

# SHIVAJI UNIVERSITY, KOLHAPUR

Department of Economics-Autonomous



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**Accredited By NAAC**

**Syllabus For**

**B.Sc.-M.Sc. Economics Integrated (Five Years)**

**(As per National Education Policy 2020)**

**Faculty of Humanities**

**(B.Sc. Second Year Semester III and IV)**

**(Subject to the modifications to be made from time to time)**

**To be Introduced from June 2023.**

**A] Ordinance and Regulations: As applicable to B.Sc.-M.Sc. Economics Integrated (Five Years)**

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B]

**Shivaji University, Kolhapur**  
Syllabus For  
**B.Sc.-M.Sc. Economics Integrated (Five Years)**

Semester with Credits and CIE System of Examination  
[ Faculty of Humanities]

**1. TITLE: B.Sc.-M.Sc. Economics Integrated (Five Years)**

**(Under the Faculty of Humanities)**

**2. YEAR OF IMPLEMENTATION:**

To be Introduced from 2023.

**3. PREAMBLE:**

Keeping in view, the general employability of Graduates and Post Graduates and utterly unsatisfactory the success rate of students in both the Central Civil and Specialized Services Examinations of UPSC, the Department of Economics of Shivaji University has decided to introduce B. Sc.-MSc Economics Integrated (Five Years) course. The unique character of the captioned postgraduate course will be that the students opting for this course shall have the option of multiple exits and the two-point entry system. Accordingly, syllabus has been framed in view to understand recent trends in economics and interdisciplinary subjects along with theoretical and applied perspective as well as skill development with the introduction of semester and credit system.

**4. Programme Outcomes:**

1. As mentioned in the foregoing point (a) that the captioned Programme will be a successful model in creating the employment avenues in the changing Labour Market which has become a ruthless quality conscious.

2. The captioned Programme will equip the students with the necessary skills to make the diagnosis of contemporary economic problems and write a project proposal.
3. Students at the completion of the captioned Programme shall be able to apply statistically and mathematical tools to monitor and evaluate the policy outcomes.
4. As the students of the captioned Programme will have to study compulsory, the foreign languages it will be easy for them to seek the foreign employment and further higher studies.
5. Students of the captioned Programme will be able to apply their knowledge in the analysis of the socio-economic problems and suggest effective measures in solving the problems.
6. Students completing the captioned Post Graduate Programme will be strongly equipped with the Mathematical, Statistical, and Econometrics skills which in fact is the need of the contemporary world labour market covering the fields of academics, industry, services sectors and national and international administrative fields.

**5. DURATION:**

- The course shall be a full-time course.
- The duration of course shall be of Five years /Ten Semesters.

**6. PATTERN:** -The pattern of examination will be Semester with Credit and Continuous Internal Evaluation [CIE].

**7. FEE STRUCTURE: -**

**i) Entrance Examination Fee: As per university rules**

**ii) Course Fee-As per the University rules/norms.**

<b>Particulars</b>	<b>Rupees</b>
Tuition Fee	Rs.
Laboratory Fee	Rs.
Computer Fee	Rs.
Total	

**Other fee will be applicable as per University rules/norms.**

## **8. IMPLEMENTATION OF FEE STRUCTURE:**

In case of revision of fee structure, this revision will be implemented in phase wise manner and as per the University decision in this regard.

## **9. ELIGIBILITY FOR ADMISSION:**

The basic eligibility for the course is 10 + 2 with any discipline of Arts, Commerce, Science, and Diploma Engineering (10+3) from any recognized Board of Examination in India. The minimum percentage of marks [At 10+2 and 10+3 (the case of Diploma Engineering)] required for seeking admission will be 50 percent for the General and 45 percent for reserved category candidates. Basic knowledge of mathematics is required. The merit list will be prepared on the basis of the entrance examination score.

## **10. MEDIUM OF INSTRUCTION:**

The medium of instruction shall be English.

**11. STRUCTURE OF PROGRAMME:** As per National Education Policy 2020.

**Structure of Programme B.Sc.-M.Sc. Economics Integrated (Five Years) is given below:**

**Syllabus for B.Sc.-M.Sc. Economics Integrated (Five Years)**

**Department of Economics-Autonomous, Shivaji University, Kolhapur**

**B.Sc.-I (Semester-I & II) introduced from June 2022**

**B.Sc.-II (Semester III and IV) introduced from June 2023**

Structure of Level 6 of B.Sc.-M. Sc. Economics Integrated (Five Years)											
Semester III											
Teaching Scheme						Examination Scheme					
Sr. No.	Theory				Practical	Semester-end Examination (SEE)			Internal Assessment (IA)		
	Course TYPE	No of Lectures	Hours	Credits		Paper Hours	Max	Min	Internal	max	Min
1	DSC-I	4	3.2+0.8	4		3	70	28		30	12
2	DSC-I	4	3.2+0.8	4		3	70	28		30	12
3	DSC-I	4	3.2+0.8	4		3	70	28		30	12
4	DSC-I	4	3.2+0.8	4		3	70	28		30	12
5	GEC-IV /DSE-IV	2	3.2+0.8	4	2x4=8*	2	50	20		50**	20
6	AECC-III	4	3.2+0.8	4		3	70	28		30	12
7	SEC-III	2	2	2		3	50	20		-	-
		26	20.2+5.8=26	26			470	188		180	72

\* Each Batch of 10 students will be 4 Practical hours per week (2 Batch x 4 Hrs. = 8)

\*\* CIE 50 Marks (30 Marks for Practical Examination and 20 Marks for Journal/Internal Test)

Semester IV											
Teaching Scheme						Examination Scheme					
Sr. No.	Theory				Practical	Semester End Examination			Internal Assessment		
	Course TYPE	No of Lectures	Hours	Credits		Paper Hours	Max	Min	Internal	max	Min
1	DSC-II	4	3.2+0.8	4		3	70	28		30	12
2	DSC-II	4	3.2+0.8	4		3	70	28		30	12
3	DSC-II	4	3.2+0.8	4		3	70	28		30	12
4	DSC-II	4	3.2+0.8	4		3	70	28		30	12
5	GEC-IV /DSE-IV	4	3.2+0.8	4		3	70	28		30	12
6	AECC-IV	4	3.2+0.8	4		3	70	28		30	12
7	SEC-IV	2	2	2		0.5	50	20		-	-
		26	19.2+6.8=26	26			470	188		180	72
Grand Total Semester III & IV		52	52	52	08		940	376		360	144
<b>Total Credits Required for Completing Level 6: 52 Credits</b>											

**Teaching Scheme for B. Sc. - M. Sc. Economics Integrated (Five Years)  
For Level 6**

<b>Semester III</b>						
<b>Sr. No.</b>	<b>Course TYPE</b>	<b>Title of the Courses</b>	<b>Theory</b>		<b>Practical</b>	<b>Credits</b>
			<b>No. of Lectures</b>	<b>Hours</b>		
1	DSC-III	Macro Economics-II	4	3.2+0.8	-	4
2	DSC- III	Econometrics-II	4	3.2+0.8	-	4
3	DSC- III	Development Economics-I	4	3.2+0.8	-	4
4	DSC- III	Public Finance	4	3.2+0.8	-	4
5	GEC-III /DSE-III	Computer Application in Economics-II	2	3.2+0.8	2*4=8#	4
6	AECC-III	English for Economics: Intermediate	4	3.2+0.8	-	4
7	SEC-III		2	2	-	2
<b>Total</b>			26	20.2+5.8= 26		26

