# POST GRADUATE DEPARTMENT OF ECONOMICS



**Under Graduate Curriculum** 

# For 2016 Admission Onwards

# **Programme : BA Honours in Economics**

**Under Choice Based Credit System [CBCS]** 

# Preface

India has a rich and glorious tradition of higher education since ancient times. Nalanda, Takshasila, Vikramshila and Vallabhi were some of the important and well known universities of ancient India. These universities or centres of excellence have a unique role in the history of higher education in the country. Machiavelli had once remarked" man is a social animal; man is basically an animal that need socialisation. For this socialisation and civilisation he needs education and training'. It is widely acknowledged that a rupee invested on education bring greater increase in national income and national prosperity. Alfred Marshall has also commented that investment in human beings as the most valuable of all capital. The positive correlation between education and economic development has been proved across the world.

One of the important aspects of higher education is that it should uphold qualitative changes. It should cater to the needs of a growing economy. This means that the course content of education should be periodically revised and updated. Economics, as a subject of study holds infinite promise. In the present scenario, it is very well noticed that almost every facet of human activity is directly or indirectly related to Economics. A change in the economic policy of government, regulation and deregulation issues, monetary and fiscal policy, proper understating of government's budget etc has Economics in it. The major objective of Economics is to acquaint the student community with both theoretical and practical aspects of all matters related to Economics. Hence a study of the subject of Economics is of paramount importance.

Keeping these facts in mind, the "Restructuring of Curriculum and Syllabi" of UG and PG Programmes has been taken up by the Post Graduate Department of Economics, Maharaja's College, Ernakulam. The process of restructuring the syllabus started with the constitution of the Board of Studies in 2015 by incorporating well known experts from both the industry and from academia. The inclusion of these members brought in a dynamism and fresh perspective to the whole process. A seven day workshop on Curriculum and Syllabus Restructuring for teachers was organized in the month of November and December with the financial support of Directorate of Collegiate Education. After serious discussions and deliberations, the Department prepared a draft syllabus. This draft syllabus was presented before the Board of Studies and the suggestions made by the external members were incorporated into the syllabus. The process culminated with the approval of the Restructured Curriculum and Syllabus by the Board of Studies.

It is with immense pleasure and pride that the Post Graduate Department of Economics, Maharaja's College, Ernakulam, presents to all stakeholders, the Restructured Curriculum and Syllabus for Under Graduate and Post Graduate Programmes, 2016 admissions onwards.

> Dr. Sunil Kumar S. Menon Chairman, Board of Studies

#### ACKNOWLEDGEMENT

Acknowledgment or expression of gratitude is a difficult task especially when genuine. Everything good happens a result of an united action. The Restructured Curriculum and Syllabus of the Post Graduate/ undergraduate Department of Economics is a conclusion of the determined effort put in by the members of the Board of Studies and experts from other institutions.

I would like to thank all the external members of the Board of Studies,Dr. K.V Raju, Dr. S. Muraleedharan, Dr K.Prasanna, Dr. V.K Vijayakumar and Sri Arun S.Babu for their whole hearted cooperation commitment and constructive criticism.

This venture would not have been possible without the support of my colleagues in the department who are also internal members of the Board of Studies. All the members worked tirelessly during the last one year for all the academic endeavours of the department, especially in the syllabus restructuring process. I place on record my sincere gratitude to all of them for their dedicated efforts. They stood as a bridge across troubled waters. In particular, I appreciate the efforts of Dr. Ancy V.P, coordinator of the Syllabus Restructuring Workshop. I would also like to thank the teacher participants of the workshop.

In any academic endeavour in college, the role of the captain has to be recognised. I would like to acknowledge the constant support and guidance of Principal Smt. N.L Beena. The Department also owes a lot to the guidance given by the former faculty member Prof. Martin Patrick. I would be failing in my duty if I forget the help and advices given by my friend Dr. V.N Suresh, Member Secretary, Academic Council of our college and the Head of the Department of Commerce. He was of great courage and support to me, especially.

Last, but definitely not the least, I express sincere gratitude to the Directorate of Collegiate Education, Government of Kerala for the financial support extended. I firmly believe that process of initiating a change is always never ending.

> Dr. Sunil Kumar S. Menon Chairman, Board of Studies.

# Maharaja's College Ernakulam A Government Autonomous College Affiliated to Mahatma Gandhi University, Kottayam Under Graduate Degree Programme in Economics w.e.f. 2016 Admission Onwards

Sl. No.	Name of Member	Designation
1	Dr. Sunil Kumar S. Menon.	Chairman, BoS Economics
		Assistant Professor and HoD
2	Dr. S. Muraleedharan	External Member
		Associate Professor of Economics (Rtd)
		Research Supervisor, Research Centre in Economics
		Maharaja's College, Ernakulam.
3	Dr. K.V Raju	External Member
		Associate Professor of Economics
		Post Graduate and Research Centre in Economics
		Sacred Heart College, Thevara, Kochi
4	Dr. K. Prasanna	External Member
		Head, Department of Economics,
		Chinmaya Vidyapeet, Ernakulam
		Former Principal, T.M Jacob Memorial Government
		College, Manimalakunnu
5	Dr. V.K Vijayakumar	External Member [Industry]
		Investment Strategist, Geojit BNP Paribas
6	Mr. Arun S.Babu	External Member [Alumni]
		Substitute Lecturer (FDP)
7	Smt. Mary Ushes James.	Internal Member
		Assistant Professor in Economics
8	Dr. Ancy V.P.	Internal Member
		Assistant Professor in Economics
9	Smt. Nishanthi P.U	Member
		Assistant Professor in Economics
10	Sri. Martin K.J	Internal Member
		Assistant Professor in Economics
11	Sri. R.L Rejith	Internal Member
		Assistant Professor in Economics

# **Board of Studies in Economics**

Sl. No.	Name	Designation	Institution
1	Dr. CHACKO JOSE P	Associate Professor and Head, Dept. of Economics	Sacred Heart College, Chalakkudy
2	Dr. S MURALEEDHARAN	Rtd. Professor	Maharaja's College, Ernakulam
3	Dr. T.K SEBASTIAN	Associate Professor	Nirmalagiri College , Koothuparambu
4	Dr. ROY SCARIA	Assistant Professor	Government College Manimalakunnu
5	Sri. M J SUNIL KUMAR	Associate Professor	Government College, Kottayam
б	Dr. TOJO JOSE	Assistant Professor and Head	Government College, Manimalakunnu
7	Dr. SINDHU K	Associate Professor	The Cochin College
8	Sri. SHANU .S	Assistant Professor	Government College For Women, Trivandrum
9	Sri. THOMAS MATHEW	Assistant Professor	Government College, Chalakkudy
10	Dr. ABIN MATHEW	Assistant Professor	Government Art's College, Trivandrum
11	Sri. JOBY JOSE	Assistant Professor	Government College, Kottayam
12	Prof. K. T. THOMACHAN	Associate Professor	St. Joseph's College, Devagiri, Kozhikode
13	Dr. C. A. PRIYESH	Assistant Professor	University College, Trivandrum
14	Sri. SUNIL KUMAR M	Assistant Professor	Government College, Thrishur
15	Dr. MOTHI GEORGE	Assistant Professor	Governmenmt College, Ambalapuzha
16	Dr. ANNA ABRAHAM PACHAYIL	Assistant Professor	Governmenmt College, Kottayam

External Participants of Curriculum and Syllabus Restructuring Workshop

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# MAHARAJA'S COLLEGE, ERNAKULAM [A GOVERNMENT AUTONOMOUS COLLEGE] <u>REGULATIONS FOR UNDER GRADUATE PROGRAMMES UNDER</u> <u>CHOICE BASED CREDIT SYSTEM- 2016 ADMISSION ONWARDS</u>

# 1. TITLE

1.1. These regulations shall be called "Regulations for Under Graduate Programmes under Choice Based Credit System, 2016" of Maharaja's College, Ernakulam [Autonomous].

# 2. SCOPE

2.1 Applicable to all Under Graduate Programmes conducted by Maharaja's College Ernakulam [Autonomous] with effect from 2016-17 admissions.

2.2 The provisions herein supercede all the existing regulations for undergraduate programmes to the extent herein prescribed.

# **3. DEFINITIONS**

3.1. *'Academic Week'* is a unit of five working days in which distribution of work is organized from day1 today5, with five contact hours of one hour duration on each day. A sequence of 18 such academic weeks constitutes a semester.

3.2. *College Co-ordinator*' is a teacher nominated by the College Council to co-ordinate the continuous evaluation undertaken by various departments within the college. He/she shall be nominated to the college level monitoring committee.

3.3. *'Common Course I'* means a course that comes under the category of courses for English and *'Common Course II'* means additional language, a selection of both is compulsory for all students undergoing undergraduate programmes. *'Common Course II'* is exempted in the cases of B.A Economics (Honours), B.Sc. Physics(Instrumentation) and B.Sc. Environmental Chemistry and Water Management programmes.

3.4. *Complementary Course*' means a course which would enrich the study of core courses.

3.5. 'Core Course' means a course in the subject of specialization within a degree programme.

3.6. *'Course'* means a complete unit of learning which will be taught and evaluated within a semester.

1

3.7. *'Credit'* is the numerical value assigned to a course according to the relative importance of the content of the syllabus of the programme.

3.8. 'Department' means any teaching department in a college.

3.9. *Department Co-ordinator'* is a teacher nominated by a Department Council to coordinate the continuous evaluation undertaken in that department.

3.10. 'Department Council' means the body of all teachers of a department in a college.

3.11. 'Faculty Advisor' means a teacher from the parent department nominated by the Department Council, who will advise the student in the choice of his/her courses and other academic matters.

3.12. **Grace Marks** shall be awarded to candidates as per the M.G.University orders issued from time to time in recognition of meritorious achievements in NCC/NSS/Sports/ Arts and Cultural Activities.

3.13. *'Grade'* means a letter symbol (e.g.,S, A, B, C, etc.), which indicates the broad level of performance of a student in a course/ semester/programme.

3.14. *'Credit Point (CP)'* of a course is the value obtained by multiplying the grade point (GP) by the Credit (C) of the course CP=GP x C.

3.15. *'Cumulative Grade Point Average (CGPA)'* is the value obtained by dividing the sum of credit points in all the courses taken by the student for the entire programme by the total number of credits and shall be rounded off to two decimal places.

3.16. *'Choice based Course'* means a course other thanin the subject of specialization which can be opted by a student/department in a degree programme.

3.17. '*Parent Department*' means the department which offers core courses within a degree programme.

3.18. *'Programme'* means a three year programme of study with examinations spread over six semesters, according to the regulations of the respective programme, the successful completion of which would lead to the award of a degree.

3.19. 'Semester' means a term consisting of a minimum of 450 contact hours distributed over90 working days, inclusive of examination days, within 18 five-day academic weeks.

#### 4. ELIGIBILITY FOR ADMISSION, AND RESERVATION OF SEATS

4.1 Eligibility and Norms for admission and reservation of seats for various Degree Programmes shall be according to the rules framed by the Mahatma Gandhi University/State Government from time to time.

#### 5. DURATION

5.1 The duration of U.G. programmes shall be *6 semesters* (the semestersdefined under 3.19 above).

5.2 The duration of odd semesters shall be from **June to October** and that of even semesters from **November to March.** There shall be one week *semester break after odd semesters and two months vacation during April and May in every academic year.* 

5.3 A student may be permitted to complete the Programme, on valid reasons, within a period of 8 continuous semesters from the date of commencement of the first semester of the programme.

#### 6. REGISTRATION

6.1 The strength of students for each course shall remain as per existing regulations.

6.2 Each student shall register for the courses in the prescribed registration form in consultation with the Faculty Advisor within two weeks from the commencement of each semester. Faculty Advisor shall permit registration on the basis of the preferences of the student and availability of seats.

6.3 The number of courses/credits that a student can take in a semester is governed by the provisions in these regulations pertaining to the minimum and maximum number of credits permitted.

6.4 Those students who possess the required minimum attendance and progress during a semester and could not register for the semester examination are permitted to apply for Notional Registration to the examinations concerned enabling them to get promoted to the next class.

# 7. SCHEME AND SYLLABUS

7.1. The U.G. programmes shall include (a) Common courses I & II, (b) Core courses, (c) Complementary Courses, (d) Choice Based Course I & II. Complementary Courses are exempted in the case of B.Com and B.A Economics (Honours) programmes.

