

# SYLLABUS

# ECONOMICS

**PROGRAMME – Master of Arts (M. A.) in Economics (Semester Mode)**

**UNDER DISTANCE EDUCATION**

**(Approved by the 118<sup>th</sup> meeting of the Academic Council held on 27.12.2019)**



DIRECTORATE OF OPEN AND DISTANCE LEARNING  
DIBRUGARH UNIVERSITY  
DIBRUGARH-786004  
ASSAM, INDIA

# **SYLLABUS**

**M.A. (Economics)**

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**DIBRUGARH UNIVERSITY**

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The M.A. Programme in Economics under Open and Distance Learning shall comprise 16 (Sixteen) courses of hundred marks each.

There shall be 14 (Fourteen) compulsory courses till the fourth semester including 2 (two) optional courses in third and fourth semester to be selected from Group – ‘A’ or ‘B’.

The snapshot of courses comprising the four semesters of M.A. Programme in Economics under Open and Distance Learning are as follows:

## **COURSE STRUCTURE:**

### **FIRST SEMESTER**

**(All courses are compulsory)**

<b>Course code</b>	<b>Course Name</b>	<b>No. of Assignments</b>	<b>In Semester Marks</b>	<b>End Semester Marks</b>	<b>Credit Value of the course</b>
ECO-101	Microeconomic Theory-I	2	20	80	4
ECO-102	Macroeconomic Theory	2	20	80	4
ECO-103	Public Finance	2	20	80	4
ECO-104	Issues on Indian Economics	2	20	80	4

### **SECOND SEMESTER**

**(All courses are compulsory)**

<b>Course code</b>	<b>Course Name</b>	<b>No. of Assignments</b>	<b>In Semester Marks</b>	<b>End Semester Marks</b>	<b>Credit Value of the course</b>
ECO-201	Microeconomic Theory-II	2	20	80	4
ECO-202	Monetary Theory	2	20	80	4
ECO-203	Statistics for Economic Analysis	2	20	80	4
ECO-204	Regional Economics	2	20	80	4

### **THIRD SEMESTER**

(ECO-30100, 30200 & 30300 are compulsory and one group among 'A', 'B' to be selected as Optional courses throughout the remaining Semesters)

<b>Course code</b>	<b>Course Name</b>	<b>No. of Assignments</b>	<b>In Semester Marks</b>	<b>End Semester Marks</b>	<b>Credit Value of the course</b>
ECO-301	International Economics	2	20	80	4
ECO-302	Mathematics for Economic Analysis	2	20	80	4
ECO-303	Development Economics-I	2	20	80	4
<b><u>Optional paper (Any one group – 'A', 'B')</u></b>					
ECO-304(A)	Economics of Agriculture (Group A)	2	20	80	4
ECO-304(B)	Demographic Analysis (Group B)	2	20	80	4

### **FOURTH SEMESTER**

(ECO-40100, 40200 & 40300 are compulsory and one group among 'A', 'B' to be selected as Optional paper)

<b>Course code</b>	<b>Course Name</b>	<b>No. of Assignments</b>	<b>In Semester Marks</b>	<b>End Semester Marks</b>	<b>Credit Value of the course</b>
ECO-401	Development Economics –II	2	20	80	4
ECO-402	Environmental Economics	2	20	80	4
ECO-403	Econometrics	2	20	80	4
<b><u>Optional paper (Any one group – 'A', 'B')</u></b>					
ECO-404(A)	Rural Development (Group A)	2	20	80	4
ECO-404(B)	Population Studies (Group B)	2	20	80	4

#### **1.0 Schedule of Programme:**

A Post-Graduate programme under Distance Education shall be conducted in four parts – (Semester I, Semester II, Semester III and Semester IV). The schedule for the Distance Education System shall ordinarily be as shown below:

- (i) Odd Semesters (i.e., First and Third): January to June  
(including End Semester Examinations)
- (ii) Even Semesters (i.e., Second and Fourth): July to December  
(including End Semester Examinations)

The total marks in a Post-Graduate Programme in Open and Distance Learning shall be as follows:

- a) All the M.A. /M.Sc. / M.Com. Programmes of DODL, D.U. are of 2-years duration and the total credit ranges from 64-72.
- b) Total marks for the two years M.A. /M.Sc. / M.Com. Programmes of DODL, D.U. shall be 1600 per programme.
- c) 20% of the marks in each course shall be assessed through assignments.
- d) Rest 80% of the marks in each course (paper) shall be assessed through University End Semester Examination.

The syllabus for each course (paper) shall be divided into blocks and units keeping in view the Credit value of the course. The norms for delivery of courses through distance mode are as under:

Credit Value of the course	Study input (hours)	Size of SLMs (unit)	No. of Counselling Sessions Theory (10% of total Study hours)	* Practical Session (hours)
2 credits	60	6 – 8	6	60
3 credits	90	10-12	9	90
4 credits	120	14 – 16	12	120
6 credits	180	20 – 24	18	180

\*Some Programmes have practical component also. Practical are held at designated Institutions/ Study Centres for which schedule is provided by the Study Centre. Attendance at practical is compulsory.

## 2.0 Assignment:

**2.1** Assignment shall be a compulsory component of the evaluation process.

**2.2** **20%** of each course (paper) shall be assessed through Assignments (Internal-Assessment – In Semester Examination). Rest **80%** of the marks in each course (paper) shall be assessed through University End-Semester Examination

**2.3** The assignments to be submitted by a learner would depend upon the Credit value of the Course, as follows:

Credit value of the course	No. of Assignments
2 Credits	1
3 credits	2
4 credits	2
6 credits	2

- 2.4** A candidate may submit assignments in the office of the Directorate of Distance Education or his/her respective Study Centres within the stipulated time. Subsequently the study centres shall do the needful as per the instruction issued from the Directorate from time to time.
- 2.5** Marks secured on the assignments by the candidates, who appeared in the examinations but failed, shall be carried over to the next permissible chances.
- 2.6** Marks secured on the assignments by the candidates who filled in the examination forms but did not appear in the examination, shall also be carried over the next permissible chances.

### **3.0 Examination and Evaluation**

- 3.1** Examination and Evaluation shall be done on a continuous basis.
- 3.2** There shall be 20% marks for internal assessment (In Semester) and 80% marks for End-Semester Examination in each course during every Semester.
- 3.3** There shall be no provision for re-evaluation of the answer-scripts of the End-Semester Examinations. However, a candidate may apply for re-scrutiny.
- 3.4** Internal assessment is assignment based or OMR based.
- 3.5** End Semester Examination:
- 3.5.1** There shall be one End-Semester Examination carrying 80% marks in each course of a Semester covering the entire syllabus prescribed for the course. The End Semester Examination is normally a written / laboratory-based examination.
  - 3.5.2** The Controller of Examinations shall make necessary arrangements for notifying the dates of the End-Semester Examinations and other procedures as per Dibrugarh University Rules (at least 20 days in advance) and the Academic Calendar / Date Sheet notified by the University / DODL, Dibrugarh University.
  - 3.5.3** The End-Semester Examination for each course shall be of three hours duration.
  - 3.5.4** Setting of question papers, moderation of question papers, evaluation of answer scripts, scrutiny, tabulation of marks etc. and announcement of result of results, shall be governed by the Dibrugarh University Examination Ordinance 1972 (as amended up to date).
- 3.6** Betterment Examination:
- 3.6.1** A learner shall be entitled to take the “Betterment Examination” in any two theory courses of any of the four semesters after passing the Fourth Semester Examination only once. In this case the higher marks secured by the student shall be retained. The learner shall have to apply for betterment examination within one year after passing the Fourth Semester Examination.
  - 3.6.2** No betterment shall be allowed in the practical examination.
- 3.7** A learner shall be declared as passed a course, provided he / she secures at least 45% marks in the course (paper) in aggregate in the In-and End-Semester Examination.
- 3.8** A learner shall be declared as passed a Semester, provided he / she passes all the courses of a Semester independently.
- 3.9** The marks of In – Semester Examinations (i.e., Internal Assessment) obtained by the learner shall be carried over for declaring any result.