#Practical workload for two batches (per batch 20 students/Per batch 4 hours teaching

<b>Semester IV</b>						
<b>Sr. No.</b>	<b>Course TYPE</b>	<b>Title of the Courses</b>	<b>Theory</b>		<b>Practical</b>	<b>Credits</b>
			<b>No Of Lectures</b>	<b>Hours</b>		
1	DSC-IV	International Economics	4	3.2+0.8	-	4
2	DSC-IV	Rural and Agricultural Economics	4	3.2+0.8	-	4
3	DSC-IV	Public Policy	4	3.2+0.8	-	4
4	DSC-IV	Mathematical Economics	4	3.2+0.8		4
5	GEC-IV/ DSE-IV	Environmental Economics	4	3.2+0.8	-	4
6	AECC-IV	French Language	4	3.2+0.8	-	4
7	SEC-IV		2	2	-	2
<b>Total</b>			26	19.2+6.8=26		26
<b>Grand Total Semester III &amp; IV</b>			52	52	08	52

## Question Paper Pattern for Semester-End Examination

<b>B. Sc.-M. Sc. Economics Integrated (Five Years)</b>		
<b>Paper Title:</b>		
<b>Subject Code:</b>		
Day and Date:		Total Marks: 70
Time: 3 Hours		
<b>Instructions:</b> 1. All question are compulsory. 2. Figures to right indicated Full Marks.		
Q.No.	Type of Question	Marks
1	Objective Type Questions (Each Question carry two marks)	20
	A. Objective Type questions.	10
	B. Answer in one or two sentences	10
2	Short Answer questions (Any Two out of Three Questions)	15
3	Answer in Brief (Any three out of five Questions)	15
4	Descriptive type question	20

## Question Paper Pattern for Semester-End Examination Computer Application in Economics

<b>B.Sc. Economics Semester II, III and V</b>		
<b>Subject Code &amp; Paper Title:</b>		
Day and Date:		Total Marks: 50
Time: 2 Hours		
<b>Instructions:</b> 1. All question are compulsory. 2. Figures to right indicated Full Marks. 3. Use of Calculator is Permitted.		
Q. No.	Type of Question	Marks
1	Objective Type Questions	10
	A. Objective Type questions. (Each Question carry one mark)	5
	B. Answer in one or two sentences (Each Question carry one mark)	5
2	Write short notes (Any two out of four Questions)	10
3	Answer in Brief (Internal Choice)	10
4	Answer any two from three (Numerical Problems)	20

**Question Paper Pattern for Semester-End Examination (For 2 credits)  
SEC-III and SEC-IV**

<b>B. Sc. – M. Sc. Economics Integrated (Five Years)</b>		
<b>Paper Title:</b>		
<b>Subject Code:</b>		
Day and Date:		<b>Total Marks: 50</b>
Time: 1Hour		
<b>Instructions:</b> 1. All questions are compulsory 2. Figures to right indicates full marks		
<b>Q. No</b>	<b>Types of Questions</b>	<b>Marks</b>
1.	25 Objective Type Questions (Each Question will carry two marks)	50

**Internal Assessment**

Sr. No.	Semester	Type of internal Assessment	
		For 20 Marks	For 10 Marks
1	I	Unit test	Home Assignment/Oral Examination/ Seminar Presentation/Group Discussion/ Field work/Project work/ Review of Article/Academic Writing
2	II	Unit Test	
3	III	Unit Test	
4	IV	Unit Test	
5	V	Unit Test	
6	VI	Unit Test	
7	II, III & V	Computer Practical 30 marks	Journal/Internal Test 20 marks

**Result** - The result of each semester shall be declared as Pass or Fail or Allowed to Keep Terms (A.T.K.T. for Semester II & IV) with grade/ grade points and Credits gained.



**SHIVAJIUNIVERSITY, KOLHAPUR**  
**DEPARTMENT OF ECONOMICS-AUTONOMOUS**  
**B.Sc.-M.Sc. Economics Integrated (Five Years)**  
**B. Sc. Economics Second Year**  
**Semester-III**

<b>Sr. No.</b>	<b>Paper Code</b>	<b>Paper Title</b>
1	DSC-III	Macro Economics II
2	DSC-III	Econometrics-II
3	DSC-III	Development Economics-I
4	DSC-III	Public Finance
5	GEC-III /DSE-III	Computer Application in Economics-II
6	AECC-III	English for Economics: Intermediate
7	SEC-III	

**B.Sc.-M. Sc. Economics Integrated (Five Year)**  
Second Year Semester-III  
Title of the Paper: - **Macro Economics -II**  
Total Credits: 4

**Course Outcomes:** By the end of this course student will be able to

- 1 Demonstrate the systemic facts and latest theoretical developments at macro level studies for empirical analysis.
- 2 Acquire the prior knowledge of macroeconomic theoretical structure this is essential for the proper comprehension of the different issues and policies.
- 3 Establish the functional relationship between the large aggregates.

**UNIT I Circular Flow of Income and National Income Accounting (15 Periods)**

- 1.1 The Circular Flow of Income in two, three and four-sector economy
- 1.2 National income accounting – social accounting, Double Entry System, Equation Model
- 1.3 Flow of funds accounting and Input-output accounting
- 1.4 National income accounting for an open economy; balance of payments: current and capital account

**UNIT II The Keynesian Model: Model of income determination (15 Periods)**

- 2.1 Concept of Effective Demand: Aggregate demand Supply curves and its determinants
- 2.2 Consumption Function
- 2.3 Multiplier analysis with autonomous investment
- 2.4 Investment Function

**UNIT III Theories of Consumption Function (15 Periods)**

- 3.1 Absolute Income Hypothesis
- 3.2 Relative Income Hypothesis
- 3.3 Permanent Income Hypothesis
- 3.4 Life Cycle Hypothesis

**UNIT IV Theories of Business Cycles (15 Periods)**

- 4.1 Features and Phases of BC
- 4.2 Hawtrey's and Hayek's Theory of TC
- 4.3 Schumpeter and Keynesian Theory of TC
- 4.4 Measures to Control TC