7.2. Credit Transfer and Accumulation system can be adopted in the programme. Transfer of Credit consists of acknowledging, recognizing and accepting credits by an institution for programmes or courses completed at another institution. The Credit Transfer Scheme shall allow students pursuing a programme in one College to continue their education in another College without break.

The College shall allow credit transfer, subject to the approval of the concerned Board of Studies and Academic Council.

# 8. PROGRAMME STRUCTURE

There shall be a maximum of three credits for the open course.

a	Programme Duration	6 Semesters
b	b Total Credits required for successful completion of the programme	
c	Minimum credits required from common courses	38*
d	Minimum credit required from common courses in B.Com.	24
e	Minimum credit required from common courses in B.A. Economics(Honours), B.Sc. Instrumentation and B.Sc. Environmental Chemistry	8
f	Minimum credits required from Core + Complementary + Vocational courses including Project	74*
g	Minimum credits required from Choice Based Course I & II	8
h	Minimum attendance required	75%

\*except in the case of Language Restricted Programmes [LRPs] including B. Com., B.A Economics (Honours), B.Sc. Instrumentation and B.Sc. Environment Chemistry.

# 9. EXAMINATIONS.

The evaluation of each course shall contain two parts:

- (i) In-Semester Assessment (ISA)
- (ii) End-Semester Assessment (ESA)

The in-semester to end semester, assessment ratio shall be 1:4, for both courses with or without practical. There shall be a maximum of 80 marks for end semester assessment and maximum of 20 marks for in-semester assessment. For all courses (theory & practical), grades are given on a 10- point scale based on the total percentage of marks (ISA+ESA) as given below:

Percentage of Marks	Grade	Grade Point(GP)
95 and above	S Outstanding	10
85 to below 95	A <sup>+</sup> Excellent	9
75 to below 85	A Very Good	8
65 to below 75	A <sup>-</sup> Good	7
55 to below 65	B <sup>+</sup> Above average	6
50 to below 55	B Average	5
40 to below 50	C Pass	4
Below 40	F Fail	0
	Ab Absent	0

# 10. CREDIT POINT(CP), SEMESTER GRADE POINT AVERAGE (SGPA) & CUMULATIVE GRADE POINT AVERAGE (CGPA)

Credit Point (CP) of a course is calculated using the formula

 $CP = C \times GP$ , where C = Credit; GP = Grade point

Semester Grade Point Average (SGPA) of a Semester is calculated using the formula

SGPA= TCP/TC, where TCP = Total Credit Point of that Semester

*TC* = *Total Credit of that Semester* 

*Cumulative Grade Point Average (CGPA)* of a Programme is calculated using the formula

formula

 $CGPA = \sum (TCP \times TC) \div \sum TC$ 

CGPA shall be rounded off to two decimal places

#### Grades for the different semesters and overall programme are given based on the

corresponding CPA as shown below:

GPA	Grade
Equal to 9.5 and above	S Outstanding
Equal to 8.5 and below 9.5	A <sup>+</sup> Excellent
Equal to 7.5 and below 8.5	A Very Good
Equal to 6.5 and below 7.5	A <sup>-</sup> Good
Equal to 5.5 and below 6.5	B <sup>+</sup> Above average
Equal to 5.0 and below 5.5	B Average
Equal to 4.0 and below 5.0	C Pass
Below 4.0	F Failure

Note: A separate minimum of 30% marks each for in-semester and end semester (for both theory and practical) and aggregate minimum of 40% are required to pass for a course. To pass in a programme, a separate minimum of Grade C is required for all the individual courses. If a candidate secures **F** Grade for any one of the courses offered in a Semester/Programme only **F** grade will be awarded for that Semester/Programme until he/she improves this to **C** grade or above within the permitted period. Candidate secures **C** grade and above shall be eligible for higher studies.

# 11. MARKS DISTRIBUTION FOR END SEMESTER EXAMINATION AND IN-SEMESTER EVALUATION

The end semester examination of all semesters shall be conducted by the college at the end of each semester. All theories, practicals and project(s) are treated as individual papers and marks should be in the 80(external)/20 (internal) pattern. In-semester evaluation is to be done through continuous assessment. Marks distribution for end semester and in-semester assessments and the components for in-semester evaluation with their marks are shown below:

Components of the in-semester evaluation and their marks are as below.

# **11.1 For all courses without practical**

a) Marks of End Semester Examination : 80

# b) Marks of In Semester Evaluation : 20

All the three components of the in-semester assessment are mandatory.

<b>Components of In-Semester Evaluation</b>	Marks
Attendance	5
Assignment /Seminar/Viva	5
2 Test papers*	10
Total	20

\*marks of test papers shall be the average

#### **11.2 For all courses with practical**

# a) Marks of theory -End Semester Examination : 80

# b) Marks of theory – In Semester Evaluation : 20

Components of Theory–In Semester Evaluation	Marks
Attendance	5
Assignment/Seminar/Viva	5
2 Test papers*	10
Total	20

\*marks of test papers shall be the average

#### c) Marks of Practical –End semester Examination: 80

(Practicals shall be conducted in even semesters for all programmes except commerce. For Commerce, in semester evaluation shall be conducted separately for odd and even semesters).

Components of Practical-In Semester evaluation	Marks
Attendance	4
Record*	10
Viva / Working Model Projects	6
Total	20

# d) Marks of Practical- In Semester Evaluation: 20

\*Marks awarded for Record should be related to number of experiments recorded.

# **11.3 Project Evaluation: (Maximum marks100)**

<b>Components of Project-Evaluation</b>	Marks
In-semester Evaluation*	20
Dissertation (End semester)	50
Viva-Voce (End semester)	30
Total	100

*Components of Internal Evaluation	Marks
Relevance and Contents	5
Analysis and Presentation	5
Pre-submission Presentation and Viva	10
Total	20

#### 12. Attendance Evaluation

#### 1) For all courses without practical

% of attendance	Marks
90 and above	5
85 - 89	4
80-84	3
76-79	2
75	1

(Decimals are to be rounded to the next higher whole number)

#### 2) For all courses with practical

% of Attendance	Marks for theory	% of Attendance	Marks for practical
90 and above	5	90 and above	4
8589	4	85—89	3
8084	3	80—84	2
76-79	2	75—79	1
75	1		

(Decimals are to be rounded to the next higher whole number)

#### 13. In-Semester Assessment

The evaluation of all components is to be published in the department and is to be acknowledged by the candidates. All documents of in-semester assessments are to be kept in the department for two years and shall be made available for verification by the college authorities.

#### 13.1 Grievance Redressal Mechanism for In-Semester Assessment

In-Semester assessment shall not be used as a tool for personal or other type of vengeance. A student has every right to know, how the teacher arrived at the marks. In order to address the grievance of students, a two-level Grievance Redressal mechanism is envisaged. A student can approach the upper level only if grievance is not addressed at the lower level.

**Level 1:Department Level**: The department cell chaired by the Head; with Dept. coordinator and teacher in-charge, as members.

**Level 2**: **College level**: A committee with the Principal as Chairman, Dept. Coordinator, HOD of concerned Department and a senior teacher nominated by the College council as members.

- 13.2 The college council shall nominate a senior teacher as coordinator of in-semester evaluations. This coordinator shall make arrangements for giving awareness of the insemester evaluation components to students immediately after commencement of I semester
- **13.3** The in-semesterevaluation report in the prescribed format should reach the Controller of Examinations before the 4<sup>th</sup> week of October and March in every academic year.

#### 14. End SemesterExamination

The end semester examination of all semesters shall be conducted by the College at the end of each semester.

14.1 Students having a minimum of 75% average attendance for all the courses only can register for the examination. Condonation of shortage of attendance to a maximum of 10 days or 50 hours in a semester, subject to a maximum of 2 times during the whole period of the programme, may be granted by the subcommittee of the College Council on valid grounds. This condonation shall not be counted for in-semester assessment.

Benefit of attendance may be granted to students attending University/College union/Cocurricular activities by treating them as present for the days of absence, on production of participation/attendance certificates, within one week, from competent authorities and endorsed by the Head of the institution. This is limited to a maximum of 10 days per semester and this benefit shall be considered for in-semester assessment also.

Those students who are not eligible to attend the end semester examination due to shortage of attendance, even with condonation, shall repeat the course along with the next batch upon the recommendation of the Head of the Department and the College Council.

- **14.2** All students are to do a project. This project can be done individually or as a group of 3 students. The projects are to be identified during the 4<sup>th</sup> semester of the programme with the help of the supervising teacher. The report of the project in duplicate is to be submitted to the department at the sixth semester and are to be produced before the examiners appointed by the College.
- **14.3** Those candidates who have not appeared/failed in the end semester examinations of 5<sup>th</sup> and 6<sup>th</sup> Semester shall be eligible to appear for special supplementary examination by paying separate fees. For reappearance/ improvement, the students can appear along with the next batch.
- **14.4** A student who registers his/her name for the end semester examination will be eligible for promotion to the next semester.
- 14.5 A student who has completed the entire curriculum requirement, but could not register for the Semester examination can register notionally, for getting eligibility for promotion to the next semester.

- **14.6** A candidate who has not secured minimum marks/credits in in-semester examinations can re-do the same subsequently with the next batch.
- 14.7 All programmes and courses shall have unique alphanumeric code.

# 15. PATTERN OF QUESTIONS

Questions shall be set to assess knowledge acquired, standard application of knowledge, application of knowledge in new situations, critical evaluation of knowledge and the ability to synthesize knowledge. The question setter shall ensure that questions covering all skills are set. He/She shall also submit a detailed scheme of evaluation along with the question paper.

A question paper shall be a judicious mix of objective type, short answer type, short essay type /problem solving type and long essay type questions.

	Total no. of questions	Number of questions to be answered	Marks of each question	Total marks
	10	8	1	8
	8	6	2	12
	8	6	5	30
	4*	2	15	30
TOTAL	30	22	Х	80

Pattern of questions for end semester examination for theory paper

\*questions in bunches of two

16. There shall be 2 level monitoring committees for the successful conduct of the scheme. They are:

1. Department Level Monitoring Committee (DLMC), comprising HOD and two teachers nominated as members by the Department Council.

- 2. College Level Monitoring Committee (CLMC), comprising Principal, Controller
- of Examinations, Academic Coordinator, Department Co-ordinator and A.O/Superintendent as members.

# **17. TRANSITORY PROVISION**

Notwithstanding anything contained in these regulations, the Principal shall, for a period of one year from the date of coming into force of these regulations, have the power to provide by order that these regulations shall be applied to any programme with such modifications as may be necessary.

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### **Department of Economics**

### UG Programme : <u>BA Honours in Economics</u>

#### **Total Credits: 120**

	•						Curric	ılum	-						
	Course Code	Course	Credit		Marks		Weekly Contact Hours		Course Code	Course	Credit	Marks			Weekly Contact Hours
				Int.	Ext.	Total						Int.	Ext.	Total	
		Common Course: English	5	20	80	100	5			Common Course: English	5	20	80	100	5
		Common course Additional language	NA							Common course Additional language	NA				
rI	ECH1COR01	Micro (Applied) Economics 1	5	20	80	100	6	Π	ECH2COR05	Micro (Applied) Economics 11	5	20	80	100	6
Semester	ECH1COR02	Macro ( Applied) Economics I	4	20	80	100	6	Semester II	ECH2COR06	Macro ( Applied) Economics I I	4	20	80	100	6
Sen	ECH1COR03	Statistical methods in Economics I	4	20	80	100	6	Sem	ECH2COR07	Statistical methods in Economics II	4	20	80	100	6
	ECH1COR04	Mathematics in Economics I	4	20	80	100	6		ECH2COR08	Mathematics in Economics II	4	20	80	100	6
		TOTAL	22			500	29			TOTAL	22			500	29
	ECH3COR09	Introduction to Econometrics	4	20	80	100	6		ECH4COR14	Advanced econometrics	4	20	80	100	6
н	ECH3COR10	Development and Environment Economics	4	20	80	100	6	<b>^</b>	ECH4COR15	Operations Research	4	20	80	100	6
Semester III	ECH3COR11	International Trade ( Applied) theory and Policy	4	20	80	100	6	Semester IV	ECH4COR16	Computer Applications for Economic Analysis	4	20	80	100	6
Se	ECH3COR12	Public Economics	4	20	80	100	6	Se	ECH4COR17	International Finance and Trade Regulatory System	4	20	80	100	6
	ECH3COR13	Money and Financial markets	4	20	80	100	6		ECH4COR18	Analytical Indian Economy	4	20	80	100	6
		TOTAL	20			500	30			TOTAL	20			500	30
	ECH5COR19	Economy, state, society and Physio economics	4	20	80	100	6		ECH6COR23	Research methodology- Intermedite	4	20	80	100	6
Λ	ECH5COR20	Introduction to research methodology and field work	4	20	80	100	6	И	ECH6COR24	Fundamentals of Environmental Economics and management	4	20	80	100	5
Semester <sup>1</sup>	ECH5COR21	Theory of games and General Equilibrium	3	20	80	100	6	Semester VI	ECH6COR25	Health Economics	3	20	80	100	5
Seme	ECH5COR22	Structure and Operations of capital Markets	3	20	80	100	6	Seme	ECH6ELE 02	Optional II	3	20	80	100	5
	ECH5ELE 01	Option 1	3	20	80	100	6		ECH6ELE 03	Optional III	3	20	80	100	4
						-00		4		Dissertation –viva	2			-	
		TOTAL	17			500	30			TOTAL	19			500	25

# Syllabus & References

# **BA (Honours) in Economics**

# **Objective**

After the wide spread introduction of liberalisation and trade regime, it is imperative that a discipline like Economics has to undertake the challenges of the emerging global scenario. Many conventional tools in this discipline introduced to the students are unequipped or out of date. In this context, it is either necessary to restructure the existing programmes in Arts & Science colleges or to introduce new course so as to meet new challenges. It seems that an alloy of the new approaches in Economics plus certain courses of business schools is appropriate to enable the students to meet the changing demand in the labour market. This proposed programme, is designed to have a better coverage at UG level with a professional touch. Its duration is three years (six semesters) which is comparable with any professional course in the country.