**3.10** A learner who fails or does not appear in one or more courses of any End Semester Examinations up to Fourth Semester shall be provisionally promoted to the next higher Semester with the failed course(s) as carry over course(s). Such learners will be eligible to appear in the carry over course in the next regular examinations of those courses. However, the following restrictions shall be applicable:

***“A learner shall be entitled to avail the chance for a maximum of 5 consecutive years from the date of admission to clear a course or courses as well as the whole programme”.***

**3.11** If a learner clears the Fourth Semester Examination before clearing all the courses of the previous semesters, the result of such candidate shall be kept withheld and his / her results shall be announced only after he / she clears the courses of the previous semesters.

**3.12** A learner must pass all his / her Semester Examinations within 5 years from the date of admission to the First Semester of any programme.

**3.13** A learner shall be declared to have passed the Fourth Semester M.A. / M. Sc. / M. Com. Degree Programme provided he / she has passed all the Semesters and in all the course separately.

**3.14** The system of evaluation in DODL, D.U. is different from that of the Conventional Department of the University. It has a multi-tier system of evaluation:

**3.14.1** Self-assessment exercise within each unit of study.

**3.14.2** Continuous evaluation mainly through assignments and/or Internal Assessment Examination through Multiple Choice Questions (MCQ) using OMR sheet.

**3.14.3** Term-end examination.

**3.14.4** Project work (Programme specific).

**3.15** The marks secured by a student in the Assignment / IA – In Semester Examination (20% of each course) is added with the marks secured in that course in End Semester examination which is 80% of the course.

**3.16** The following scale of grading system shall be applied to indicate the performance of students in terms of letter grade and grade points as given below:

% of marks obtained in a course (Assignment + Term End)	Letter Grade	Grade Point	Qualitative Level
Above 95	O	10	Outstanding
85 – < 95	A <sup>+</sup>	9	Excellent
75 – < 85	A	8	Very Good
65 – < 75	B <sup>+</sup>	7	Good
55 – < 65	B	6	Above Average
50 – < 55	C	5	Average
45 – < 50	P	4	Pass
Below 45	F	0	Fail
0	Abs/I	0	Absent / Incomplete

- 3.17** The letter Grade ‘B<sup>+</sup>’ and above shall be considered First Class; the Letter Grade (s) ‘B’ to ‘P’ shall be considered as Second Class. However, letter Grade ‘B’ shall be considered as Second Class with minimum of 55% marks.
- 3.18** A learner is considered to have completed a course successfully and earned Letter Grade other than ‘F’ (Failed) or Abs / I (Absent / Incomplete).
- 3.19** If a learner secures ‘F’ Grade in a Course, he / she shall have to reappear in the Course in the next legitimate chance.
- 3.20** Result of the learners appeared in the ‘Betterment’ examination shall not be counted for the award of Prizes / Medals / Rank or Distinction.
- 3.21** A learner shall have to pay a prescribed fee to appear in the ‘Betterment’ Examination fixed by the University from time to time.

#### **4.0 Conversion of Marks to Grades and Calculation of GPA (Grade Point Average)**

In the Credit and Grade Point System, the assessment of individual courses in the concerned examinations will be on the basis of marks only, but the marks shall later be converted into Grade by some mechanism wherein the overall performance of the learners can be reflected after considering the Credit Points for any given course. However, the overall evaluation shall be designated in terms of Grade. There are some abbreviations used here that need understanding of each and every parameter involved in grade computation and the evaluation mechanism. The abbreviation and formulae used are as under:

##### **4.1 Abbreviations and Formula’s Used:**

- G : Grade  
 GP : Grade Points  
 C : Credits  
 CP : Credit Points  
 CG : Credit X Grade (Product of Credit & Grades)  
 $\sum C_i G_i$ : Sum of Product of  $i^{th}$  Credits & Grade Points  
 $\sum C_i$ : Sum of  $i^{th}$  Credit Points.

$$SGPA = \frac{\sum C_i G_i}{\sum C_i}$$

SGPA : Semester Grade Point Average shall be calculated for each End Semester Examination.

CGPA : Cumulative Grade Point Average shall be calculated for the entire programme by considering all semesters taken together. It shall be calculated by the formula given below:

$$CGPA = (\sum \sum C_{ni} G_{ni}) / (\sum \sum C_{ni})$$

Here,

- $C_i$  = number of credit for the  $i^{th}$  course,  
 $G_i$  = grade point obtained in the  $i^{th}$  course,  
 $C_{ni}$  = number of credit if the  $i^{th}$  course  $n^{th}$  the year,  
 $G_{ni}$  = grade point of the  $i^{th}$  course of the  $n^{th}$  year

After calculating the SGPA\* for an individual semester and the CGPA\* for the entire Programme, the value can be matched with the grade in the Grade Point table in (3.16) above.

#### **4.2 Conversion Formula:**

Ordinarily the CGPA earned by a student may be converted to percentage of marks by following the formula mentioned as under:

$$\text{CGPA} \times 10 = \text{Percentage of Marks}$$

#### **4.3 Grade Card / Sheet (Reporting of Learners Performance):**

The Grade Card / Sheet issued at the end of end term examination to each learner shall contain the following:

- a. The marks obtained by a learner in each course,
- b. The credit earned for each course registered for that semester,
- c. The performance in each course indicated by the letter grade,
- d. The Semester Grade Point Average (SGPA),
- e. The cumulative Grade Point Average (CGPA) and
- f. Conversion formula.

#### **4.4 Transcript:**

The University may issue consolidated Transcript on request to the Controller of Examinations which shall contain letter grades, grade points, GPA and CGPA mentioning the Course Title in detail, medium of instruction and programme duration.

#### **4.5 Rules for admission of Unsuccessful and Absentee Candidates**

Unsuccessful learners who fail to complete the programme within the stipulated time may take readmission in the programme by paying fees fixed by the University from time to time.

#### **4.6 General:**

For any matter not covered under these Regulations for the Directorate of Open and Distance Learning, the existing Dibrugarh University Rules, Ordinances and the Dibrugarh University Act, 1965 (as amended), The Dibrugarh University Examination Ordinance, 1972 (as amended up to date) and the Dibrugarh University Distance Education Ordinance, 2006 (amended up to date) shall be applicable.

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\* SGPA and CGPA shall be rounded off to 2 decimal points and reported to the Grade Card (Sheet) and Transcript.



## Detailed syllabus

### Course: ECO-101 (First Semester)

#### Microeconomic Theory-I

Credits: 4

#### **Block I: Basic Concepts of Microeconomics and Theory of Demand**

**Marks-20**

Micro static, dynamic and comparative static analysis; Economic models; Concepts and importance of firm and industry; Criteria for the classification of firms into industries; Criteria for the classification of marks; Partial and general equilibrium; Elasticities of demand-price, cross and income; Elasticity of supply.

#### **Block II: Theory of Consumer Behaviour**

**Marks-20**

Cardinal utility theory; Indifference Curve Analysis (income, substitution and price effects, Slutsky theorem, compensated demand curve) and their applications; Revealed preference theory; Consumer surplus; Consumer choice involving risk; Recent developments in demand analysis-Pragmatic approach.

#### **Block III: Theory of Production and Costs**

**Marks-20**

Production function and its graphical representation, Law of variable proportions and returns to scale; Technological progress and production function; Equilibrium of the firm; Choice of optimal combination of factors of production; Choice of optimal expansion path; Graphical derivation of cost curves from production function; The production possibility curve of a firm; Equilibrium of a Multi-product- firm. Traditional and modern theories of costs - The envelop curve, The L-shaped scale curve; The analysis of economies of scale-real and pecuniary economies of scale; The relevance of the shape of cost curves in decision making.

