

DEPARTMENT OF ECONOMICS
SACRED HEART COLLEGE (AUTONOMOUS), THEVARA
KOCHI, KERALA, 682013



CHOICE BASED COURSE CREDIT AND SEMESTER SYSTEM
(CBCSS)

SYLLABI

For
Under Graduate Programme in
ECONOMICS

INTRODUCED FROM 2019 ADMISSION ONWARDS

BOARD OF STUDIES IN ECONOMICS
Sacred Heart College, Thevara, Kochi, Kerala

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ACKNOWLEDGEMENT

There are many profound personalities whose relentless support and guidance made this syllabus restructuring 2019 a success. I take this opportunity to express my sincere appreciation to all those who were part of this endeavor for restructuring the syllabus of U G course in Economics of Sacred Heart College (Autonomous) Thevara.

I express profound gratitude to Rev. Fr. (Dr) Johnson Palackkappilli, Principal, Sacred Heart College (Autonomous), Thevara, who gave all the help, motivation and support in accomplishing this task. I am greatly indebted to members of board of studies: Dr. K V Raju, Associate Professor, Department of Economics, Sacred Heart College, Thevara, Dr. V T Jose, Associate Professor, Department of Economics, Sacred Heart College, Thevara, Dr. Dr. S.Harikumar, Professor, Dept. of Applied Economics, Cochin University of Science and Technology, Dr. Beena P.L, Associate professor in Economics, Centre for Development Studies, Thiruvananthapuram, Dr (Rev.Fr). Gilson John (Former Principal& Associate Professor in Economics, St. Joseph's College, Moolamattam), Dr. Sunil Menon (HOD)Dept. of Economics, Maharaja's College, Ernakulam, Mr. Alex K Baby,Chairman, and Managing Director of the Hedge Group of Companies (Hedge Equities) for their invaluable suggestions, advice and support. I express my sincere gratitude to all the faculty of Economics Department of College: Dr. K V Raju, Associate Professor, Department of Economics, Sacred Heart College, Thevara, Dr. V T Jose, Associate Professor (Rtd), Department of Economics, Sacred Heart College, Thevara, Mr. M.S. Madhusudhanan Nair, Associate Professor, Mr.Sibi Abraham, Assistant Professor, and Mr. Vinil K.V, Assistant Professor who, from the very beginning, did a marvelous work in course restructuring and syllabus revision process.

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INTRODUCTION

B. A. ECONOMICS PROGRAMME:

Economics concerns the wealth of nations, its origins in production and exchange, its allocation among competing uses, its distribution among individuals, its accumulation or decline. Economics as a discipline is a study of how individuals, firms, government and global organizations make decisions and that together determine how resources are allocated. Economics study is primarily concerned with important issues such as the behaviour of individuals and firms and their strategic interactions, production and consumption of goods and how wealth is created, lost and transferred globally, economic growth and development, the causes and effects of unemployment and inflation, income distribution, industrial organization, public policy design and implementation, management of the environment, and the means to improve overall efficiency and living standards. An appreciation of economics and the general workings of the economy have become increasingly necessary to make sense of governmental policy-making, the conduct of businesses and the enormous changes in economic systems occurring throughout the world.

The under graduate programme at Department of Economics Sacred Heart College (Autonomous) Thevara provides a rigorous toolkit for thinking about the economy and about economic policy. It promotes an active learning approach to economics in which students think about real problems in an analytically rigorous way. In addition, the programme aims to teach students how to put the acquired skills to use in their own research. Students will find a cumulative and hierarchical body of knowledge laid out in a structured series of courses. This creates a foundation which the student can build on and apply to many areas. Our Economics students graduate as self-motivated, ambitious learners, able to confidently navigate their future career path.

In the past years, many new insights have taken root and become important in economic theory and policy. In the light of the expanding horizons of knowledge, constant endeavours have been made to review the curriculum in many of the universities in the world to make Economics a vibrant and meaningful subject. The curriculum merits better pondering so as to make it practically more competitive and student centered in the multidimensional environment.

The Board of Studies resolved to restructure the curriculum and syllabi of BA Degree course under choice-based credit and semester system. The restructuring is attempted in such a way as to lay emphasis on student choice and self-learning. While attempting restructuring, the existing conditions relating to infrastructure, work load and staff pattern have been properly taken care of and provision for full utilization of the existing faculty is proposed.

The task of restructuring was done by expert committees constituted for each course by Department of Economics, Sacred Heart College, Thevara, after considering proposals and suggestions of the members of Board of Studies in Economics for course restructuring. The proposals and suggestions of members of Board of Studies in Economics were consolidated at its meeting held on 14th July 2018. The members of the expert committees for course restructuring and Board of Studies in Economics did a commendable work to accomplish the task of course restructuring and syllabus revision.