# **II Structure of the course**

Part I & II will follow the same pattern of the vocational degree programme in the Mahatma Gandhi University

# Part III

The various courses are spread over six semesters spread for three years. The various courses in different semesters are outlined below.

# Semester I

SI. No	Paper	Title of the paper	Instructional hours	Credit
1	Common I	Language I	5	5
2	Core I	Micro (Applied) Economics I	5	5
3	Core II	Macro (Applied) Economics I	5	4
4	Core III	Statistics in Economics I	5	4
5	Core IV	Mathematics in Economics I	5	4
Tota	al	I	25	22

# Semester II

SI. No	Paper	Title of the paper	Instructional hours	Credit
1	Common II	Language II	5	5
2	Core V	Micro (Applied) Economics II	5	5
3	Core VI	Macro (Applied) Economics II	5	4
4	Core VII	Statistics in Economics II	5	4
5	Core VIII	Mathematics in Economics II	5	4
Tota	al	•	25	22

# Semester III

SI. No	Paper	Title of the paper	Instructional hours	Credit
1	Core IX	Introduction to Econometrics	5	4

2	Core X	Development and Environmental Economics	5	4
3	Core XI	International Trade (Applied) Theory and policy	5	4
4	Core XII	Public Economics	5	4
5	Core XIII	Money and Financial Markets	5	4
Tota	al		25	20

# Semester IV

SI. No	Paper	Title of the paper	Instructional hours	Credit
1	Core XIV	Advanced Econometrics	5	4
2	Core XV	Operations Research	5	4
3	Core XVI	Computer Application for Economic Analysis	4	4
4	Core XVII	International Finance Regulatory System	5	4
5	Core XVIII	Analytical Indian Economy	6	4
Tota	al		25	20

# Semester V

SI. No	Paper	Title of the paper	Instructional hours	Credit
1	Core XIX	Economy System State and Society and Physio Economics (Interdisciplinary)	5	4
2	Core XX	Introduction to Research Methodology and Field Work	5	4
3	Core XXI	Theory of Games and General Equilibrium	5	3
4	Core XXII	Structure and Operation of Capital Market	5	3

5	Core XXIII	Elective (From Group A)	5	3
Tota	al		25	17

# Semester VI

SI. No	Paper	Title of the paper	Instructional hours	Credit
1	Core XIV	Research Methodology – Intermediate	5	4
2	Core XV	Fundamentals of Environment Economics and Management	5	4
3	Core XVI	Health Economics	5	3
4	Core XVII	Elective II ( from Group B)	5	3
5	Core XVIII	Elective III (from Group B)	5	3
Proj	ect and Viva	– Voce examination		2
Tota	al		25	19

#### **Group A: Corporate Sector and Capital Market**

- A-1: Principles of Management and Organisation Behaviour
- A-2: Fundamentals of Corporate Finance
- A-3: Principle of Accounting
- A-4: Investment and Portfolio Analysis

# Group B: Trade management and Procedure

- B-1: Foreign Trade Policy and Law
- B-2: Foreign Trade Management: Documentation, Marketing, Finance, Shipping and Packaging
- B-3: Investment and Portfolio analysis
- **B-4: Management of Specific Products**

#### **Other Instructions**

Every student shall prepare a synopsis and literature review in the 5<sup>th</sup> semester relating to a dissertation work to be done in the last semester. The student must choose a topic limited to her/his optional papers. The HOD shall certify that each student has submitted synopsis and literature review at the time of sending the internal marks. The synopsis should be initially admitted by the internal faculty committee constituted by the HOD.

- 1. Internal Assessment would follow the existing UG system in the University concerned
- 2. 50% of questions in the question paper shall be numerical or application type questions.
- 3. Regular classes should have duration of 6 hours per working day. Seminars and presentations shall be done in the 6<sup>th</sup> hour.

4 The field work and internship shall be held during the end semester holiday of fourth and fifth semesters. It should address actual issues in industry and business.

5 The contents of every course shall be evaluated and reviewed revised by the Board of Studies after one year of the introduction.

# Semester I

# **Core I – Micro (Applied) Economics I**

## No.of credits : 5

#### No.of Hours : 108

# Learning objective

The course is intended to provide the students in an understanding of the concepts and methods of microeconomics. The broad objectives of the course is to equip the students themselves in a comprehensive manner with the various aspects of the traditional Microeconomic theory and to introduce them to practical applications of microeconomics.

#### 1. Introduction

The Basic Micro- Economic Problem of Scarcity and Choice- Market and Price Mechanism -Constructing a Model, optimization and Equilibrium -The Demand Curve- The Supply Curve - Market Equilibrium – Elasticity of demand- elasticity of supply- Comparative Statics - Disturbances to equilibrium- Applications of demand and supply: price rationing, price floors, consumer surplus.

#### **II.** Consumer Theory

Consumer choice- perfect substitutes- substitutes and complements- consumer preferences- cardinal utility- equilibrium- ordinal utility- indifference curves nature types - budget constraint – equilibrium- corner solutions- Price effect- decomposition of price effect into income effect and substitution effect- for normal goods, inferior goods and Giffen goods-Hicks's method – Slutsky's method. Revealed Preference theory- Consumer behavior under Risk and Uncertainty

#### **III. Production and Costs**

Production: behaviour of profit maximising firms, production process, production functions: Cobb Douglas, CES and Fixed coefficient type, Translog production function. Law of variable proportions, choice of technology, isoquant and isocost lines, cost minimizing equilibrium condition.

Costs: costs in the short run, costs in the long run, revenue and profit maximizations, minimizing losses, short run industry supply curve, economies and diseconomies of scale, long run adjustments, modern theory of cost.

#### **IV. Markets**

Classification of Markets. Various types of Markets.- Perfect competition- featuresequilibrium- **Monopoly:** Measurement of Monopoly power. Equilibrium of a Firm under Monopoly. - Price Discrimination under Monopoly, different types. Comparison of monopoly and perfectly competitive market outcomes. Regulation of Monopoly Power. **Imperfect Competition:** Monopolistic Competition, Price and Non-price competition, Equilibrium. Product Differentiation, Selling Costs and Excess Capacity. **Oligopoly**: Basic market structure, Non-collusive oligopoly (Models of Cournot, Bertrand, Stackelberg, Chamberlin and Sweezy) Collusive oligopoly, Cartels, Price and Output Determination, Simple games of complete information, Concept of Nash equilibrium.

#### **Recommended Books:**

 Varian, Hal (1996): Intermediate Microeconomics, W.W. Norton and Company, New York.
Hirschleifer J and A. Glazer (1997): Price Theory and Applications, Prentice Hall of India, New Delhi.

3. Stigler, G (1996): Theory of Price, Prentice Hall of India, New Delhi.

4. Sen, A.(1999): Micro Economics: Theory and Applications, Oxford University Press, New Delhi.

6. Kreps, David, M (1990): A Course in Microeconomic Theory, Princeton University Press.

7. Koutsyannis Microeconomics

8. Andreu Mas Collel, Michael D. Whinston and Jerry R. Green Micro Economic Theory OUP

# CORE II MACRO ECONOMICS (APPLIED) I

#### No.of credits : 5

## No.of Hours : 108

## Learning objective

The purpose of this paper is to provide an overview of the economy and to understand how an aggregate economy works. It explains the macroeconomic variables that are crucial for understanding the development of an economy.

#### Module I- Introduction to macro economics

Introduction- subject matter – macroeconomic variables –static dynamis, equilibrium, disequilibrium stocks, flow- Ideological issues ( concerning government intervention v/s free-market policies) ( 10 hours)

#### **Module II- The National Accounts**

National income concept- accounting procedure CSO estimation - concepts- Other macroeconomic aggregates-Identities in NI accounting-Real and nominal GDP-GDP, economic development and welfare-Green GNP-Gross National Happiness (15 hours)

#### Module III- Theoretical foundations of macroeconomics

The classical school – postulates of classical school- classical model with and without savings and dynamics in the model- Says Law- the quantity theory and its restatement by Friedman - The classical dichotomy-Homogeneity postulate-Say's Identity and Equality (25 hours)

#### Module IV - The simple Keynesian model

The simple Keynesian model-The principle of effective demand and Keynesian economics- -The Keynesian cross model of income determination up to four sectors-multiplier and its dynamism-Consumption function- its attributes - hypotheses- inter temporal choice (30 hours)

#### **Recommended books**

- 1.N. Gregory Mankiw "Macroeconomics", Worth Publishers 7th editon 2010
- 2. Richard T.Froyen Macroeconomics, Pearson Publishers, 2<sup>nd</sup> edition 2005
- 3. Nicoli Nattrass and G.Visakh Varma "Macroeconomics Simplified- Understanding
- Keynesian and Neoclassical Macroeconomic systems", Sage Publishers, New Delhi
- 4. Vanitha Agarwal Macro Economics, Pearson Publishers

#### **CORE III – STATISTICAL METHODS IN ECONOMICS I**

#### **OBJECTIVE**

Many issues can be analysed with the help of numerical data. What is the impact of increased deficit financing on inflation. Why does Air India not earn profit in recent years? What are the determinants of unemployment in India? What will be the probable impact of FDI inflow to a country? Similar questions are answered by Data analysis. This is the main purpose of introducing statistics here.

#### **MODULE I**

Introduction to Statistics, Population and Sample, Collection of Data, Various methods of data collection, Census and Sampling, Methods of Sampling- Simple Random Sampling; Stratified Sampling, Systematic Sampling. Types of data, Classification and Tabulation, Diagrams and Graphs - Bar diagram, Pie diagram, histogram and ogives, Lorenz curve.

#### **MODULE II**

Measures of Central Tendency – Mean; Median; Mode, Partition values (Concepts only), Measures of dispersion – Range; Standard deviation, Coefficient of variation, Moments, Skewness-Pearson and Moment measures, Kurtosis-Moment measure.

#### **MODULE III**

Correlation – Scatter diagram, Types of correlation, Coefficient of correlation – Karl Pearson's and Spearman's rank correlation, Regression – regression lines and regression coefficients. Use of Computer for the computation of correlation and regression.

#### **MODULE IV**

Index Numbers – Definition and uses, Simple Index Numbers; Weighted Index Numbers – Laspeyer's, Paasche's and Fisher's Ideal Index Numbers, Cost of Living Index Numbers-Family Budget Method, Aggregate Expenditure Method. Time series analysis – components of time series, Measurement of trend using graphical, semi-average, moving average, least-square methods.

Note: Review exercises should be based on the recommended books.

Each module should have at least two assignments.