#### **Block IV: Theory of Product Pricing**

**Marks-20**

##### **Theory of Firm:**

Traditional and modern theories of Firm - basic differences, concept of break-even point and its practical utilities, Managerial theory of firm-Baumol's sales revenue maximization model.

##### **Perfect Competition:**

Short run and long run equilibrium of the firm and industry; Supply curve.

**Monopoly:** Short run and long run equilibrium, Price discrimination and its effects; The Multi-plant firm; Bilateral monopoly.

**Monopolistic Competition:** Equilibrium of the firm-Product differentiation and the demand curve; The concept of industry and group.

**Oligopoly:** Non-collusive oligopoly - Cournot's duopoly model, Chamberlin's oligopoly model, Kinked-demand model, Collusive Oligopoly-Joint profit maximization, Market sharing cartels; Price leadership, Theory of limit pricing; Bain, Sylos-Labini, Modigliani and Bhagwati.

#### **Recommended Books and Suggested Readings:**

1. Koutsoyiannis, A Modern Microeconomics, ELBS with Macmillan Publication, London.
2. Henderson & Quandt: Microeconomic Theory, McGraw Hill, New York.

3. Samuelson, P.A.: Economics, McGraw Hill, New York.
4. Stonier, W & Hague, D.C.: A Text Book of Economic Theory, Longman, London.
5. Rubinfeld & Pindyck: Micro Economics McGraw Hill, New York.
6. David N. Hyman: Economics 4th Ed. Irwin, Chicago.
7. Shastri, Rahul A.: Microeconomic Theory, Universities Press (India Ltd.) Hyderabad.
8. Chopra, P.N.: Advanced Economic Theory, Kalyani Publishers, Ludhiana
9. Ahuja, H.L.: Advanced Economic Theory-Micro Economic Analysis, S. Chand & Co., New Delhi.

**Course: ECO-102 (First Semester)**

**Macroeconomic Theory**

**Credits: 4**

**Block I: National Income**

**Marks-16**

Gross National Product, Net National Product. National Income, Personal Income, Disposable Personal Income, Real and nominal GNP. Circular flow of national income in two, three and four sector economy; Gross capital formation, Net capital formation. Capital-output ratio, National income and economic welfare.

**Block II: Classical and Keynesian Approaches to Macroeconomics**

**Marks-16**

Classical theory of employment and output determination, Keynesian theory of employment and output; The consumption function, The investment function; Aggregate demand and aggregate supply approach; Saving-investment approach. The concept of Investment multiplier and its diagrammatic representation; The Balanced Budget Multiplier.

**Block III: Product and Money Market Equilibrium**

**Marks-16**

Product market and the IS curve. The money market and the LM curve; The General equilibrium in the IS-LM framework. Shifts in the IS and LM curves; Relative effectiveness of monetary policy and fiscal policy.

**Block IV: Income-Consumption relationship**

**Marks-16**

Absolute Income Hypothesis. Relative Income Hypothesis-Demonstration effect and Ratchet effect. Permanent Income Hypothesis and its implications; Life Cycle Hypothesis and its implications.

**Block V: Macroeconomic policies**

**Marks-16**

Monetary and Fiscal policies and their relative effectiveness, The Philip's curve, Friedman-Phelps approach, Rational Expectations approach. Stabilisation policies, Incomes policy; Problems of Stabilization policies; Supply side economics.

**Recommended Books and Suggested Readings:**

1. N. Gregory Mankiw: Macroeconomics, (Ind Edn. CBS Publishers & Distributors, 485, Jain Bhawan, Bhola Nath Nagar, Shahdara, Delhi - 110032).
2. Michael Patkin: Macroeconomics, Addison -Wesley, NY, 1990.
3. Lawrence Harris: Monetary Theory (3rd Edn.), McGraw Hills, NE, 1995.
4. T.J. Sargent: Macroeconomics & Mathematical Economics (6th Edn), Academic Press, N.T., 1994.
5. Todaro, M.P. & Smith: Development Economics, Pearson Education.
6. F.S. Mishkin: Money, Banking and Financial Markets (2nd Edn.), Scott, forestnan & Co., 1989.
7. David Romer: Advanced Macroeconomics, McGraw Hills, NY, 1996.

**Course: ECO-103 (First Semester)****Public Finance****Credits: 4****Block I: Public Finance-Role, Approach and some Basic Concepts****Marks-16**

Role of Public Finance in developing economies and its distinction from developed economies, Government as an agent for economic planning and development; Government in different economic set up; Functional and normative approach to Public Finance; Optimum Budget Model. Characteristics of public goods-market failure-imperfection, decreasing cost, Externalities; Public goods Vs. private goods; Merit goods, mixed goods; Market failure- imperfection, decreasing cost, Externalities.

**Block II: Taxation****Marks-16**

The Benefits-Received approach and the Ability to pay approach, Critical study of traditional and modern theories of taxation; Neo-Classical and Modern concept of incidence. Meaning, Importance - and Limitations. Salient features and defects, Recent tax reform measures, Role of taxation in economic development.

**Block III: Public Expenditure and Public Debt****Marks-16**

Structure and growth of public expenditure; Wagner's theory of public expenditure and other modern theories-Erik Lindahl, H.R. Bowen and P.A. Samuelson, Investment criteria, Cost-benefit analysis; Shadow pricing and External Cost and Benefit; Role of public expenditure in economic development. Role and burden of public debt, shifting of debt burden; Principles of debt management and repayment of public debt.

**Block IV: Fiscal Policy and Federal Finance****Marks-16**

Role and objectives in both developing and developed countries, Distinction between fiscal and revenue deficits, Balanced budget multiplier and its implications. Fiscal federalism; principles and policies of federal government; Methods of resource transfer in a federation.

**Block V: Public Budget, Public Utilities and Public Enterprises****Marks-16**

Types of public budget, Economic and functional classification of budget; Zero-based budgeting, Programme and Performance budgeting; Budget as an instrument of economic policy. Rights, duties

and characteristics of public utilities; pricing of public utilities and its distinction from the pricing of public enterprises; Distinction between public utilities and public enterprises.

**Recommended Books and Suggested Readings:**

1. Musgrave and Musgrave: Theory & Practice of Public Finance, McGraw Hill Kogakusha Ltd., Tokyo.
2. Prest, A.R. Public Finance in Theory & Practice, Vikash Publications Ltd., New Delhi.
3. Tripathy, R.N. Public Finance in Underdeveloped Countries, The World Press Pvt. Ltd., Calcutta.
4. Musgrave: Theory of Public Finance, McGraw Hill Book Company INC New York.
5. Taylor: Economics of Public Finance, Oxford & IBH Publishing Company, Calcutta.
6. Choudhury, R.K.: Public Finance and Fiscal Policy, Kalyani Publishers, Ludhiana.

**Course: ECO-104 (First Semester)**

**Issues on Indian Economics**

**Credits: 4**

**Block I: Structure of the Indian Economy**

**Marks-16**

Basic characteristics of Indian economy, Causes of economic backwardness, Trends in national income-growth and structure. Mineral, forest, water and land; Human resource and its potentials, Population - size, composition and distribution, population policy, population growth and economic development; Occupational pattern, Unemployment problem; Poverty and poverty alleviation programmes.

**Block II: Agriculture and Rural Development**

**Marks-16**

Role of agriculture in Indian economy, Nature of Indian agriculture, Cropping pattern in India; Food security in India- policies for sustainable agriculture, Public Distribution System and its impact; National Agricultural Policy, Conditions and problems of agricultural labourers. Irrigation, agricultural inputs and mechanization of agriculture; Agricultural growth during the planning era; Land reforms; Agricultural marketing. Institutional credit flow to the rural sector - SCBs, RRBs, NABARD; Micro finance-SHG movement; Agricultural taxation in India, WTO and Indian agriculture.

