary Course II

Code: ECOUGMDC1202

Development Studies-I

Marks: 100 Credits: 3

[For Semester-II]

Course Objective: (CO)

CO1: To help the student identify the basic concepts related to poverty, Human Development and role of gender.

CO2: To help the students to be able to classify the major issues, trends, and challenges related to development.

CO3: To enlighten the student the problem and issues of development in a scientific manner.

CO4: To ensure students can compare between various concepts of poverty, inequality, and development.

CO5: To equip students to evaluate various public policy and develop their own ideas about solving the issues related to development.

Learning Outcomes (LO): After completion of the course the following learning objective shall be achieved:

LO1: The student shall be able identify the basic concepts related to poverty, Human Development, and role of gender.

LO2: The students shall be able to classify the major issues, trends, and challenges related to development.

LO3: The student shall be able to understand the problem and issues of development in a scientific manner.

LO4: The students can relate to various concepts of poverty, inequality and development.

LO5: The students will be able to evaluate various public policy and develop their own ideas about solving the issues related to development.

Detailed Syllabus

1. Introduction

[No of Lectures: 09]

Understanding Millennium Development Goals and sustainable development goals. Human Development Reports and HDI. Growth and Development. Trickle-down theory and its consequences. Development issues – the issue of poverty, inequality, inclusivity and gender.

2. Poverty and its Measurement issues

[No of Lecture :22]

The current trends in poverty across globe; where do we stand in terms of the Issues related to regional disparity in achieving poverty reduction targets. India's long battle and recent trend in poverty; state level performances in India.

Who is poor? Measurement of Poverty; calorie and poverty line; Income as an indicator of poverty. Absolute and relative poverty; rural vs urban poverty; HCR, PGR as measurement of poverty

Multi-dimensional aspects of poverty; moving from money-metric to other non-monetary dimensions of poverty. Assessment of several poverty alleviation programs across globe Poverty alleviation programs; India as a case study. Political Economy of poverty and policies to eradicate it.

3. Inequality

The issues of inequality, its measurement, its consequences, Inequality adjusted human development index and its classes.

4. Issues of Inclusion and Gender roles in development.

Understanding the issues of inclusive development and the ideas of penetration of fruits of development across all sections. Gender roles and focus on inequality across gender. Gender Development Index

Suggested Readings:

Banerjee, A.V., Benabou, R., & Mookherjee, D. (Eds). (2006). *Understanding Poverty*. Oxford University Press. New York.

Ray, D. (2009). *Development Economics*. Oxford University Press. New Delhi.

Sen, A. (2000). *Development as Freedom*. Oxford University Press. New Delhi.

Jeffery Haynes (2008) : “*Development Studies*” Polity Press; 1st edition

Economics Skill Enhancement Course II

Code: ECOUGSEC1202

Economic Data Analysis

Credit : 3

[For Semester-II]

It is a Lab Based Practical Paper. The student shall learn the operations through Lectures, Hands-on Practical Training followed by practical tests.

Course Objective: (CO)

CO1: To help student get familiar with the analysis of economic data using software.

CO2: To help Students to translate conceptual issues of statistics into practical applications by using software.

CO3: To guide students to solve statistical problems by using computer software.

CO4: To help students learn how to analyze data and illustrate their properties through data analysis and graphical interpretation.

CO5: To ensure that the students are able to learn how to integrate different statistical concepts and summarize real life data by using computer software.

Learning Objective: (LO)

LO1: Students will be able to translate conceptual issues of statistics into practical applications by using computer softwares

LO2: Students will be able to solve statistical problems by using computer applications

LO3: Students will learn to analyze data and illustrate their properties through data analysis and graphical interpretation.

LO4: Students will learn to integrate different statistical concepts and summarize real life data by using computer applications.

Broad topics to be covered.

1. Introduction to statistical analysis using software
2. Introduction to various commands for the chosen software
3. Importing, formatting and cleaning of data
4. Data management and visualization
5. Statistical data analysis techniques using computer software.

Reference

Mukherjee C, White H, and Wuyts M (1998) : “Econometrics and Data analysis for Developing countries” Routledge London, 1998

Koops G (2013) “ Analysis of Economics Data” John Wiley

A simple introduction to R by Arnab Chakraborty (freely available at <http://www.isical.ac.in/~arnabc/>)

R for beginners by Emmanuel Paradis (freely available at https://cran.r-project.org/doc/contrib/Paradisrdebut_en.pdf).

Cameron, A.C. and Trivedi, P.K. (2009) “Microeconometrics Using Stata.” Stata Press, Texas.

Lawrance Hamilton “ Statistics with Stata” 12th edition, Cenagage Publication

Christopher Baum “ Econometrics Using Stata” STATA press