#### **REFERENCES:**

1. David Freedman, Robert Pisani, Roger Purves And Ani Adhikari: Statistics, (Second Edition) Norton.

2. Astana : Statistics (With The Use Of Spss)

3 Gupta, S P : Statistics Methods, Sultan Chand & Sons

4. Douglas A. Lind, William G. Marchal, Samuel A. Wathen : Statistical Techniques in Business and Economics (15<sup>th</sup> Edition), Mc GrawHill.

#### **CORE IV – MATHEMATICS IN ECONOMICS I**

#### **Course Objectives**

To prepare students to use a wide range of mathematical techniques used in economic analysis, to impart an initial understanding of economic modelling to develop necessary problem solving and analytical and essential mathematical skills to read and understand current journals and articles in economics.

# Module 1

Elementary aspects of logic-propositions, implications, necessary and sufficient conditions. Mathematical proofs-direct, indirect and proof by contradiction. deductive and inductive reasoning(concepts only). Set theory-set membership-set operations-Venn diagrams. Mathematical modeling in economics-two dimensional model of consumer choice and multi dimensional model of consumer choice

# Module II

Calculus- functions-increasing and decreasing functions-linear functions-slope of a linear function-economic interpretation of the slope- non-linear functions. Differentiable and non-differentiable functions-continuous and discontinuous functions. limits and continuity. Derivatives-rules-product rule-quotient rule-chain rule- differentiation of exponential, logarithmic and implicit functions.

# Module III

Second order derivatives-convex, concave, point of inflexion, maxima-minima-partial differentiation-first order-second order –applications -production functions-MRTS-cost functions. Integration-power rule- exponential function-by algebraic substitution-definite integral-area under a curve-consumer and producer surplus-income distribution-integration by parts

# Module 1V

Linear algebra-systems of linear equations-vectors- geometric representation- vector operationsscalar product- matrix operations-multiplication-transpose-determinants of order 2 and 3cofactors-inverse-cramers rule- input-output model -IS-LM model.

# **Recommended books**

- 1. R G D Allen, Mathematical Analysis for Economics
- 2. Chiang A C ,Fundamental methods of mathematical economics, Mcgraw Hill
- 3. Henderson and Quandt, Micro economic theory: a mathematical approach
- 4. Simon and Blume, Mathematics for Econiomists :Viva –Norton student edition
- 5. Sydsaeter and Hammond, Mathematics for Economic Analysis, Pearson
- 6. Hamdy Taha, Operations Research
- 7. Dowling, Mathematical Economics, Schaum Series.
- 8. Avinash Dixit, (1990), Optimization in Economic Theory, (2<sup>nd</sup> edition)

# **Additional readings**

1. Bertrand Russel (2012), Principles of Mathematics, Rutledge (special Indian edition)

# 2. Davis and Hersh (1998), The Mathematical Experience, Mariner Books.

#### **SEMESTER II**

# Core V – Micro (Applied) Economics II

#### Module I: Theory of Distribution and factor pricing

Marginal productivity theory of distribution- demand supply approach- perfect competition. Imperfect competition- Product Exhaustion theorem. (Euler's Theorem)- modern theory of rentquasi-rent-wage differentials-collective bargaining-interest-classical theory-profit-riskuncertainty- and innovation

#### Module II: Welfare Economics

Piguo's Welfare Theorem - Pareto Optimality - Social Welfare Function, Compensation Criteria. Arrow's Impossibility Theorem.

Consumer Surplus- Producer Surplus- Market Efficiency- Deadweight Loss of Taxation.

#### Module III Economics of Public Sector

Concept of externalities- Coase theorem- Production Externalities. Command and Control Regulations- Economics of Natural Resources

#### Module IV Poverty, Inequality and Discrimination

Economics of Discrimination- Determinants of Equilibrium Wages- Measurement of inequality-The political Philosophy of Redistributing Income- Policies to Reduce Poverty- Asymmetry of Information

#### **Recommended Books:**

1.Varian, Hal (1996): Intermediate Microeconomics, W.W. Norton and Company, New York. 2. Hirschleifer J and A. Glazer (1997): Price Theory and Applications, Prentice Hall of India, New Delhi.

3. Stigler, G (1996): Theory of Price, Prentice Hall of India, New Delhi.

4. Sen, A.(1999): Micro Economics: Theory and Applications, Oxford University Press, New Delhi.

6. Kreps, David, M (1990): A Course in Microeconomic Theory, Princeton University Press.

7. Koutsyannis Microeconomics

8. Andreu Mas Collel, Michael D.Whinston and Jerry R.Green Micro Economic Theory OUP

9. Microeconomics principles and policy, Baumol and Blinder

# CORE VI – MACRO (APPLIED) ECONOMICS II

#### Module I Investment

Investment – determinants of investment- accelerator theory of investment- investment theoriesclassical, neoclassical and Keynesian theory of investment -Inflation and interest rates-The structure of interest rates-Inflation-indexed bonds

#### Module II ISLM Model

The ISLM model up to three sectors-Fiscal and monetary policy in the ISLM model-Numerical excercises.

#### Module III Inflation and Unemployment

Inflation- inflationary gap – inflation and unemployment- Phillips curve- Long run Phillips curve modified Phillips curve by Tobin- Okun's law- sacrifice ratio - -Business cycle- multiplier accelerator theory – political business cycle theories.

#### Module IV Post Keynesianism

Monetarism- New classical macroeconomics-Supply side economics-Real business cycle theory-Neo-Keynesianism- New Keynesian macroeconomics- -Endogenous growth model (main postulates alone may be discussed)

## **Essential readings**

- 1. N. Gregory Mankiw "Macroeconomics", Worth Publishers 7<sup>th</sup> editon 2010
- 2. Richard T. Froyen Macroeconomics, Pearson Publishers, 2<sup>nd</sup> edition 2005
- 3. Nicoli Nattrass and G.Visakh Varma "Macroeconomics Simplified- Understanding Keynesian and Neoclassical Macroeconomic systems", Sage Publishers, New Delhi
- 4. Vanitha Agarwal Macro Economics, Pearson Publishers

# **CORE VII – STATISTICAL METHODS FOR ECONOMICS II**

#### **OBJECTIVE**

Apart from the general objective stated in statistics I, this course enables students to know the various aspects of sampling and tests of significance.

#### Module I

Probability Concepts, Approaches to Probability - Classical, Statistical and Axiomatic, Addition theorem, Conditional Probability, Independence of events, Multiplication theorem, Baye's Theorem and its applications.

# **MODULE II**

Random Variables -Discrete and Continuous, Probability Distributions, Expected value, Theoretical Distributions: Binominal, Poisson and Normal. Central limit theorem and its applications.

# **MODULE III**

Testing of hypothesis -null and alternative hypothesis, Type I and Type II errors, Critical Region, Significance level, P-value, One sample Tests – test concerning population mean and proportion, Two sample Tests – test concerning population means (dependent and independent samples).

# MODULE IV

F-test and Analysis of Variance (one-way ANOVA), Test for significance of correlation coefficient, Chi-Square test for independence. Use of Computer for the computation of ANOVA table.

#### **REFERENCES:**

1. Douglas A. Lind, William G. Marchal, Samuel A. Wathen : Statistical Techniques in Business and Economics (15<sup>th</sup> Edition), McGrawHill.

2. David Freedman, Robert Pisani, Roger Purves And Ani Adhikari: Statistics, (Second Edition) Norton.

3 Gupta, S P : Statistics Methods, Sultan Chand & Sons

#### **CORE VIII : MATHEMATICS IN ECONOMICS II**

#### Module I

Linear algebra-linear independence-rank of a matrix-Eigen values-diagonalization

#### Module II

Functions with two or more variables-geometric representation-Surfaces in 3D space-budget plane –partial derivatives with two variables-applications-productio functions

#### **Module III**

Optimization –convex and concave functions-quasi convex and quasi concavity (concepts only) unconstrained optimization-constrained optimization-Lagrange multiplier method-envelope theorem (idea only)

# Module IV

Difference equations- first order and second order equation with constant coefficients and differential equations-first order and second order equations-separable- with constant coefficients-applications-growth model-multiplier-accelerator interaction. Theory of games-simple and mixed strategy-saddle point-zero sum game-Nash equilibrium

#### **Recommended books**

- 1. R G D Allen, Mathematical Analysis for Economics
- 2. Chiang A C ,Fundamental methods of mathematical economics, Mcgraw Hill
- 3. Henderson and Quandt, Micro economic theory: a mathematical approach
- 4. Simon and Blume, Mathematics for Econiomists : Viva Norton student edition
- 5. Sydsaeter and Hammond, Mathematics for Economic Analysis, Pearson
- 6. Hamdy Taha, Operations Research
- 7. Dowling, Mathematical Economics, Schaum Series.
- 8. Avinash Dixit, (1990), Optimization in Economic Theory, (2<sup>nd</sup> edition)

#### **Additional readings**

- 1. Bertrand Russel (2012), Principles of Mathematics, Rutledge (special Indian edition)
- 2. Davis and Hersh (1998), The Mathematical Experience, Mariner Books.

# Semester III

# **INTRODUCTION TO ECONOMETRICS**

#### Learning objectives:

- To give the students an understanding of the meaning and methodology of econometrics
- To enable to students to understand and apply the technique of linear regression
- To enable to students to understand hypothesis testing, estimation, of and the importance of distribution of error term

#### Module I

Econometrics- Meaning and methodology and applications. Data types -nominal, ordinal, interval and ratio, Different types of variables- independent, dependent, discrete, continuous. Relation between variables- Linear relation, non linear relation. Measures of linear relations-scatter plot, correlation, regression, Mathematical representation of simple regression Equation-linearity, slope, intercept, errors. Population regression function, Sample regression function.

Simple linear regression equation- Geometrical interpretations, functions that can be converted into linearity, two regression equations (y on x and x on y). Relation between variables-Population and sample covariance, correlation and coefficient of determination, prediction.

# Module II

The method of OLS—Least square theory, Assumptions, Estimation of simple linear regression coefficients. Advantages of OLS—Mathematical Properties of OLS estimators—Statistical properties of OLS, Gauss-Markov theorem and classical linear regression. Reliability of OLS estimators and the standard error Goodness of the fit and R-square, interpretations of regression coefficients.

# Module III

Hypothesis testing of and the importance of distribution of error term—The assumptions of error term—The properties of OLS estimators and the BLUE

# Module IV

Point and interval estimations—confidence interval of slope and intercept coefficient sand variance of error term (sigma square) —Hypothesis testing of OLS estimators, ANOVA table of regression, "t" test and "F" test, significance and p values—Hypothesis test of variance of error term—Statistical versus practical significance. The problem of prediction— mean and individual values

# **Basic Readings**

- Gujarathi, D (2003) Basic Econometrics, 4th Edition, New York: McGraw Hill
- Wooldridge, Jeffrey M, Introductory Econometrics, (2002) Thomson, South Western, USA

# Other readings

- Gujarati, damodar (2011), Econometrics by example, I edition, Palgrave- McMillan.
- Stock, James and Watson, mark(2012) Introduction to econometrics, II edition, Pearson, Addison Wesley
- Brooks, Chris(2012), Introductory Econometrics for finance II edition, Cambridge
- Koutsoyiannis A (1977), Theory of Econometrics, Palgrave, New York.
- Maddala G S (2002), Introduction to Econometrics, 3rd edition, John Wiley & Sons, New York`
- Ramanathan, Ramu (2002), Introductory Econometrics with Applications, Thomson Learning Inc, Singapore.

- Intrilligator, M. D (1980)Econometric Methods, Techniques and Applications Prentice Hall,
- Engle wood Cliffs, N. J Klein LR (1974) A Text Book of Econometrics 2<sup>nd</sup> Ed., Prentice Hall, Engle wood Cliffs, N. J
- Kmenta, Jan(1976), Elements of Econometrics, 2<sup>nd</sup> ed. Macmillian, New York.
- Mukherijee, Chandan, Howard white and Marcwuyts (1998) Econometrics and Data Analysis for Developing Countries, Rutledge New York.

# **Core X - Development and Environmental Economics**

# Learning objectives

- 1. To enable the students to understand the theories and strategies of growth and development
- 2. To impart knowledge about the issues relating to sustainable development, environmental protection and pollution control measures

# Module I

Economic growth and development: Meaning and indicators of economic growth and development- GNP- Per capita income- PQLI-HDI-HPI- Sen's capabilities approach- Features of underdevelopment- Factors affecting economic development (capital, labour and technology)-Development Gap- Measuring poverty - Theories of economic growth and development: Classical- Marxian- Schumpeterian- Stage theory- Structuralist- Dependency- and Market friendly approaches (concepts only).

