

University of Rajasthan, Jaipur
M.A. Economics Syllabus
Semester Scheme 2011-13

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1. NEW ORDINANCES RELATED TO M.A. ECONOMICS (Semester Scheme)

O.199F1: The examination of Regular students of Master degree (Post-graduate) courses of the University admitted in the academic session 2011-12 and after shall be based on (a) Semester Examinations, (b) Continuous Assessment, (c) Choice Based Credit System, and (d) Semester Grade Point Average and Cumulative Grade Point Average system as provided in O.199F1 to O.199F5. The ordinances which were in force prior to academic session 2011-12, will be applicable for Non-collegiate students (wherever permissible) and students admitted prior to academic session 2011-12 only. The ordinances O.199F1 to O.199F5 will have overriding effect over other ordinances for the Regular courses leading to Masters' degree.

O.199F2: Fifteen (15) hours of theory teaching will lead to one credit (which means one hour per week theory teaching in a semester of 90 teaching days) and in case of practical 45 hours of laboratory work will lead to two credit (which means 3 hours practical class per week in a semester of 90 teaching days). Each semester of Master's course shall offer 36 credits or more. Number of Semester Examinations and Minimum Credit required to be earned for award of Master degree in various Post-Graduate courses is specified in table given below.

S. No.	Faculty	Degree	Subject	Number of Semesters	Minimum Credit Required
1	Arts	M.A. (Master of Arts)	1. English	4	120
2			2. European Studies	4	120
3			3. French	4	120
4			4. Hindi	4	120
5			5. Philosophy	4	120
6			6. Sanskrit	4	120
7			7. Urdu	4	120
8	Social Science	M.A. (Master of Arts)	1. Anthropology	4	120
9			2. Economics	4	120
10			3. Garment Production and Export Management	4	120

11			4. Geography	4	120	
12			5. History	4	120	
13			6. Mathematics	4	120	
14			7. Political Science	4	120	
15			8. Psychology	4	120	
16			9. Public Administration	4	120	
17			10. Sociology	4	120	
18			11. Statistics	4	120	
19			M.S.W. (Master of Social Work)		4	120
20			M.J.M.C.(Master of Journalism and Mass Communications)		4	120
21	Fine Arts	M.A. (Master of Arts)	Dramatics	4	120	
22			Drawing and Painting	4	120	
23			Music	4	120	
24		M.V.A. (Master of Visual Arts)		4	120	
25		M. Mus. (Master of Music)		4	120	
26	Commerce	M.Com. (Master of Commerce)	Accountancy and Business Statistics	4	120	
27			Business Administration	4	120	
28			Economic Administration and Financial Management and Cooperation	4	120	
29		M.C.C.A. (Master of Cost Control and Accounts)		4	120	
30		M.H.R.M. (Master of Human Resource Management)		4	120	
31		M.I.B. (Master of International Business)		4	120	
32		M.F.C. (Master of Finance and Control)		4	120	
33	Management	M.B.A. (Master of Business Administration)		4	120	
34		M.B.A. (Executive) (Master of Business Administration (Executive))		4	120	
35		M.B.A. (CAM) (Master of Business Administration-Computer Aided Management)		4	120	
36		M.B.A. (E-Com) (Master of Business Administration-E-Commerce)		4	120	
37	Education	M.Ed. (Master of Education)		2	60	
38		M.P.Ed. (Master of Physics Education)		4	120	
39		M.Lib. & Inf. Sc.(Master of Library and Information Science)		2	60	
40	Law	LL.M. (Master of Law)		4	120	
41		LL.M. (H.R.&V.E.) (Master of Law –Human Rights and Value Education)		4	120	
42	Science	M.Sc. (Master of Science)	1. Anthropology*	4	120	
43			2. Biochemistry	4	120	
44			3. Biotechnology	4	120	

45			4. Botany	4	120
46			5. Chemistry	4	120
47			6. Environmental Science	4	120
48			7. Garment Production and Export Management*	4	120
49			8. Geography*	4	120
50			9. Geology	4	120
51			10. Home Science	4	120
52			11. Information Technology	4	120
53			12. Mathematics*	4	120
54			13. Microbiology	4	120
55			14. Pharmaceutical Chemistry	4	120
56			15. Physics	4	120
57			16. Psychology*	4	120
58			17. Statistics*	4	120
59			18. Zoology	4	120
60			M.C.A. (Master of Computer Applications)	6	180
61			B.Sc.-M.Sc. Integrated Biotechnology	10	300
62			B.Sc.-M.Sc. Integrated Information Technology	10	300
63			M.Tech. (Engineering Physics)	4	120
64	Engineering and Technology	Dual degree B.Tech. M.Tech. in Converging Technologies	1. Nanomaterials and Nanotechnology	10	300
65			2. Bioinformatics and Biotechnology	10	300
66			3. Information and Communication Technologies	10	300
67			4. Cognitive and Neuroscience	10	300
68	Social Science	M.A. (Masters of Arts)	12. Museology and Conservation	4	120
69			13. Rajasthani Language Literature & Culture	4	120

* Candidate who have been admitted to Master's degree in Anthropology/ Garment Production and Export Management / Geography/ Mathematics/ Psychology/ Statistics based on the Bachelor degree in Arts shall be awarded the M.A. degree in the concerned subject and candidates who have been admitted to Master's degree in Garment Production and Export Management based on the Bachelor degree in Commerce shall be awarded the M.Com. degree in the subject.

The number of papers, course type and credits and detailed syllabus for each course shall be shown in the syllabus for the course concerned. A candidate will be required to earn minimum credits prescribed above for award of the Master degree.

O.199F3:

- a) The Department in context of this ordinance means the Department/Centre of concerned PG subject at University of Rajasthan or that of an affiliated institution or college, as the case may be. Teacher of parent Department means a duly appointed Teacher as per UGC prescribed qualifications in the Department where student is enrolled for the course.
- b) A Credit Monitoring Committee (CMC) of the Department will consist of the Head and THREE Senior Most Teachers on roll of the Department with Head of the Department as Chairperson. Under special circumstance, when the number of teachers on roll is less than four, the Vice-Chancellor may constitute the Credit Monitoring Committee. Registration of candidates in the First and subsequent Semesters after the prescribed last date shall not be permitted. For subsequent semesters no minimum credit earning criterion will be applicable. Credit registration atleast once in all Compulsory Credit Course shall be binding, however, earning all CCC Credits for accumulation of the prescribed minimum credits shall not be required.
- c) The candidate will be required to finalize the number of credits at the time of registration in a semester and no change will be permitted after seven days of start of the semester. The CMC of the Department shall forward the credit registration details of all students enrolled in the semester, latest by the tenth day of commencement of the semester. The prior approval of Credit Monitoring Committee will be essential and decision of Credit Monitoring Committee shall be final and binding.
- d) The Credit Courses have been classified as
 - i. Compulsory Core Courses(CCC)
 - ii. Elective Core Courses(ECC),
 - iii. Seminar (SEM), Project Work (PRJ), Field Study (FST), Self Study Courses(SSC), and other Supportive Courses (OSC), Research Publications [RPJ] can also be taken in support of Core or Elective course wherever so prescribed.
- e) The aim of the seminar is to give students an exposure to recent developments and advance topics of research interest. The Seminar preparations can be undertaken only on prior approval of Credit Monitoring Committee of the Department. The CMC will allot Seminar Credits on Merit Basis out of desiring students. Seminar preparations are to be undertaken under guidance of a Teacher of parent Department. No teacher shall be permitted to guide more than three students in a semester for Seminar supervision. The guiding teacher will make continuous internal assessment of the Seminar. At the End of Semester Examination (EoSE) the Seminar will be conducted and credits will be awarded by a Board of Three Examiners consisting of the Head of the Department, guide and one faculty member other than guide.
- f) The aim of Project Work or Field Study is to introduce students to research methodology in the subject and prepare them for pursuing research in theoretical or experimental or computational areas of the subject. The project work or Field Study is

to be undertaken under guidance of a Teacher of that Department or a Scientist or any other suitable person with proven research excellence in the concerned field of study. The Project Work or Field Study can also be taken up in an outside institution of repute on approval by Credit Monitoring Committee of the Department. The Project Work or Field Study can be undertaken only on prior approval of Credit Monitoring Committee of the Department. The CMC will allot Project Work or Field Study Credits on Merit Basis out of desirous students. The guiding teacher will make continuous internal assessment of the Project Work/ Field Study. No teacher shall be permitted to guide more than three students in a semester for Project Work/Field Study under his/her supervision. EoSE for Project Work/ Field Study will be held at the unit where project work has been undertaken by a board of three examiners consisting of HoD, guide and one senior faculty.