## References/Reading List:

1. Ackley, G. (1978), *Macroeconomics: Theory and Policy*, Macmillan, New York.
2. Blackhouse, R. and A. Salansi (Eds.) (2000), *Macroeconomics and the Real World (2 Vols.)*, OxfordUniversity Press, London.
3. Branson, W. a. (1989), *Macroeconomic Theory and Policy*, (3rd Edition), Harper and Row, New York.
4. Culbertson, J. M. (1968), *Macroeconomic Theory and Stabilization Policy*, McGraw Hill, Kogenkosh, Tokyo.
5. Dornbusch, R. and F. Stanley (1997), *Macroeconomics*, McGraw Hill, Inc., New York.
6. Duesenberry, J. S. (1949), *Income, Saving and the Theory of consumer Behaviour*, Harvard University Press, Harvard.
7. Edey, M. and A. T. Peacock (1967), *National Income and Social Accounts*, Hutchinson University Library, London.
8. Frisch, H. (1983), *Theories of Inflation*, CambridgeUniversity Press, Cambridge.
9. Gordon, R. A. (1961), *Business Fluctuations*, Harper and Row.
10. Gordon, R. and S. G. Harris (1998), *Macroeconomics*, Addison Wesley.
11. Gordon, R. and S. G. Harris (1998), *Macroeconomics*, Addison Wesley, Massachusetts.
12. Hall, R. E. and J. B. Taylor (1986), *Macroeconomics*, W. W. Norton, New York.
13. Heijdra, B. J. and V. Frederick (2001), *Foundations of Modern Macroeconomics*, OxfordUniversity Press, New Delhi.
14. Hicks, J. R. (1950), *A contribution to the Theory of Trade Cycles*, Clarendon Press, Oxford.
15. Jha, R. (1991), *contemporary Macroeconomic Theory and Policy*, Wiley Eastern Ltd., New Delhi.
16. Jha, R. (1999), *Contemporary Macroeconomic Theory and Policy*, New Age International (P) Ltd., New Delhi.
17. Keynes, J. M. (1936), *The General Theory of Employment, Interest and Money*, Macmillan, London.
18. Levacic, R. and A. Rebman (1986), *Macroeconomics: An Introduction to Keynesian and Neo-classical Controversies*, Macmillan, London.
19. Lucas, R. (1981), *Studies in Business Cycle Theory*, M. I. T. Press, Cambridge, Massachusetts.
20. Mankiw, N. G. and D. Romer (Eds.) (1991), *New Keynesian Economics*, (2 Vols.), MIT Press, Cambridge.
21. Mankiw, N. G. and D. Romer (Eds.) (1991), *New Keynesian Economics*, (2 Vols.) MIT Press, Cambridge.
22. Mueller, M. G. (1966), *Readings in Macroeconomics*, Holt Rinehart and Winston, New York.
23. Patinkin, D. (1965), *Money, Interest and Prices*, Harper and Row, New York.
24. Powelson, J. P. (1960), *National Income And Flow of Funds Analysis*, McGraw Hill, New York.
25. Rakshit, M. (1998), *Studies in the Macroeconomics of Developing Countries*, Oxford University Press, New Delhi.
26. Rao, V. K. R. V. (1983), *India's National Income: 1950 to 1980*, Sage Publications, New Delhi.
27. Romer, D. L. (1996), *Advanced Macroeconomics*, McGraw Hill Company Ltd., New York.
28. Ruggles, R. and N. Ruggles (1956), *National Income Accounts and Income Analysis*, McGraw Hill, New York.
29. Scarfe, B. L. (1977), *Cycles, Growth and Inflation*, McGraw Hill, New York.
30. Shapiro, E. (1996), *Macroeconomic Analysis*, Galgotia Publications, New Delhi.
31. Sheffrin, S. M. (1996), *Rational Expectations*, CambridgeUniversity Press, Cambridge.
32. Taylor, L. (1983), *Structuralist Macroeconomics*, Basic Books, New Longman.
33. United Nations (1974), *Year Book of National Account Statistics*

**B.Sc.-M. Sc. Economics Integrated (Five Year)**

Second Year Semester-III

Title of the Paper: - **Econometrics-II**

Total Credits: 4

- Course Outcomes:**
1. The student will be able to Formulate an Econometric Model.
  2. The student will be able to estimate different Econometric Models.
  3. The student will be able to interpret the Econometric Model.
  4. The student will be able to Compare the Econometric Models.

**UNIT I Multiple Regression Analysis: The Problem of Estimation (15 Periods)**

- 1.1 Three-Variable Model: Notation and Assumptions
- 1.2 Multiple Regression Equation-Interpretation, Partial Regression Coefficients
- 1.3 OLS and ML Estimation of the Partial Regression Coefficients
- 1.4 Multiple Coefficient of Determination and the Multiple Coefficient of Correlation

**UNIT II Multiple Regression Analysis: The Problem of Estimation (15 Periods)**

- 2.1 Simple Regression in the Context of Multiple Regression: Introduction to Specification Bias
- 2.2  $R^2$  and the Adjusted  $R^2$
- 2.3 Polynomial Regression Models
- 2.4 Partial Correlation Coefficients

**UNIT III Multiple Regression Analysis: The Problem of Inference (15 Periods)**

- 3.1 Hypothesis Testing in Multiple Regression: Testing the Overall Significance of the Sample Regression, Testing the Equality of Two Regression Coefficients
- 3.2 Restricted Least Squares: Testing Linear Equality Restrictions-t-Test and F-Test Approach
- 3.3 Testing for Structural or Parameter Stability of Regression Models: The Chow Test
- 3.4 Prediction with Multiple Regression

**UNIT IV Dummy Variable Regression Models (15 Periods)**

- 4.1 Meaning and Nature of Dummy Variables
- 4.2 ANOVA Models -ANOVA Models with Two Qualitative Variables ANCOVA Models: Regression with a Mixture of Quantitative and Qualitative Regressors

- 4.3 The Dummy Variable Alternative to the Chow Test, Interaction Effects Using Dummy Variables, and Use of Dummy Variables in Seasonal Analysis
- 4.4 Piecewise Linear Regression, Panel Data Regression Models, Some Technical Aspects of the Dummy Variable Technique

### **References/Reading List**

1. Damodar Gujarati: Basic Econometrics, McGraw Hill, New York.
2. Badi H Baltagi: Econometrics, Springer, New York.
3. G S Maddala: Introduction to Econometrics, John Williams and Sons, New York.
4. Amemiya, T. (1985), Advanced Econometrics, Harvard University Press, Cambridge, Mass.
5. Dougherty, C. (1992), Introduction to Econometrics, Oxford University press, New York.
6. Goldberger, A. S. (1998), Introductory Econometrics, Harvard University Press, Cambridge, Mass.
7. Kennedy, P. (1998), A Guide to Econometrics, MIT press, New York.
8. Kmenta, J. (1997), Elements of Econometrics (Reprint Edition), University of Michigan Press, New York.
9. Koutsoyiannis, A. (1977), Theory of Econometrics (2nd ed.), The Macmillan Press Ltd., London.
10. Krishna, K. L. (Ed.) (1997), Econometric Applications in India, Oxford University Press, New Delhi.
11. Theil, H. (1981), Introduction to Econometrics, Prentice Hall of India, New Delhi.
12. Johnston (1984) Econometrics Methods, MacGraw Hill, New York

**B.Sc.-M. Sc. Economics Integrated (Five Year)**

Second Year Semester-III

Title of the Paper: - **Development Economics -I**

Total Credits: 4

- Course Outcomes:**
1. students are able to identify difference between economic growth and development
  2. students are able to Analyse stages of economic development
  3. students are able to Understand need and importance of sustainable development
  4. students are able to Evaluate role of government and economic development

**UNIT I                    Basic concepts of economic development                    (15 Periods)**

- 1.1 Meaning of economic development- Distinction between economic development and growth
- 1.2 Why Study Development Economics? Indicators of economic development
- 1.3 Obstacles to economic development
- 1.4 Sustainable and green development

**UNIT II                    Theories of economic development                    (15 Periods)**

- 2.1 Classical approach to development- Ricardian Theory
- 2.2 Myrdal's theory of economic development
- 2.3 Rostow's stages of economic growth
- 2.4 Theory of balanced and unbalanced growth