**Block III: Industrial Development**

**Marks-16**

The performance and pattern of industrialization under Five-year Plans, Problems of Industrial development; Small- scale and cottage industry: Industrial sickness-extent, causes and remedies, Industrial policy of India. Saving, capital formation in India, Causes of low rate of capital formation.

**Block IV: Tertiary Sector in India**

**Marks-16**

Transport and communication; Education and Health, Information technology; Tourism sector. Foreign trade of India-value, composition and direction, balance of payments problem, Trade policy of India, foreign investment-direct and portfolio, Role of multinational firms, Foreign exchange, Foreign aid, External debt of India. RBI, Commercial banks, RRBs, Non-banking financial intermediaries; Money and capital markets in India, Stock market; Indian public finance-Fiscal federalism, Problems of fiscal policy, Fiscal sector reforms in India, budget.

**Block V: Economic Planning****Marks-16**

Features of economic planning in India, Main objectives, Achievements and failures of Plans, Strategy of Indian Planning, Resource mobilization and investment in Five- year Plans, Salient features of current Five-year Plan: Regional Disparities-Indicators, causes, extent and policy measures, Regional Planning, Role of Panchayat, NGOs, SHGs. Liberalization, Privatization and Globalization, Disinvestments in public sector undertakings-rationale, feature and assessment, WTO regime and India.

**Recommended Books and Suggested Readings:**

1. Misra, S.K. & Puri, V.K.: 'Indian Economy' Himalaya Publishing House, Bombay, 1997.
2. Dewett, K.K., Verma & Sharma: 'Indian Economics', S. Chand & Co., New Delhi, 1999.
3. Daff, R. & Sundaram, K.P.M.: 'Indian Economics', S. Chand & Company Ltd., Ramnagar, New Delhi.
4. Dhar, P.K.: 'Indian Economy' 9th edition, Kalyani Publishers, Ludhiana, 2001.

**Course: ECO-201 (Second Semester)****Microeconomic Theory-II****Credits: 4****Block I: Theory of Distribution****Marks-16**

Marginal productivity theory; Euler's theorem and adding up controversy; Rent, Quasi rent and transfer earnings, Ricardian theory of rent; Classical and modern wage theories, Robinsons' theory of exploitation; Classical, Keynesian and modern theories of interest; Risk and uncertainty bearing theories of profit, Schumpeter's theory of profit.

**Block II: Welfare Economics****Marks-16**

New welfare Economics and its Distinction with Pigovian welfare economics; Pareto's welfare criterion and conditions of Paretian optimality; Merits and demerits of Paretian social optimum concept. Compensation principle of Kaldor-Hicks; Scitovsky's paradox, Scitovsky's double criterion; Value judgment; Bergson-Samuelson social welfare function; Arrow's theory of social choice and impossibility theorem, Amartya Sen's concept of poverty and welfare.

**Block III: The Economics of Information****Marks-16**

Markets with Asymmetric Information; Quality Uncertainty and the Market for Lemons. Adverse Selection; Social Insurance; Signaling and Screening; Moral Hazard; The Principal-Agent Problem. Asymmetric Information in Labour Markets: Efficiency-wage Theory.

**Block IV: Linear Programming****Marks-16**

Definition, Objectives and applications, Statement of the problem; Concepts of objective function, Constraints, Iso- cost and Iso-profit lines, Feasible region, Optimal solution; Graphical solution of linear programming problem.

**Block V: Introduction to Game Theory****Marks-16**

Basic Concepts, Objectives and Applications; Classification of Games depending upon Number of Players, Sum of Gains and Losses, and, Strategy; Competitive Games: Two-Person Zero-Sum Games;

Pure and Mixed Strategies ; Rules of Dominance and Iterated Deletion of Dominated Strategies; Solution of Games with and without Saddle Point; Two Person, Non-Constant- Sum Games; Cooperative Games and Nash Bargaining Solution; Non-Cooperative Games and Prisoners' Dilemma.

**Recommended Books and Suggested Readings:**

1. Koutsoyiannis, A Modern Microeconomics, ELBS with Macmillan Publication, London.
2. Henderson & Quandt: Microeconomic Theory, McGraw Hill, New York.
3. Samuelson, P.A.: Economics, McGraw Hill, New York.
4. Stonier, W & Hague, D.C.: A Text Book of Economic Theory, Longman, London.
5. Rubinfeld & Pindyek: Micro Economics McGraw Hill, New York.
6. David N Hyman: Economics 4th Ed. Irwin, Chicago.
7. Sen, A.K.: Poverty and Famine: "An Essay on Entitlement and Deprivation", Oxford University Press.
8. Shastri, Rahul A.: Microeconomic Theory, Universities Press (India Ltd.) Hyderabad.
9. Chopra, P.N.: Advanced Economic Theory, Kalyani Publishers, Ludhiana
10. Ahuja, H.L.: Advanced Economic Theory-Micro Economic Analysis, S. Chand & Co., New Delhi.

**Course: ECO-202 (Second Semester)**

**Monetary Theory**

**Credits: 4**

**Block I: Demand for and Supply of Money**

**Marks-16**

Classical and Keynesian Approach - Classical approach to demand for money-Cash transaction approach, cash balance approach, Keynes's liquidity preference approach-transactions, precautionary and speculative demand for money; Wicksell's analysis of interest and prices, Keynesian theory of money and prices. Definitions of money supply, Changes in the supply of money, The Money Multiplier- High powered money.

**Block II: Demand for Money: Post Keynesian Approach**

**Marks-16**

Baumol's inventory theoretic approach; Tobin's theory of risk aversion. Friedman's restatement of the quantity theory of money; Patinkin's theory of money and prices. Basic concepts - Meaning, types, sources and causes; Demand-pull inflation - Monetarists' view, Keynesian view, Bent Hansen's view; Cost-push inflation, Inflationary gap. Phillips curve analysis, Natural rate hypothesis, Tobin's modified Phillips curve; Stagflation. Monetary Policy, Fiscal Policy, Incomes policy-objectives, instruments and effectiveness.

**Block III: Analysis of Inflation**

**Marks-16**

Basic concepts- meaning, types, sources and causes; Demand-pull Inflation-Monetarists view, Keynesian view, Bent Hansens View; Cost-push inflation, inflationary gap. Phillips curve analysis, Natural rate hypothesis, Tobin's modified Phillips curve; stagflation. Monetary Policy, Fiscal policy, Incomes Policy –objectives, instruments and effectiveness.

**Block IV: Analysis of Business Cycle**

**Marks-16**

Meaning, types, characteristics and phases of Business cycle. Hawtrey's monetary theory, Multiplier-accelerator interaction models of Hicks and Samuelson, Control of business cycle.

**Block V: Money Market with Special Reference to Indian Money Market****Marks-16**

Scope, need, objectives, constitutions, functions and limitations of Money Market. Structure of Indian money market, Defects of Indian money market; Steps to improve Indian market; Non-Performing Assets (NPA), Non-banking financial intermediaries in India.

**Recommended Books and Suggested Readings:**

1. Keynes, J.M.: 'General Theory of Employment, Interest and Money' Macmillan, London
2. Patinkin, Don: Money, Interest and Prices-part I, Harper & Row, 2nd Ed., London.
3. Lawrence Harris: Monetary Theory (Third Edition), McGraw Hills, New York.
4. N. Gregory Mankiw: Macro Economics (Third Edition), C.B.S. Publishers and distributors, 485 Jain Hhawan, Delhi-100 032.
5. Friedman, M.: Studies in the Quantity Theory of Money, The University of Chicago Press, Chicago.
6. Hajela, P.D.: Problems of Monetary Policy in Underdeveloped Economy, Kitab Mahal, Allahabad.
7. Paul, R.R. Monetary Economics, Kalyani Publishers, Ludhiana.
8. Sinha R.K.: Monetarism Versus Keynesianism, Deep & Deep Publications, New Delhi.
9. RBI Reports: Currency and Finance.