# Module II

Approaches to economic development: the vicious circle of poverty low level equilibrium trap Critical minimum effort thesis - Big push- Lewis model - Dualistic theories- Balanced versus unbalanced growth strategy - Cost benefit analysis. (33 hrs)

# Module III

Human resource development - Concept of intellectual capital - Population growth and economic development- Malthusian theory of population- Theory of demographic transition- Issues of good governance. (15 hrs)

# Module IV

Environment- Economy linkage- environment as a necessity and a luxury - Environment as a public good - Global environmental issues and concerns- Causes for environmental degradation-Market failure for environmental goods – The tragedy of commons – Sustainable development -

Property right approach to environmental problems – Valuation of environmental damages-Pollution- Control of pollution: Policy instruments and legislation -Environmental accounting.

# Readings

- 1. Todaro and Smith Economic Development, Pearson Education, New Delhi (recent edition)
- 2. Thirlwall, Growth and Development with special reference to Developing Countries. (recent edition) Palgrave Mc Millan, New Delhi.
- 3. Benjamin Higgins (1968), Economic Development, (recent edition) Universal book stall, New Delhi
- 4. Meir, G.M. (2007), Leading Issues in Economic Development, Oxford University press, New Delhi.
- 5. Kartar Singh and Anil Shishodia (2007), Environmental Economics: Theory and Application, Sage Publications, New Delhi.
- 6. Nick Hanley et al (2007) Environmental Economics: Theory and Practice, Palgrave Mcmillan

# **Core XI : International Trade (Applied) : Theory & Policy.**

The link between countries is increasing day by day, especially in terms of trade. There are many theoretical and practical explanations for this phenomenon. The students after studying this programme, will get better understanding about why trade, what are the gains from trade and what are the majors policy instruments executed in controlling trade.

# MODULE I

Sovereignty and trade mercantilist and classical views on production, consumption and trade in a single commodity production and consumption in general equilibrium prices, outputs and national product. Trade and general equilibrium determination of International Prices -gains from trade – offer curves and International Equilibrium.

# **MODULE II**

Sources of comparative advantages: production and trade in the Ricardian Model - Wages, Prices, and Comparative Advantage. Trade with many countries and goods factor endowments and goods factors endowments and comparative advantage. The HO Theorem: Production and Trade in HO Model. The Rybczynsky Theorem Factor Prices, Goods prices and trade in HO Model. Stolper – Samuelson Theorem Factors price equalisation Theorem – many countries and goods – Natural resources, skills and human capital.

# **MODULE III**

Factors Prices and Factors Substitution – Modified Riciardian Model Economic Growth and Ricardian Model – Modified HO Model – Economic Growth and HO Model - Intra industry trade. Trade between Monopolised National Markets – Trade with Monopolistic competition – Innovation and trade – factors movement, capital movement in the modified Ricardian HO models – multinational production and translational taxation

# **MODULE IV**

Trade Policy: instruments of Trade Policy in partial and general equilibrium – Nominal and effective tariff – tariff and the distribution of the gain from trade – tariffs and the distribution of domestic Income – Tariffs & domestic Distribution – Non – Tariff barriers -Evolution of Trade Policy

# **REFERENCES:**

- Peter B Kenen: The international Economy (3<sup>rd</sup> Edition) 1996, Cambridge University Press.
- BO Sodersten and Geogffrey Reed: International Economics (3<sup>rd</sup> Edition) 1994, The Macmillan Press Ltd.
- Paul Krngman, International Economics Mourice Obstfeld (Second Edition) Harper Collin Publishes, 1981
- Salvatore International Economics Eighth Edition Wiley & Sons , 2004

# **Core XII – Public Economics**

# Learning objectives

The purpose of this course is to give an understanding of the role of state in fostering the economic activities via budget and fiscal policies. This course enables the students to understand the various issues between Central and State governments.

# **Module I- Introduction to Public Economics**

Nature and scope of Public Economics- Comparison of public and private finance- Public goods versus private goods- Role of state in economic activities- Market failure and role of government- Principle of maximum social advantage- The role of fiscal policy (18 hrs)

# Module II - Public Revenue

Public Revenue - Tax and non tax revenue - Taxes - Types and cannons - Principles of taxation - Benefit principle and ability to pay theory - Impact and incidence of taxation - Effects of taxation - Concept of taxable capacity - The Laffer curve- Budget and its role. (18 hrs)

# Module III Public expenditure and Public Debt

Meaning- Cannons of public expenditure – Pattern and Growth of public expenditure – Effects – Public debt – Types – Debt redemption – Burden of public debt – Public debt in India. (18 hrs)

# Module IV Fiscal federalism

Meaning and importance- Vertical and horizontal equity in fiscal federalism – Fiscal federalism in India – Finance commission - Theory of grants- Resource transfer from union to states – Criteria for transfer of resources –Recommendations of the latest three Finance commissions State finance commission and Panchayati raj institutions. (18 hrs)

# Readings

- 1. Harvey Rosen, (2008) Public finance, Mc Graw Hill, New York
- 2. Bernard P Harbar, Modern Public Finance (Richard Irwin Inc.)
- 3. H.L Bhatia, Public finance (recent edition) Vikas publishing house, New Delhi
- 4. B.P. Tyagi, Public finance, (recent edition) Jai Prakash Nath and co., Meerut
- 5. Musgrave and Musgrave (1984) Public finance in theory and practice, McGraw hill, New Delhi (reprint edition)
- 6. Joseph Stiglitz, Economics of public sector, (recent edition) Norton, New York

# **Core XIII : Money and Financial Markets**

# Learning objective

Monetary and financial institution plays a very crucial role in the working of an economy. A student is required to know the theory and working of money and financial markets. This paper is designed to provide the undergraduate students a basic knowledge in the operations of money and financial system in general and in India in particular.

# Module 1 Money and Exchange

Money in Economic system- Functions of Money-Evolution of Money-Types of Monetary standards-Efficiency in Exchange-Characteristics of Real – Exchange Economy and Monetary Economy. Money and Financial system – Properties of financial assets- selection criteria-Role of financial markets-Functions of financial Intermediaries - Financial intermediation and capital accumulation. Monetary policy- Goals and objectives-Instruments of credit control-Transmission process-Monetary policy in closed and open economies

# Module 2 Theory of Money

Demand for Money: Quantity theory- Classical, Cambridge and Keynesian Versions-Motives and Determinants of Demand for money-Theory of Liquidity Reference Transaction Demand, Precautionary demand and speculative demand-Interest elasticity-Portfolio Analysis of demand for money-Friedman's reformulation of the Quantity theory. Money supply analysis: money stock measures-velocity of circulation on money determinants-Money multiplier-Money supply and Balance of payments.

# Module 3 Banking system

Commercial banks-functions and operations-credit creation-structure of balance sheet-Bank nationalization in India- Reforms in the Indian Banking system.- Central bank-Role and functions-Monetary control-RBI functions and working-developments in Indian banking.- Cooperative banks-Regional rural banks-Development banks- new generation banks.

# Module 4 Money and capital market

Money market-structure and functions-Features of Indian money market-Role of unorganized money markets in India- Capital market-primary and secondary markets-Functions and instruments SEBI and capital markets- Foreign Exchange market-Exchange rate movements-Determinants –Hedging operations-convertibility in current and capital account

# References

- 1. Suraj B. Gupta, Monetary Economics, S Chand & Co Delhi
- 2. L M Bhole, Financial Institutions and Market
- 3. V M Avadhani, Studies in Indian Financial System
- 4. Myron B Glovin, Marie Elizabeth Sushta, Money and Economic Activity
- 5. Michael R Bayes and Denni S W Jansen, Money, Banking and Financial Markets All India Traveller Book Seller, New Delhi.
- 6. Mervyn K. Levis and Paul D. Mizen, Monetary Economics, OUP
- 7. Rakesh Mohan, Growth with Financial Stability, OUP

# SEMESTER IV

# **Core XIV: Advanced Econometrics**

# Learning objectives:

- To introduce to students the extensions of the classical regression model and the changes in theoretical treatment involved when some of the basic assumptions of classical regression are violated
- To introduce to students the theory and practice of multiple regression and the basics of three variable model

# Module I

Regression models—Other functional forms of regression models, log linear, semi log and reciprocal models, Cobb Douglas production function. Cross sectional data, time series data, and applications of regression in economic situation

# **Module II**

Multiple regression and the basics of three variable model, ANOVA table—Partial regression coefficients—Interpretations of the regression coefficients from linear, semi –log, log-liner regression models. (Wooldridge. 4ed). The problem of multicollinearity. The matrix approach—The general k variable linear regression model—Regression assumptions in matrix notation—OLS estimators and the BLUE property - Multiple coefficient of determination and Multiple coefficient of correlation , ANOVA table—Adjusted R square—Simple and partial correlation coefficients. Impact on dependent variable of explanatory variables— specification bias

# Module III

Regression and analysis of variance—Comparison of regression analysis and analysis of variance—Testing the overall significance of the model and significance of individual coefficients( "F" and "t") test - Relationship between R square and "F" Adjusted R-square - interpretations of multiple regression outputs of standard softwares like Excel, SPSS. Marginal contribution of explanatory variables—Restricted least squares and testing linear equality restrictions

# Module IV

Multicollinearity, nature, estimation in its presence, detection and remedial measures— Hetroscedasticity, nature, estimation in its presence, detection and remedial measures— Autocorrelation, nature, estimation in its presence, detection and remedial measures

#### Readings

• Introductory Econometrics: A Modern Approach by J.M. Wooldridge. 4ed. South Western Cengage learning.

- Gujarathi, D (2003) Basic Econometrics, 4th Edition, New York: McGraw Hill
- Wooldridge, Jeffrey M, Introductory Econometrics, (2002) Thomson, South Western, USA

# Other readings

- Gujarati, Damodar (2011), Econometrics by Example, I edition, Palgrave- McMillan.
- Stock, James and Watson, mark(2012) Introduction to econometrics, II edition, Pearson, Addison Wesley
- Brooks, Chris(2012), Introductory Econometrics for finance II edition, Cambridge
- Koutsoyiannis A (1977), Theory of Econometrics, Palgrave, New York.
- Maddala G S (2002), Introduction to Econometrics, 3rd edition, John Wiley & Sons, New York`
- Ramanathan, Ramu(2002), Introductory Econometrics with Applications, Thomson Learning Inc, Singapore.
- Intrilligator, M. D (1980)Econometric Methods, Techniques and Applications Prentice Hall, Engle wood Cliffs, N. J
- Klein LR (1974) A Text Book of Econometrics 2<sup>nd</sup> Ed., Prentice Hall , Engle wood Cliffs, N. J Kmenta, Jan(1976), Elements of Econometrics, 2<sup>nd</sup> ed. Macmillian, New York.
- Mukherijee, Chandan, Howard white and Marcwuyts (1998) Econometrics and Data Analysis forDeveloping Countries, Rutledge New York.

# **CORE XV : OPERATIONS RESEARCH**

# **OBJECTIVE**

Planning and decision making are very important in military operation research was initially developed in the context of defence strategy. This was later become popular in the academic world, especially in business and industry. Hence this course is introduced to empower students in the realms of planning and decision making.

# MODULE I

Introduction : Meaning and scope of Operations research (OR) Applications in Business and economics-limitations of OR

Linear Programming problem (LPP) mathematical formulation of LPP- solution to the LPP using graphic method, simplex method and Big B method (up to 3 variables) duality in LPP- concept and interpretation

# **MODULE II**

Transportation Problem: Description and Formulation of transportation problem –initial basic feasible solution by 1) North West Corner Rule 2) Least cost method 3) Vogel's Appoximation method- Assignment problem – Introduction balanced and unbalanced assignment problem, solution using Hungarian method.

# MODULE III

Project Analysis: basic concepts and definitions, Gannt charts, CPM and PERT networks, Critical Path Calculations.

