

Syllabus of 4 + 1 Year Integrated UG and PG Programme

w. e. f 2024-25 Academic Year



GRADUATE SCHOOL

Mahatma Gandhi University

P. D. Hills P O

Kottayam, Kerala

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Schools offering Majors

SL.No	School/Centre
1	School of Bio Sciences
2	School of Chemical Sciences
3	School of Computer Sciences
4	School of Environmental Sciences
5	School of Gandhian Thought and Development Studies
6	School of International Relations and Politics
7	School of Pure and Applied Physics
8	School of Social Sciences

Sl. No.	Major	Intake
SCIENCE		
1	Bio Sciences	6**
2	Chemistry	6
3	Computer Science	6
4	Environmental Science	6
5	Physics	6
SOCIAL SCIENCES		
1	Development Studies	5
2	Gandhian Studies	5
3	History	10
4	International Relations and Politics	10

Majors offered and Intake *1 seat shall be sanctioned over and above the intake in each major in the 3rd semester for students who opt for a change of major after two semesters.

**Progression to PG Shall be based on the specialization selected by students as Biochemistry (2 seats) Biotechnology (2 seats) and Microbiology (2 seats) based on merit.

Schools offering Minors/MDCs/AECs/VACs/SECs

SL.No	School/Centre
1	School of Artificial Intelligence And Robotics
2	School of Behavioural Sciences
3	School of Biosciences
4	School of Chemical Sciences
5	School of Computer Sciences
6	School of Data Analytics
7	School of Energy Materials
8	School of Environmental Sciences
9	School of Food Science And Technology
10	School of Gandhian Thought And Development Studies
11	School of Gender Studies
12	School of Indian Legal Thought
13	School of International Relations And Politics
14	School of Letters
15	School of Mathematics And Statistics
16	School of Nanoscience And Nano Technology
17	School of Pedagogical Sciences
18	School of Polymer Science And Technology
19	School of Pure And Applied Physics
20	School of Social Sciences
21	School of Tourism Studies
22	International and Inter University Centre for Nanoscience and Nanotechnology
23	K N Raj School of Economics

Scheme for 4 + 1 Integrated UG and PG Programme
Graduate School - KNRSE
Mahatma Gandhi University

Course Code	Title	Credits	Hours per Week		Level	Type
			Theory	Practicals		
SEMESTER I						
	Major	4			Foundation (100-199)	
MG1DSC UEC121	Minor A Introductory Microeconomics	4	48	12	“	Minor A
MG1DSC UEC141	Minor B Economic History of India	4	47	13	“	Minor B
MG1MDC UEC101	MDC An Introduction to the Indian economy	3	37	8	“	MDC
	AEC (Eng)	3			“	
	AEC (Mal)	3			“	
SEMESTER II						
	Major	4			“	
MG2DSC UEC121	Minor A Introductory Macroeconomics	4	48	12	“	Minor A
MG2DSC UEC141	Minor B Economic History of the	4	46	14	“	Minor B

	World					
MG2MDC UEC101	MDC Basics of Data Analysis for Basic Sciences and Social Sciences	3	38	7	“	MDC
	AEC (Eng)	3			“	
	AEC (Mal)	3			“	
SEMESTER III						
	Major	4			Intermediate (200-299)	
	Major	4			“	
	Major	4			“	
MG3DSC UEC221	Minor A Quantitative Techniques for Economics	4	45	15	“	Minor A
MG3MDC UEC201	MDC Fundamentals of Optimisation Techniques in Operation Research	3	35	10	“	MDC
MG3VAC UEC201	VAC 1) Training in Fundamentals of EViews and Python	3	30	15	“	VAC

MG3VAC UEC202	2) Economic Forecasting		30	15		VAC
SEMESTER IV						
	Major	4			“	
	Major	4			“	
	Major	4			“	
MG4DSC UEC241	Minor B Intermediate Macroeconomics	4	45	15	“	Minor B
MG4SEC UEC201	SEC 1) Data Analysis and Visualisation 2) Academic Writing in Economics	3	30	15	“	SEC SEC
MG4SEC UEC202			35	10		
MG4VAC UEC201	VAC Foreign Exchange Market and Procedure in Foreign Trade	3	35	10	“	VAC
	Internship/Fieldwork	2	5	25		
SEMESTER V						
	Major	4			Higher (300- 399)	
	Major	4			“	