**UNIT III                    Resources for economic development                    (15 Periods)**

- 3.1 Capital formation, Technology and economic development
- 3.2 Human capital and economic development
- 3.3 Role of state in economic development
- 3.4 Development status of Indian Economy

**UNIT IV                    Financing Economic Development                    (15 Periods)**

- 4.1 Concept, need and objectives
- 4.2 External resources - FDI, Foreign aid vs. trade, technology inflow
- 4.3 MNC activity in developing countries; Borrowings - domestic and external
- 4.4 Burden of borrowing - IMF and World Bank, policies in developing countries

### **References/Reading List**

1. Adelman, Irma (1962), Theories of Economic Growth and Development, Stanford University Press, Stanford.
2. Behrman, S. and T.N. Srinivasan (1995), Handbook of Development Economics, Vol. 1 to 3, Elsevier, Amsterdam. Economics 31
3. Ghatak, Subrata (1986), Introduction to Development Economics, Allen and Unwin, London.
4. Hayami, Yujiro and Yoshihisa Godo (1997), Development Economics, Oxford University Press, New York.
5. Higgins, Benjamin (1980), Economic Development, Norton, New York.
6. Kindleberger, C.P. (1965), Economic Development, 3e, McGraw Hill, New York.
7. Meier, Gerald M. and James E. Rauch (2005), Leading Issues in Economic Development, Oxford University Press, New Delhi.
8. Myint, Hla (1965), The Economics of Underdeveloped Countries, Preager, New York.
9. Myint, Hla (1971), Economic Theory and Under Developed Countries, Oxford University Press, New York.
10. Thirlwal, A.P. (1999), (6th Edition), Growth and Development, Macmillan, London.
11. Bhagwati, J. and P. Desai (1970), India : Planning for Industrialization, Oxford University Press, London.

**B.Sc.-M. Sc. Economics Integrated (Five Year)**

Second Year Semester-III

Title of the Paper:- **Public Finance**

Total Credits: 4

- Course** 1. The student will be able to understand the Indian public finance
- Outcomes:** 2. The student will get acquainted with theories of public Interest  
3. The student will be able to understand public expenditure  
4. The student will be able to review the public debt and taxation.

**UNIT I Introduction to Public Finance (15 Periods)**

- 1.1 Meaning and Scope of Public Finance, Distinction between private and public Finance
- 1.2 Introduction of Public Good, Merit Good and Private Good
- 1.3 Fiscal Federal System
- 1.4 Role of Government in the Economy

**UNIT II Theories of public interest (15 Periods)**

- 2.1 Introduction and concept
- 2.2 Bentham utilitarian criterion and J. S. Mill Approach
- 2.3 Dalton Principle of Maximum Social Advantage and Pareto Criterion
- 2.4 Pigou's concept of welfare

**UNIT III Public Expenditure (15 Periods)**

- 3.1 Meaning Nature and Scope and deterrents of government expenditure
- 3.2 Wagner's law of expanding state activities
- 3.3 Peacock and Wiseman Theory of public expenditure
- 3.4 Public expenditure growth trends in India. Impact of Public Expenditure

**UNIT IV Public Revenue and Public Debt (15 Periods)**

- 4.1 Taxation: Nature, Scope, History and basic Principles
- 4.2 Taxation on Individual Income, Corporate Income and Goods and Service Tax system in India
- 4.3 Public Debt: Structure, Classification, Components, Size and Growth of Public Debt in India
- 4.4 Debt Management Impact of Public debt on India Economy



### **References/Reading List**

1. H. L Bhatia (2017) Public Finance, Vikas Publishing House Private Limited, Noida
2. J V M Sharma (2018) Public Finance, Oxford university Press, New Delhi
3. K P M Sundharam K K Andley, Public Finance Theory and Practice, S. Chand Publication New Delhi.
4. J R Gupta (2014), Public Economics in India: Theory and Practice, Atlantic Publisher and Distributors New Delhi.
5. Bird R. M. and O. Oldman (1967): "Readings on Taxation in Developing Countries."  
edited, Cambridge, Mass: Harvard Law School, International Tax Program.
6. Datta and Sundharam (2018): "Indian Economy" S. Chand & Company, New Delhi
7. Indian Public Finance Statistics, Ministry of Finance, Government of India, New Delhi.
8. Buchanan, J. M. (1970), The Public Finances, Richard D. Irwin, Homewood.

**B.Sc.-M. Sc. Economics Integrated (Five Year)**

Second Year, Semester-III

Title of the Paper: **COMPUTER APPLICATION IN ECONOMICS-III**

Total Credits: 4

**Course Outcomes:** By the end of this course student will be able to,

- 1 Acquire the basic knowledge of Computer and Data Information.
- 2 Enable the students to acquaint the soft wares like Excel and SPSS which are essential for research
- 3 Make the students more able to handle real data with confidence by applying econometric methods of analysis to new circumstances and to develop the skills of using more scientific tools based on computers for economic analysis, research and forecasting.

**UNIT I Software, Operating System and Computer Networks (15 Periods)**

- 1.1 Types of software: system software (operating system, device drivers), application software including mobile applications
- 1.2 Multimedia: images, audio, video, animation
- 1.3 Operating system: The purpose of operating systems- Providing a user interface, running programs, Managing hardware, Enhancing an OS utility software.
- 1.4 Computer Network: Types of Computer Networks –LAN,WAN, PAN, Network Devices: Router, Modem Bridge

**UNIT II Data Representation in a computer (15 Periods)**

- 2.1 Concept of Data: Types of data representation, decimal number system, binary number system, octal number system and hexadecimal number system.
- 2.2 Converting number system to binary number system
- 2.3 Character representation in computer, binary arithmetic
- 2.4 Use simple statistical functions: SUM, AVERAGE, MAX, MIN, IF.

**UNIT III Cyber-safety (15 Periods)**

- 3.1 Types of Hacking and Prevention
- 3.2 Safely browsing the web and using social networks: identity protection, proper usage of passwords, privacy, confidentiality of information, cyber stalking, reporting Cybercrimes
- 3.3 Viruses and malware, adware
- 3.4 HTTP/HTTPS, Browser Certificates

**UNIT IV Computer Application in Descriptive Statistics - (15 Periods)**  
**Correlation and Regression**

- 4.1 Correlation Analysis: Meaning, Concept and Types
- 4.2 Measurement of Correlation: (i) Karl Pearson's Coefficient of Correlation  
(ii) Spearman's Rank Coefficient of Correlation
- 4.3 Regression Analysis: Types of regression, two lines of Regression  
Equations Forecasting
- 4.4 Multiple Linear regression -Forecasting