1 REGULATIONS FOR CHOICE BASED CREDIT AND SEMESTER SYSTEM (CBCSS) FOR UNDER GRADUATE PROGRAMMES-2019

Preamble

Sacred Heart College, Thevara became an autonomous college under Mahatma University Kottayam in 2014. The college revised the choice based credit and semester system (CBCSS) for under graduate programmes in 2015-16. The Academic Council which met on 21-07-2018 approved the proposals of the various Boards of Studies for revising the syllabi of the undergraduate programmes from 2019-20 admissions onwards and the regulations for CBCSS. The revised regulations are as follows.

1.1 Title

These regulations shall be called “**SACRED HEART COLLEGE THEVARA REGULATIONS FOR CREDIT AND SEMESTER SYSTEM 2019**”

1. 2. Scope

Applicable to all programmes of the college with effect from 2019 admissions, except otherwise approved by the Academic Council of the College

1.3. Definitions

- i. ‘**Programme**’ means the entire course of study and examinations.
- ii. ‘**Duration of Programme**’ means the period of time required for the conduct of the programme. The duration of under graduate programmes shall be 6 semesters, post-graduate programme shall be of 4 semesters and M Phil programmes shall be 2 semesters.
- iii. ‘**Semester**’ means a term consisting of a minimum of 90 working days, inclusive of examination, distributed over a minimum of 18 weeks of 5 working days, each with 5 contact hours of one hour duration
- iv. ‘**Course**’ means a segment of subject matter to be covered in a semester. Each Course is to be designed variously under lectures / tutorials / laboratory or fieldwork / study tour / seminar / project / practical training / assignments/evaluation etc., to meet effective teaching and learning

- needs.
- v. **‘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 (Model I)
 - vi. **‘Core course’** means a course in the subject of specialization within a degree programme.
 - vii. **‘Complementary Course’** means a course which would enrich the study of core courses.
 - viii. **‘Open course’** means a course outside the field of his/her specialization, which can be opted by a student.
 - ix. **‘Additional core course’** means a compulsory course for all undergraduate students (as per the UGC directive) to enrich their general awareness.
 - x. The U.G. programmes shall include (a) Common courses (b) Core courses (c) Complementary Courses (d) Open Course (e) Study tour and (f) Internship for selected programmes.
 - xi. **‘Additional Course’** is a course registered by a student over and above the minimum required courses.
 - xii. **‘Credit’ (Cr)** of a course is the numerical value assigned to a course according to the relative importance of the content of the syllabus of the programme.
 - xiii. **‘Extra credits’** are additional credits awarded to a student over and above the minimum credits required for a programme for achievements in co-curricular activities carried out outside the regular class hours OR curricular activities/courses completed for value addition, as directed by the College/ department. It is the numerical value assigned to Club activities, Social service, Internship etc. which is not added with the total academic credits of the students. Additional credit components
 - (a) Talent & career club activity (optional)

- (b) Social service(mandatory)
 - (c) Internship for Commerce, Communication and Computer applications(mandatory).
 - (d) Internship (desirable for other programmes).
 - (e) Add on courses(optional)
- xiv. **‘Programme Credit’** means the total credits of the UG Programme.
- xv. **‘Programme Elective course’** Programme Elective course means a course, which can be chosen from a list of electives and a minimum number of courses is required to complete the programme.
- xvi. **‘Programme Project’** Programme Project means a regular project work with stated credits on which the student undergoes a project under the supervision of a teacher in the parent department / any appropriate Institute in order to submit a dissertation on the project work as specified.
- xvii. **‘Internship’** is on-the-job training for professional careers.
- xviii. **‘Plagiarism’** Plagiarism is the unreferenced use of other authors’ material in dissertations and is a serious academic offence.
- xix. **‘Tutorial’** Tutorial means a class to provide an opportunity to interact with students at their individual level to identify the strength and weakness of individual students.
- xx. **‘Seminar’** seminar means a lecture by a student expected to train the student in self-study, collection of relevant matter from the books and Internet resources, editing, document writing, typing and presentation.
- xxi. **‘Evaluation’** means every course shall be evaluated by 25% continuous (internal) assessment and 75% end course/end semester (external) assessment.
- xxii. **‘Repeat course’** is a course that is repeated by a student for having failed in that course in an earlier registration.
- xxiii. **‘Audit Course’** is a course for which no credits are awarded.
- xxiv. **‘Department’** means any teaching Department offering a course of study approved by the college/Institute as per the Act/ Statute of the

University.