	Major	4			“	
	Major	4			“	
MG5SEC UEC301	SEC Econophysics	3	35	10	“	SEC
MG5VAC UEC301	VAC Methods of National Accounting and Company Accounts	3	25	20	“	VAC
SEMESTER VI						
	Major	4			“	
	Major	4			“	
	Major	4			“	
	Major (E)	4			“	
	Major (E)	4			“	
MG6SEC UEC301	SEC Fundamental and Technical Analysis of Portfolios	3	25	20	“	SEC
Total Credits		133				

SEMESTER VII						
	Major	4			Advanced (400-499)	

	Major (E)	4			“	
	Major (E)	4			“	
MG7DSCUE C441	Minor B Mathematics for Economics	4	45	15	“	Minor B
MG7DSEUE C421	Minor A (E) 1) Public Finance	4 “	45 “	15 “	“ “	MinorA (E) “
MG7DSECE U422	2) International Finance	“	“	“	“	“
MG7DSECE U423	3) Investment and Portfolio Analysis	“	“	“	“	“
MG7DSECE U424	4) International Trade					
MG7DSECE U425	5) Basic Econometrics	“ “	“ “	“ “	“ “	“ “
MGDSCCEU 426	6) Health Economics Health Economics	“	“	“	“	“
MG7DSEUE C441	Minor B (E) 1) Money and Banking in Practice	4	45 “	15 “	“ “	Minor B(E) “
MG7DSECE U442	2) Environmental Economics	“	“	“	“	“
MG7DSECE U443	3) Advanced Mathematical Economics	“	“	“	“	“

MG7DSECE U444	4) Advanced Econometrics	“	“	“	“	“
SEMESTER VIII						
	Major	4			“	
	Major (E)	4			“	
	Research Project	12			“	
	Major*	4			“	
	Major*	4			“	
	Major*	4			“	
	Total Credits	44				
SEMESTER IX						
	Major	4			PG Level (500-599)	
	Major	4			“	
	Major	4			“	
	Major	4			“	
	Major	4			“	
SEMESTER X						
	Research Project	20			“	
	Major**	4			“	
	Major**	4			“	
	Major**	4			“	
	Major**	4			“	
	Major**	4			“	
	Major**	4			“	
	Total Credits	40				

*Only for 4-Years Honours Students

**Only for students who opt for theory courses instead of Research Project

Note: General foundations courses shall be offered by different schools. Students can flexibly choose the courses across disciplines.

Level	Foundation (100-199)	Intermediate (200-299)	Higher (300-399)	Advanced (400-499)	PG Level (500-599)
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Type	Major	Minor	MDC	SEC	VAC	AEC
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	MAHATMA GANDHI UNIVERSITY Graduate School
	4 + 1 Integrated UG and PG Programme

School	KN Raj School of Economics
Programme	BA in Social Sciences
Course Title	Introductory Microeconomics
Course Type	Minor
Course Level	100-199
Course Code	MG1DSCUEC121
Course Overview	Basics of Microeconomics is presented in the first unit. Fundamentals of demand theory is provided in this unit which is followed by production and cost theories and their application. The third unit deals with the nature of perfect competitive market while monopoly power is measured in the fourth chapter. The last chapter addresses market in practice compared to perfect competitive market and monopoly market. Every unit has assignments relating to numerical problems, field study and policy analysis.

Semester	1	Credit	4
Total Student Learning Time	Instructional hours for theory	Instructional hours for practical/lab work/field work	
	45	15	
Pre-requisite	Pass in plus two-level Programme		

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains	PSO No.
	<i>Upon completion of this course, students will be able to;</i>		
1	Understand the basics of Economics	U	
2	Assess the theoretical and policy implications of demand, production and costs	A	
3	Make familiar with different forms of market based on the degree of competition	An	
4	Make capable to take decisions in output and price to reach profit maximisation under different forms of market	S	
5	Empower to solve numerical problems and to conduct policy analysis.	E	
6	Create interest in analysing policy tools like elasticity, tax incidence, profit maximisation	C	

	etc.		
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*(Learning Domains: Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E) , Create (C), Skill (S))