**References/Reading List**

1. Applied Econometric Time Series (1995), John Wiley & Sons, New York
2. Box, G.E.P. and Jenkins, G.M. (1976), Time series Analysis, Forecasting and Control, Holden Day.
3. Hamilton. J. (1994), Time Series Analysis, Princeton University, Princeton.
4. Sinha P.K. (1992), Computer Fundamentals, BPB Publications, New Delhi.
5. Rajaraman, V. (1996), Fundamentals of Computers, prentice Hall of Indian, NewDelhi.
6. Lipschutz, M.M. and S.Lipschultz (1982), Theory and Problems of DataProcessing, Schum's Outline Series, McGeaw Hill, New York.
7. Schild, H (1987), C. Made Easy, McGraw Hill, New York.
8. Levin R.I. and C.A. Kirkpatrick (1975), Quantitative Approaches to Management(3rd Edition) McGraw Hill.
9. Mirsky, L. (1955), Introduction to Linear Algebra, Oxford University Press.
10. Intrilligator, M.D. (1978), Econometric Models, techniques and Applications, Prentice hall Englewood Cliffs, N.J.
11. Wood, M.B. (1983), Introducing Computer Security, Broadman Association, Delhi
12. Dhanasekaran. K (2013) Computer applications in Economics, Vrinda Publications Pvt. Ltd.
13. Elhance, D. N. (1962), Fundamentals of Statistics, KitabMahal, Allahabad.
14. Gupta, S. C. (1981), Fundamentals of Statistics, Himalaya Publishing House, Bombay.
15. N. M. Downie and R. W. Heath (1970), Basic Statistical Methods, Harper and Row, New York.
16. Rajaram, V, (1996), Fundamentals of Computers, Prentice Hall of India, New Delhi.
17. Sanders, D. H. (1988), Computer Today, McGraw Hill, New York.
18. Sinha, P. K. (1992), Computer Fundamentals, BPB Publications, New Delhi.
19. Yamane, Taro (1973), Statistics, An Introductory Analysis, Harper and Row (India) and John Weatherhill Inc., Tokyo

## **B.Sc.-M. Sc. Economics Integrated (Five Year)**

Second Year Semester-III

Title of the Paper: **English for Economics: Intermediate**

Total Credits: 4

### **Course Outcomes:**

- 1 The students will develop their English Listening, Reading, Writing and Speaking skills specifically for economic and business needs.
- 2 The students will be able to improve their ability to use English for spoken and written communication at workplace.
- 3 The students will be able to communicate competently in formal situations as that of conducting and participating in meetings, negotiating, giving presentations, giving interviews, business correspondence, writing application letters, reports, etc.
- 4 The students will be able to develop their word power related to business and Economics.
- 5 The students will be able to revise and enrich their grammatical competence.

### **UNIT I Listening and Reading Skills (15 Periods)**

- 1.1 Intonation (Listening component from Unit 11 from Whitby, Business Benchmark)
- 1.2 Listening to a Presentation (Listening component from Unit 15 from Whitby, Business Benchmark)  
Listening to Statistical Information (Listening component from Unit 17 from Whitby, Business Benchmark)
- 1.3 Reading Financial Statements (section 3 from Unit 13 of MacKanzie, English for Business Studies)
- 1.4 Interpreting charts (complete Unit 17 from Whitby, Business Benchmark)

### **UNIT II Speaking Skills (15 Periods)**

- 2.1 Short speeches and situational conversations
- 2.2 Formal Meetings
- 2.3 Formal Presentations
- 2.4 Interview skills

**UNIT III Writing Skills****(15 Periods)**

- 3.1 Difference between Formal and Informal Language
- 3.2 Writing Agenda and Minutes of Meetings
- 3.3 Letter writing – block and semi-block formats (different types of formal letters; for example, leave application, job application, complaint letter, enquiry letter, etc.)
- 3.4 Curriculum Vitae/ Resume writing

**UNIT IV Grammar and Vocabulary****(15 Periods)**

- 4.1 Active and passive voice, independent and subordinate clauses
- 4.2 Conditional sentences, degrees of comparison
- 4.3 Economic and Business Vocabulary (from Unit 8, Company Finances)  
Collocations (from Unit 2),  
Guessing vocabulary from the context (from Unit 13)  
(All from ((Whitby, Business Benchmark
- 4.4 Common errors related to grammar

**References/Reading List****Text Books**

1. Whitby, Norman. 2006. *Business Benchmark: Preintermediate to Intermediate*. Cambridge University Press.
2. MacKenzie, Ian. 1997. *English for Business Studies: A Course for Business Studies and Economics Students*. Cambridge University Press.

**References/Reading List**

1. MacKenzie, Ian. 1997. *English for Financial Sector Students*. Cambridge University Press.
2. Murphy, Raymond. 1994. *Intermediate English Grammar*. Cambridge University Press
3. Mascull, Bill. 2002. *Business Vocabulary in Use*. Cambridge University Press.

**B.Sc.-M. Sc. Economics Integrated (Five Year)**

Second Year Semester-III

Title of the Paper: **Skill Enhancement Course -III**

Total Credits: 2

**SHIVAJIUNIVERSITY, KOLHAPUR**  
**DEPARTMENT OF ECONOMICS-AUTONOMOUS**  
**B.Sc.-M.Sc. Economics Integrated (Five Years)**  
**B. Sc. Economics Second Year**  
**Semester-IV**

<b>Sr. No.</b>	<b>Paper Code</b>	<b>Paper Title</b>
1	DSC-IV	International Economics
2	DSC-IV	Rural and Agricultural Economics
3	DSC-IV	Public Policy
4	DSC-IV	Mathematical Economics
5	GEC-IV/ DSE-IV	Environmental Economics
6	AECC-IV	French Language
7	SEC-IV	

## **B.Sc.-M. Sc. Economics Integrated (Five Year)**

Second Year Semester-IV

Title of the Paper:- **International Economics**

Total Credits: 4

### **Course Outcomes:**

- 1 Students understand basic theories of International Trade
- 2 Understand the concept and the working of Exchange Rate
- 3 Analyse the concept and causes and consequences of balance of payments
- 4 Identify the role of International Institutions in trade and development

### **UNIT I Theory of International Trade (15 Periods)**

- 1.1 Distinction between Internal and International Trade - Exports and Imports of Goods and Services
- 1.2 Theories of International Trade: Classical Theory of Trade;  
i) Absolute Cost Advantage Doctrine of Adam Smith  
ii) Comparative Cost Advantage Theory of Trade of Ricardo
- 1.3 Modern Theory / Heckscher – Ohlin Theory of International Trade
- 1.4 Trade Policy: Arguments for Free Trade – Arguments for Protective Trade

### **UNIT II Theory of Rate of Exchange (15 Periods)**

- 2.1 Concept of Rate of Exchange rate
- 2.2 Types: Fixed Rate of Exchange: Meaning- Merits and Demerits  
Flexible Rate of Exchange: Meaning- Merits and Demerits
- 2.3 Floating Rate of Exchange: Meaning- Merits and Demerits
- 2.4 Purchasing Power Parity Theory

### **UNIT III Balance of Trade and Balance of Payments (15 Periods)**

- 3.1 Balance of Trade: Meaning and Components
- 3.2 Balance of Payments: Meaning and Components
- 3.3 Disequilibrium in Balance of Payments: Causes and Consequences
- 3.4 Measures to correct disequilibrium in Balance of Payments



## **UNIT IV International Institutions**

**(15 Periods)**

- 4.1 IMF: Objectives and Functions
- 4.2 IBRD: Objectives, Functions
- 4.3 WTO: Objectives, Functions
- 4.4 BRICS : Objectives, Functions