- xxv. **'Parent Department'** means the Department which offers a particular UG/PG programme.
- xxvi. **'Department Council'** means the body of all teachers of a Department in a College.
- xxvii. **'Faculty Advisor'** is a teacher nominated by a Department Council to coordinate the continuous evaluation and other academic activities undertaken in the Department.
- xxviii. **'College coordinator'** means a teacher from the college nominated by the College Council to look into the matters relating to CBCS-PG System.
- xxix. **'Letter Grade'** or simply **'Grade'** in a course is a letter symbol (O,A,B,C, D, etc.) which indicates the broad level of performance of a student in a course.
- xxx. Each letter grade is assigned a **'Grade point'** (GP) which is an integer indicating the numerical equivalent of the broad level of performance of a student in a course.
- xxxi. **'Credit point'** (CP) of a course is the value obtained by multiplying the grade point (GP) by the Credit (Cr) of the course $CP=GP \times Cr$.
- xxxii. **'Semester Grade point average'** (SGPA) is the value obtained by dividing the sum of credit points (CP) obtained by a student in the various courses taken in a semester by the total number of credits taken by him/her in that semester. The grade points shall be rounded off to two decimal places. SGPA determines the overall performance of a student at the end of a semester.
- xxxiii. **'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.
- xxxiv. **'Grace Marks'** means marks awarded to course/s, as per the orders issued by the college from time to time, in recognition of meritorious achievements in NCC/NSS/Sports/Arts and cultural activities.

1.4 ATTENDANCE

Being a regular college, physical presence in the regular activities, especially, classes and exams, is mandatory for the students. However, if a student secures 75% of attendance s/he is eligible to appear for the exams, provided there are no other impediments like disciplinary proceedings, malpractice record etc.

- i. A maximum of 5 marks (5%) for a course is given for attendance
- ii. **Absence:** A student found absent for one hour in the forenoon or afternoon session is deprived of the attendance for the entire session as far as eligibility for final exam is concerned.
- iii. The hour related calculation in a course is meant for awarding marks for the course concerned.
- iv. **Late entry:** A student is supposed to be in time in the class. Late arrival related treatment is left to the discretion of the individual teacher. However, as a norm, a late arriving student may be permitted to the class, if it is not inconvenient or distraction to the class as such; though attendance MAY NOT BE GIVEN. Late arrival beyond 5 minutes is treated as ABSENCE; though the teacher may consider permitting the student to sit in the class.
- v. **Leave:** A student has to formally report his/her absence with reasons either in advance, or immediately after the absence for obtaining an approved leave. This applies to all sorts of leave –medical, on duty or other.
- vi. The student is supposed to report in prescribed format on the very next day of the absence; however, upto a week's time is permitted. Afterwards, the leave applications will not be considered.
- vii. The student has to retain a copy/section of the approved leave form and produce the same as proof, in case there is any confusion regarding the leave sanctioning. In the absence of such proof, the claims will not be entertained.

- viii. **Duty Leave:** A student representing the college in sports, arts, social service or academic matters, has to get sanction from the class teacher concerned and submit the leave application from duly endorsed by teacher concerned & the class teacher, and submit it to the faculty Dean (or Vice Principal). The same will be forwarded by the Dean/Vice Principal for attendance entry. **SPORTS:** The approval of the Department of Physical Education and the class teacher is required. The time limit for submission mentioned above is applicable in the case of duty leave as well.
- ix. **CONDONATION:** a student may have the privilege of condonation of attendance shortage (upto a maximum of 10 days) on the basis of genuineness of the grounds of absence (medical reasons or college duty), duly recommended by the department. This is not a matter of right. It is a matter of privilege based on Principal's discretion and the good conduct of the student on the campus. A student of UG programme may have a maximum of two such opportunities and that of PG programmes only one opportunity.
- x. **RE-ADMISSION** – a student whose attendance is inadequate will have to discontinue the studies. Such students, whose conduct is good, may be re-admitted with the approval of governing council, on the basis of recommendation from the department, and assurance from the student and the guardian regarding good conduct and compliance in academic and discipline matters. For this the prescribed re-admission fee has to be paid. As a condition for re-admission, the student should have cleared all academic arrears, or should have appeared for the exams in which he/she is having an arrear (if the results are not out), and should have fulfilled all academic assignments prescribed by the department for compensating for his lack of attendance.
- xi. **UNAUTHORISED ABSENCE & REMOVAL FROM ROLLS:** A student absent from the classes continuously for 10 consequent days without intimation or permission, shall be removed from the rolls, and the matter intimated to the student concerned. On the basis of recommendation of

the department concerned, re-admission process may be permitted by the Principal.

1.5 PROGRAMME REGISTRATION

- i. A student shall be permitted to register for the programme at the time of admission.
- ii. A UG student who registered for the programme shall complete the same within a period of 12 continuous semesters and a PG student within a period of 8 continuous semesters from the date of commencement of the programme.