Inventory models, costs in inventory management deterministic inventory models- EOQ Model with instantaneous replenishments and constant rate of Demand

# MODULE V

Theory of Games: Basic concepts and definitions, Two person zero sum game , saddle point pure and mixed strategies Optimal solution of the game with saddle point Reducing the size of the game using dominance property, optimal solution to a  $2 \times 2$  game without saddle point, graphical solution to  $2 \times n$  and mx2 games

# **REFERENCES:**

- Taha H.A 2007 Operations research 8<sup>th</sup> Edition Pearson
- Taylor B.W 2013 Introduction to management Science, 11<sup>th</sup> edition Prentice Hall
- Sharma J.K 2013 Operations research , Theory and Applications 5<sup>th</sup> Edition Laxmi Publications New Delhi
- Hillier F.S and Lieberman G.J 2010 Introduction to Operations Research 9<sup>th</sup> Edition Mc Graw Hill

# **Core XVI : Computer Application for Economics Analysis**

# Learning objective

The paper attempts to provide a solid foundation of the use of computers among students and to prepare them to be equipped with the data entry and its analysis. Preparation of project and analysis of the data using statistical packages can be mastered after studying this paper.

# **Module 1 : Basics of Computers**

Computer fundamentals, Organisation and components of computer Hardware-CPU; Memory; Disk drives, Input and Output devices; Keyboard; Mouse and VDU; Computer peripherals like printer, scanner, digitizer etc. Computer software- Operating system, application software and packages.

# Module 2 Use of computer for Office Automation

Text editors and work processor software packages; Operative familiarization, MS-word, Concept and use of spread sheet; Operation and use of MS\_excel; Basics of Data base; Table; Records and fields; Data entry and query processing; Operative principle of MS access; Document formation and presentation through MS Power point.

# Module 3 Data analysis, Statistical Processing Techniques

Basics of statistical functions and analysis- Mean, Median, Mode, Variance, Standard Deviation; Covariance, Skewness. Statistical package handling and command description of SPSS(Statistical Package for Social science).Series ,groups, tables cross tables, diagrams (Line,pie and Bar)- Regression, Correlation analysis (simple, partial and multiple), Time series-Trend, Growth models-Forecasting, ANOVA- Table-Test of significance- R<sup>2</sup>, 't', F values.

# Module 4 : Internet

Internet Addressing-IP address, Domain, URL- Types of connection : Dial-up ,ISDN, Leased line- How to get internet access: Internet Service providers-Web pages, Web browsers, saving information, viewing a Document Offline-searching the web-search engines: Google, Yahoo-Emails-create email account, E-mail address- sending, receiving, Managing mails: Composing, Address book, Attachments, Replying for messages, Forwarding messages, Email ethics-FTP basics: Downloading a file from a FTP server.

# **Module 5 Applications to Finance & Business**

On line banking, ATM's, Electronic stock exchange ; Electronic trading, Data sharing and decimation ; electronic transaction; Document delivery; Authentication and validation transaction processing Electronic trading and marketing; On line shopping and malls,B2B,B2C,C2B and G2B models and their applications; Document and transaction security and digital signature integrated transaction on mobile platforms.

Recommended readings

# Core XVII: International Finance and Trade Regulatory System

# Learning objectives

The course on international finance and trade regulatory system provides to show the monetary side of international economics. It explains how international accounts are maintained, how equilibrium is attained and how a regulatory system functions in international economy

# **MODULE I**

# **Balance of Payments and Foreign exchange Policies**

Introduction-accounting principles- accounting balance and disequilibrium in BOP-BOP accounts-current account-capital account-Recording Individual transactions-current account and national income – cash flows and foreign exchange market- functions of foreign exchange markets-foreign exchange rates- equilibrium rates- arbitrage- spot and forward risks hedging speculation off shore financial markets- determination of exchange rates- purchasing power parity- mint parity monetary approach to BOP under fixed exchange system and flexible exchange system.

# Module II

# **Exchange Rate and Current Account**

Elasticity Approach- Marshall – Learner –J curve effect - Robinson Condition- Nominal and Real exchange rate- Income effects of changing exchange rate-measuring the impact of exchange rate changes – the Absorption Approach and Optimal Policy –Open economy adjustment policies-ISLM BP modes under fixed and flexible exchange system The Assignment Problem – Optimal - The Fleming-Mundell model- Interest rates and capital flows- capital mobility and exchange rate flexibility-capital mobility and optimal policy under a pegged exchange rate-capital mobility,

# **MODULE III**

# Stocks, flows and Monetary Equilibrium

Two views of BOPs – origin and issues – David Hume and Specie-flow of Doctrine – Deriving the basic proposition- Simple Monetary model – supply of money – money market and Bop – stocks, flows and dynamics in the monetary model – A monetary model of Exchange rate behavior - money stock and exchange rate – Testing the monetary model – Purchasing Power Parity – the law of ne price and PPP – neutrality of money and PPP

# **MODULE IV**

# Asset market dynamism

Asset Markets, Exchange rate and Economic Policy -Portfolio Balance sheet – equilibrium in goods market wealth and Exchange rate – equilibrium in asset market – an increase in foreign expenditure – behavior under pegged exchange rate – behavior under a flexible exchange rate – an open market purchase – analysis of devaluation with special reference to India.

# **MODULE V**

# Monetary system

The Evolution of Monetary System – Bretton Woods System – Monetary relation under Bretton Woods System – Dollar shortage – dollar Gult – System in Crisis – Monetary relation under flexible exchange rate - oil shock – the year of dollar weakness – the second oil shock – the year of dollar strength – managing the float -WTO Regime

# **REFERENCES:**

- Dominick Salvatore International Economics Eighth Edition Wiley Publishers
- Peter B Kenen: The international Economy (3<sup>rd</sup> Edition) 1996, Cambridge University Press.
- BO Sodersten and Geogffrey Reed: International Economics (3<sup>rd</sup> Edition) 1994, The M acmillan Press Ltd.
- Paul Krngman, International Economics Mourice Obstfeld (Second Edition) Harper Collin Publishes, 1981

# **Core XVIII: Analytical Indian Economy**

# Learning objectives

The paper on analytical Indian economy is an effort to introduce the different aspects of Indian economy, the development initiatives, the structure of Indian economy in terms of its sectors its progress, policy changes and reforms initiated. The last module attempts to assess the impact of reforms on poverty national income and inflation.

# Module 1

# Planning, Institutional Framework, Constraints and Role of the state

Colonialism and Under Development in India-Indian Economy at Independence-Planning in India-The problem of Development-Five Year Plans-12<sup>th</sup> Five Year Plan: Objectives, Targets and strategy-Political change and Intensification of controls of License-Permit Raj-The New Economic policy and the Role of the state- Demographic constraints: Integration between population change and Economic development-Highlights of 2011 census-Demographic aspects of development:

# Module ll

# Agriculture

Developments in Indian Agriculture: some Issues-The problem of productivity-PDS and food security- Reforms in Land system in Post Independent India-Modernizing Indian Agriculture: A review of critical policy issues-Green revolution-Farm Mechanization and Choice of Appropriate Technology-Agricultural finance in India-Agricultural Marketing and price policy-Indian Agriculture and Globalisation -India's Agricultural development policy-A viable Agriculture in the New International Trade regime- WTO on Agriculture in India-Agreements on Agriculture and India.

# Module III

# **Industry and Infrastructure**

Industrial development and policies since Independence-Industrial growth and diversification—Public sector in Industrial development-New Industrial policy-Disinvestment: strategies and Issues-Disinvestment commission-Infrastructure and Economic development-Industrial growth in the 80s: facts and some issues-Paradigm shifts in Industrial policy-

# Module IV

# **External sector**

Foreign Trade- direction composition and trnds in India's trade policy- and BOP-Foreign Trade policies and India's Development- Impact analysis of Unilateral and Global changes in Trade-EXIM policy statement- -Liberalization and changing patterns of Foreign Direct Investments- WTO :Doha round- Global Financial crisis and measures adopted by India-Globalisation and Indian Economy.

# Module V

# Growth, Employment and National Income

- A. Growth and structural change since 1950:Inequality and equity in the rapid growth process-Indian economy since 1980:Virtuous growth or Polarisation -The Economic performance of the states in the post reform period-Assessment of the Growth Experience:
- B. Poverty ,unemployment, Inequality and Inflation-Poverty and development policy-The Employment and Unemployment situation: an assessment- conflict between Employment and Inflation-
- C. Development, Inflation and Monetary policy-Prices and Food management -Sustainability of Growth-Growth Accounting-National Income : Trends and Structural Transformation.

# **References :**

- Uma Kapila : Indian Economy Since Independence Academic Publishers
- A.C Fernando Indian Economy Pearson
- Ashima Goyal (Ed) A Concise Handbook of the Indian Economy in the 21<sup>st</sup> Century, OUP, 2015
- Misra and Puri Indian Economy S.Chand Publishers

# Semester V

# ECH5COR19: Economy, System, State, Society and Physio-economics (Interdisciplinary)

# Objective

The comprehension of economic behavior is related to the structure of whole society. This course is intended to enable the students to study development process in the large canvass of sociology. They are also exposed to the link between Economics and Physics This makes the students to go beyond techniques and abstraction. They can obtain a broader view.

# MODULE I Sociology and Economic law

Economic sociology unbound -Sociology and Economics : Economic Theory and its sociological critique Rise of markets and economic development -The Heart of the Economy: Organisation and Corporation

Assignment:1) Document the relationship between Economics and Sociology in the context of India

2 )Prepare a brief report regarding the rise of Indian MNCs in the light of this module

# MODULE II

Economics, Inequality and Mobility - Great Experiment: Markets in the Shadows of Socialism-Brave New World: Critical Examination and Globalisation : the New Millennium.

Assignment : 1)Examine the content of this module in the context of inequality in India.

2) The role of India in a so called globalised world.

Module III

Meaning of Economic Analysis of Law – Efficiency vs Equity – Importance of Economic Analysis of Law

Competition Act – Intellectual Property Rights. MRTP Act, FERA, Consumer Protection Act, FEMA, Competition Commission, Finance Commission, Industrial Policy Resolutions, Excise and Customs Act, Environment Protection Act, FRBM Act, MNREGS, Minimum Wages Act.

# Module IV

Utility Physiology – history of human thermostat – hypothalamic chemistry – the Hypothalamus and Behavior – From Homeostasis to Economic Behavior – "Man Is a Tropical Animal" – adaptation – automatic limits: the frontier of physioeconomic behavior - strongly seasonal climates and Homeostasis.

# Reference

Hass, Jeffrey Kenneth (2007) Economic Sociology: A Introduction, Routledge

# ECH5COR20: INTRODUCTION TO RESEARCH METHODOLOGY AND FIELD WORK

# **OBJECTIVE**

Research is the best method of generation of knowledge and its application. This has to be done in a systematic manner. This course is designed to equip the students how to prepare for a basic designing for research in social science. The student will be able to formulate a problem and hypothesis which are fundamental to research. The techniques of sampling and data collection are also part of this course.

# **MODULE I**

Research: meaning Characteristics and Types of research; Steps in Research; Observation of Phenomenon; Formulating Research problem; Review of literature; formulation of Hypothesis or Research Questions; Design of study; selection of Tools and Data collection; Importance of sampling; procedure for data collection and use of instruments; analysis of Data; Presentation of results; interpretation of data and statement of conclusion; reporting research.

**ASSIGNMENTS:** All the candidates shall choose 5 to 10 special articles from the listed journals below and conduct a review of literature. They shall formulate hypothesis on the basis of review of literature. This should be documented for external inspection.

# **MODULE II**

Sampling – Types of Sampling– Criteria and Essentials of sampling. Methods of research – survey; case study; experimental; historical; field study; evolutionary; statistical; action; casual – comparative.

**ASSIGNMENT**: Every student shall prepare an assignment by linking an appropriate type of sampling and a method of research.

# MODULE III

Tools & Techniques in Descriptive research: Questionnaire and schedules, check list & Scales; Interview; Tests, Reliability and validity; observation, research ethics.

ASSIGNMENT: Preparation of a questionnaire that suits to the assignment in

# the first module.

# MODULE IV

Research Designs: Population; Identifying dependent, extraneous and independent variables; methods of measuring criteria; controlled variables; significance; Time frame of study & Confidence limits - Social Survey Techniques.

**ASSIGNMENT**: Prepare a research design for the proposed study in the first module. Conduct a field study based on the research design

**REFERENCE:** 

# **ECH5COR21: THEORY OF GAMES & GENERAL EQUILIBRIUM**

# Objective

Interdependence is the order of the day. It is necessary both at national and global levels. General equilibrium theory will enable the students to understand interdependence at all levels. The market mechanism has many imperfections including uncertainty. Understanding of game theory is very essential to act the backdrop of risk and uncertainty. This course is designed to empower students to take decisions in the context of global interdependence and imperfections.