**Course: ECO-203 (Second Semester)****Statistics for Economic Analysis****Credits: 4****Block I: Sampling Methods and Test of Significance****Marks-20**

Census, Sampling and Sampling Distribution-Sampling methods, Sampling and non-sampling errors, Sampling distribution of an estimate, Point and interval estimations. Chi-Square, t-test & F-test, Analysis of variance, Standard Error.

**Block II: Correlation and Regression****Marks-20**

Simple correlation, Multiple correlation, Partial correlation. Method of least squares, Multiple linear regression.

**Block III: Interpolation & Extrapolation****Marks-20**

Graphic method, Parabolic curve, Binomial expansion method, Finite difference method, Newton's forward difference, Newton's backward difference method, Newton Gauss method.

**Block IV: Probability & Distribution****Marks-20**

Classical and empirical definitions of probability, Laws of addition & multiplication, Mathematical expectation. Discrete and continuous distributions-Binomial, Poisson and Normal distribution.

**Recommended Books and Suggested Readings:**

1. Croxton & Cowden: Applied General Statistics, Prentice Hall of India Pvt. Ltd., New Delhi.
2. Gupta, S.P. Statistical Methods, Sultan Chand & Sons, New Delhi.
3. Taro Yamane: Statistics, Prentice Hall of India, New Delhi.
4. Agarwal, B.L., Basic Statistics, (Second Edition), Wiley Eastern Ltd., New Age International Ltd., New Delhi.

**Course: ECO-204 (Second Semester)**

**Regional Economics**

**Credits: 4**

**Block I: Regional Economics: Basic Concepts and Growth Theories**

**Marks-16**

Definition of a Region; Definition, scope, content and importance of regional economics. Current state of regional growth theory-Export base model, Neoclassical model; Input-output model.

**Block II: Regional Planning**

**Marks-16**

Definition, scope, content and needs of regional planning; Regional Vs National planning. Location theory and regional growth; Growth pole theory and Regional planning, Concept of regional multiplier and its application; Role of decentralized planning in regional development; Vision 2020.

**Block III: Regional Economic Development**

**Marks-16**

Concept of regional development, Strategy of balanced regional development, Myrdal's Backwash theory, Urbanization and regional development. Regional disparities in India, Goals for balanced regional development and economic policy in India.

**Block IV: Resources of North East India**

**Marks-16**

Mineral, Forest and Water resources; Economic characteristics of North East India. Trends in population growth, Composition of population, Distribution of the population, Population density, Urbanization, Occupational distribution, Migration-internal and international.

**Block V: Sectoral Development of North East India**

**Marks16**

Trends and pattern of production - Land use, Agricultural holdings and Cropping pattern, Food production and food security, Shifting cultivation, Modernization of agriculture, Sustainable agriculture, Problems of agriculture with special reference to flood, erosion and soil conservation. Industrial Development, Major and Small-Scale Industries- Problems and prospects, Development of infrastructure, power, Transport and communication, Growth of banking and financial institutions, Role of NEC in economic and infrastructural development. Performance of Social Sector, Role of NEDFi, SIDBI, IDBI and other development agencies; Border trade and Look East Policy.

**Recommended Books and Suggested Readings:**

1. H.W. Richardson (Ed) : Regional Economics : A. Reader, Allen & Irwin, London.
2. H.W. Richardson: Regional Growth Theory; MacMillan.
3. Goswami, P.C. : Economic Development of Assam, Kalyani Publishers, Ludhiana.
4. B. Dutta Roy, Social and Economics Profile of N.E. India, Omsons, New Delhi.
5. Singh, J.K. : Regional Economics, Bharati Prakashan, Varanasi.
6. NCEAR: Techno Economic Surveys of Assam, Arunachal Pradesh and Manipur and Nagaland.
7. NEC: (a) Basic Statistics of N.E. Region, 1980-85. (b) Towards Regional Development: Plans and Perspective (1980).
8. Govt. of Assam : Economic Survey and Statistical hand Book.
9. Assam Prakashan: Assam Beyond 2000.
10. Govt. of Assam: Vision 2025.



**Course: ECO-301 (Third Semester)**

**International Economics**

**Credits: 4**

**Block I: Classical and Neo-classical Theories of International Trade**

**Marks-16**

Absolute advantage theory of Adam Smith; Comparative advantage theory of David Ricardo; Relevance of the classical theory in less developed countries. Replacement of Labour Cost by Opportunity Cost; Trade under constant cost, Trade under increasing cost, Trade with more than two countries-two commodities model; Determination of actual terms of trade with the help of Reciprocal demand analysis and Offer curve technique.

**Block II: Modern Theories of International Trade**

**Marks-16**

Factor abundance, Factor intensity reversal, Demand reversal; Factor-price equalisation theorem, equalization theorem; Leontief paradox. Vent for surplus theory, Imitation lag hypothesis, Linder theory, The product cycle theory of Vernon, Kravis theory; Intra-industry trade.

**Block III: Economic Growth and International Trade**

**Marks-16**

Effects of economic growth on terms of trade; Effects of technological progress and factor growth on volume of production, terms of trade and welfare. Hypotheses of secular deterioration in the terms of trade- Myrdal, Prebisch and Singer's views; Immiserising growth.

**Block IV: Foreign Investment**

**Marks-16**

The theory of foreign direct investment, effects of direct investment on home and host countries, Risk involved in foreign direct investment for both home and host countries. Meaning of portfolio investment, Motives for portfolio investment, Determinants of portfolio investment, Risk involved in Foreign Portfolio Investment for both investors and host country.

**Block V: Economic Integration**

**Marks-16**

Free trade area, Customs union, Common market and Economic union; Customs union -Static effects -Trade creation and Trade diversion; Dynamic effects of customs union. EU, ASEAN, NAFTA, SAFTA, SAARC. IMF- Objectives, functions, achievements and failures; WTO -Objectives, Agreements on Intellectual Property Rights and Agriculture and their impacts on India.

**Recommended Books and Suggested Readings:**

1. Bo Sodersten: International Economics, Macmillan Education, London.
2. H.G. Mannur: International Economics: Theory and Policy Issues, Vikas Publishing House, New Delhi.
3. Krugman Paul & Obstfeld: International Economics (4<sup>th</sup> Edition), McGraw Hill, New York.
4. Viner, J.: Studies in the Theory of International Trade, Allen & Unwin, London.
5. G.C. Hufbauer: The Multinational Corporation and Direct Investment in P.B. Kenen (Ed.), International Trade and Finance, Cambridge University Press. New York.
6. Salvatore, D.: Theory and Problems of International Economics, (Schaum's Outline Series) McGraw Hill Book Company, New York.
7. D.R. Apployand & A.J. Field Jr. Irwin: International Economics, (3rd Edition), McGraw Hill, New Delhi.
8. Grubel, H.G.: International Economics, Irwin, Homewood-III.
9. U.N.O. Trade and Development Report, 2000.

**Course: ECO-302 (Third Semester)**  
**Mathematics for Economic Analysis**  
**Credits: 4**

**Block I: Set, Matrix and Input-Output Analysis**

**Marks-20**

Concept of set, Types, Set operations, Convex set, properties of Convex set. Matrix-Types, Operations, Cramer's Rule; Determinant- Properties. Structure of Input Output Model, Static Input-Output Model, Hawkins-Simon Conditions.

**Block II: Differentiation**

**Marks-20**

Definition and Basic rules of Differentiation-Partial and Total differentiation-derivative of implicit functions- Applications of derivative in case of elasticity, Cost function, Revenue function and derivation of other marginal functions-Application to comparative static analysis of market model and national income model. Optimization-unconstrained and constrained-Applications to cost minimization, Revenue maximization, Profit maximization and equilibrium of firm-Optimization with equality constraint-Lagrange's Multiplier Method-Application to Consumer's equilibrium and producer's equilibrium.