1.6 PROMOTION: A student who registers for the end semester examination shall be promoted to the next semester. However, in extreme circumstances, a student having sufficient attendance who could not register for the end semester examination may be allowed to register notionally by the Principal with the recommendation of the Head of the department concerned and , by paying the prescribed fee.

2 UNDER GRADUATE PROGRAMME STRUCTURE

Model IBA/B.Sc.

a	Programme Duration	6 Semesters
b	Total Credits required for successful completion of the Programme	120
c	Credits required from Common Course I	22
d	Credits required from Common Course II	16
e	Credits required from Core course and Complementary courses including Project	79
f	Open Course	3
g	Minimum attendance required	75%

Model I/II B.Com

a	Programme Duration	6 Semesters
b	Total Credits required for successful completion of the Programme	120
c	Credits required from Common Course I	14
d	Credits required from Common Course II	8
e	Credits required from Core and Complementary/ Vocational courses including Project	95
f	Open Course	3
g	Minimum attendance required	75%

Model II BA/B.Sc.

a	Programme Duration	6 Semesters
b	Total Credits required for successful completion of the Programme	120
c	Credits required from Common Course I	16
d	Credits required from Common Course II	8
e	Credits required from Core + Complementary + Vocational Courses including Project	93
f	Open Course	3
g	Minimum attendance required	75%

3 EXAMINATIONS

All the End Semester Examinations of the college will be conducted by the Controller of Examination. The Principal will be the Chief Controller of Examinations. An Examination committee consists of the Chief Controller of Examinations, Controller of Examinations, Additional Chief Superintendent, Deans, IQAC Coordinator and other faculty members nominated by the Principal will act as an advisory body of the matters relating to the conduct of examinations.

4 EVALUATION AND GRADING

The evaluation scheme for each course shall contain two parts;

- a. Continuous Internal Evaluation (CIA) and
- b. End Semester Examination (ESE).

The internal to external assessment ratio shall be 1:3, for both courses with or without practical. For courses without practical, there shall be a maximum of 75 marks for external evaluation and maximum of 25 marks for internal evaluation. For courses with practical, generally external evaluation shall be for a maximum of 60 marks and internal evaluation for 20 marks. Both internal and external evaluation shall be carried out in the mark system and the marks are to be rounded to the nearest integer.

4.1 Continuous Internal Assessment (CIA)/ Continuous Assessment:

The internal evaluation shall be based on predetermined transparent system involving periodic written tests, assignments, seminars/viva/field survey and attendance in respect of theory courses and based on written tests, lab skill/records/viva and attendance in respect of practical courses. The marks assigned to various components for internal evaluation as follows.

Components of Internal Evaluation (for theory without practical)

	Components	Marks
i.	Assignments	5
Ii	Seminar/Quiz/Field survey /Viva etc.	5
Iii	Attendance	5
Iv	Two Test papers(2x5)	10
	Total	25

- i. **Assignments:** Every student shall submit one assignment as an internal component for every course.

Components	Marks
Punctuality	1
Content	2
Conclusion	1
Reference/Review	1
Total	5

- ii. **Seminar:** The seminar lecture is expected to train the student in self-study, collection of relevant matter from the books and Internet

resources, editing, document writing, typing and presentation.

Components	Marks
Content	2
Presentation	2
Reference/Review	1
Total	5

iii. Evaluation of Attendance

2.10 The attendance of students for each course shall be another component of internal assessment.

% of attendance	Mark
Above 90%	5
Between 85 and below 90	4
Between 80 and below 85	3
Between 76 and below 80	2
Between 75 and below 76	1

Components of Internal Evaluation (for theory with practical)

Components of Theory – Internal Evaluation	Marks
Attendance	5
Seminar/ Assignment (Written assignments, preparation of models, charts, posters etc., field survey, field work)	5
Test paper(s)	10
Total	20

Components of Practical- Continuous internal assessment

Components	Marks
Attendance and Lab involvement	2
Record	2
Viva/Model Exam	1
Total	5

iv. **Class Tests:** Every student shall undergo **two class tests** as an internal component for every course.

4.2 End Semester Examination (ESE): The End Semester Examination in theory courses shall be conducted by the college with question papers set by external experts/ question bank. The evaluation of the answer scripts shall be done by the examiners based on a well-defined scheme of evaluation given by the question paper setters/Prepared as per the direction of the Chairman, Board of Examiners. The evaluation of the End Semester Examinations shall be done immediately after the examination preferably through the centralized valuation.