# MODULE I

Introduction to General Equilibrium – interdependence in the economy – Walrasian system – Existence, uniqueness and stability of an equilibrium – graphical representation of general equilibrium – properties of general equilibrium – general equilibrium and allocation of resources – prices of commodities and factors – factor ownership and income distribution –gains from international trade – taxes in general equilibrium – other sources of inefficiency.

Assignments: Gains from trade and sources of inefficiency.

# MODULE II

General Equilibrium – extension of general equilibrium model: any number of household commodities and factor of production (Matrix Approach) - Arrow –Debrew Model – stability of general equilibrium – money and general equilibrium – Patinikin's System – Keynesian counter revolution -

# MODULE III

Welfare Economics – criteria of social welfare – growth of GNP as a welfare criterion – Benthaman's criterion – A Cardinalist Criterion – The Pareto Optimality Criterion – Kaldor Hicks Compensation Criterion – Bergson Criterion Social welfare function – Maximization of social welfare – derivation of the grand utility possibility frontier – determination of the welfare maximizing state – determination of the welfare maximizing output mix, commodity distribution and resource allocation – welfare maximization and perfect competition – Critique and Extension – Extension to many factors, products and consumers; corner solution; existence of commodity indifference curve; elastic supply of factors; joint and intermediate products; decreasing returns to scale; externalities in production and consumption; kinked isoquants; convex isoquants; Increasing returns to scale; indivisibilities in the production process.

# MODULE IV

Decision theory – dominance; beliefs; never weak best response's strategies – Strategic Form Games – dominance, Nash Equilibrium; mixed strategies.

# MODULE V

Extensive Form games; corresponding strategic form; welfare economics; behavioral strategies; backwards induction; sub game; perfect equilibrium - - game of incomplete information; normal form representation of static games of incomplete information; Bayerian Nash Equilibrium – perfect Bayesian equilibrium.

# MODULE VI

Repeated Game Falk theorem – Mechanism Design; Design of the optimal auction; the revenue equivalence theorem

# Reference

Martin J Oborne : An Introduction to Game Theory, OUP.

Mas. Colell A, Whiston M D and J R Green (1995): Micro Economic Theory, OUP

A. Koutsoyiannis : Microeconomics ; international edition Oritario

Robert H Frank : Microeconomics and Behavior, McGraw Inc. New york.

R W Clower, 'The Keynesian Counter Revolution: A theoretical appriasal' in the Theory of Interest, ed. F H R Hahn and F P R Breching (Macmillian, 1965)

# **ECH5COR22: Structure & Operations of Capital Market**

# Objective

Financial resources are an important ingredient for the development of the country. The students in Business Economics need to understand the structure, dynamism and development of the financial system of a country. This course is designed to train students in this direction.

Module I

Nature and Role of Financial Systems: Functions of a Financial System -Stages and the Structure of Financial System- Its Linkage with Saving And Investment –Financial Institutional Development since1947.

Financial Sector Reform in India- New Issue and Stock Market reforms-Government Securities Market Reforms-Banking Sector Reforms-External Sector Reforms -Flow of Funds.

Regulatory Authorities-The Reserve Bank of India: its Functions and Promotional Role – Structure, Objectives and Functions of the Securities Exchange Board of India.

*Assignment*: Make a comparative analysis of the roles and functions of RBI and SEBI. Each student can focus on a few issues their roles.

Module II

Financial Markets : New Issue Markets- Role of the New Issue Market- Method of Floating New Issues -Offer to Public Procedure- Intermediaries to the Issue- Trends in the New Issue Market-The Relationship of the New Issue Market and Stock Exchange.

The Secondary Market- Important Stock Market in India : National Stock Exchange (NSE); Bombay Stock Exchange (BSE) Mumbai; Over the Counter Stock Exchange (OTCEI); Inter – connected Stock Exchange (ISE)- Mechanics of Security Trading in Stock Exchanges-Development in the Stock Market- Options and Derivatives -Circuit Breakers-Settlement and Clearing - Financial Markets for short Term Funds.

Assignment : *Students shall be sent to one week training programme to Cochin Stock Exchange for one week intensive training programme* 

Module III

Dimensions for International Financial Market : Foreign Exchange Market: Nature, Participants and Trends in Exchange Market ; Types of Transactions; Trading Mechanism ; Foreign Exchange Risks; Developments in the Foreign Exchange Market

Foreign capital Flows : Factors Affecting International capital Flows; Types of Foreign Capital; Types of International Financial Instruments; Global Banking ; Multilateral Financial Intermediaries; Developments of Foreign capital into India

Assignment : Students can prepare a data analysis of any topic contained in this module.

Module IV

Financial Institutions : Commercial Banks - Co-operative Banks - Non-banking Financial Intermediaries : Non-bank Financial Companies - Small Savings, provident Funds & Pension Funds - Insurance Companies - Unit Trust of India and Mutual Funds - Development Banks-Financial Services – Pre and post-liberalisation Development of All These Institutions

*Assignment* : one week institutional training in one of the institutions mentioned in this module. The students can either take an actual problem of the institution or the general working of the selected institution.

References:

Preeti Singh : Dynamics of Indian Financial System Markets, Institutions & Services , Ane Books Pvt Ltd.

# <u>ECH5COR23</u>: OPTION 1 FROM GROUP A SEMESTER VI

#### **ECH6COR24: RESEARCH METHODOLOGY- INTERMEDIATE**

#### **OBJECTIVE**

The science of research methodology is rooted to logical reasoning and statistical procedure. A student should be able to develop better analytical skill if the incumbent is familiar with these two aspects of research. This course is designed to mould students in this direction.

#### MODULE I

Philosophical Roots of Social Research Issues in the Theory of Epistemology Empiricism Scepticism Agnosticism Cartesian Philosophy Rationalism Forms and types of knowledge Positivism Holistic Approach Deductive and Inductive Methods.

#### **ASSIGNMENT**

- 1. Examine the nature and predictability of laws in Economics.
- 2. Trace a two or three theories in Economics that follow deductive and inductive methods of conclusion.

#### **MODULE III**

The use of probability when it is applied role of expectations purpose of various distributions need for testing and hypothesis practical application of various tests 't', F etc. How

to overcome issues of multi-collinearity and auto-correlation. The role of forecasting in Economics Relevance of Factor Analysis use of Dummy and proxy variables. Quantitative techniques in Quality Research.

#### **ASSIGNMENTS :**

- 1. Sketch a few cases where the theory of probability is applied in Human Behaviours in Economics?
- 2. How will you interpret the parameters present in various distributors?
- 3. Discuss the purposes of various tests of significance.
- 4. How can you tadale the issues of multicellinearity and autocorrelation

#### **MODULE II**

Presentation of Data Comparative uses and Applications of measures of central tendency why dispassion comparative relevance of measures of Dispersion in Interpreting Data shy correlation and Regression.

#### **ASSIGNMENTS :**

- 1. How will you account for risk and consistency in economic/business decisions.
- 2. What are the economic relevance of using various measures of Central Tendency
- 3. Use an actual data set to justify the role of using measures of dispersion.
- 4. How will you determine cause and effect relationship in Economics?
- 5. The relevance of scaling technique.
- 6. How will you establish the degree of association?

#### MODULE IV

Report writing structure of a report – features of a report – Bibliography and Appendix – Paper – Article – Workshop – Seminar – Conference and Symposium – Interpretive Analysis – Discourse Analysis – Grounded Theory – Content Analysis.

#### ASSIGNMENTS:

- 1. Conduct a make workshop / Conference.
- 2. General Procedure in preparing a bibliography with examples

- 3. Review the structure of an actual thesis from any library.
- 4. Observe the nature of analysis in the thesis considered in assignment 3.

#### **REFERENCES:**

Feeber R and Verdoom P.J. Research Methods in Economics and Business

Kurian C.T. (ed.) A Guide to Research in Economics

Wilkson, T.S. and Bhamdarkar, DL Methodology and Techniques of Social Research

#### ECH6COR25: Fundamental of Environment Economics & Management.

#### **OBJECTIVE**

Development and environment are inter related. The students are expected to train to know the inter relationship between the two. They would be able to understand the magnitude of negative impacts of growth and the ways to mitigate it.

#### MODULE I

The basics of Environmental Economics – Roots of Environmental Degradation – welfare effects – Efficiency and Equity market and Government Failures compensating and Equivalent variation and surplus Issues of time.

Assignment : Identify the nature of Environmental Degradation and types of Externalities in your local area.

#### MODULE II

Optional Environmental Protection Environmental valuation. Monetary and alternatives valuing life and health. Resolving WTP and WTA Discrepancies. Hedowcpence methods.

Assignment: Apply valuation Techniques (preliminary approach) in the environmental issues in your native places.

#### MODULE III

Environmental problems and policy solutions – social choice – property rights co Asian markets – command – and – control versus market – based instruments. Efficient and emission taxes versus tradable permits subsidisers second – best world regulation with unknown costs. Audits, Enforcement, and moral Hazard – Risk and Uncertainly.

Assignment: Tools in practice in your local body as state.

# **MODULE IV**

International and interregional competition –Economy – wide effects of Environmental regulations – trade and Environment – strategic Behaviour in trade and environment policy – evolution of trade and environment policy.

# Assignment:

- 1. Some cases of trade and environment,
- 2. Empirical studies on Trade and Environment (Assignment must be based on reference given)

# **REFERENCES**

- Charles D Kolstad: Environmental Economics, OUP, 2000, New York
- Anil Shishodia Pearson: Environmental Economics: Theory and Application

# ECH6COR26: HEALTH ECONOMICS

# objective

Health is an important issue in developing country like India. It is a major determinant of labour productivity, which is crucial to industry and business. This course is helpful to understand the theoretical and practical aspects of Health Economics in the context of India.

# Module I

Definition and scope- Health, good health and quality of life- Determinants of good health-Measurement of health status- Mortality, morbidity and "HALY family" of summary measures-QUALY.

Assignment : Prepare brief report on the status of mortality and morbidity in your locality

# Module II

Demand for health and demand for medical care. Supplier induced demand. Production of health care- providers- physicians, hospitals and pharmaceuticals. Role of technological change in health care Sustainability, equity-efficiency trade off

Assignment : The nature of health care system in a selected area.

Module III

Health Cost concepts – opportunity cost. Fixed and variable costs- Incremental and Marginal cost. Direct and indirect medical costs time costs and travel cost.

Economics of health insurance- Information asymmetry – adverse selection. Risk aversion. Moral hazard. Health insurance- challenges. Insurance concepts. Co-payments. Co-insurance rates, deductibles, group insurance.

Assignment : Prepare the extent of cost items in your family during the last one year.

Module IV

Economic evaluation, cost benefit analysis. Cost effectiveness analysis. Cost Utility analysis. Methodologies, issues.

Manpower planning in health sector-The health work force. Medical education .Physician supply .Physician incentives. Manpower planning -models. Health Scenario in India- Indian Medicine: WTO, the pharmaceutical industry and its implications.

Assignment : 1) prepare a cost-benefit analysis of medical treatment of a few selected patients 2) Document the status of Pharmaceutical industry in India / Kerala.

**Recommended Reading** 

1 Charles Phelps - Health economics

2 Clewer, Ann and David Perkins 1998 - Economics for health care management

3 Economic Survey, Government of India

# ECH6COR27- OPTIONAL II **ECH6COR28-OPTIONAL III**

PROJECT AND VIVA- VOCE EXAMINATION

# Group A: Corporate sector & capital market

A-1 : Principles of Management & Organisation Behaviour

A-2 : Fundamentals of corporate finance

A-3 : Fundamentals of Accounting

A-4 :Investment & Port folio analysis

# **Group B: Trade Management & Procedure**

- B-1: Foreign Trade Policy and Law
- B-2: Foreign Trade Management: Documentation, Marketing, Finance, Shipping and Packaging
- B-3: Investment & Port folio analysis
- **B-4: Management of Specific Products**

# GROUP A: CORPORATE SECTOR & CAPITAL MARKET

# A-1 : PRINCIPLES OF MANAGEMENT & ORGANISATION BEHAVIOUR

# MODULE I

Introduction : Evolution of management thought – management skills, roles and modern challenges – social responsibility and management ethics. <u>-</u>Difference in Managerial Life and Work in the Organisation.

Assignment : Case studies in the refered books.

# MODULE II

Planning : Elements, strategic planning, managerial decision making – organising – job design – organisational structure and design – Formal and informal organisation.

Assignment : Map the structure of an organisation in your local area.