**Block III: Production Functions**

**Marks-20**

Nature and properties of production functions. Cobb-Douglas and Constant Elasticity of Substitution Production Function-Properties and importance.

**Block IV: Integration**

**Marks-20**

Concept of Integration; Standard Integrals; Important Rules; Methods of Integration. Derivation of total functions from marginal functions Concept of Definite Integral; Definite Integral as an Area; Applications of Definite Integrals in Economics application in case of consumer's surplus and producer's surplus.

**Recommended Books and Suggested Readings:**

1. Alpha C. Chiang: Fundamental Methods of Mathematical Economics, McGraw Hill, New York.
2. R.G.D. Allen: Mathematical Analysis for Economics, Macmilan India.
3. G.C. Archibald & R.G. Lipsey: An Introduction to a Mathematical Treatment of Economics, AITBS, New Delhi, 1984.
4. Baruah, S: Basic Mathematics and its Application in Economics, Macmilan India.
5. Taha, H.A.: Operations Research: An Introduction (6th edition), Prentice Hall of India Pvt. Ltd., New Delhi.
6. Yarnane, Taro, Mathematics for Economists, Prentice Hall of India, New Delhi.
7. Baumol, W.J.: Economic Theory and Operations Analysis, Prentice Hall, Englewood Cliffs, New Jersey.

**Course: ECO-303 (Third Semester)**  
**Development Economics-I**  
**Credits: 4**

**Block I: Economic Growth and Development**

**Marks-20**

The concepts of development and growth; Causes and features of underdevelopment; Poverty - Absolute and relative, Vicious circle of poverty; Factors affecting growth -capital, labour and technology. Measurement of development and development gap -GNP, Per capita income. Composite Index, Inequality of income, Human development index.

**Block II: The Theories of Growth**

**Marks-20**

Classical growth theory, Harrod-Domar growth models, Neo-classical growth theory -Solow and Meade models, Joan Robinson's model. Balanced growth theory. Unbalanced growth theory, Critical minimum effort thesis. Low level equilibrium trap, Endogenous growth theory.

**Block III: Approaches to Political Economy**

**Marks-20**

Radical, Mainstream and Institutional, Development and Underdevelopment – ‘Dependencia’ Theories of Development – Center-Periphery Model, False-Paradigm Model, the Dualistic Development thesis – the Neoclassical Counterrevolution – Political Instability and Economic Policy; the role of State in Less Developed Economies, the Role of Institutions.

**Block IV: Population Growth and Economic Development**

**Marks-20**

Factors affecting population growth-Birth, death and migration, Natural change in population; Age composition and occupational structure of the developed and developing countries, Population pyramid. Positive and negative impacts of population growth, Population policy for economic development.

**Recommended Books and Suggested Readings:**

1. Meier, Gerald M. & Rauch, J.E.: Leading Issues in Economic Development, Seventh Edition, 2000, Oxford University Press.
2. Higgins, B.: Economic development -Problems, Principles & Practices, Revised Edition Reprint, 1994, Universal Book Stall, New Delhi.
3. Gill, R.T.: Economic Development: Past and Present, Prentice-Hall of India Pvt. Ltd., 1992.
4. Ray, Debraj: Development Economics, Oxford University Press.
5. Adelman, I.: Theories of Economic Growth and Development, University Press, Stanford, 1961.
6. Hogendorn, J: Economic Development, Addison, Wesley, New York, 1996.
7. Behrman, S. and T.N. Srinivasan: Handbook of Development Economics, Vol. 3, Elsevier, Amsterdam, 1995.

**Optional Courses: Choose any one Group ('A' or 'B')**

**Course: ECO-304 (A) (Elective) (Third Semester)**

**Economics of Agriculture (Group A)**

**Credits: 4**

**Block I: Agriculture and Economic Development**

**Marks-16**

Scope of agricultural and rural economies, changing importance of agriculture, Traditional agriculture and its modernization; Sectoral dependence of agricultural economics; Interdependence between agriculture and industry.

**Block II: Agricultural Production and Resource Use**

**Marks-16**

Returns to scale; Input-output relationship; Choice of resource allocations, resource substitution and factor relationships; Cost and supply curves; Factor combination and least cost production. Production decision; Resource use under uncertainty condition; Extensive and intensive cultivation.

**Block III: Factor Markets**

**Marks-16**

Principles of land utilization; Size of firm: Tenancy and reform; Land tenure and farming systems. Agricultural labour., wages and employment; Unemployment~ and disguised unemployment. Saving and capital formation; Objectives and principles of a sound credit structure; Characteristics of agricultural credit; Types of credit; Sources of credit; Co-operative credit and credit supervision. Problems, farm efficiency and factors determining efficiency.

**Block IV: Agricultural Marketing**

**Marks-16**

Market surplus and marketable surplus, Approaches of agricultural marketing, Problems of agricultural marketing, Types of costs, Organization of markets, Market grades and standards. Market regulations, Market intelligence, Information services, Co-operative marketing. International commodity agreement, International Patent Ordinance, WTO and Indian agriculture.

**Block V: Agricultural Prices**

**Marks-16**

Demand and supply of agricultural produce, Short and long run movement of agricultural prices, Cyclical and seasonal variations, Cobweb theorem and Producer's response to price. Support price; Problems of agricultural prices, State intervention in production and marketing, Price and income stability, Protection of farm wages, Planning in agriculture.

**Recommended Books and Suggested Readings:**

1. Cohen, R: Economics of Agriculture, James Nisbet Co, Cambridge University Press, London.
2. Sadhu & Singh: Fundamentals of Agricultural Economics, Himalaya Publishing House, Bombay.
3. Soni, R.N.: Leading Issues in Agricultural Economics, Shobin Lal Nagin Chand & Co., Jalandha
4. Heady, E.O.: Economics of Agricultural Production & Resource, Prentice Hall, New York.

**Course: ECO-304 (B) (Elective) (Third Semester)**  
**Demographic Analysis (Group B)**  
**Credits: 4**

**Block I: Demography and Sources of Demographic Data** **Marks-16**

Definition, Scope and Importance of Demography. Definition, History, Salient features, Scope and need, Types of enumeration - household method and canvasser method; Methods of census operation -defacto and de jure. Definition, Salient features, History and Development of Registration of Vital Events; Problems of Vital Registration. Nature, scope, need and advantage of sample survey; Other Sources of demographic data -International Migration records, NSSO records, Administrative records etc.

**Block II: Basic Measures of Fertility and Mortality** **Marks-16**

Crude Birth Rate, General Fertility Rate, Age-specific Fertility Rate, Total Fertility Rate, Child-Women Ratio; Differential Fertility; Measures of Reproduction -Gross Reproduction Rate and Net Reproduction Rate; Crude Death Rate, Specific death rates with respect to age, sex; Infant mortality, Neo-natal mortality; Foetal, Perinatal and Maternal mortality rates; Standardised death rate. Current and Cohort life table, Complete and Abridged life table, construction of life table, uses of life table.

**Block III: Migration** **Marks-16**

Basic concepts; Direct Method of estimating migration- Birth Place Statistics. Intercensal Component Method, National Growth Rate, Vital Statistics Method, Forward and Reverse Survival Rate methods.

**Block IV: Population Structure and Distribution** **Marks-16**

Age structure -Measures of age structure, Population Pyramid, Aging of population, Factors affecting age structure; Sex structure -Measures of sex structure, Factors affecting sex structure, Marital characteristics -Classification of marital status, Measures of marital status; Economic Characteristics - Labour force -Concepts and Definition, Measures of labour force participation -Crude labour force participation rate, General labour force participation rate, Age-specific labour force participation rate, Standardised labour force participation rate. Meaning and measures of population distribution; Factors affecting population distribution; Urbanisation -Various concepts, Measures of Urbanisation - Concentration and Dispersion of population -Lorenz Curve and Gini's Concentration Ratio; Components of Urban Growth.