4.3 Project

Project work is a part of the syllabus of most of the programmes offered by the college. The guidelines for doing projects are as follows:

- i. Project work shall be completed by working outside the regular teaching hours.
- ii. Project work shall be carried out under the supervision of a teacher in the concerned department or an external supervisor.
- iii. A candidate may, however, in certain cases be permitted to work on the project in an industrial / Research Organization/ Institute on the recommendation of the Supervisor.
- iv. There should be an internal assessment and external assessment for the project work in the ratio 1:3
- v. The external evaluation of the project work consists of valuation of the dissertation (project report) followed by presentation of the work and viva voce.
- vi. The mark and credit with grade awarded for the program project should be entered in the grade card issued by the college.

Components of Internal Evaluation for Projects

Components	Marks
Topic/Area selected	2
Experimentation/Data collection	5
Punctuality-Regularity	3
Compilation	5
Content	5
Presentation	5
Total	25

4.4 Comprehensive Viva-voce

Comprehensive Viva-voce shall be conducted at the end of the programme, which covers questions from all courses in the programme as per the syllabus.

4.5 Grade and Grade Points

For all courses (theory & practical), Letter grades and grade point are given on a 10-point scale based on the total percentage of marks, (CIA+ESE) as given below: -

Percentage of Marks	Grade	Grade Point (GP)
95 and above	O Outstanding	10
85 to below 95	A+ Excellent	9
75 to below 85	A Very Good	8
65 to below 75	B+ Good	7
55 to below 65	B Above Average	6
45 to below 55	C Average	5
35 to below 45	D Pass	4
Below 35	F Fail	0
	Ab Absent	0

Grades for the different semesters and overall programme are given based on the corresponding SGPA/CGPA as shown below:

SGPA/CGPA	Grade
Equal to 9.5 and above	O Outstanding
Equal to 8.5 and below 9.5	A+ Excellent
Equal to 7.5 and below 8.5	A Very Good
Equal to 6.5 and below 7.5	B+ Good
Equal to 5.5 and below 6.5	B Above Average
Equal to 4.5 and below 5.5	C Average
Equal to 3.5 and below 4.5	D Pass
Below 3.5	F Failure

A separate minimum of 30% marks each for internal and external (for both theory and practical) and aggregate minimum of 35% are required for a pass for a UG programme. A candidate who has not secured minimum marks/credits in internal examinations can re-do the same registering along with the end semester examination for the same semester, subsequently. A student who fails to secure a minimum marks/grade for a pass in a course can be permitted to write the examination along with the next batch.

After the successful completion of a semester, Semester Grade Point Average (SGPA) of a student in that semester is calculated using the formula given below. For the successful completion of semester, a student should pass all courses and score at least the minimum CGPA grade 'D'. However, a student is permitted to move to the next semester irrespective of her/his SGPA.

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

CP = Cr x GP, where Cr = Credit; GP = Grade point

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

SGPA = TCP/TCr, where

TCP = Total Credit Point of that semester = $\sum^n CP_i$;

TCr = Total Credit of that semester = $\sum^n Cr_i$

Where n is the number of courses in that semester

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

$$CGPA = \frac{\sum(SGPA \times TCr)}{\sum TCr}$$

SGPA/CGPA shall be round off to two decimal places

To ensure transparency of the evaluation process, the internal assessment marks awarded to the students in each course in a semester shall be published on the notice board/website at least one week before the commencement of external examination. There shall not be any chance for improvement for internal mark.

The course teacher and the faculty advisor shall maintain the academic record of each student registered for the course which shall be forwarded to the controller of examinations through the Head of the Department and a copy should be kept in the department for at least two years for verification.

5 Registration for the examination

- a. All students admitted in a programme with remittance of prescribed fee are eligible for the forthcoming semester examinations.
- b. Online application for registration to the various End Semester Examinations shall be forwarded to the CE along with prescribed fee for each course in prescribed format.
- c. The eligible candidates who secure the prescribed minimum attendance of the total duration of the course and possess other minimum qualification prescribed in the regulations for each course shall be issued the hall tickets. The hall ticket shall be downloaded by the students from the college website.
- d. The mode of fee remittances shall be through the prescribed bank.

6 Supplementary Examinations

Candidates who failed in an examination can write the supplementary examination conducted by the College along with regular examinations.

7 Improvement of Examination

A candidate can improve his/her marks once by appearing again for the examination with the subsequent batch with the remittance of prescribed fee. In such cases the better of the two marks shall be taken as the marks awarded to him.

Internal assessment marks shall be carried over to the subsequent semester examination.

There shall not be any provision for improving internal assessment marks.

There will be no improvement examinations for PG programmes

8 Promotion to the Next Higher Semester

A candidate shall be eligible for promotion from one semester to the next higher semester if,

- a. He / she secures a minimum 75 % attendance and registered for the End Semester Examination of the programme for which he/she is studying.
- b. His / her progress of study and conduct are satisfactory during the semester completed, as per the assessments recorded by the course teachers and the Head of the Department concerned.