- g) Each department is required to arrange delivery of all compulsory core courses and special number of elective core courses so that the students enrolled for the course can complete prescribed minimum number of credits. It is not binding on the Department to make provision for all elective core courses.
- h) A course is identified by a course code designated by a string of six alphanumeric characters and a course title. In a course code the first three characters of the string indicate the Department offering the course and the later three alphanumeric characters designate a particular course. In the case of compulsory core course the fourth character identifies the semester numeric digit and in case of the elective core courses the fourth character indicates the cluster of specialization. For compulsory theory core courses the fifth character is '0', for laboratory core courses it is '1' and for Project Work/ Seminar/Field Study it is '2' and for Research Publications in journals it is '3'.
- i) There will be no supplementary/due paper/special examination. Students with grade 'F' or 'E' will have to get themselves re-registered in the course if they so desire with option either as a Self Study Course or as a regular course depending on the feasibility at the Department. The credit will be considered and counted only if registered and approved by the Credit Monitoring Committee at the time of semester registration.
- j) The candidate shall not be permitted to appear in EoSE of a particular credit if (i) he/she does not fulfil the minimum 75% attendance requirement, or (ii) he/she fails to secure a Semester Grade Point Average (SGPA) of 1.5 in the continuous assessment. The concerned department will have to communicate the eligibility of candidate for EoSE to the University Fifteen days before commencement of Examination.

O.199F4: In Continuous Assessment (Department/ College/Institution wise) and End of Semester Examination (EoSE) examination (University as a whole) separate Grades will be awarded as specified under this ordinance. The continuous assessment will consist of two components, namely, (i) Internal Assessment and (ii) Sessional Test(s) in ratio 30:70. The internal assessment component will comprise of assessment of students performance on the basis of factors like Attendance, Classroom Participation, Quiz, Home Assignment etc. The sessional test shall be conducted on coverage of 50% of course content specified in the syllabus. The Semester Grade Point Average (SGPA) and Cumulative Grade Point Average

(CGPA) for Continuous Assessment will be calculated on the Department/College level and for EoSE at the University level. The name of College/Department will be mentioned with SGPA and CGPA of Continuous Assessment.

O.199F5:

- a) Grades in a particular examination with less than 10 students registered in the course (cumulative at Department level for continuous assessment and cumulative at university level for EoSE) will be awarded on the basis of percentage of marks obtained as per table given below.

Percentage Range	Grade	Grade Point	Grade Definition
75-100	O	6	Outstanding
65-74	A	5	Very Good
55-64	B	4	Good
45-54	C	3	Average
33-44	D	2	Below Average
25-33	E	1	Poor
0-24	F	0	FAIL

- b) Grades in a particular examination with more than 10 students registered in the course (cumulative at Department level for continuous assessment and cumulative at university level for EoSE) will be calculated on the basis of relative merit of marks obtained, that is, Grade O (Point 6) to top 10% students, Grade A (Point 5) to next 25 % students in merit order, Grade B (Point 4) to further next 30% students in the merit order and Grade C (Point 3) to further next 25% in the merit order and Grade D (Point 2) to remaining last 10% students with exceptions permitted (i) to the extent to award students with same mark and the same grade, (ii) to award Grade E (Point 1) to those students securing less than 33% but more than 25% marks in the examination, and (iii) to award Grade F (Point 0) to those students securing less than 25% marks in the examination. The grade point assignment is also given below in tabular form.

Standing in Merit of the Course or Marks Obtained in the course	Grade	Grade Point	Grade Definition
Top 10 % in Merit	O	6	Outstanding
Among Top 35% in Merit but not in Top 10%	A	5	Very Good
Among Top 65% in Merit but not in Top 35%	B	4	Good
Among Top 90% in Merit but not in Top 65%	C	3	Average
Among Last 10% in Merit	D	2	Below Average
25% <=Marks<33%	E	1	Poor
Marks<25%	F	0	FAIL

- c) Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) will be calculated on the credit weighted average of the grade points obtained as given below.

$$SGPA = \frac{\sum_{i=1}^n C_i P_i}{\sum_{i=1}^n C_i}$$

Where

C_i : Number of credits earned in the i^{th} course of Semester for which SGPA is to be calculated.

P_i : Grade Point Earned in i^{th} course

i : 1, 2,n represents the number of courses in which a student is registered in the concerned semester.

$$CGPA = \frac{\sum_{i=1}^n C_i P_i}{\sum_{i=1}^n C_i}$$

Where

C_i : Number of credits earned in the i^{th} course of Course till date for which CGPA is to be calculated.

P_i : Grade Point Earned in i^{th} course

i : 1, 2,n represents the number of courses in which a student is registered in the concerned semester.

- d) The SGPA, CGPA grades will be assigned as per table given below.

SGPA or CGPA	Grade	Definition
5.50 to 6.00	O	Outstanding
4.50 to 5.49	A	Very Good
3.50 to 4.49	B	Good
2.50 to 3.49	C	Average
1.50 to 2.49	D	Below Average
0.50 to 1.49	E	Poor
0.00 to 0.49	F	FAIL

- e) The University will issue a complete transcript of credits, grade obtained, SGPA and CGPA on declaration of each semester result and a consolidated one on the accumulation of minimum credits required for the award of Master degree.
- f) The maximum period for accumulation of the credit for Award of Master degree is 5 years (8 years for Ten Semester courses). Failing which the credits earned will stand withdrawn and null and void.

- g) The details of conversion of seven point scale into percentage as per UGC notification is given below

SGPA or CGPA	Grade	Definition	Percentage
5.50 to 6.00	O	Outstanding	75-100
4.50 to 5.49	A	Very Good	65-74
3.50 to 4.49	B	Good	55-64
2.50 to 3.49	C	Average	45-54
1.50 to 2.49	D	Below Average	33-44
0.50 to 1.49	E	Poor	25-33
0.00 to 0.49	F	FAIL	0-24

Thus the percentage will be obtained by using this table

CGPA	%	CGPA	%	CGPA	%
6	100	4	60	2	39
5.9	95	3.9	59	1.9	37.8
5.8	90	3.8	58	1.8	36.6
5.7	85	3.7	57	1.7	35.4
5.6	80	3.6	56	1.6	34.2
5.5	75	3.5	55	1.5	33
5.4	74	3.4	54	1.4	32.2
5.3	73	3.3	53	1.3	31.4
5.2	72	3.2	52	1.2	30.6
5.1	71	3.1	51	1.1	29.8
5	70	3	50	1	29
4.9	69	2.9	49	0.9	28.2
4.8	68	2.8	48	0.8	27.4
4.7	67	2.7	47	0.7	26.6
4.6	66	2.6	46	0.6	25.8
4.5	65	2.5	45	0.5	25
4.4	64	2.4	43.8	0.4	20
4.3	63	2.3	42.6	0.3	15
4.2	62	2.2	41.4	0.2	10
4.1	61	2.1	40.2	0.1	5

The enhancement of CGPA by 0.01 will enhance percentage as given below:

Grade	SGPA or CGPA	Percentage enhancement on 0.01 CGPA enhancement
O	5.50 to 6.00	0.5
A	4.50 to 5.49	0.1
B	3.50 to 4.49	0.1
C	2.50 to 3.49	0.1
D	1.50 to 2.49	0.12
E	0.50 to 1.49	0.08
F	0.00 to 0.49	0.5

For example (i) CGPA of 5.73 is equivalent to 86.5%, (ii) CGPA of 5.12 is equivalent to 71.2%, (iii) CGPA of 4.34 is equivalent to 63.4%, (iv) CGPA of 3.26 is equivalent to 52.6%, (v) CGPA of 2.17 is equivalent to 41.04%, and (vi) CGPA of 1.11 is equivalent to 29.88%.

2. Eligibility:

A candidate who has secured more than 50% or CGPA of 3.0 in the UGC Seven Point scale [45% or CGPA 2.5 in the UGC Seven Point Scale for SC/ST/Non-creamy layer OBC] or equivalent in the Bachelor degree in Arts, Science or Commerce shall be eligible for admission to First Semester of a Master of Economics course.

3. Scheme of Examination:

- (1) Each theory paper EoSE shall carry 100 marks The EoSE will be of 3 hours duration. Part 'A' of theory paper shall contain 10 Short Answer Questions of 20 marks, based on knowledge, understanding and applications of the topics/texts covered in the syllabus. Each question will carry one mark for correct answer.
- (2) Part "B" of paper will consist of four questions carrying five marks each. The limit of answer will be 150 words.
- (3) Part "C" shall contain three questions (one from each module) with internal choice carrying 20 marks each.

4. Course Structure:

The details of the courses with code, title and the credits assigned are as given below.

Abbreviations Used

Course Category

CCC: Compulsory Core Course

ECC: Elective Core Course

OEC: Open Elective Course

SC: Supportive Course

SSC: Self Study Core Course

SEM: Seminar

PRJ: Project Work

RP: Research Publication

Contact Hours

L: Lecture

T: Tutorial

P: Practical or Other

S: Self Study

Relative Weights

IA: Internal Assessment (Attendance/Classroom Participation/Quiz/Home Assignment etc.)