COURSE CONTENT

Module 1	Hours	CO No
	13	
Trade Offs, Prices and markets, Equilibrium, Theories and Models, Positive and Normative Analysis	1	
Market Defined, Real and Nominal Prices, Decision Making and Policy Design	1	
Market Equilibrium, Changes in Market Equilibrium	2	
Elasticities of Demand and Supply	1	
Consumer Preferences and Indifference Curves	1	
Budget Constraints and Consumer Equilibrium	2	
Price Effect, Substitution, and Income effects	2	
Elasticity of Demand and Consumer Surplus	1	
Practice: Collecting data on real and nominal prices; Measuring elasticity of demand based on field level data	2	
Computation of substitution and income effect; Computation of consumer surplus based on field data	2	

Module 2 Production and Costs	Hours	CO No
	14	
Production Decision and Technology of Production	1	R
Law of Production- One and two Inputs	2	U
Law of Production- Returns to Scale	2	A
Concepts of Costs	1	U
Determinants of Costs and Cost-Minimising Input Choice	2	A
Short-Run and long-Run Cost	2	An
Production Possibility Curve and The Learning Curve	2	S
Practice: Fitting a production function based on actual data; Classification of costs based on field data	1	A
Computation of short-run and long-run costs; Understanding actual	2	AN

nature of learning curve.		
Production Decision and Technology of Production	1	C

Module 3 Market Structure, Competitive Market and Monopoly Power	Hours 15	CO No
Characteristics of a Perfectly Competitive Markets	1	R
Profit Maximisation, Revenue and Supply Curve	2	U
Market Equilibrium, Changes in Market Equilibrium	2	U
Producer Surplus and long-Run Equilibrium	2	A
Industry's Long-Run Supply Curve	2	An
Monopolists' Output Decision- Shift in Demand and Effect tax under Monopoly	2	A
Monopoly Power and Sources of Monopoly Power	2	E
Practice: Visit a rural agricultural market and compare with the properties of Perfect competition; Prepare a supply curve by interviewing a few sellers.	1	C
Compute producers' surplus based on a numerical example, Compare short-run and long-run supply curves based on change in cost trends based on actual data.	2	S
Trace the history of Indian Railway or KSRTC as a monopoly firm	1	E

Module 4 Imperfect Competitive Market	Hours 16	CO No
Social Costs of Monopoly Power	1	
Monopsony and Monopsony Power	1	
Price Discrimination	2	
Monopolistic Competition and equilibrium	2	
Monopolistic Competition and Economic Efficiency	1	
Equilibrium in the Oligopoly Market	2	
The Cournot Model and Stackelberg Model	2	
Price Competition with Homogenous Products	1	
Price Competition with Differentiated Products	2	

Practicum: Study price discrimination by KSEB or Kerala Water Authority; Compute monopoly Power; study the role of a purchaser as a monopsonist.	2	
Take the case of a monopolistic Industry like Bath soap or textile industry	2	
Study the case of telecom or Airline firms in India as a case of Oligopoly	2	

Mode of Transaction	Classroom activities: Lectures, Assignments, PPT, Numerical Analysis, Self-Assessment by students, Field activities: Visits to market, Households and Industries. Lab based activities: Computer Lab
Mode of Assessment	Continuous Internal Assessment (CIA) • Seminar Presentation – a theme is to be discussed and identified to prepare a paper and present in the seminar • Assignments • Numerical applications • Policy discussion • Semester End examination

Learning Resources

- 1) Robert S. Pindyck, Daniel L Rubinfeld and Prem L Mehta (2013): Microeconomics, Pearson Prentice Hall of India Ltd.: New Delhi
- 2) Robert. H. Frank (2000): Microeconomics and Behavior, Irwin Mc Graw – Hill.
- 3) A Koutsosianis (1978): Modern Microeconomics, Macmillan.

<https://digitalcommons.du.edu/cgi/viewcontent.cgi?article=1372&context=etd>
https://ceswp.uaic.ro/articles/CESWP2015_VII3_BAL.pdf

Relevance of Learning the Course/ Employability of the Course

This is a theory-oriented course but has application side like policy analysis and managerial decision making. Those who are employed as managers and policy analysts require basic training in this field. This course is important for getting employment as managers, engineers, policy analysts, capital market analysts etc.