9 Certificates

1. Diploma and Degree certificates are issued by the Mahatma Gandhi University, Kottayam as per the act and statues of the University on the submission of the consolidated mark / score cards of the students by the College.
2. A consolidated mark / scored card shall be issued to the candidates after the publication of the results of the final semester examination taken by the candidate.
3. A Course Completion Certificate with classification shall be issued to students till the provisional certificate is issued by the university.

10 Award of Degree

The successful completion of all the courses with 'D' grade shall be the minimum requirement for the award of the degree. For M.Phil., minimum grade required is 'C'

11. Monitoring

There shall be a Monitoring Committee constituted by the principal consisting of faculty advisors, HoD, a member from teaching learning evaluation committee (TLE) and the Deans to monitor the internal evaluations conducted by college. The Course teacher, Class teacher and the Deans should keep all the records of the internal evaluation, for at least a period of two years, for verification.

Every Programme conducted under Choice Based Credit System shall be monitored by the College Council under the guidance of IQAC Coordinator, Controller of Exams, academic deans and HoDs.

12. Condonation of Shortage of Attendance

Candidate can seek condonation of shortage of attendance only once in a 2 year course and twice in other courses of longer duration. Following are the rules regarding attendance requirement:-

1. Every candidate is to secure 75% attendance of the total duration of the course.
2. A candidate having a shortage of 10% can apply for condonation of shortage in prescribed form on genuine grounds. Condonation of shortage of attendance if any should be obtained at least 7 days before the commencement of the concerned semester re-examination.
3. It shall be the discretion of the Principal to consider such applications and condone the shortage on the merit of each case in consultation with the concerned course teacher and HoD.
4. Unless the shortage of attendance is condoned, a candidate is not eligible to appear for the examination.

13 Grievance Redressal Mechanism

In order to address the grievance of students regarding Continuous internal assessment (CIA) a three-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: At the level of the concerned course teacher

Level 2: At the level of a department committee consisting of the Head of the Department, a coordinator of internal assessment for each programme nominated by the HoD and the course teacher concerned.

Level 3: A committee with the Principal as Chairman, Dean of the Faculty concerned, HOD of the department concerned and one member of the Academic council nominated by the principal every year as members.

13. PROGRAMME AND PROGRAMME SPECIFIC OUTCOMES.

14.1 Programme Outcome

The syllabus is framed in the Outcome Based Education (OBE) framework and the Programme Outcomes(POs) are given in the table below;

PROGRAMME OUTCOMES(POs)
PO1- Critical Thinking and deep domain knowledge
PO2- Effective Communication
PO3- Contributes to nation building
PO4- Care for environment
PO5- Ethical values
PO6- Global Perspective

14.2. Programme Specific Outcome

The Specific Program Outcomes (PSOs) are listed in following table;

At the end of the B A Economics programme, students are able to:

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1- Understand the functions and behavior of economic agents at Micro and Macro Economic levels.

PSO2- Understand the areas where market mechanism is supplemented, modified, corrected and supplanted by government.

PSO3- Understand the economic relationship between countries of the world.

PSO4- Understand the interaction between economy and environment and the need to obtain balance between them.

PSO5- Construct various types of indices and measurements such as index numbers, national income, central tendency, dispersion etc.

PSO6- Prepare questionnaires, conduct surveys, to tabulate data and present the data in graphs charts etc.

15 B A ECONOMICS PROGRAMME STRUCTURE

The B A Economics programmes shall include (a) Common courses I & II, (b) Core courses, (c) Complementary Courses, (d) Open Course (e) Study tour (e) Internship(desirable)

Additional credit components

- I. Talent & career club activity(optional)
- II. Social service(mandatory)
- III. Internship(desirable).

PROGRAMME STRUCTURE

A	Programme Duration	6 Semesters
B	Minimum credits required from common courses	38
C	Minimum credits required from Core + complementary + vocational* courses including Project	79
D	Minimum credits required from Open course	03
	Total Credits required for successful completion of the programme	120
E	Club activity (desirable)	01
F	Social service (mandatory)	01
G	Internship (desirable)	02
H	Minimum attendance required	75%

Detailed Distribution of Courses

Choice-based Credit and Semester System B.A. (Economics) Programme

Semester	Title of the Course	Hours per Week	Credit	Weightage	
				Internal	External
I	English Common 1	5	4	1	3
	English Common 2	4	3	1	3
	Additional Language I	4	4	1	3
	Methodology and Historical Perspectives of Economics	6	4	1	3
	Complementary I	6	4	1	3
II	English Common 3	5	4	1	3
	English Common 4	4	3	1	3
	Additional Language 2	4	4	1	3
	Principles of Microeconomics	6	5	1	3
	Complementary II	6	4	1	3
III	English Common 5	5	4	1	3
	Additional Language Common 3	5	4	1	3
	Microeconomic Analysis	4	4	1	3
	Economics of Growth and Development	5	4	1	3
	Complementary III	6	4	1	3
IV	English Common 6	5	4	1	3
	Additional Language Common 4	5	4	1	3
	Principles of Macroeconomics	5	4	1	3
	Public Economics	4	4	1	3
	Complementary IV	6	4	1	3