ST: Sessional Test

EoSE: End of Semester Examination

First Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	ECO 101	Microeconomic Theory – I	CCC	09	6	3	0	3	0
2.	ECO 102	Macroeconomic Theory - I	CCC	09	6	3	0	3	0
3.	ECO 103	Mathematical Methods for Economics	CCC	09	6	3	0	3	0
4.		Core Elective-1	ECC	09	6	3	0	3	0

Second Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	ECO 201	Microeconomic Theory – II	CCC	09	6	3	0	3	0
2.	ECO 202	Macroeconomic Theory - II	CCC	09	6	3	0	3	0
3.	ECO 203	Statistical Methods	CCC	09	6	3	0	3	0
4.		Core Elective-II	ECC	09	6	3	0	3	0

Third Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	ECO 301	Public Economics- I	CCC	08	6	2	0	3	0
2.	ECO 302	International Trade Theory	CCC	08	6	2	0	3	0
3.	ECO 303	Economics of Development and Growth –I	CCC	08	6	2	0	3	0
4.	ECO 304	Indian Economic Development and Policy – I	CCC	08	6	2	0	3	0
5.		Core Elective-III	ECC	08	6	2	0	3	0

Fourth Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	ECO 401	Public Economics - II	CCC	08	6	2	0	3	0
2.	ECO 402	Trade Policy and International Monetary System	CCC	08	6	2	0	3	0
3.	ECO 403	Economics of Development and Growth –II	CCC	08	6	2	0	3	0
4.	ECO 404	Indian Economic Development and Policy- II	CCC	08	6	2	0	3	0
5.		Core Elective-IV	ECC	08	6	2	0	3	0

Elective Core Course

Elective Course code	Specialization	Paper Title	Prerequisite	Semester
ECO A01		Agricultural Economics		I
ECO A02		Indian Banking System		I
ECO A03		Industrial Economics-I		I
ECO A04		Mathematical Economics-I		I
ECO B01		Demography		II
ECO B02		Indian Financial System		II
ECO B03		Industrial Economics-II		II
ECO B04		Mathematical Economics-II		II
ECO C01		Economics of Infrastructure -I		III
ECO C02		International Finance		III
ECO C03		Health Economics		III
ECO C04		Econometrics- I		III
ECO D01		Economics of Infrastructure -II		IV
ECO D02		History of Economic Thought		IV
ECO D03		Indian Health Care System		IV
ECO D04		Econometrics - II		IV

ECO 101: Microeconomic – I**Module 1:**

Theory of Consumer behaviour – cardinal and ordinal utility approaches, Price, Income and Substitution Effects, Normal, Inferior and Giffen goods, Derivation of demand curves, Determinants of Demand, Different elasticities of Demand, Complementary and Substitute goods, Consumer Surplus, Revealed preference hypothesis, Consumer behaviour under uncertainty and risk.

Module 2:

Production Function: short and long run. Law of Variable Proportions, Three stages of production, Ridge lines, Law of Returns and Returns to Scale, Isoquants and optimum factor combination, Expansion Path, Capital deepening and Labour deepening technology through Isoquants, Euler's theorem, Elasticity of Substitution, Cob-Douglas Production function.

Module 3:

Cost concept, cost curves – short and long run cost curves, Modern theory of cost curves, Economies of scale.

Price and output determination under Perfect competition, Monopoly and Monopolistic competition; concept of excess capacity, selling cost and group equilibrium under monopolistic competition.

Books recommended:

1. Koutsoyiannis: Modern Microeconomics, Macmillan, London.
2. H. L. Ahuja: Advanced Economic Theory, S. Chand & Sons, New Delhi.
3. D. Salvatore: Microeconomics Theory, Oxford University Press, New Delhi.
4. Robert S. Pindyck and Daniel L. Rubinfeld: Microeconomics, Pearson Education Inc., New Delhi.

ECO 102: Macroeconomic - I**Module1:**

Macroeconomic variables; National income: concepts, components and measurement, Inter-relationship between three measures of national income, Measurement of Economic Welfare - socio-economic indicators approach: PQLI and HDI, The origin and development of Macroeconomics - Classical, Keynes, New Classical and Modern.

Module 2:

Consumption function: Determinants, Consumption function hypotheses – Absolute, Relative, and Permanent Income hypotheses, Life cycle hypothesis.

Investment function: Neo-classical theory of investment, Stock market and Tobin's Q ratio, Neo-Keynesian theory of investment; theories of accelerator.

Module 3:

Classical, Keynesian, and Post Keynesian theories of demand for money (inventory theory of Baumol and portfolio balance theory of Tobin), Restatement of quantity theory of money by Milton Friedman, and Patinkin.

Supply of Money – measurement, components, and determinants, High-powered money and Money multiplier, Theories of money supply.

Books recommended:

1. Errol D;Souza, Macroeconomics, Pearson Education.
2. Richard,T.Froyen, Macro Economics: Theories and Policies, Pearson Education.
3. P.Edgemon, Macreconomics, PHI, New Delhi.
4. Gregory Mankiv, Macroeconomics, CBS Publishers, New Delhi.
5. Robert J Gorden, Macroeconomics, Harper Collins.
6. Rana & Verma, Macroeconomics, Vishal Publishing House (Hindi and Engilsh medium).
7. H L Ahuja, Macroeconomics, S Chand & Sons. New Delhi (Hindi and Engilsh medium).

ECO 103: Mathematical Methods for Economics

Module 1:

Concept of a function; Limits, continuity and differentiability of a real valued function; concave and convex functions. Derivatives - Simple differentiation; maxima, minima and point of inflexion and applications of Simple differentiation in economics, Partial differentiation and unconstrained and constrained Optimisation (two indendent variable case), simple applications in economics.

Module 2:

Integration; indefinite and definite and its application, First order Difference and Differential equations and their application in economics.

Module 3:

Matrices and determinants and their applications in economics, Basic Input-Output model (determination of gross output) , Linear Programming (graphical and simplex methods), Game Theory – two person constant and zero sum game (only saddle point solution).

Books recommended:

1. R.G.D.Allen:Mathematical Analysis for Economists,McMillan,London.
2. Edward T.Dowling: Mathematics for Economists,Schaum's Outline series,McGraw-Hill Book Co., New Delhi.
3. Laxmi Narain Nathuramka:Arthshastra Mein Ganit Ke Prayog (Hindi),College Book House,Jaipur.
4. B.C.Mehta and G.M.K.Madnani: Mathematics for Economists,Sultan Chand & sons,New Delhi.
5. Alpha C.Chiang: Fundamental Methods of Mathematical Economics, McGraw-Hill, Tokyo.

ECO 201: Microeconomic – II

Module 1:

Oligopoly – non –collusive models of Cournot, Bertrand, Edgeworth, Chamberlin, Paul M. Sweezy (kinked demand curve) and Stakelberg. Collusive oligopoly- Cartels and Price Leadership, merger and acquisition, Price and output determination bilateral monopoly, Baumol’s sales revenue maximization model; Williamson’s model of managerial discretion; Marris model of managerial enterprise; Full cost pricing rule; Bain’s limit pricing theory and its recent developments including Sylos-Labini’s model; Behavioural model of the firm; Game theoretic models.

Module 2:

Theory of Distribution: Neo-classical approach — Marginal productivity theory; Product exhaustion theorem; Elasticity of technical substitution, technical progress and factor shares; Factor pricing in competitive and imperfect competitive markets; determination of rent, wages, interest and profit; Macro theories of distribution — Ricardian, Marxian, Kalecki and Kaldor’s.

Module 3:

Welfare Economics – Pigovian Welfare Economics, Pareto Optimal conditions, Kaldor – Hicks Compensation criterion, Bergson Social Welfare Function, Maximization of Social Welfare and the point of Bliss, Welfare maximization, Externalities, Theory of Second Best - Arrow’s impossibility theorem, Rawl’s theory of justice, equity-efficiency trade off.

Books recommended:

1. A. Koutsoyiannis: Modern Microeconomics, Macmillan, London.
2. H. L. Ahuja: Advanced Economic Theory, S. Chand & Sons, New Delhi.
3. D. Salvatore: Microeconomics Theory, Oxford University Press, New Delhi.
4. Robert S. Pindyck and Daniel L. Rubinfeld: Microeconomics, Pearson Education Inc., New Delhi.

ECO 202: Macroeconomic -II

Module 1:

Determination of output and employment: The Classical model; One Sector Neo-classical and Keynesian models; Concept of multiplier; Static and Dynamic Multiplier.

IS-LM model- The interaction of Real and Monetary sectors of the economy , Keynesian version of the IS-LM model , Neo-classical version of the IS-LM model, Fiscal policy and crowding out effect, role and relative effectiveness of fiscal and monetary policy; aggregate supply and aggregate demand model- Neo-classical three sector model (Pigou effect) and Keynesian three sector model (Keynes effect).

Module 2:

Open Economy Macroeconomics: Trade balance, Exchange rates and International Monetary System; Mundell-Fleming model- analysis of fiscal, monetary and trade policies under imperfect capital mobility and perfect capital mobility with fixed and flexible exchange rate systems; dual gap model.

Classical, Keynesian and Monetarist approaches to inflation, Phillips curve, expectation augmented Phillips curve, natural rate of unemployment hypothesis, Adaptive expectation hypothesis, policies to control inflation

Module 3:

Theories of business cycle - Multiplier – Accelerator interaction Models of Samuelson and Hicks, Kaldor and Goodwin’s models, Real business cycle theory , Political business cycle model of Nordhaus. Commercial banks and multiple credit creation, Role of Central bank and credit control.