### **References/Reading List**

1. Kindleberger, C. P. (1973), International Economics, R. D. Irwin, Homewood.
2. Kindleberger, C. P. (1996), A History of Financial Crisis: Manias, Panics and Crashes (3rd Edition), John Wiley and Sons, New York.
3. King, P. G. (1995), International Economics and International Economic Policy : A Reader, McGraw Hill International, Singapore.
4. Krugman, P. R. and M. Obstfeld (1994), International Economics: Theory and Policy, Ienview, Foresman.
5. Manmohan Singh (1964), India's Export Trends and the Prospects for Self-sustained Growth, Oxford University press, New Delhi.
6. Mithani, D.M. ( 1997 ), International Economics , Himalaya Publishing House, Delhi.
7. Mundell, R. (1968), International Economics, The Macmillan Company Ltd., New York.
8. Nayyar, D. (1976), India's Exports and Export Policies in the 1960s , Cambridge University Press.
9. Panchmukhi, V. R. (1978), Trade Policies of India – A Quantitative Analysis, Concept Publishing Company, New Delhi.
10. Patel, S. J. (1995), Indian Economy Towards the 21st Century, University Press, Ltd., India.
11. Pomfret, R. (1996), International Trade: An Introduction to Theory and Policy, Basil Blackwell, Oxford.
12. Rana and Verma ( 2010 ), International Economics , Vishal Publishing Company, Delhi.
13. Salvatore, D. (1997), International Economics, Prentice Hall, Upper Saddle River, N. J. New York.
14. Satyanarayan, B. (1986), India's Trade with Asia and The Far East Countries, B. R. Pub. Corp., New Delhi. 27
15. Soderstrom, Bo (1991), International Economics, The Macmillan Press Ltd., London.
16. Soloman, R. (1982), The International Monetary System 1945-1981, Harper and Row Publishers, New York.
17. Verma, M. L., (1995), International Trade, Vikas Publishing House Pvt. Ltd., Delhi.
18. Francis Cherunilum, International Trade and Export Management, Himalaya Publishing House, Delhi.

**B.Sc.-M. Sc. Economics Integrated (Five Year)**  
Second Year Semester-IV  
Title of the Paper:- **Rural and Agriculture Economics**  
Total Credits: 4

**Course Outcomes:**

- 1 Students are able to examine the scenario of rural economy.
- 2 Students are able to get acquaint with various development theories and its significance.
- 3 Students are able to investigate the role of agriculture in economic development.

**UNIT I Rural Economy of India (15 Periods)**

- 1.1 Nature and Scope of the Study of Rural Economy, Need for the Study of the Rural Economy, Features of Rural Economy, Economic Backwardness, Comparison of Rural and Urban Economy
- 1.2 Rural Income - Sources of Household Income, Income Differences between Rural and Urban; Poverty - Causes and Consequences
- 1.3 Agriculture - Size of Land Holdings, Land Tenure and Land Reforms
- 1.4 Problems of Small and Marginal Farmers, Agricultural Labour - Labour Problems

**UNIT II Rural Development (15 Periods)**

- 2.1 Concept of Development, Indicators of Development
- 2.2 Measures of Development, Determinants of Rural Development
- 2.3 Development Theories: The Modernization Theory, Dependency Theory
- 2.4 Lewis Model of Economic Development

**UNIT III Agricultural Economics (15 Periods)**

- 3.1 Agricultural Economics: Definition, Nature and Scope, Agriculture and Economic Development
- 3.2 Role of Agriculture in Economic Development: Agriculture in a Developing Economy,- Share of Agriculture in National Income
- 3.3 Changing Phase of Agriculture, Interdependence and Complementarities between Agriculture and Industry
- 3.4 Characteristics of Land - Factors affecting the Productivity of Land

## **UNIT IV Agriculture and Economic Development**

**(15 Periods)**

- 4.1 Characteristics of Indian Economy - Causes of Agricultural Backwardness
- 4.2 Present Position of Agriculture - Causes of Low Productivity in Agriculture
- 4.3 Agricultural Policies and Programmes in India
- 4.4 Modernization of Agriculture - Green Revolution

### **References/Reading List**

- 1) Ashok Rudra, (1982) Indian Agricultural Economics, Myths and Realities, Allied Publishers Mumbai.
- 2) Bilgrami S. A.R. (2000) An Introduction to Agricultural Economics, Himalaya Publishing House, Mumbai.
- 3) Dalip S Thakur, (1985) Poverty, Inequality and Unemployment in Rural India, B R Pub., Corporation, Delhi.
- 4) Dandekar V.M (1996) The Indian Economy 1947-92 Vol 1: Agriculture, Sage Publishing House, Mumbai.
- 5) Datt and Sundaram (2020), "Indian Economy", S. Chand & Company, New Delhi.
- 6) Government of India, Five-Year Plan Documents- from Fifth Plan to Tenth Plan.
- 7) Jain Gopal Lal, (1998) Rural Development, Mangal Deep Publications, Jaipur.
- 8) Katar Singh, (2009) Rural Development, Principles, Policies and Management, Sage Publications.
- 9) Katar Singh, (2009) Rural Development: Principles, Policies and Management, Sage Publications, New Delhi.
- 10) Lekhi R.K., & Joginder Singh, (2011) Agricultural Economics, Kalyani Publishers, New Delhi.
- 11) Lekhi R.K., & Joginder Singh, (2011) Agricultural Economics, Kalyani Publishers, New Delhi.
- 12) Mishra and Puri, (2020), "Indian Economy" Himalaya Publishing House, New Delhi.
- 13) Sadhu A.N and Singh Amarjit, (2014) Fundamentals of Agricultural Economics, Himalaya Pub., House, New Delhi
- 14) Satya Sundaram I, (2011) Rural Development, Himalaya Publishing House, Mumbai.
- 15) Satya Sundaram I, (2011) Rural Development, Himalaya Publishing House, New Delhi.
- 16) Sharma D.P, & U V Desai, (1980) Rural Economy of India, Vikas Publishing House Private Limited.
- 17) Shriram Maheshwari, (1995) Rural Development in India: A Public Policy Approach, Sage Publications, New Delhi.

**B.Sc.-M. Sc. Economics Integrated (Five Year)**

Second Year Semester-IV

Title of the Paper:- **Public Policy**

Total Credits: 4

**Course Outcomes:**

- 1 Students are able to get acquainted with concept of public policy, policy analysis, steps and methods of policy analysis
- 2 Students are able to evaluate the agriculture and industrial policies and its current relevance
- 3 Students are able to investigate the Finance, Tax, External Sector, Social Sector and Macroeconomic policies and its significance.