Semester	Title of the Course	Hours per Week	Credit	Weightage	
				Internal	External
V	Quantitative Techniques for Economic Analysis	6	4	1	3
	Macroeconomics Analysis	6	5	1	3
	Open Course*	4	3	1	3
	Environmental Economics	5	4		
	Introductory Econometrics	4	4	1	3
VI	Quantitative Methods for Economic Analysis	6	4	1	3
	International Economics	5	4	1	3
	Choice-based Course	4	3	1	3
	Money and Financial System	5	4	1	3
	Indian Economy	5	4	1	4
	Project	-	2	1	3
	TOTAL	150	120		

*One course to be selected from the list of Open Courses.

B.A. Economics Programme
Core, Complementary, Choice-based & Open Courses

Sem.	Core Papers	Exam	Teaching hours	Credits	Weightage	
					Internal	External
S1	Core 1 – Methodology and Historical Perspectives of Economics (19U1CRECO1)	S1	6	4	1	3
	Complementary 1: Historical Currents of the Modern World	S1	6	5	1	3
S2	Core 2 – Principles of Microeconomics (19U2CRECO2)	S2	6	4	1	3
	Complementary 2: The Concise History of Modern India	S2	6	4	1	3
S3	Core 3 – Microeconomics Analysis (19U3CRECO3)	S3	4	4	1	3
	Core 4 – Economics of Growth and Development (19U3CRECO4)	S3	5	4	1	3
	Complementary 3: An Introduction to Concepts in Political Science	S3	6	4	1	3
S4	Core 5 – Principles of Macroeconomics (19U4CRECO5)	S4	5	4	1	3
	Core 6 – Public Economics (19U4CRECO6)	S4	4	4	1	3
	Complementary 4: Indian Polity - Governmental Machinery and Processes	S4	6	4	1	3
S5	Core 7 – Quantitative Techniques for Economic Analysis (15U5CRECO7)	S5	6	4	1	3
	Core 8 – Macroeconomics Analysis (19U5CRECO8)	S5	6	5	1	3
	Open Course: Economics for Everyday Life (19U5OCECO1)	S5	4	3	1	3
	Core 9 – Environmental Economics (19U5CRECO9)	S5	5	4	1	3
	Core 10 – Introductory Econometrics (19U5CRECO10)	S5	4	4		
S6	Core 11 – Quantitative Methods for Economic Analysis (19U6CRECO11)	S6	6	4	1	3
	Core 12 – International Economics (19U6CRECO12)	S6	5	4	1	3
	Choice Based Elective Course –	S6	4	3	1	3

19U6ELECO1 – Modern Banking					
19U6ELECO2 – Human Resource Management					
19U6ELECO3 – Mathematical Economics					
19U6ELECO4 – Business Economics					
Core 13 – Money and Financial System(19U6CRECO13)	S6	5	4	1	3
Core 14 – Indian Economy (19U6CRECO14)	S6	5	4	1	3
Project (19U6PJECO1)	-	-	2	1	3
Total Credits			82		

Syllabi
For
Under Graduate Programme in
Economics

SEMESTER 1

Core Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
01	19U1CRECO 1	Methodology and Historical Perspectives of Economics	4	108

Course Outcome

	Course Outcome	POs/PSO	CL	KC	Class Sessions
CO1	Understand the broad contours of Economics, its methodologies, tools and analysis procedures.	PSO1, PSO4	U	C	15
CO2	Knowledge of the basic concepts and terminology of Economics	PSO1, PSO4	U	C	15
CO3	Gains knowledge to apply the methods and theories of social sciences to contemporary issues	PSO1, PSO2	U	C	12
CO4	Compares the basic postulates of various schools of economic thought	PSO3, PSO4	A	F	20
CO5	Describe the roots of economic thought and practices in the modern economic world.	PSO1, PSO3	U	C	10
CO6	Understanding the theoretical background of various economic concepts and theories	PSO1, PSO4	U	C	14
CO7	Evaluates the economic thoughts of Kautilya, Naoroji, Gandhiji and Amartya Sen.	PSO1, PSO4	E	F	12
CO8	Acquiring the basic knowledge of research methodology	PSO4	U	F	10
	TOTAL HOURS OF INSTRUCTION				108