	MAHATMA GANDHI UNIVERSITY Graduate School
	4 + 1 Integrated UG and PG Programme

School	KN Raj School of Economics
Programme	BA in Social sciences

Course Title	Introductory Macroeconomics		
Course Type	Minor		
Course Level	100-199		
Course Code	MG2DSCUEC121		
Course Overview	Basics of Macroeconomics is presented in the first Module. Two sector economy is the concern of the next module. Money market, theory of money, monetary policy and fiscal policy are the components in the third module. Twin deficits and open economy models are the concern of the fourth module. Capital mobility is a major theme in the last module.		
Semester	2	Credit	4
Total Student Learning Time	Instructional hours for theory	Instructional hours for practical/lab work/field work	
	52	8	
Pre-requisite	Pass in plus two-level Programme		

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COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains	PSO No.
	<i>Upon completion of this course, students will be able to;</i>		
1	Comprehend the basic concepts and circular flow of the Macroeconomy.	U	
2	Assess the influence of real and money markets..	A	
3	Analyse the impact of changes in expenditure, rate of interest and exchange rate on income.	An	
4	Compare real market, money market, domestic economy and open economy.	E	
5	Create interest in critically assessing the policy implications in the fluctuations of the economy.	A,	
6	Create interest in analysing policy tools like multiplier, budget deficit, trade deficit etc.	C	

*(Learning Domains: Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E) , Create (C), Skill (S))

COURSE CONTENT

Module 1 Nature Macroeconomics in an Economy	Hours	CO No
	16	
Macroeconomics Defined	1	1
Macroeconomics in the short run and long run.	2	1
National Income (NI) concepts	1	2
NI – Income approach	2	2
NI – Product approach	2	1
NI – Expenditure approach	2	1
National Income Statistics in India	2	1
Limitations of NI accounts	2	1

Practicum: Assess Fluctuations in Indian economy; Find out items of income and expenditure in India	2	3
Prepare a brief write up on the nature of national income data in India	2	3

Module 2 Two Sector Economy	Hours 15	CO No
Income flow from business firms to households	2	1
Nominal GDP, Real GDP, and GDP deflator	2	1
Consumption function	2	3
Saving function	1	2
Investment Function	2	3
Multiplier effect, interest rate, rate of return , and Autonomous spending.	2	3
Equilibrium of the economy	2	6
Practicum: Consumption and saving behaviour in India	2	1
Computation of multiplier based on Indian national income data.	2	4

Module 3	Hrs.	Co.
	14	No.
Money market	2	4
Quantity theory of money	2	2
Role of monetary policy and economic equilibrium	2	3
Role of fiscal policy and economic equilibrium	2	3
Interaction of monetary and fiscal policies	2	3
Policy mix	2	4
Practicum: Money market in India	2	5
Crowding out in India	2	6

Module 4 The Open Economy	Hours	CO No
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	15	
The Twin Deficits	2	1
Budget deficit in developing countries	1	4
Foreign Trade and the Balance of Payments	1	3
Exchange Rate Systems	2	3
Determinants of Net Exports	2	4
The Real Exchange Rate and the Interest Rate	2	4
Capital Mobility	1	5
Aggregate Demand and Aggregate Supply	2	4
Practicum: History of Budget Deficit in India	2	1
The Impact of COVID – 19 and twin Deficits in India	2	6

Mode of Transaction	Classroom activities: Lectures, Assignments, PPT, Numerical Analysis, Self-Assessment by students, Field activities: Interactions with Chamber of Commerce, Industrialists, Service providers, Consumers' Associations Lab based activities: Computer Lab
Mode of Assessment	Continuous Internal Assessment (CIA) • Seminar Presentation – a theme is to be discussed and identified to prepare a paper and present in the seminar • Assignments • Numerical applications • Policy discussion • Semester End examination

Learning Resources

1. Robert J Gordon: Macroeconomics, Harper Collins.
2. N George N Mankiw: Principles of Macroeconomics, Cengage, 9th Edition.

Relevance of Learning the Course/ Employability of the Course Understanding of macroeconomy is necessary to know one's own economy. This is an important course for competitive examinations like civil services, RBI, NABARD, Banking services etc. The impact of economic policies on common man can be understood only through a basic training in macroeconomics. It is also significant in understanding the relative position of the one's own economy in the context of global economy.