**UNIT I Public Policy and Analysis (15 Periods)**

- 1.1 Public Policy and Analysis: Concept, Meaning, Nature and Importance
- 1.2 Public Policy and Public Administration; Approaches to Public Policy Analysis
- 1.3 Steps in Policy Analysis: Verify, Define and Detail the Problem, Establish Evaluation Criteria
- 1.4 Methods in Policy Analysis: Identifying and Gathering Data, Interviewing for Policy Data, Quick Surveys, Assessing Information Quality, Basic Data Analysis

**UNIT II Agriculture and Industrial Policies (15 Periods)**

- 2.1 Agricultural Policy: National Policies on Agriculture: Subsidies, Minimum Support Prices, Public Distribution System
- 2.2 Agricultural Policy in the Context of WTO, TRIPs, TRIMs, & GATS
- 2.3 Industrial Policy: Industrial Policy of 1948, 1956, 1977 and Industrial Policy 1991
- 2.4 New Economic Policy and Impact of Policy Changes on Industrial Production, Structural Changes; Corporate Social Responsibility (CSR)

**UNIT III Finance, Tax and External Sector Policies (15 Periods)**

- 3.1 Financial Sector: Banking Sector Policies, Insurance Sector IRDA, Financial Sector Reforms, Monetary Policy
- 3.2 Tax Policies: Goods and Services Tax (GST).
- 3.3 External Sector: Trade Policy in India since Independence, EXIM Policy
- 3.4 Foreign Direct Investment, Technology Policy

#### **UNIT IV Social Sector Policies**

**(15 Periods)**

- 4.1 Population Policies: Family Welfare Policy, Population Policy 2000
- 4.2 Gender Equality policy
- 4.3 Education Policies: Right to Education (RTE), NEP 2020 Health Policies: Health for All
- 4.4 Food Security and Right to Food, Right to Employment, Right to Information, MDGs and SDGs

#### **References/Reading List**

- 1) Acharya Shankar, (2003) India's Economy: Some Issues and Answers, Academic Foundation, New Delhi.
- 2) Anderson J.E., (2006) Public Policy-Making: An Introduction, Boston, Houghton
- 3) Anthony E. Boardman, David H. Greenberg, Aidan R. Vining, and David L. Weimer, (2001) Cost-Benefit Analysis: Concepts and Practice, Englewood Cliffs, New Jersey, Prentice-Hall.
- 4) Bardach, Eugene, (2011) A Practical Guide for Policy Analysis: The Eightfold Path to More Effective Problem Solving, Washington D.C.
- 5) Bergerson, Peter J. (ed.), (1991), Teaching Public Policy: Theory, Research and Practice, Westport, RI: Greenwood Press
- 6) David L. Weimer and Aidan R. Vining, (2010) Policy Analysis: Concepts and Practice, Englewood Cliffs, New Jersey: Prentice-Hall.
- 7) Dhar P. N., (2003) The Evolution of Economic Policy in India-Selected Essays, OUP, New Delhi
- 8) Dhar P.K., (2016) Indian Economy: Its Growing Dimensions, Kalyani Publications, Ludhiana.
- 9) Dror.Y., (1989), Public Policy making Re-examined, 2nd ed., San Francisco, Chandler.
- 10) Dunn, William N, (2011) Public Policy Analysis: An Introduction, Prentice Hall.
- 11) Dutt Ruddar, and K.P.M. (2004) Sundaram, Indian Economy, S. Chand and Company, New Delhi.
- 12) Dye Thomas (2008), Understanding Public Policy, Singapore, Pearson Education
- 13) Dye, T. (2013) Understanding Public Policy, Englewood Cliffs, NJ, Prentice Hall.
- 14) Hanson James A., and Sanjay Kathuria (Ed) (2001) India-A Financial Sector for the Twenty-First Century, World Bank, Oxford University Press, New York.
- 15) Hanumantha Rao C. H. (2006) Agriculture, Food Security, Poverty Environment - Essays on Post Reform India, OUP
- 16) Hill Michael, (2005), The Public Policy Process, Harlow, UK; Pearson Education, 5th Edition.
- 17) Howlett, Michael, and M. Ramesh, (1995), Studying Public Policy: Policy Cycles and Policy Subsystems, OUP, Toronto.
- 18) Jay M. Shafritz (ed) (1998), International Encyclopedia of Public Policy and Administration, Westview Press
- 19) Jones, C.O., (1970), An Introduction to the Study of Public Policy, Belmont, Prentice-Hall.
- 20) Kapila Uma, (2005) Understanding the Problem of Indian Economy, Academic

- Foundation, New Delhi.
- 21) Kapila Uma, (2015) Indian Economy since Independence, Academic Foundation, New Delhi.
  - 22) Lerner, D. and H.D.Lasswell (eds.), (1951), The Policy Sciences, Stanford, Stanford University Press.
  - 23) Lindblom, C.E., and E.J., Woodhouse, (1993), The Policy making Process, 3rd ed., New Jersey., Prentice - Hall.
  - 24) McCool, Daniel C. (ed.), (1995), Public Policy Theories, Models, and Concepts: An Anthology, NJ: Prentice-Hall.
  - 25) Misra S.K. & V.K. Puri, (2011) Indian Economy-Its Development Experience, Himalaya Pub.,House, Mumbai.
  - 26) Moran Mitchel and Robert Goodin, (2006), The Oxford Handbook of Public Policy, Oxford University Press, New York.
  - 27) Nachmias, David, (1979), Public Policy Evaluation: Approaches and Methods, New York: St. Martin's Press.
  - 28) NCAER, Economic and Policy Reforms in India, NCAER, New Delhi.
  - 29) Patton & Sawicki, Monitoring & Evaluating Implemented Policies, Prentice Hall
  - 30) Patton, Carl V. and David S. Sawicki,(2015) Basic Methods of Policy Analysis and Planning, Englewood Cliffs, New Jersey, Prentice Hall.
  - 31) Vaidyanathan A, (2003) India's Economic Reforms and Development, Academic Foundation, New Delhi.

**B.Sc.-M. Sc. Economics Integrated (Five Year)**

Second Year Semester-IV

Title of the Paper: - **Mathematical Economics**

Total Credits: 4

**Course Outcomes:**

- 1 The student will be able to make the application of Mathematics to consumer behavior.
- 2 The student will be able to do the application of Mathematics in producer behavior.
- 3 The student will be able to make the application of Mathematics in the cost function.
- 4 The student will be able to make the application of Mathematics in the market.

**UNIT I Consumer Behaviour (15 Periods)**

- 1.1 Utility: Cardinal and Ordinal utility, Utility Functions: Homogeneous, Homothetic, Indirect, CES & Cobb-Douglas
- 1.2 Demand function, Ordinal utility maximization, Compensated Demand function, Slutsky equation, income, substitution, and price effects
- 1.3 Elasticity: Meaning, Concept, Types, and its Applications
- 1.4 Consumer's Surplus: Meaning, Concept, and its Applications

**UNIT II Producer Behaviour (15 Periods)**

- 2.1 Production function: Short Run and Long Run, Homogeneous and Non-homogeneous
- 2.2 Cobb-Douglas production function, and its properties, CES production function, and its properties
- 2.3 Producer's Surplus: Meaning, Concept, and its Applications
- 2.4 Producer's equilibrium: Constrained optimization of a producer-Output maximization and Cost minimization

**UNIT III Theory of Cost (15 Periods)**

- 3.1 Cost function-Meaning and its types
- 3.2 Short-run cost function- simple derivation of the short-run cost function, the modern theory of cost, the relation between AC and MC in a short period.
- 3.3 Long-run cost curves and properties
- 3.4 Cost Minimisation applications

## **UNIT IV Market Structure**

**(15 Periods)**

- 4.1 Market Structure- Types of various markets
- 4.2 Price and output determination in Perfect Competition, Monopoly
- 4.3 Price and output determination in Monopolistic Competition
- 4.4 Price and output determination in a Duopoly, Oligopoly