**Block V: Population Growth and Projection** **Marks-16**

Intercensal Growth Rate, Annual average growth rates -Arithmetic, Geometric and Exponential growth rates; Meaning, assumptions and uses of population projection; Methods of population projection.

**Recommended Books and Suggested Readings:**

1. Shryock, H.S.: Methods and Materials of Demography, et al, Academic Press, New York.
2. Srinivasan, K.: Basic Demographic Techniques & Application, Sage Publications, New Delhi.
3. Rama Kumar, R.: Technical Demography, Wiley eastern Ltd, New Delhi.
4. Barclay G. W.: Techniques of Population Analysis, John Wiley & Sons, New York.
5. Pollard, A.H.: Demographic Techniques, et al, Pergamon Press, Australia.
6. Bouge D.J.: Principles of Demography, John Wiley & Sons, New York.
7. Cox, P. R.: Demography, Cambridge University Press, Cambridge.

**Course: ECO-401 (Fourth Semester)**  
**Development Economics-II**  
**Credits: 4**

**Block I: Sectoral Aspects of Development**

**Marks-20**

Role of agriculture in economic development, Agricultural modernization and sustainable development, Globalisation and its effects on agriculture and industrial sectors in developing countries, Infrastructure and economic development; Role of government in development. Basic concepts, techniques and issues, Intermediate technology.

**Block II: Human Resources**

**Marks-20**

Contribution of education to economic development, Human capital formation, Health, Education and nutrition, The role of human capital in economic development. Gender and development - women empowerment, poverty and development in the Third World Economies. Basic concepts of environment, Environmental issues and sustainable development.

**Block III: Concepts and Measurement of Poverty**

**Marks-20**

Measures of poverty- Head-count; Foster –Greer- Thorbecke, Sen; Critique of the poverty line approach; Absolute vs. Relative Poverty; Millennium Development Goals and Poverty; Poverty traps, Multi-dimensional measures of Poverty: MPI; Poverty as capability failure; Poverty and under nutrition; poverty and environment; Policies to tackle Poverty: Macro vs. Micro Interventions; Targeting vs. Universalism; Micro-credit.

**Block IV: Inequality**

**Marks-20**

Causes and measures of income inequality, Lorenz curve, Gini Co-efficient, Concentration ratio, Entropy; Growth-Inequality and Poverty debate, Patterns and Changes in inequality and poverty- the inverted U hypothesis, Inequality and capitalism in the twenty-first century, the rise of global middle class and global plutocracy; Inequality within and among countries; Measures to reduce inequality; Inclusive Growth.

**Recommended Books and Suggested Readings:**

1. Meier, Gerald M. & Rauch, J.E.: Leading Issues in Economic Development, Seventh Edition, 2000, Oxford University Press.
2. Higgins, B.: Economic development -Problems, Principles & Practices, Revised Edition Reprint, 1994, Universal Book Stall, New Delhi.
3. Gill, R.T.: Economic Development: Past and Present, Prentice-Hall of India Pvt. Ltd., 1992.
4. Ray, Debraj: Development Economics, Oxford University Press.
5. Adelman, I.: Theories of Economic Growth and Development, University Press, Stanford, 1961.
6. Hogendorn, J: Economic Development, Addison, Wesley, New York, 1996.
7. Behrman, S. and T.N. Srinivasan: Handbook of Development Economics, Vol. 3, Elsevier, Amsterdam, 1995.

**Course: ECO-402 (Fourth Semester)**

**Environmental Economics**

**Credits: 4**

**Block I: Economics and Environment**

**Marks-16**

Environment and Development: Basic Issues -Resources and Residuals -Environment as an Economic and Social Asset -Environmental Economics -History of Development of the subject, Definitions and Objectives -Resource Economics Vs. Environmental Economics. Renewable and Exhaustible Resources -Pollutants -Types and Sources of Pollutants - Choice of Environmental Quality for the current and future generation.

**Block II: Public Goods**

**Marks-16**

Environmental Quality as Public Goods -Characteristics of Public Goods -Externalities - Environmental Externalities -Environmental Damage as Negative Externalities - Allocative Inefficiency of Competitive Equilibrium in case of Environmental Quality -the Social Optimum Equilibrium. Concept of Market Failure -the Coase Theorem -Common Property Resources and its characteristic feature.

**Block III: Environmental Pollution**

**Marks-16**

Air, Water, Soil, Noise, Nuclear, Thermal and Marine: Causes, Impacts and Policy Measures -Problem of Solid Wastes and their Management; Solution to Environmental Problems -Conventional, Economic and Incentive based. Concept, Components and Indicators of sustainable development, Sustainable Accounting -Environmental Reporting, Accounting and Auditing -Environmental Impact Assessment: Basic Concepts.

**Block IV: Environmental problems**

**Marks-16**

Environmental problems of the Developed and Developing countries -Policy Responses -Ozone Depletion, Green House Effect and Global Warming, Loss of biodiversity -Causes, Consequences and Remedial Measures -Efforts at national and international level -Carbon Trading.

**Block V: Environmental Problems of India and North East India**

**Marks-16**

Environmental Problems of India -Causes, Consequences and Remedial Measures - India's Environmental Policy -Government Response to Environmental Problems - Environmental Laws and their Implementation -Policy instrument for controlling water and air pollution -Forest Policy -Joint Forest Management -Social Forestry -rationale and benefits, Environmental Problems of North East India -Causes, Consequences and Remedial Measures.

**Recommended Books and Suggested Readings:**

1. Barry C. Field, Environmental Economics: An Introduction (2nd Edition), Mc Graw Hill, New York, 1997.
2. Hanley, N., J. F. Shogern and B. White (1997), Environmental Economics in Theory and Practice, Macmillan.
3. Kolstad, C.D., Environmental Economics, OUP, New Delhi.

4. Scott J. Callan and Janet M. Thomas, Environmental Economics and Management: Theory, Policy and Applications, Irwin, Chicago, 1996.
5. Tom Tintenberg, Environmental and Natural Resources, (5th Edition) Addison Wesley, New York, 2000.
6. D.W. Pearce and R.K. Turner, Economics of Natural Resources and the Environment, John Hopkins University Press, Baltimore, 1990.
7. Sankar, U. (2001), Environmental Economics, OUP, New York.
8. Bhattacharya, R.N.(Ed), Environmental Economics: An Indian Perspective, OUP, New Delhi.
9. Sengupta, R.P. (2001), Ecology and Economics: An Approach to Sustainable Development, OUP, New Delhi.
10. ESCAP (1997), Accounting and Valuation of Environment- A Primer for Developing Countries, Volume I, United Nations, New York.
11. Mehta, S., S. Mundle and U. Sankar (1995), Controlling Pollution: Incentives and Regulation, Sage, New Delhi.
12. Singh, J.K., Das, D.K., Environmental Economics and Development, Deep and Deep, New Delhi.

**Course: ECO-403 (Fourth Semester)**

**Econometrics**

**Credits: 4**

**Block I: Fundamental Concepts**

**Marks-16**

Statistic and Parameter, Estimator & Estimate, Characteristic of a good estimator, Sampling distribution, Random variable, Variance, Co-Variance & Correlation.

**Block II: Linear Regression Model**

**Marks-16**

Principles of least squares - Two-Variable Linear regression Model, BLUE – The Gauss–Markov Theorem – Extension to Multi-Variable Linear regression Model, Interval Estimation - Hypothesis testing, Prediction & Forecasting; Maximum likelihood, Dummy Variable.