	MAHATMA GANDHI UNIVERSITY Graduate School
	4 + 1 Integrated UG and PG Programme

School	KN Raj School of Economics
Programme	UG Programme in Basic Sciences and Social sciences

Course Title	An Introduction to the Indian economy		
Course Type	MDC		
Course Level	100-199		
Course Code	MG1MDCUEC101		
Course Overview	The course in 'Introduction to Indian Economy' is a basic treatment of the economy meant for learners of different disciplines. It has three modules where a travel is arranged from pre-colonial period to the present in the first module. Development experience of India with a few burning issues are presented in the second module. The content of the last module touches the recent issues in Indian Economy. Each module has topics for understanding the local economy in the light of the content of this course.		
Semester	1	Credit	3
Total Student Learning Time	Instructional hours for theory	Instructional hours for practical/lab work/field work	
	38	7	
Pre-requisite	Pass in plus two-level Programme		

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COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains	PSO No.
	<i>Upon completion of this course, students will be able to;</i>		
1	Understand the evolution of the Indian economy from the medieval period to the present.	U	
2	Try to translate national level ideas to apply to a local context.	A	
3	Analyse the modernisation of the economy and its advantages to the people.	An	
4	Analyse the various economic issues of the Indian economy.	E	
5	Create interest in critically assessing the policy implications in addressing the issues of the economy.	C	
6	Develop ability to understand a local or regional economy	S	

*(Learning Domains: Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E) , Create (C), Skill (S))

COURSE CONTENT

Module 1 Indian Economy from Pre-colonial Period to the Present	HRs.	CO. No.
	15	
India from 'Fabulous riches of the East' to 'Asiatic Mode of Production' and Colonial Indian Economy.	2	1
Drain theory, Swadeshi movement, Economy during world wars and the population divide	2	1
India as a Mixed economy- Nehru-Mahalanobis model and an overview of economic planning in India	2	1

Plan holidays, Structural retrogression and turnaround of the Economy in the 1980s	3	2
New Economic Policy and Globalizing India.	3	1
Practicum: A debate on the economic history of India since the pre-colonial period	2	2
Prepare a document on the Planning experience in India	2	2
Collect information from at least ten respondents' perception about the economic reforms in India.	2	3

Module 2 Major Aspects in Indian Economy	Hours 15	CO No
Development experience of India, Kerala, Gujarat and UP: A comparison	2	1
Poverty and Inequality-economic, social, gender and spatial dimensions	2	2
Farmer's Distress and Protests	2	2
Energy insecurity and vulnerable climatic conditions	2	3
India's instability in Foreign Trade and Balance of Payments	2	3
The termination of Five-Year Plans and the installation of NITI Ayog	2	4
Practicum: Document the extent of poverty and inequality in your locality.	2	2
Try to comprehend the condition of farmers in a village and report it	2	1
What are the impacts of climate variability in one's locality?	2	4

Module 3 Recent Trends in Indian Economy	Hrs.	Co.
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	15	No.
Demonetization and its impact on various sectors	2	5
Introduction of GST and its outcome.	2	5
Insolvency and Bankruptcy Code (IBC) and its implications	2	5
Import Substitution and Atma Nirbhar Bharat	2	5
Digitalisation of Indian economy	2	3
India as the Chairing Country of G-20 and global economy	2	1
Unemployment among Youths in India	1	3
Practicum: Enquire the impact of demonetisation among small traders and households in your locality.	2	6
Study the fact relating to unemployment among youth, the impact of digitalisation and demand for domestic goods in your village or town.	2	5

Mode of Transaction	Classroom activities: Lectures, Assignments, PPT, Numerical Analysis, Self-Assessment by students, Field activities: Visits to villages and towns to assess the condition of local economy. Lab based activities: Graphing of Indian Economic Data
Mode of Assessment	Continuous Internal Assessment (CIA) • Seminar Presentation – a theme is to be discussed and identified to prepare a paper and present in the seminar • Assignments • Numerical applications

	• Policy discussion . Reports based on field visits • Semester End examination
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Learning Resources

1. Kurien, C. T. (1992): The Economy: An Interpretative introduction, New Delhi: Sage.
2. Sen, A.K. (2005): The Argumentative Indian, London: Penguin.
3. Dreze, Jean and Amartya Sen (2013): An Uncertain Glory-India and its Contradictions, London: Penguin
4. Economic Survey, Govt. of India, Various issues.

Relevance of Learning the Course/ Employability of the Course

As a multidisciplinary course, this is useful learners from any discipline. A learner's understanding of economic environment enables them to compete in various careers from civil service, managerial posts to clerical posts. This is also relevant in developing appropriate technology by scientists and technocrats. Further, a basic knowledge in Indian economy makes a person to judge economic policies before casting her vote.