# MODULE III

Managing Human Resources

Leading – Leadership – Motivation Inter Personal & Organisation Communications – work groups and teams – controlling: elements of controlling; production, operation and financial controls.

# Assignment :

- 1. Qualities of a leader and an actual leadership in your local area.
- 2. The process of control in an industrial organisation

# MODULE IV

Managing change & Innovation - Organisational Change and learning- Manager as a decision maker - systematic management as programmed decision making - management science – models and simulation- Case studies, management in Non industrial Organisation – Management in other countries - case studies.

Assignment : Innovative management in a non-industrial organisation.

# **REFERENCES :**

Joseph A Litterer : An Introduction to Management, Wiley/Hamilton.

Thomas N Duening & John M Ivamcevich: Management : Principles and Guidelines, Biztantra, 2003.

John B Miner : The Management Process, Macmillan, 1973, New York.

# **A-3: PRINCIPLES OF ACCOUNTING**

# MODULE I

Elements of financial reporting - the income statement ;revenues and expenses- ratio analysis- Fund flow analysis – analysis of financial transaction- bank reconciliation statement-trial balance and errors.

Assignment: Study report on a bank balance sheet.

# MODULE II

Balance sheet: Current assets and current liabilities; long term investments; property, plant and equipment; deferred income taxes, long term debt; ratio analysis.

Assignments: Compare the structures of balance sheet and balance of payments.

# **MODULE III**

Standard costs and variance analysis – cost price volume relationships- activity based costing (service industry)- cost of capital and capital structure -planning : cost of debt of Tata tea – capital structure planning- capital budgeting- working capital planning and financing – budgetary control.

# Assignment :

- 1. BEP and production theory
- 2. Investment criteria and social cost -benefit analysis.
- 3. Zero based budgeting in industry and public finance.

# MODULE IV

Indian Accounting Standards – Analysis of Profit and Loss Account of Asian Paints (India). Cash- Flow Analysis of Reliance Industries (2002-03). Economic Value Added: the case of Reliance – Farm Accounting in India.

Assignment: Study Report of any Cooperate Body in terms of Profit and Loss Accountant or Economic Value Added

# **REFERENCES:**

Klearence B. Nickerson: Accounting Hand Book for Non-Accountants, second edition, CBI Publishing Co. 1979, Boston.

Ghosh, T.P.G : Accounting and Finance for Managers, Tax Mann's allied services, 2004, New Delhi.

Pramanik, Alok Kumar : Accounting and Management, Deep & Deep Publications, New Delhi.

# A-4 : Investment & Portfolio analysis

Objective

The contents of this course are expected to bring students to the real world. Capital market has become the most dynamic system after the emergence of neo-liberal system. This course enables the students to understand the structure, instruments, operations and mechanisms of capital market both from theoretical and practical point of view. This suggests the study of case studies and practical training. One module is exclusively recommended for bond market.

Module I

Exchange traded markets and Types of Traders- Mechanics of futures markets- Hedging strategies using futures- Interest rates: Types and Term Structure- Determination of forward and futures prices - Interest rate futures- Swaps

Assignment: Trend in forward and future prices of selected items.

Module II

Mechanics of option markets- Properties of stock options- Trading strategies- Binomial trees - The Markov property- The Black –Scholes-Merton model- Options on stock indices, currencies, and futures - The Greek letters & Stock Market Volatility - Volatility smiles

Assignment : Options market in Practice

# Module III

Basic numerical procedures- Binomial trees-Using the binomial tree for options on indices, currencies and futures contracts-Binomial model for a dividend paying stock-Alternative procedure for constructing trees-Time dependent parameters-Monte Carlo simulation-Variance

reduction procedure-Finite difference methods - Value at risk- Estimating volatilities and correlations

Assignment : Make a survey of various techniques mentioned in this module

Module IV

Credit risk - Credit derivatives - Exotic options- Weather ,Energy and insurance derivatives - More on models and numerical procedures- Martingales and measures - Interest rates derivatives :the standard market models - Convexity ,timing and quanto adjustments - Interest rate derivatives: models of the short rate- Interest rate derivatives :HJM and LMM -

Swaps revisited & Real options - Derivatives mishaps and what we can learn from them

Lessons for all users of derivatives-Lessons for financial institutions –Lessons for non financial corporations

Assignment : presentations based on case studies

Module V

Bonds: the better investment -Adopting the all-Bond portfolio: a case study -The evolution of a bond : from verbal IOU to Electronic entry - -The life of a bond - US Bond System- Options for purchasing bonds –How to buy individual bonds : a tool kit -Choosing a bond fund - Bond investment strategies - Financial planning with bonds : case studies

Assignment: make a comparison of bond markets in India and USA.

John C Hull Options, futures and other derivatives, Pearsons prentice hall Sixth edition

Hildy Richelson : Bonds: the unbeaten path to secure investment growth

Stan Richelson

# **Group B: Trade Management & Procedure**

# B-1 : FOREIGN TRADE POLICY AND LAW

#### **Module I**

1) Preamble- Legal Framework- Special Focus Initiative- Board of Trade- General Provisions Regarding- Export & Import- Promotional Measures- Duty Exemption /Remission Schemes. Assignment : Summarise the promotional measures for two export / import items.

# Module II

Export promotion Capital Goods Scheme- Export oriented Units (EOUs)- Electronics Hardware TechnologyParks (EHTPs) - Software Technology Parks (STPs) - Bio-technology Parks (BTPs) - Special Economic Zones (SEZs) - Free Trade & Ware Housing Zones - Deemed Exports -Central Excise Act, 1944- Central Excise Rules, 2002- Service Tax.

# Module III

State control over import and export of goods –from rigidity to liberalization - Impact of regulation on economy- The Basic Needs of Export and Import Trade- Goods, Services, Transportation –International Regime: WTO agreement- WTO and tariff restrictions-WTO and non-tariff restrictions- Investment and transfer of technology- Quota restriction and anti-dumping - permissible regulations- Quarantine regulation- Dumping of discarded technology and goods in International market - Reduction of subsidies and counter measures.

# Module IV

General Law on Control of Imports and Exports:

General scheme- Legislative control- Power of control : Central Government and RBI: Foreign Trade Development and Regulation Act 199, Restrictions under customs law,Prohibition and penalties- Export-Import formulation : guiding features, Control under FEMA, Foreign exchange and currency,Import of goods- Export promotion councils- Export oriented units and export possessing zones- Control of Exports : Quality control, Regulation on goods. **Module V** 

Exim policy : Changing Dimensions: Investment policy : NRIs. FIIs, Joint venture, Promotion of foreign trade, - Law Relating to Customs : Prohibition on importation and exportation of goods, Control of smuggling activities in export-import trade, Levy, of and exemption from, customs duties, Clearance of imported goods and export goods, Conveyance and warehousing of goods.

# Module VI

Regulation of investment: Conservation of foreign exchange- Foreign exchange management, Currency transfer, Investment in foreign countries,Borrowing and Lending of money and foreign currency, Securities abroad – issue of Immovable property – purchase abroad, Establishment of business outside, Issue of derivatives and foreign securities – GDR (global depositories receipts), ADR (American depository receipts) and Uro, Investment in Indian banks, Repatriation and surrender of foreign securities. Technology transfer : Collaboration Agreement for Technology Transfer, restrictive terms in technology transfer agreements- Automatic approval scheme.

# **B-2 Foreign Trade Management: Documentation, Marketing, Finance, Shipping and Packaging**

Module 1 Export Documentation and Government policy

Introduction-Export-Import policy-Customs act-allied acts related to Foreign Trade-Formalities for commencing-Customs formalities-Export Documentation-Project Exports—export of services-export of Excisable goods

# Module ll

Import Documentation-Clearance of Import goods-Cent percent-Export oriented units-Export processing zones-Special Economic Zones-Duty Drawback procedure-Export/Import by post customs House agents-Import of Different products-Import/export incentives-Import Licenses

# Module III Marketing

Introduction-Marketing terms-Global marketing Environment-Entry to Foreign market-Strategies-Support Institutes to facilitate Exports-Market Research and its Design-Destination of Exports-IMF-World Bank-WTO-Export correspondence and pricing-E-trade-Channels of distribution-Export of projects and services.

# Module IV Export Finance

Basic concept of Foreign Exchange-Methods of International payment settlement-International commercial terms-Letter of credit-Exchange control regulation for imports and exports-Export Financing-Pre-shipment Finance-EXIM Bank of India-ECGC-Demand guarantees and standby letter of Credit –Forfeiting and factoring –case studies

Module V

Shipping and Packaging: shipping and Marine Insurance Terminology-General information on shipping-Types of containers and ships-Containerization-Marine Insurance –Air Transportation-Bill of Exchange, Air way Bill/Sea Way Bill-Maritime Fraud-Packaging Introduction-Mechanical tests-stretch wrapping-cushioning materials-shrunk packaging-packaging cost-Lab testing-International care labeling code

# **B 3:** Investment And Portfolio Analysis

# MODULE I

Portfolio Investment by Foreign Investors : Procedures and requirements-Market regulations : SEBI, RBI and Ministry of Finance; legal framework, participants and Stock Exchanges – History, Trading Mechanism, Listing on BSE & NSE, BSE & NSE Indices and Debt Segment.

# MODULE II

Trading Rules & Practices – Disclosure- Clearing & Settlement – BSE & NSE Listed Stocks-Negotiated Trades- Reports – Delivery- Buy-in - Precautionary Measures- The National Securities depository Ltd.- BSE Depository- Investment in New Issue- Underwriting and Minimum Subscription Requirement - Initial Public Offering- Public Issues by Listed Companies

# MODULE III

Debt Market - Characteristics of the Indian Debt market- Types of Debt Instruments- Central Government Securities - Treasury Bills -State Government Securities- Government-guarantee Bonds - Public Sector Undertaking Bonds - Corporate Debentures - Commercial paper (CP) - ertificate of Deposits (CD) - Credit rating

#### MODULE IV

Taxation -Tax consultant -Income Taxes -Tax Treaties - Avoidance of Double Taxation - India-Mauritius Treaty -Treaty Benefits -NatWest bank case -AIG case -Foreign and Colonial case -Outlook for the Tax Treaty-Computation of capital gains-Stamp Duty-Service Tax-Custodial Services-Safe Custody of Shares-Safekeeping Methods-Inspection of Records-Protection of Clients' Assets-Corporate Actions-Sources of corporate Action Information-Date for Determining Corporate Entitlements-Notification to Foreign –investors-Proxy Service to Foreign Investors- custodial charge-Dividend & sales proceeds-Dividend Payment-Repatriation-Sales proceeds-Dividends-Foreign Exchange Control-Information about India-Internet sites Related to India-Regulators-Media-Rating agencies-Link.

The Indian Securities Market: A Guide for Foreign and Domestic Investors - Yadashi Endo

Publishers : Vision Books.

# **B-4 : Management of Specific products**

# Module 1

Agriculture Exports-Forms of Agriculture-Product catalog-Export statistics of agricultural products-Pricing of Agricultural products-EU regulation of Imports-Quality standards-Role of Export promotion councils and development programmes-Technology advancement on agricultural products-Inland and Overseas Trade Fairs-Import policy-Business opportunities

# **Module II Floriculture Exports**

Introduction to Floriculture - Kinds of Floriculture - Product Catalogue - Marketing of Floriculture Products - Export Statistics - Plant Quarantine and other control procedures - EU regulation - Export Promotion Council - Quality Standards - Recent advancements-

- (a) Buyer Seller meets
- (b) Import policy abstracts.

# Module III Gem and Jewellery Exports

Introduction - Scope of study - Statistics of Gem & Jewellery export - Markets - Global Competition - Export Promotion schemes - product development - Technical aspects of gold jewellery - Role of export Promotion Council.

# **Appendix to group B:**

- 1. Export-Import : Subject Introduction.
- 2. Foreign Trade Policy & Handbook of Procedures 2004-09.
- 3. Standard Input-Output Norms (SSION) and ITC (HS) Classification of Goods.
- 4. Export Incentives : Duty Exemption & Duty Remission Schemes.

Advance License/DFRC/DEPB/DFIA/Duty.

- 5. Formation of Export Firm/Company : Important Tips.
- 6. Importer-Exporter code Number. Take it yourself.
- 7. Export Documentation : General.
- 8. Commercial Documents
- 9. Regulatory Documents.
- 10. Export Documentation : Preparing Proforma Invoice/Commercial
- 11.. Central Excise.