Books recommended:

1. Eric Pentacost, Macro Economics: An Open Economy Approach, Macmillan, Indian Edition, New Delhi, 2000.
1. Errol D;Souza, Macroeconomics, Pearson Education, 2008
2. Richard,T.Froyen, Macro Economics: Theories and Policies, Pearson Education, 2003
3. P.Edgmond, Macreconomics, PHI, New Delhi, 1999.
4. Gregory Mankiv, Macroeconomics, CBS Publishers, New Delhi,1992.
5. Robert J Gorden, Macroeconomics, Harper Collins, 1994.
6. Rana & Verma, Macroeconomics, Vishal Publishing House, (Hindi and Engilsh medium)
7. H L Ahuja, Macroeconomics, S Chand & Sons. New Delhi (Hindi and Engilsh medium)

ECO 203: Statistical Methods

Module 1:

Measures of central tendency, dispersion, skewness, and kurtosis, Measurement of inequality - Lorenz Curve and Gini co-efficient.

Correlation, simple regression, and interpretation of multiple linear regression equation.

Module 2:

Analysis of time series and curve fitting, index numbers.

Probability, mathematical expectation and probability distributions (Binomial, Poisson, and Normal)

Module 3:

Sampling and survey methods, testing of hypothesis, applications of Z, t, F & χ^2 tests, Association of attributes, Analysis of Variance.

Books recommended:

1. S.P.Gupta: Statistical Methods, Sultan Chand & Sons, New Delhi.
2. Kailash Nath Nagar: Sankhyiki Ke Mool Tatva (Hindi) Meenakshi Prakashan, Meerut.
3. A.L. Nagar & R.K.Das: Basic Statistics, Oxford University Press, New Delhi.

ECO 301: Public Economics- I

Module 1:

Nature and Scope of public finance, Role of Government in the Economic activity- Allocation, Distribution and Stabilization functions, Private, public and Merit goods. Theory of externalities - external benefits and cost - correction of externalities, Principle of Maximum Social Advantage.

Public Budgets - kinds of budgets, Optimal budgeting, Balanced and Unbalanced Budgets- Deficit Financing, Performance and Programming Budgeting, Zero base budgeting .

Public Expenditure-Hypothesis and evaluation, Effects of Public Expenditure on production and distribution, Bowen, Lindhal and Samuelson's Models, Wagner's Law of increasing state activities, Weisman-Peacock hypothesis.

Module 2:

Public Revenue - Canons of Taxation, Different approaches to the division of tax burden, incidence and effects of taxation, Taxable capacity, Justice in taxation, Benefit & Ability to pay approaches. Theory of optimal taxation - Equal absolute, Equal-proportional, Equal-marginal and least aggregate sacrifice principles, Buoyancy and elasticity of a tax.

Module 3:

Direct and Indirect taxes - Effects of direct tax on production (viz. labour supply and saving rate) and distribution, Effects of indirect tax on production, Progressiveness of a tax system and its measurement, Shifting and Incidence of taxes under Monopoly and perfect Competition.

Books recommended:

1. R.A.Musgrave:Theory of Public Finance.
2. R.A.Musgrave and P.B.Musgrave: Public Finance in Theory and practice.
3. S.Ganguli: Public Finance.
4. H.L.Bhatia: Public Finance (Hindi and English)
5. B P Tyagi: Public Finance (Hindi and English)
6. Raghvendra Jha: Modern Theory of Public Finance.

ECO 302: International Trade Theory**Module 1:**

Early Trade Theories: Mercantilism, Classical Theory of Trade, Absolute Advantage and Comparative Advantage - Views of Adam Smith, Ricardo, Mill, Haberler, Empirical Testing of Classical Theory

Standard Theory of Trade- Production Possibility Frontier, Community Indifference Curves, Offer Curves, Trade Indifference Curves, Terms of Trade and Gains from Trade.

Module 2:

Factor Endowments and Heckscher-Ohlin Model-factor Price Equalization Theorem, Stolper-Samuelson theorem, Metzler Paradox and Rybczynski Theorem, Empirical Verification of H-O Theory, Leontief Paradox, Meade's General Equilibrium in trade, International trade under Imperfection Competition in Goods Market: Intra Industry Trade.

Module 3:

Economic Growth and International Trade - Growth of factors of production, Technical Progress, Immiserizing Growth, International Factor Movements - Labour and Capital Movements and their effects, Brain Drain, Multinational Corporations and their role.

Free Trade versus Protection, Instruments of Protection and their effects; Tariffs (Partial and General Equilibrium), Quota, and other non-Tariff Barriers.

Books recommended:

1. J. Bhagwati: International Trade, Cambridge University Press, London.
2. R. J. Carbaugh; International Economics
3. D. Salvatore: International Economics, PHI, New York
4. Rana and Verma: International Economics, Vishal Publishing House Ludhiana (Hindi and English)

ECO 303: Economics of Development and Growth –I

Module 1:

Understanding Development: Dividing the world and levels of development (Development as an evolving concept i.e. Development, Growth and Change; Goulet's three core values of development; Sen's Conception of Development; Income/Output based measures and their inadequacies; PQLI and HDI as indicators of Development). Ingredients of development- Land, labour, Physical and Human capital, Technological change, Scale and Organization, Sustainable Development (conceptualization, concern, indicators and remedial measures), Concept, measures and problems of growth, poverty and Inequalities in LDCs and their impact on development.

Module 2:

Theories of Economic Development: Agriculture-Industry interface - interdependence between agriculture and industry; industrialization and urbanization (The models of Lewis, Fei and Ranis and Todaro); The Balanced Growth Doctrine (Review of Rosenstein, Nurkse and Lewis); Strategy of Unbalanced Growth (Hirschman's version), and the reconciliation of the two.

Module 3:

Project evaluation criteria: Internal rate of return, net present value and cost-benefit analysis, social discount rate, shadow prices of capital, unskilled labour and foreign exchange, Choice of techniques, Capital-output ratio, Applications of Input-Output Analysis in Planning, Financing of economic development - domestic and external resources, Two-gap model, International trade and development, Types and approaches of planning, Plan models of India, past performance and current issues of Indian planning.

Books Recommended:

1. Meier, Gerald M. and James E. Rauch (2006) : Leading Issues in Economic Development, Eighth Edition, Oxford University Press, New York.
2. Ray, Debraj (2004) : Development Economics, Seventh Impression, Oxford University Press, New Delhi.
3. Thirlwall, A. P. (2006) : Growth and Development, Eighth Edition, Palgrave Macmillan, New York.
4. Todaro, Michael P. and Stephen Smith, C. (2007) : *Economic Development*, Eighth Edition, Second Impression, Pearson Education, (Singapore) Pvt. Ltd., Indian Branch, Delhi.
5. Yotopoulos, Pan A. and Nugent Jeffery B. (1976) : Economics of Development : Empirical Investigations, Harper and Row Publishers, New York.

ECO 304: Indian Economic Development and Policy – I

Module 1:

Natural resource in India- land, water forest and minerals, Population - Size, composition, quality and growth trends, Characteristics of Indian population through recent census, Population policy and economic effects of population pressure, Poverty, unemployment and human development during plan period - Appraisal of Government measures, India's human development record in global perspective.

Module 2:

Agricultural Development in India: Institutional aspects – Land Reforms, green revolution, Technological Aspects – agricultural inputs and shifts in production function, Agricultural cost and price policy, Agricultural marketing and credit, Food policy and security, Subsidy and public distribution system, Capital formation in Indian Agriculture, problems in agriculture- a need for second green revolution.

Module 3:

Industry - Strategy of Industrial Development and Industrial policy reforms, Small scale and cottage industries, Reservation policy relating to small scale industries, Sources of Industrial finance – Banks, share market, insurance companies, pension funds, non-banking sources and FDI, Role of foreign capital for direct investment and portfolio investment, Public sector reforms, privatization and disinvestment.

Books Recommended:

1. Arvind Panagariya: India - The Emerging Giant
2. Rudradutt and Sundram : Indian Economy (Latest Ed.) (Hindi and English)
3. A. N Agrawal : Indian Economy (Latest Ed.) (Hindi and English).
4. Laxmi Narayan Nathuramka : Bhartiya Arthshastra(Latest Ed.)
5. Mishra & puri: Indian Economy (Latest Ed.) (Hindi and English)
6. Uma Kapila: Indian Economy

ECO 401: Public Economics - II

Module 1:

Public Debt – Sources, effects, burden and its management, Theory of public debt, Loans and saving as sources of finance for development.

Fiscal Policy – Objectives, Neutral and compensatory and functional finance; Fiscal policy in developing countries, Automatic and built-in-flexibility, Interdependence of fiscal and monetary policies, Balanced Budget Multiplier, Compensatory fiscal policy and inflation.

Module 2:

Indian Tax System -Salient features, Major Taxes, Main trends in the Revenue of the Central and State Governments in India, Non-tax revenue,

Union budget of India, Major trends in public expenditure in India (growth and composition), Problem of budget deficit and FRBM Act.

Pricing policy in public enterprises, Disinvestment and Privatisation of public enterprises in India, Internal and External public Debt of India.

Module 3:

Fiscal Federalism -Theory and problems, Problems of centre-state financial relations in India, Criteria for resource transfer from the centre to states, Finance Commissions and Devolution of resources to states, Fiscal policy, and recent Tax Reforms in India including Direct Tax Code and GST.

State finances of Rajasthan – trend and composition of revenue and expenditure.