**Block III: Single Equation Problems - I:**

**Marks-16**

Auto-Correlation, Heteroscedasticity – Problem, Detection and Alternative Methods of Estimation – Generalised Least Square Method, Properties of GLS Estimators.

**Block IV: Single Equation Problems - II:**

**Marks-16**

Multicollinearity, Errors in Variable and Specification Errors – Problems, Detection and Alternative Methods of Estimation.IV Distributed Lag Models: Concepts – Koyck Model – Estimation – Rationalization of Koyck Model.

**Block V: Time Series Analysis**

**Marks-16**

Concepts and components, Measurement of trend-seasonal, cyclical, irregular movements; Importance of time series analysis – Stationary and Non-stationary time series – Univariate time series processes: AR, MA, ARMA and ARIMA – Estimation of AR, MA and ARMA models.



**Recommended Books and Suggested Readings:**

1. Gujarati, D.N.: "Basic Econometrics", McGraw Hill, New Delhi.
2. Pindyck, R.S. and Rubinfeld, D. L.: "Econometric Models and Economic Forecasts", McGraw Hill, New York.
3. Dourgherty, C: "Introduction to Basic Econometrics

**Optional Courses: Choose any one Group ('A', 'B')****Course: ECO-404 (A) (Elective) (Fourth Semester)****Rural Development (Group A)****Credits: 4****Block I: Concepts of Rural Development****Marks-16**

Meaning of Rural Development, Basic elements of development, Expectations of rural people. Social constraints in rural development. Distribution of income. Measures of rural poverty in India.

**Block II: Determinants of Rural Development****Marks-16**

Utilization of natural resources, Changes in employment. Increase in capital, Technological changes. Infrastructural development: Role of information technology in rural development.

**Block III: Diversification of Rural Economic Activities****Marks-16**

Livestock resources and their productivity, problems of marketing, White revolution; Fishery and poultry development. Issues and problems in rural industrialization. Development of agro based industries. Forestry, Horticulture and Floriculture.

**Block IV: Policies and Programmes of Rural Development****Marks-16**

Community Development Programmes, Special group and Area Specific Programmes, Operation flood. Self-help groups, SGSY and other employment related development programmes.

**Block V: Planning and Management****Marks-16**

Decentralised planning, Organisations for rural development DRDA, DIC, Panchayati Raj Institutions, Co-operatives, CAPART and NIRD, Rural development under planning. Role of NABARD, RRB's, Commercial Banks, Cooperative Banks, NGO's, Foreign Investment and Foreign Aid.

**Recommended Books and Suggested Readings:**

1. Singh, Katar: Rural Development Policies and Management. Sage Publications, New Delhi.
2. Maheshwari, S.R.: Rural Development in India. Sage Publications, New Delhi.
3. Desai, D.K.: Management in Rural Development, Oxford and IBH, New Delhi.
4. Harriss: Rural Development, ELBS.
5. Mascarenhas: A Strategy for Rural Development, Sage Publications, New Delhi.

**Course: ECO-404 (B) (Elective) (Fourth Semester)**

**Population Studies (Group B)**

**Credits: 4**

**FIRST HALF – THEORIES OF POPULATION**

**Block I: Pre-Malthusian Views on Population and Theories of Population** **Marks-10**

Ancient writings of Greek, Roman, Chinese and Indian thinkers, Medieval Christian thinkers, view of the Mercantilists, Physiocrats and Political Arithmeticians (Graunt, Petty); Writings of Condorcet and Godwin. Malthusian Theory, Theory of Optimum Population, Theory of Demographic Transition, Contribution of the Socialist School.

**Block II: Fertility Theories** **Marks-10**

Social Capillarity Theory (Dumont), Theory of Cultural Lag or Diffusion (Carlson), Theory of Change and Response (Davis). Economic Theories of Leibenstein (Cost-benefit) and Becker (Micro Consumption); Biological Theories of Spencer, Gini, Sadler, Doubleday.

**Block III: Fertility and Mortality Variables** **Marks-10**

Background and Proximate determinants of Fertility, Theory of Intermediate Variables. Economic, Ecological, Cultural, Familial, Marital, Parental, Perinatal, Nutritional, Hygienic, Genetic, Natural, Accidental, interventional.

**Block IV: Migration** **Marks-10**

Factors affecting migration, Push and Pull factors, Demographic, Economic, Social and cultural consequences of migration. Lee's Theory, Peterson's Typology, Ravenstein's Laws of Migration, Theory of Intervening Opportunities (Stouffer), Zipf's gravity Model of Migration.

**Recommended Books and Suggested Readings:**

1. Coontz, S.H.: Population Theories and Their Economic Interpretations, - Routledge & Kegan Paul, London.
2. Mahavevan, K. (Ed): Fertility and Mortality, Sage publications, New Delhi.
3. Bhende, A.A. & Kanitkar, T.: Principles of Population Studies, Himalaya Publishing House, Bombay.
4. Kenneth Kammeyer -Population Studies, Rand Mc Nally College Publishing Company, Chicago.
5. Ralph Thomlinson: Population Dynamics, Random House, New York.
6. Clark, W.A. V.: Human Migration, Sage Publications, New Delhi.
7. Cebula R.J.: The Determinants of Human Migration, Lexington Books, Lexington.
8. Donald Bogue: Principles of Demography, John Wiley & Sons, Inc. New York
9. Coale, A.J. & Hoover, E.M.: Population Growth and Economic Development in Low Income Countries, Princeton University Press, Princeton.
10. Evert Lee: " A Theory of Migration" in J.A. Jackson (Ed.) Migration, Cambridge University Press, Cambridge.
11. Philip Hanser & O Duncun (eds): The Study of Population, Asia Publishing House, New Delhi.
12. D.V. Glass: Introduction to Malthus, frank Grass & Co., London.
13. J. Spenglar & O Duncun: Population Theory and Policy, The Free Press of Glancoe, London.

14. Victor S D Souza: Economic Development, Social Structure and Population Growth, Sage Publications, New Delhi.

## **SECOND HALF – INDIAN POPULATION PROBLEMS**

### **Block I: Sources of Demographic Data in India**

**Marks-10**

History. Characteristic, Coverage, Stages, Reliability, Salient Features of the Latest Census History and Reliability of the Vital Registration System; SRS and NSSO records.

### **Block II: Major Demographic features of Indian population and Population Distribution**

**Marks-10**

Size, Growth, Births, Deaths, Marriages, Literacy, Sex-Ratio; Trends in these features over the decades. Occupational and Rural-urban distribution, Trends of Urbanisation and its causes, Density, factors affecting density, Internal and International migration.

### **Block III: Population Policy, Human Capital Formation and Manpower Planning in India**

**Marks-10**

The shift in policy from population control to family welfare, Family welfare programmes -Failures and success, Reproductive Health, Maternal nutrition and Child health policies, Various aspects of the National Population Policy, Population education. Meaning and Objectives, Components of Human Capital Formation, Problems of Human Capital Formation and Manpower Planning.

### **Block IV: Population Growth and Population Distribution in Assam**

**Marks-10**

Behaviour of population dynamics, Problem of Illegal Migration, Population growth and land use pattern. Occupational and Rural-Urban distribution, Density of Population, Trend and Pattern of urbanization.

### **Recommended Books and Suggested Readings:**

1. Bhende, A.A. & Kanitkar, T.: Principles of Population Studies, Himalaya Publishing House, Bombay.
2. Ghosh, B.N.: Population Theories on Demographic Analysis, Minakshi Prakasan, New Delhi.
3. Coale, A.J. & Hoover, E.M.: Population Growth and Economic Development in Low Income Countries, Princeton University Press, Princeton.
4. Agarwal, S.N.: Population, National Book Trust, New Delhi.
5. Davis, K.: The Population of India and Pakistan, Princeton University Press, Princeton.
6. Driver, E.D.: fertility Differentials in Central India, Princeton University Press, Princeton.