### **References/Reading List**

1. Allen, R.G.D. (1974), Mathematical Analysis for Economists, Macmillan Press, London.
2. Chiang, A.C. (1986), Fundamental Methods of Mathematical Economics (3rd Ed), Tata McGraw Hill, New Delhi.
3. Mukherji, B. and V.P. andit (1982), Mathematical Method of Economic Analysis Allied Publishers, New Delhi.
4. Chiang, A.C., Elements of Dynamic Optimization, McGraw-Hill, 1992.
5. Intriligator, Michael D., Mathematical Optimization and Economic Theory, Prentice Hall, 1971



**B.Sc.-M. Sc. Economics Integrated (Five Year)**  
Second Year Semester-IV  
Title of the Paper: **ECONOMICS OF ENVIRONMENT**  
Total Credits: 4

**Course Outcomes:**

- 1 Students understand fundamentals of Economics of Environment.
- 2 Equip with environmental problems of economic development.
- 3 Get acquainted with the global environmental problems.
- 4 Discuss on the Environmental Policy

**UNIT I Fundamentals of Economics of Environment (15 Periods)**

- 1.1 Economics of Environment: Meaning -Nature- Scope – Importance
- 1.2 Economic Development and Environment - The Material Balance Principle (Entropy Law)
- 1.3 Eco-systems – Loss of Biodiversity
- 1.4 Sustainable Development

**UNIT II Environmental Problems of Economic Development (15 Periods)**

- 2.1 Environmental Pollution: Causes, Effects and Remedies
- 2.2 Water & Air pollution : Causes, Effects and Remedies
- 2.3 Noise & Land Pollution : Causes, Effects and Remedies
- 2.4 Depletion of Ozone Layer- Global Warming- Climate Change

**UNIT III Valuation Of The Environment (15 Periods)**

- 3.1 Valuation of the Environment: Meaning and Importance
- 3.2 Concepts of Value: Use value, Nonuse Value and Total Economic Value
- 3.3 Direct Methods: Contingent Valuation Method, Trade off Games Method, Costless Choice Method, Delphi Technique
- 3.4 Indirect Methods: Hedonic Approach, Conventional Market Approach, Cost Based Methods

**UNIT IV Environmental Policy (15 Periods)**

- 4.1 Environment Management Techniques: Cost Benefit Analysis
- 4.2 Environmental Impact Assessment
- 4.3 Environmental Audit
- 4.4 Environmental Protection Laws in India

## References/Reading List

1. Baumol, W. J. & W. E. (1997), *The Theory of Environmental Policy*, Prentice Hall, Englewood-Cliffs.
2. Bhardwaj, R. (1983), *Managing Limits to Growth*, Asian and Pacific Development Centre, Kuala Lumpur.
3. Dorfman, R. & N. Dorfman (Eds.) (1977), *Economics of the Environment*, W. W. Norton, New York.
4. Nijkamp, P. (Ed.) (1976), *Environmental Economics*, Vol. I & II, Martinus Nijhoff, Leiden.
5. Charles Peering (1987), *Economy and Environment* Cambridge University Press, New York.
6. Ali, S. A. (1979), *Resources for Future Economic Growth*, Vikas Publishing House, New Delhi.
7. Rathore, M. S. (Ed.) (1996), *Environmental and Development*, Rawat Publications, Jaipur.
8. Garge, M. R. (Ed.) (1996), *Environmental Pollution and Protection*, Deep and Deep Publications, New Delhi.
9. Lodha, S. L. (Ed.) (1991), *Economics of Environment*, RBSA Publishers, Jaipur.
10. Rajlakshmi N. and Dhulasi B. (1994), *Environomics*, Allied Publishers Ltd., New Delhi.
11. Singh, G. N. (Ed.) (1991), *Environmental Economics*, Mittal Publications, New Delhi.
12. Mehta, C. S. (1994), *Environment and Law*, RBSA Publishers, New Delhi.
13. Karpagam, M. (1993), *Environmental Economics*, Sterling Publishers, New Delhi.
14. World Bank Report on Human Development.
15. The Hindu Survey of Environment: Annual Reports.
16. R. N. Bhattacharya (2006), *Environmental Economics: An Indian Perspective*, Oxford University Press, New Delhi.
17. Ulaganathan, Sankar (2006), *Environmental Economics*, Oxford University Press, New Delhi.
18. Hanley, Shogren and White (2004), *Environmental Economics in Theory and Practice*, McMillan India Limited, Delhi.
19. Hanley and Spash (1998), *Cost Benefit Analysis and the Environment*, Edward Elgar Publishing Limited, Glos, UK.
20. Singh & Shishodia (2010), *Environmental Economics: Theory and Applications*, Sage Publications, New Delhi
21. Government of India, Ministry of Environment and Forests, Annual Reports
22. *Journal Down to Earth*, New Delhi.

**B.Sc.-M. Sc. Economics Integrated (Five Year)**

Second Year Semester- IV

Title of the Paper: - **French Language -I**

Total Credits: 4

**Course Outcomes:**

- 1 This course is conceptualized on the principals of ALTE (Association of Language Testes in Europe) and of the to develop speaking, reading and writing skills in French language to the extent that the students can understand basic instructions, can complete forms and write short notes and can take part in conversations on day to day matters.
- 2 At the end of the course the students will have acquired the knowledge of “Basic Language Use” and will possess basic functional ability to communicate and exchange information in a simple way.

**UNIT I Voyage Voyage (15 Periods)**

**Knowing this Language**

- 1.1 Introduction to French Alphabets
- 1.2 Gender of Nouns and their Plural forms
- 1.3 Basic Vocabulary & salutations
- 1.4 Introductory Questions, Days and Months, Colours and Shapes

**UNIT II Dans la Biblioth-èque (15 Periods)**

**Vocabulary resources And basic conversations**

- 2.1 Regular verb conjugation in present tense
- 2.2 Personal Pronouns
- 2.3 Numbers
- 2.4 Watch Timings, Articles, Professions, Family vocabulary, Travel and Directions

**UNIT III Un Quizz sur la France (15 Periods)**

**Knowing about France and French Grammar**

- 3.1 Possessive Pronouns and possessive adjectives
- 3.2 Introduction of Separable Verbs
- 3.3 Auxiliary Verbs and their conjugation
- 3.4 Composition – ‘*Ma famille*, Interrogatives (present tense), Countries and Nationalities, House vocabulary and Picture descriptions

**UNIT IV Les Heureux Gagnants**

**(15 Periods)**

**Writing Skills with correct grammar**

- 4.1 Conjugation of irregular Verbs in present tense
- 4.2 Formation of Questions
- 4.3 Construction of Simple Sentences
- 4.4 Composition – Ma vie, Fruits, vegetables and French Meals, Small recipe writing, Formation of sentences using object and auxiliary verbs, Introduction of pronouns and Formation of questions

**References/Reading List**

**Text Books**

1. Nouvel En Échanges

**References/Reading List**

1. Apprenons le Français
2. French for Dummies
3. Cahier d'exercise.
4. Collins dictionary

**B.Sc.-M. Sc. Economics Integrated (Five Year)**

**Second Year Semester-IV**

**Title of the Paper: Skill Enhancement Course IV**

**Total Credits: 2**