Books recommended:

1. R.A.Musgrave:Theory of Public Finance.
2. R.A.Musgrave and P.B.Musgrave: Public Finance in Theory and practice.
3. S.Ganguli: Public Finance.
4. H.L.Bhatia: Public Finance (Hindi and English)
5. Raghvendra Jha: Modern Theory of Public Finance.
6. B P Tyagi: Public Finance (Hindi and English)
7. Rudra Dutta & K P M Sundaram: Indian Economy (Hindi and English)

ECO 402: Trade Policy and International Monetary System**Module 1:**

Political Economy of Protectionism: Trade Policy in developing Nations- Import Substitution V/s Export Promotion, Strategic Trade Policy in Developed Nations.

Trade and Economic Development, Deteriorating Terms of Trade of developing Nations-Prebisch-Singer Hypothesis, Current Trade Problems of Developing Nations.

International capital movement and factors affecting it, Various forms of foreign capital and its role in economic development.

Module 2:

Economic Integration - Stages and Forms, Theory of Customs Union - Static and Dynamic Effects, Regional Trade Blocks - Bilateral and Multi-Lateral International Negotiations, Preferential Trade Areas (PTAs) and Free Trade Areas (FTAs).

WTO - Issues and its impact on trade, Rise and fall of Bretton-Woods System and Present International Monetary System, IMF, World Bank- Their Achievements and Failures.

Module 3:

Foreign Exchange Market - Functions and Exchange Rate determination, Exchange Rate Theories- Mint Parity, Purchasing Power Parity (PPP), Monetary Approach and portfolio Balance Approach, Fixed and Flexible Exchange Rates, Exchange Controls and Multiple Exchange Rates, Current Exchange Rate Regime, Euro Currency Market.

Balance of Payments – Accounting, Components, Causes of Disequilibrium and Mechanism of Adjustments, Foreign Trade Multiplier, Devaluation and Marshall-Lerner Condition, Elasticity and Absorption Approaches, External and Internal Balance, Swan Model.

Books recommended:

1. J. Bhagwati: International Trade, Cambridge University Press, London.
2. R. J. Carbough; International Economics
3. D. Salvatore: International Economics, PHI, New York
4. Rana and Verma: International Economics, Vishal Publishing House Ludhiana (Hindi and English)
5. Soderston and Reed: International Economics

ECO 403: Economics of Development and Growth –II

Module 1:

Economic Growth and Structural Change: Structural changes in the composition of gross domestic product, occupational structure, Structure of capital accumulation; and accumulation of human capital; exploring the relationship between economic development and income distribution (Kuznets' inverted U –shaped curve and augmented Kuznets' curve, Denison & Chenery empirical studies), Living in a heterogeneous world, world-Islands of prosperity and how the other three quarters live.

Module 2:

Theories of growth: Classical approach: Adam Smith, Marx and Schumpeter – Neo-classical approach: Robinson, Solow, Kaldor and Harrod-Domar model, Cambridge criticism of Neo-classical analysis of growth, the capital controversy.

Technological progress- embodied and disembodied technical progress, Hicks, Harrod learning by doing, production function approach to the economic growth, growth models of Kaldor and Pasinetti, optimal savings and Ramsay's rule of accumulation. Romar model of technological change.

Module 3:

Endogenous growth; Intellectual capital, AK model, Uzawa-Lucas Model – explanation of cross country differentials in economic growth.

Economic Isolation and Integration with the Global Market. An overview of the Economic Functions of the Market and State, Efficiency of the Competitive Market, Market Failure, Government Failure, on the Choice of Economic System, Market Failure in a Dynamic Economy.

Books recommended:

1. Chenery, Hollis and Moises Syrquin (1975) : Patterns of Development : 1950-70, Oxford University Press.
2. Kuznets, S.: Modern Economic Growth, Rate Structure and Spread, Vakils, Feffer and Simons Private Limited, Bombay.
3. Meier, Gerald M. and James E. Rauch (2006): Leading Issues in Economic Development, Eighth Edition, Oxford University Press, New York.
4. Ray, Debraj (2005): Development Economics, Oxford University Press, Delhi.
5. Robert J.Barrow and Xavier Sala-i-Martin (2004): Economic Growth, Prentice-Hall of India, Pvt. Lid., New Delhi.
6. Thirlwall, A. P. (2006): Growth and Development, Eighth Edition, Palgrave Macmillan, New York.
7. Thorvaldur Gylfason (1999): Principles of Economic Growth, Oxford University Press.

ECO 404: Indian Economic Development and Policy- II**Module 1:**

Foreign trade: Salient features, trends, composition, direction and organization, Trade reforms, liberalization and recent changes in trade policy, MNCs and their impact on Indian economy, WTO – issues and its impact on Indian economy, India's balance of payment position in recent years.

Module 2:

Economic planning : Goals, achievements and shortcomings of planned development, Planning and the market.

Decentralized planning : Constitutional obligations and Panchayati Raj institutions. Balwantrai Mehta Committee and Ashok Mehta Committee, Financial aspects of 73rd and 74th constitutional amendments.

Problem of subsidy

National and per capita income – Growth pattern and trends, Aggregate and sectoral composition and change therein, regional distribution, Income inequalities in India.

Module 3:

New economic policy – LPG and second phase of economic reforms

Infrastructure development in India – physical infrastructure (power, transport, communication and irrigation) and social infrastructure(health and education), SEZs

Books Recommended:

1. Arvind Panagariya: India - The Emerging Giant
2. Rudradutt and Sundharam : Indian Economy (Latest Ed.) (Hindi and English)
3. A. N Agrawal : Indian Economy (Latest Ed.) (Hindi and English).
4. Laxmi Narayan Nathuramka : Bhartiya Arthshastra(Latest Ed.)
5. Mishra & Puri: Indian Economy (Latest Ed.) (Hindi and English)
6. Uma Kapila: Indian Economy

ECO A01: Agricultural Economics

Module 1:

Importance of agriculture and interdependence between agriculture and industry ,Institutional and technological changes, Production functions in agriculture, resource use efficiency factors of production.

Farm size and productivity relationship in Indian agriculture farm budgeting concept of cost supply of individual crops and aggregate supply price relationship.

Module 2:

Characteristics of factors markets inter-linkages between land, labour and capital markets

Role of capital and agricultural credit- organized and unorganized capital market, uncertainty and crop insurance agricultural produce markets and marketing efficiency.

Behavior of agricultural prices demand and supply of agricultural products and cobweb cycles prices and income stability.

Module 3:

Agricultural price policy in India, agricultural growth in India inter – regional variation in growth of output and productivity.

Agricultural growth in Rajasthan cropping pattern changes in India institutional changes. Land reform credit structure and marketing.

Supply of inputs – irrigation power seed fertilizer pricing of inputs problem of mobilization of resources from agriculture.

Books Recommended:

1. E.D.Heady and J.I. Dillon: Agricultural production Functions.
2. T.W.Shultz: Transforming Traditional Agriculture.
3. Pranab K.Bardhan: Land, Labour and Rural Poverty in India.
4. Krishna Bhardwaj: Production and conditions in Indian Agriculture.
5. C.H.H.Rao: Agricultural Production, costs and Returns in India.
6. D.S.Tyagi and G.S.Bhalla: Agricultural Development in India

ECO A02: Indian Banking System**Module 1:**

Indian Banking system as on the eve of bank nationalization, Structure and development of commercial banks in India since 1969. branch expansion programme and policy, deposit mobilization and sectoral allocation of Bank credit. Concept of social and mass banking. Pointy sector advances and advance to the neglecteel sections of the society.

Financial Sector Reforms – Context, need and objectives. Implementations of the Narsimbam Committee recommendations. Issues in financial reforms.

Module 2:

Rural Banking - Overall structure and review of the contribution of major credit cooperatives, commercial banks and Regional Rural banks including that of NABARD.

Human Resource Development – Present and future HRD needs for bank employees in India. Recruitment, training and appraisal of bank employees. Khandelwal Committee (2010) on Human resource in public sector Banks.

Module 3:

The Reserve Bank of India – Functions and Role. Autonomy of the RBI. Liquidity Management. Monetary Policy – Goals, targets and indicators. RBI's monetary policy – objectives and Techniques. Impact of RBI's monetary policy on economic growth and price stability.

Books Recommended:

1. S.B. Gupta: Monetary Planning for India (Latest Ed.)
2. K.Rao: Management of Commercial Banks.
3. L.M. Bhole: Impacts of Monetary Policy.
4. Harendra Badhav (ed.) Challenges to Indian Banking Commpetition, Globalisation and Financial Markets McMillan
5. N.S. Yher: Non-Perfoming Advances in Banks, Skylark, New Delhi.
6. Report of the Commitee (Narsimham) on the Financial System Nov., 1991.

7. Raghuram Rajan Committee Report on Financial Sector reforms, Planning Commission
8. I.B.A. Bulletin: Annual Special Issues
9. RBI Report on trend and Progress of Banking in India (Latest Ed.)
10. Hanson and Kathuria (ed.) A Financial Sector for the 21st Century Oxford. University Press.
11. Y.V. Reddy, Monetary and Financial Sector Reforms in India, UBSPD, New Delhi.