	MAHATMA GANDHI UNIVERSITY
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	Graduate School
	4 + 1 Integrated UG and PG Programme

School	KN Raj School of Economics		
Programme	UG Programme in Basic Sciences and Social sciences		
Course Title	Basics of Data Analysis for Basic Sciences and Social Sciences.		
Course Type	MDC		
Course Level	100-199		
Course Code	MG2MDCUEC101		
Course Overview	This course is designed to impart training in statistical methods required for research in Social Science/ Humanities. Topics are so designed in such a way that even students who have no primary knowledge of Statistics can understand the basic theory and procedures involved. The course starts with the basic ideas relating to social science research (Module 1) and research design. Different methods of sampling and presentation of data are provided in module 2. Study about various descriptive measures is included in module 3. Use of relevant soft- wares is also the concern of that module.		
Semester	1	Credit	3
Total Student	Instructional hours for		Instructional hours for

Learning Time	theory	practical/lab work/field work
	35	10
Pre-requisite	Pass in plus two-level Programme	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains	PSO No.
	<i>Upon completion of this course, students will be able to;</i>		
1	Familiarise with the basic and advanced concepts in social science research.	U	
2	Prepare questionnaires, collect data and present it scientifically	A	
3	Analyse both secondary and primary data	An	
4	Design research and assess data to prepare a brief report.	E	
5	Conduct a sample survey independently	C	
6	Explore new ways of presenting and analysing data with help of software.	S	

*Learning Domains: Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E) , Create (C), Skill (S)

COURSE CONTENT

Module 1 BASIC CONCEPTS OF SOCIAL SCIENCE RESEARCH	HRs.	CO. No.
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	16	
Features of research in social sciences and humanities – Meaning, objectives, and significance of research - tools and methods of research – Different research designs .	4	1
Types of data - Quantitative and qualitative data—Sources of data —Distinction between primary data and secondary data	3	2
Various methods of collecting primary and secondary data – Observation method, interview method, Questionnaire method, schedule method	3	2
Guidelines for preparing a questionnaire – Difference between questionnaire method and schedule method – merits and demerits - difference between survey and experiment	3	2
Practicum: Collect a few examples from secondary data and give a few observations from them	2	4
Prepare a questionnaire assuming a set of objectives	2	2
Document a few facts based on observation of a field/ lab situation and an interview method.	2	2

Module 2 Sample Design and Presentation of Data	Hours 14	CO No
Sampling Design -Census or Sample Survey - – Different steps in sampling design	2	4
Different types of sample design - Probability and non-probability sampling.	2	4
Different methods to obtain a random and non-random sample from a population	3	4
Processing and presentation of collected data	2	3
Presentation of data using diagrams and graphs	2	3
Practicum: Conduct a census method (very small population) and sample survey.	2	5

Have a debate on the advantages and disadvantages of random and non-random sampling	2	1
Present the collected data based on census and sample methods	2	3

Module 3 Descriptive Statistics and Software Training	Hrs.	Co.
	15	No.
Descriptive measures – its properties - Measures of central tendency	3	3
Measures of dispersion – relative and absolute measures – coefficient of variation - Merits and demerits of each.	3	4
Moments – raw and central - Measures of skewness and kurtosis.	2	4
Bivariate distribution - Correlation analysis	2	4
Introduction of Software packages: Excel, SPSS	3	3
Practicum: Presentation of Data based on Excel	2	3
Presentation of Data and computation of Descriptive Statistics based on SPSS	2	6

Mode of Transaction	Classroom activities: Lectures, Assignments, PPT, Data Analysis, Self-Assessment by students, Field activities: Visits to villages and towns to collect data Lab based activities: Presentation and analysis of data
Mode of Assessment	Continuous Internal Assessment (CIA) • Seminar Presentation – a theme is to be discussed and identified to prepare a paper and present in the seminar • Assignments

	• Numerical applications and data analysis • Reports based on field visits • Semester End examination
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Learning Resources

1. John Freund (1981): *Modern Elementary Statistics*, (New Delhi: Prentice-Hall of India).
2. A.L. Nagar & R.K. Das (1977): *Basic Statistics*, (Delhi: Oxford Univ. Press).
3. A.L. Nagar, V.N. Pandit & Balvir Singh (1979): *Elementary Statistics*, (Delhi: Oxford Univ. Press).

Relevance of Learning the Course/ Employability of the Course

This is a course fit to learners of all disciplines. Data analysis has become a base for scientific approach in almost all sciences. This is a powerful capacity building course for getting employment in the fields like capital market, market research, research institutions, policy analyst etc. Moreover, skill in data analysis is a must for understanding most of the disciplines.