ECO A03: Industrial Economics-I

Module 1:

Industrialization and development. Interdependence of industrial sectors: backward and forward linkages. Location of Industries, Theories and measures of Industrial localization (Sargent F.& A.Weber). Localization of Industries in India. Industrial project selection criteria.

Module 2:

Modern corporation enterprise. Size and ownership structure of industrial enterprise. Dominant position of corporate and its characteristics. Issue of separation of ownership from management and control models alternative to profit maximization : Baumol, Williamson, Marris and Cyert and March.

Monopoly power and oligopolistic market structure. Measures of sellers' concentration. Determinant of sellers' concentration: economies of scale, barriers to entry, mergers, size and growth of markets.

Module 3:

Market conduct under oligopoly : Rivalry and collusive conduct. Dominant firm behavior and potential competition. Limit price and contestable markets. Non-price competition with reference to advertising.

Market performance: Allocative efficiency. Market structure and profitability. Productive efficiency and sub-optimal capacity. Allocative versus productive efficiency.

Books Recommended:

1. Barthwal R.R.: Industrial Economics: An Introductory Textbook, Wiley Eastern Limited, New Delhi.
2. Cohen, K. L. & Cyert R. M. : Theory of the Firm, Prentice Hall.
3. Scherer, F. M. & Ross David : Industrial Market Structure and Economic Performance, Boston Houghton Mifflin Company.
4. Hay, D. A. and Morris, D. J.: Industrial Economics : Theory and Evidence, Oxford University Press.
5. Shepherd, W. G.: The Economics of Industrial Organisation (3rd edn.), Prentice Hall Englewood Cliffs, New Jersey.
6. Martin Stephen : Advanced Industrial Economics, Blackwell Publishers Ltd.,UK.

7. Bain, J. S.: Industrial Organizations (2nd edn.), University of California.
8. Caves, R. : American Industry : Structure, Conduct Performance, Prentice Hall.
9. Wildsmith, S. : Managerial Theories of the Firm.
10. Devine, P. J. & Others: Introduction to Industrial Economics, George Allen & Unwin.
11. Nayyar, Deepak (ed): Industrial Growth and Stagnation, Oxford University Press.

ECO A04: Mathematical Economics-I

Module-I

Theory of Consumer Behaviour: Nature of a Utility Function; properties of an Indifference curve; Maximization of utility; Demand functions- Ordinary and compensated, price and income elasticity, elasticity relations in demand analysis, Restrictions on demand functions; Slutsky Equation - n- commodity case, elasticity form and important results; Income and Leisure - Derivation of labour supply function and its properties, Linear Expenditure System- properties and derivation of linear demand functions.

Homogeneous and Homothetic utility functions; Indirect Utility Functions and Duality in Consumption, properties of indirect utility function, Roy's Identity, duality theorems, derivation of direct and inverse demand functions; Consumer behaviour under conditions of risk and uncertainty.

Module-II

Theory of firm- Production function: Properties of a well behaved and homogeneous production function -Cobb-Douglas and CES Production Functions; product curves; output elasticity of factor input; properties of an isoquant, Elasticity of substitution of a homogeneous production function- linearly homogeneous, Cobb-Douglas and CES Production Functions, special cases of CES Production Functions; Expansion path; Optimization behaviour of a firm- Constrained cost minimization, constrained output maximization and profit maximization; Input Demand- properties and derivation of producer's input demand functions; Cost functions- properties and derivation of short run and long run cost functions, determination of optimum plant size.

Module-III

Perfect Competition: Market demand; producer demand; supply functions- short run and long run, external economies and diseconomies; commodity-market equilibrium- short run and long run equilibrium, differential cost conditions and rent; Effects of taxes on optimum output level, supply function and price level.

Imperfect Competition: Monopoly- Profit Maximization and sales revenue, price discrimination (market discrimination and perfect discrimination), Multi-Plant Monopolist, effect of various taxes on output and price of a monopoly firm, bilateral monopoly, Monopolistic competition equilibrium- short run and long run.

Note: Use of non-programmable calculator is permitted.

Books Recommended:

1. J.M. Henderson and R.L. Quandt: Micro Economic Theory: A Mathematical Approach, McGraw-Hill. London.
2. RGD Allen, Mathematical Economics.
3. B.C. Mehta: Mathematical Economics: Micro Economic Models, Sultan Chand & Sons, New Delhi.
4. Alpha C Chiang: Fundamental Methods of Mathematical Economics, McGraw-Hill, Kagakusha, Tokyo.

ECO B01- Demography**Module 1:**

Population study and demography : Its relation with other disciplines, theories of population malthus, optimum theory of population and theory of demographic transition, historical evidence of population growth in developed and developing countries, Population as limits to growth and as ultimate source.

Sources of Demographic data in India : Census civil registration system and demographic survey National Family Health survey objectives and Findings.

Module 2:

Techniques of Analysis crude birth and death rates, age specific birth and death rates infant mortality maternal mortality standardized birth and death rates – study of Fertility: Total fertility rate, gross reproductive rate, and net reproduction rate age pyramids life table : meaning of its columns and its uses – reproductive and child health in India temporal and spatial variation in serrations.

Books Recommended

Population Projection – concept of station statute and quasi – stationary population aging of population in India – change in family structure and old age security.

Module 3:

Population policy salient features of population censures. Evolution of population policy in India. Family welfare and women empowerment : Demographic status and household behavior – Education women’s autonomy and fertility population health, population health, poverty and environment link age in India the new population policy.

Economically active population : Basic concept and definition impact of demography process on the composition and size of the labour, occupation and Industrial composition of work force concept of human development man power planning.

Books recommended:

1. G.W.Barclay:Techniques of population Analysis.
2. D.K.Bogue:Principles of Demography.
3. Coale and Hoover:population Growth and Economic Development in Low Income Countries.
4. O.S.Srivastava:Arthik Evam Samajik Jananki Shastra(Hindi).
5. Jeevan Chandra Pant:Jananki (Hindi).
6. Mahboob-Ul-Haq:Reflections in Human Development.
7. Human Development Report (Latest).
8. National Family Health Surveys

ECO B02: Indian Financial System**Module 1:**

Financial System - Meaning, structure and functions of financial system. Financial system and economics development. Financial intermediaries and financial markets.

Money Market - Designation, nature and role of money market in the economy. Indian money market – call money market, treasury bills market, commercial bill market, markets for commercial paper and certificate of deposits. The discount market. Discount and finance house of India and securities trading corporation of India.

Module 2:

Govt. Security Market – Nature and organization of Government security market, volume and composition of Issues. Secondary market transactions, prices and yield. Implications of monetary policy recent development in Government security market.

Module 3:

Industrial Security Market – Organization and structure. Listing, trading and settlement. Primary and secondary market. Draw backs of Indian stock market. Recent development in Industrial security market.

Markets for futures, options and other financial derivatives.

Books recommended:

1. S.B. Gupta: Monetary Planning for India (Latest Ed.)
2. K.Rao: Management of Commercial Banks.
3. L.M. Bhole: Impacts of Monetary Policy.
4. Harendra Badhav (ed.) Challenges to Indian Banking Competition, Globalisation and Financial Markets McMillan
5. N.S. Yher: Non-Performing Advances in Banks, Skylark, New Delhi.
6. Report of the Committee (Narsimham) on the Financial System Nov., 1991.

7. Raghuram Rajan Committee Report on Financial Sector reforms, Planning Commission
8. I.B.A. Bulletin: Annual Special Issues
9. RBI Report on trend and Progress of Banking in India (Latest Ed.)
10. Hanson and Kathuria (ed.) A Financial Sector for the 21st Century Oxford. University Press.
11. Y.V. Reddy, Monetary and Financial Sector Reforms in India, UBSPD, New Delhi.

ECO B03: Industrial Economics-II

Module 1:

Policy goal of industrialization in India. Nature of Industrial data for organized Industry. Major classification of the organized industry : employment size and ownership structure.

Module 2:

Pattern of industrial growth and changes in industrial structure in India since 1951. Factors affecting industrial location. Regional imbalances in industrial development in India and government policy for balanced regional development of industry.

Market structure and R&D. Allocative efficiency and capacity utilization in Indian industry. Productivity growth, FDI and acquisition of technology in India.

Module 3:

MRTP and nature of concentration in Indian industry. Liberalisation and privatization in Indian industry.

Mergers and takeovers. Competition policy and consumer protection in India. Industrial development in Rajasthan.

Books Recommended:

1. Barthwal R.R.: Industrial Economics: An Introductory Textbook, Wiley Eastern Limited, New Delhi.
2. Cohen, K. L. & Cyert R. M. : Theory of the Firm, Prentice Hall.
3. Scherer, F. M. & Ross David : Industrial Market Structure and Economic Performance, Boston Houghton Mifflin Company.
4. Hay, D. A. and Morris, D. J.: Industrial Economics : Theory and Evidence, Oxford University Press.
5. Shepherd, W. G.: The Economics of Industrial Organisation (3rd edn.), Prentice Hall Englewood Cliffs, New Jersey.
6. Martin Stephen : Advanced Industrial Economics, Blackwell Publishers Ltd.,UK.
7. Bain, J. S.: Industrial Organizations (2nd edn.), University of California.
8. Caves, R. : American Industry : Structure, Conduct Performance, Prentice Hall.
9. Wildsmith, S. : Managerial Theories of the Firm.
10. Devine, P. J. & Others: Introduction to Industrial Economics, George Allen & Unwin.
11. Nayyar, Deepak (ed): Industrial Growth and Stagnation, Oxford University Press.

ECO B04: Mathematical Economics-II

Module-I

Microeconomic Models: The existence and uniqueness of equilibrium- The Stability of equilibrium, Static stability- the Marshallian & Walrasian Stability Conditions, dynamic stability- Lagged adjustment- the Cobweb model; Different models of objectives of the firm – Baumol, Morris and Williamson; Duopoly and Oligopoly market models-The quasi-competitive solution, the Collusion, solution, the Cournot solution, Stakelberg solution, the market share solution and the kinked-demand- curve solution models.

Module-II

Macroeconomic Models: Keynesian theory of income determination, concept and working of Static and Dynamic Multiplier, Employment and output determination with fixed and flexible prices (IS-LM, Aggregate demand and aggregate supply analysis), Flerning-Mundell open economy model.

Trade cycles: Multiplier-Accelerator interaction trade Cycle models of Samuelson and Hicks.

Growth Models: Harrod and Domar; Neoclassical models – Solow, Meade, Kaldor's Model with technological progress; endogenous growth models.

Module-III

Linear Programming: Simplex method; problem of Degeneracy and mixed constraints, Duality theorems, complementary slackness conditions, application of linear programming in economics.

Input-Output Analysis: Concepts of static, dynamic closed and open input - output models. Hawkins-Simon conditions of viability, Determination of gross output, price and value added in open input –output model, Determination of gross output in closed input-output model.

Theory of Games:Two-person constant sum games, Zero-sum Game, Maximin and Minimax, dominant strategies, Pure and Mixed strategies, Saddle point solution, linear-programming formulation of a matrix game, conversion of game theory into linear programming.

Note: Use of non-programmable calculator is permitted.

Books Recommended:

1. J.M. Henderson and R.L. Quandt: Micro Economic Theory: A Mathematical Approach, McGraw-Hill. London.
2. R.G.D. Allen, Mathematical Economics.
3. B.C. Mehta: Mathematical Economics: Microeconomic Models, Sultan Chand & Sons, New Delhi.
4. Alpha C Chiang : Fundamental Methods of Mathematical Economics, McGraw-Hill, Kagakusha, Tokyo.

5. R.G.D. Allen, *Macroeconomic Theory: A Mathematical Treatment*, McGraw-Hill, London.
6. Michael K. Evans: *Macroeconomic Activity: Theory, forecasting and Control*.
7. B.C. Mehta and G.M.K. Madhani: *Mathematics for Economists*, Sultan Chand & Sons, New Delhi.
8. Misra S K and V.K Puri: *Growth and Development*, Himalaya publications, New Delhi
9. Thirlwal A P: *Growth & Development*, Palgrave / Macmillan
10. Eric Pentacost, *Macro Economics: An Open Economy Approach*, Macmillan, Indian Edition, New Delhi, 2000.
11. Errol D;Souza, *Macroeconomics*, Pearson Education, 2008
12. Richard,T.Froyen, *Macro Economics: Theories and Policies*, Pearson Education, 2003
13. Gregory Mankiv, *Macroeconomics*, CBS Publishers, New Delhi,1992.

ECO C01: Economics of Infrastructure -I

Module1:

Infrastructure and economic development – Infrastructure as a public good; Social and physical infrastructure; Special characteristics of public utilities, The peak load, Off load problem; Dual principle controversy; Economies of scale of joint supply; Marginal cost pricing vs. other methods of pricing in public utilities; Cross subsidization – free prices, equity and efficiency.

Module 2:

The structure of transport costs and location of economic activities; Demand for transport – Models of freight and passenger demand; Model choice; Cost functions in the transport sector; Principle of pricing; Special problems of individuals modes of transport; Inter-model condition in the Indian situation.

Module 3:

Infrastructure development and reforms in India – power, transport, and communication.,rate making in telephone utilities; Principles of decreasing costs in telephone industry – Characteristics of postal services; Criteria for fixation of postal rates; Measurement of standards of service in telephone and postal utilities.

Books Recommended:

1. National Council of Applied Economic Research, 1996, *India Infrastructure Report: Policy Implications for Growth and Welfare*, New Delhi.
2. Parikh, K.S. (1999), *India Development Report 1999-2000*, Oxford, New Delhi.
3. *Economics of Infrastructure* (1976), Vol.VI, ICSSR, ICSSR.
4. Crew, M.A. and P.R. Kleindorfer (1979), *Public Utility Economics*, MacMillan, New York.
5. CUTS : *Competition and Regulation in India*, 2007 and 2009.

ECO C02: International Finance

Module -1:

International Finance – Functions, Sources and Uses, International Capital Flows - Foreign Direct Investment, Foreign Portfolio Investment, Effects of investment on host countries and financial instability, India's policy towards foreign capital.

International Financial System and global economy,

Principles of International Financial Management ,Foreign Exchange Market -Structure, Kinds, Instruments of payments, Functions, Trading. Developments in Foreign Exchange Markets- Eurocurrency markets, Asian Dollar Markets and International Bond Markets, Stability of foreign exchange market.

Module 2:

Foreign Exchange Rate- meaning, exchange risk, hedging and speculation. Determination of equilibrium exchange rate and exchange rate systems.

International Business Finance – Traditional Trade Finance, Multilateral Financial Markets, International Banking, International Financial Centers, International Trade and Business organizations, Trade imbalances in the modern global economy, International Monetary System and alternative international monetary standards, IMF and problem of international Liquidity.

Module-3:

The Theory of Optimum currency areas –Growth of regional financial institutions.

Reforms in International monetary system for developing countries, Asian Development Bank and its' lending activities, Borrowing from World Bank , Asian Development Bank and Aid India Club nations and its overall impact on Indian economy.

Open Economy of India - Trends in India's Balance of Payments and growth of foreign exchange reserves since the year 1990, Convertibility of Indian Rupee and its' impact on Indian economy, Exchange rate management in India.

Role of the Regional Blocks - EU, NAFTA, ASEAN, SAFTA etc. in the International Business, WTO and its impact on different sectors of the Indian economy.

Books recommended:

1. Grabbe J. Orlin: International Financial markets, Prentice Hall, Inc. Englewood cliffs, NJ, USA.
2. Daniel R. Kane: Principles of International Finance, Croom Helm Ltd.
3. Harold James: International Monetary Cooperation since Biretton Wood, IMF.
4. Peter B. Kenen (Ed): Managing the World Economy: Fifty Years after Bretton Wood.
5. Pater Kenen: International Economics, Cambridge University Press.

6. Bo Soderster and Geoffrey Reed: International Economics MacMillan.
7. Lovi-Maurica: International Finance, McGraw-Hill.

ECO C03: Health Economics

Module 1:

Introduction to Health Economics: Basic concepts in Economics with special reference to health – Utility, Demand and supply analysis, Elasticities, Expenditure Function, Imperfections in Market Structure, Production possibility Frontier (PPF), Externalities and Market Failure: Approaches to Economics-Positive and Normative, Welfare economics and health.

Application of Economics to issues relating to health with special reference to market failure and public policy. Health Economics and Population Dynamics - Demographic aging, obesity, disability and malnutrition.

Costing and Health Economics: The importance of costing in Health Economics, Alternative definitions of cost, Cost theory and cost analysis, types of cost - monetary and non-monetary, measurement and valuation issues in cost, production cost and discounting, Constraints in measuring health cost.

Module 2:

Economic Evaluation– Part I: What is economic evaluation? Various types of economic evaluation used in health care, measuring outcome, Cost effectiveness analysis (CEA), Cost-Benefit Analysis (CBA), Divergence between social and private costs and benefits in health care, Limitations of economic evaluation, Consumer Impact Assessment.

Economic Evaluation – Part II: Importance of Measures of General health status and quality of life, Measuring Health Outcomes, Assigning monetary values to health outcomes, human life and Quality Adjusted Years of Life, Cost-Utility Analysis (CUA) – including Quality Adjusted Life Years (QALYs) and Health Year Equivalents (HYEs), Economics of Prevention and Public Health – Economic evaluate on of prevention programs (include ADL and IADL for aged)

Module 3:

Efficiency and Equity in Health: An overview of the normative economics of the health sector, Health Care and Welfare State, Private versus public health care, Public and Private Partnership in Health Care, Efficiency and effectiveness in health care, Equity in Health care Delivery

Health inequalities: health inequality and its measurement, determinants of health, health seeking and access to health care service, Health care utilization.

Books Recommended:

1. Rexford E. Snterre and Stephen P. Neun, Health Economics: Theories, Insights and Industry Studies, Thompson South – Western, 3rd Edition (614, San/Hea, 073226)
2. Zweifel and Breyer, 1997, Health Economics, Oxford University Press.

3. Drummond MF, Sculpher MJ, Torrance GW, O'Brien B, Stoddart GL, eds. Methods for economic evaluation of health care programmes, Third Edition, Oxford University Press, 2005.
4. Health economics: 3rd Edition by Phelps
5. The economics of health and health care, 2nd edition by Folland, Goodman and Stono (FGS)
6. Gold Marthe R, Joanna E Siegel, Lousie B russel, and Milton C Weinstein, 1996, Cost effectiveness in health and medicine, new York: Oxford University Press.
7. Handbook of Health Economics (Anthony J. Culyer and Joseph P Newhouse eds., Elsevier Science, 2000: Available online at: <http://www.sciencedirect.com/science/handbooks/15740064>
8. David Wonderling, Reinhold Gruen & Nick Black, 2005, Introduction to health economics, Chapters 10- 11, 127-152.
9. Gold Marthe R, Joanna E Siegel, Lousie B russel, and Milton C Weinstein, 1996, Cost effectiveness in health and medicine, New York: Oxford University Press., Ch. 6, pp. 176-213.

ECO C04: Econometrics- I

Module 1:

Basic Econometrics: Nature, meaning and scope of econometrics; Simple and general linear regression model – assumptions, Estimation (through OLS approach) and properties of estimators; Derivation of least square parameters; Goodness of fit and Econometric inference.

Module 2:

Problem in the estimation of single equation model; heteroscedasticity; Multicollinearity and auto-correlation; specification problems.

Module 3:

Regressions with Qualitative Independent Variables: Dummy variable technique – Testing structural stability of regression models, seasonal analysis, piece wise linear regression, regression with dummy dependent variables; The LPM, Logit, Probit and Tobit models – applications, Economic forecasting – Methods of forecasting – Limitations.

Note; Use of non-programmable calculator is permitted.

Books Recommended:

1. J.Kmenta: Elements of Econometrics.
2. Damodar Gujarati: Basic Econometrics.
3. J.Johnston: Econometrics Methods(3rd edition).
4. G.S. Maddala : Econometrics.
5. R.S. Pindyck and D.Z. Rubinfeld : Econometric Methods and Econometric Forecasts.
6. Rao and Millar : Applied Econometrics.
7. G.M.K. Madhani : Arthmiti - Avdharnayen Evan Vidhiya.

ECO D01: Economics of Infrastructure -II

Module 1:

Primacy of energy in the process of economic development; Factors determining demand for energy; Effects of energy shortages; Energy conservation, renewable and nonconventional sources of energy; Energy modeling; The search for an optimal energy policy in the Indian context.

Bulk supply and pricing of electricity – The relative economics of thermal, hydel and nuclear power plants – The case for a National Power Grid.

Module 2:

Financing water utilities - Urban and rural water supply.

The exploitation of National Gas; Pricing problem.

Organisation and financing of supply of social services; Private vs public sector financing; Recent debate about the fixation of prices of social services; Development of social services in the successive Indian plans.

Module 3:

Education and economic growth; Approaches to educational planning, social demand, rate of return and manpower balance approaches; The case for universal, free, primary education; Structure of higher education and problems of its financing in India; Human resources and human capital development – The issues in education policy.

Health dimensions of development - Determinants of health – Poverty, malnutrition, illiteracy and lack of information, Economic dimensions of health care – Demand and supply of health care, Financing of health care and resource constraints - Inequalities in health – Class and gender perspectives; Institutional issues in health care delivery.

Books Recommended:

1. National Council of Applied Economic Research, 1996, India Infrastructure Report: Policy Implications for Growth and Welfare, New Delhi.
2. Parikh, K.S. (1999), India Development Report 1999-2000, Oxford, New Delhi.
3. Economics of Infrastructure (1976), Vol.VI, ICSSR, ICSSR.
4. Crew, M.A. and P.R. Kleindorfer (1979), Public Utility Economics, MacMillan, New York.
5. CUTS: Competition and Regulation in India, 2007 and 2009.

ECO D02: History of Economic Thought

Module 1:

Mercantilism Physiocrates, Quesnay's table economic concept of surplus growth, theory taxation and role of government.

Classical school Adam Smith the invisible hand doctrine wealth of nation laissez faire profits and wages modern revival of Adam Smith critiques of Adam Smith.

Malthus's theory of population and theory of under competition Ricardo – principal of political economy and taxation distribution theory – different routes differences with say on determination of value modern revival and interpretation (Sraffa).

Module 2:

Critics of the classical school – Sismondi socialist and the nationalist school position senior and the four postulates, J.S. Mill – four propositions and capital demand and supply bifurcation wage fund.

Rehabilitation by coarseness stationary state version non – competing groups evaluation of socialist thought – utopian socialism saint – Simon own blame, Fourier proudhob scientific socialist.

Module 3:

Karl – Marx – efforts at scientific socialism organic composition of capital break down of capitalism, reserve army of labour critiques of Marx revival of Marx in economics.

The German Historical School and development of marginalize the neo-classical school Marshall.

Twentieth century economic thought main features (Only the rise of Keynesianism the rise of mathematical economics dynamics of econometrics) critical evaluation of the development of economic thought Indian economic thought kautilya and Gandhi.

Books Recommended:

1. H.Haney: History of Economic Thought.
2. Eric Roll: History of Economic Thought.
3. Gide and Rist: History of Economic doctrine.
4. V.C. Sinha: Arthik Vicharon Ka Itihas
5. K.L. Rangaswami Aiyangar: Aspect of the ancient Economic Thought.
6. J.C. Kumarappa: Gandhian economic Thought.

ECO D03: Indian Health Care System

Module1:

Changing scenario of Health inequalities in India, Medical Tourism in India, International Comparison,
 Health Care System: Stakeholders in health care systems: Consumer, providers, and state, Human capital and health, health care and labor market, Demand for health care and for medical services – The consumer perspective, Moral Hazard and the economics of Moral Hazard, Demand and Supply of Human and physical infrastructure–physician, hospital and drugs etc, Costs as a barrier to health care utilization.

Module2:

Policies, Reforms and Regulatory Concerns in Health Sector: Health care delivery systems and Role of Government in providing health care, Role of international organizations, improving access to health care with quality, Overview of health sector reforms and Policies, Regulatory concerns and regulation of health sector including pharmaceutical industry, National Health Policies and Programmes.

Module3:

Health Financing and Health Insurance: National Health Accounting: Sources and Uses of Funds, health budgeting, Interrelationship between epidemiological transition and health expenditure, Health care financing system, source of health care spending, The Health Insurance – intermediary agent, The private health insurance, Regulation of health insurance, Government as health insurer in India, Equity in health care finances, Future investment strategies in health sector, Willingness to pay for health care, User charges as determinant of health financing

Recommended:

1. Rexford E. Snterre and Stephen P. Neun, Health Economics: Theories, Insights and Industry Studies, Thompson South – Western, 3rd Edition (614, San/Hea, 073226) \
2. Zweifel and Breyer, 1997, Health Economics, Oxford University Press.
3. Drummond MF, Sculpher MJ, Torrance GW, O'Brien B, Stoddart GL, eds. Methods for economic evaluation of health care programmes, Third Edition, Oxford University Press, 2005.
4. Health economic: 3rd Edition by Phelps
5. The economics of health and health care, 2nd edition by Folland, Goodman and Stono (FGS)
6. Gold Marthe R, Joanna E Siegel, Lousie B russel, and Milton C Weinstein, 1996, Cost effectiveness in health and medicine, new York: Oxford University Press.
7. Handbook of Health Economics (Anthony J. Culyer and Joseph P Newhouse eds., Elsevier Science, 2000: Available online at: <http://www.sciencedirect.com/science/handbooks/15740064>
8. David Wonderling, Reinhold Gruen & Nick Black, 2005, Introduction to health economics, Chapters 10- 11, 127-152.

9. Gold Marthe R, Joanna E Siegel, Lousie B russel, and Milton C Weinstein, 1996, Cost effectiveness in health and medicine, New York: Oxford University Press., Ch. 6, pp. 176-213.

ECO D04: Econometrics - II

Module 1:

Dynamic Econometric Model: Auto-regressive and distributed lag models – Koyak model, partial adjustment model, adaptive expectations; Method of instrument variables, Almon approach to distributed lag models.

Module 2:

Simultaneous Equation Models: Introduction and examples; The simultaneous equation bias and inconsistency of OLS estimators; The identification problem; Rules of identification – order and rank conditions; Methods of estimating simultaneous equation system; Recursive methods and OLS; Indirect least squares (ILS); 2SLS, 3SLS and ML methods – applications, Time series analysis – unit root and co- integration, causality test.

Module 3:

Specification and estimation of demand functions, Elasticities, Engel curve, Specification and estimation of production function – Cobb-Douglas, Translog and CES production function, Measurement of partial and total factor productivity.

Application of econometric models on selected topics: Wagner’s law of public expenditure, Various methods of estimation of elasticities in taxation and public expenditure, Demand for money and Inflation–output trade off, Linear consumption expenditure system and cost function.

Note: Use of non-programmable calculator is permitted.

Books Recommended :

1. J.Kmenta: Elements of Econometrics.
2. Damodar Gujrati: Basic Econometrics.
3. J.Johnston: Econometrics Methods(3rd edition).
4. G.S. Maddala: Econometrics.
5. R.S. Pindyck and D.Z. Rubinfeld : Econometric Methods and Econometric Forecasts.
6. Rao and Millar : Applied Econometrics.
7. G.M.K. Madhani : Arthmiti - Avdharnayen Evan Vidhiya.