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

MODULE I: Methodology of Social Science

Social Science and its emergence - different disciplines of social science – Basic principles and concepts in Social Science (Positivism, empiricism, rationalism, institutionalism, behaviorism, utilitarianism, modernism and post modernism)
- Need for interdisciplinary approach - Objectivity and subjectivity in Social Science - Limits to objectivity in social science. (25hrs)

MODULE II: Methodology and Concepts of Economics

Economics as a social science – Subject matter and scope of Economics, Pure and Applied, Positive and Normative Economics, Economic theory and Economic laws, Micro and Macro Economics, Role of assumptions in Economics, Method and Methodology - Deductive and inductive methodology, Economic Models. Various Concepts: Function, Variable, Equilibrium - Partial and General, Static, Comparative static and Dynamic-Nominal and Real Value. (30hrs)

MODULE III: Major Schools of Economic Thought

Mercantilism (Thomas Mun, William Petty) and Physiocracy (Francis Quesnay and Turgot), Basic postulates of Classical and Neo-Classical economic thought (Adam Smith, Ricardo, J.B. Say, Malthus, J.S. Mill, Jeremy Bentham, Alfred Marshall, A.C.Pigou and Walras). Socialist and Marxist Economic Thought-Karl Marx, Keynesianism-Keynes as a critique of classical Economics. Post - Keynesian developments: Milton Friedman, Joseph Schumpeter and Paul Samuelson, Thomas Piketty (Concepts only). Indian Economic Thought: Kautilya–Dadabhai Naoroji – Mahatma Gandhi - Amartya Sen. (27hrs)

MODULE IV: Research Methodology

Meaning and objectives of research – Types of research – Important methods of data collection - primary and secondary. Undertaking a research study: Conceptualization of research issues, reviewing the literature, Hypothesis, analysis and presentation of data, writing a research report. (30hrs)

References

1. Baumol, William J and Alan Blinder (2010): Economics: principles and Policy, 13th edition, South Western Cengage Learning, New Delhi.
2. Blaug, M (1998): The Methodology of Economics, Cambridge Surveys of Economic Literature, NewYork.
3. Boland, Lawrence A. (2000): The Methodology of Economic Model

Building Methodology after Samuelson, Routledge, London and New York.

4. Dasgupta, Manas(2007):Research Methodology in Economics: Problems and Issues, Deep & Deep Publications, NewDelhi.
5. Eric Roll(1956):AHistoryofEconomicThought,3rdedition,Prentice Hall, NewJersey.
6. Guthrie, Gerard (2010): Basic Research Methods- an entry to social science research, Sage publications, NewDelhi.
7. Hajela, T N (2015): History of Economic Thought, 18th edition, Ane Books, NewDelhi.
8. Haney, Lewis H(1920):History of Economic Thought, McMilan, New York
9. Hunt, E.K and Mark Lautzenheiser (2011): History of Economic Thought: A Critical Perspective, 3rd ed, Prentice Hall of India, New Delhi.
- Kaufmann, Felix (1958): Methodology of the Social Sciences, The Humanities Press, NewYork.
10. Kothari,C. R. (2010) : Research Methodology – Methods and Techniques, Rev edition, New Age Techno PressNew Delhi
11. Krishna Swami, O P and M Ranganathan (1993): Methodology of Research in Social Sciences, Himalaya Publishing House, New Delhi.
12. Lipsey, Christopher, T S Ragan, Paul A Storer (2007): Micro Economics, 13 thed,Pearson.
13. Mankiw, Gregory(2013):PrinciplesofMicroEconomics,6thedition, Cengage Learning India Private limited, Delhi.
14. Samuelson P and Nordhaus (2002): Economics 7th edition, Tata McGraw-Hill.
15. Wilkinson and Bhandarkar (1990): Methodology and Techniques of Social Research, Himalaya Publishing House, NewDelhi.
16. Young, P.V (1984): Scientific Social Survey and Research, Prentice Hall, New Delhi.

SEMESTER- II

Core Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
2	19U2CRECO2	Principles of Micro Economics	5	108

Course Outcome

	COURSE OUTCOME	POs/PSOs	CL	KC	Class Sessions
CO1	Understands micro economic concepts	PO1, PSO1	U	C	8
CO2	Analyses pricing strategies in the market	PO3, PSO2	A	C	8
CO3	Develops understanding regarding various aspects of demand and supply	PO3, PSO1	U	M	10
CO4	Evaluates various factors aspects of elasticity	PO1, PSO2	U	P	6
CO5	Understands the theory of consumer behaviour	PO1, PSO1	U	C	12
CO6	Understands the behavior of economic agents	PO1, PSO1	U	C	12
CO7	Understands the theory of production	PO1, PSO1	U	C	16
CO8	Compares the Traditional & Modern theories of Cost	PO1, PSO1	A	C	18
TOTAL HOURS OF INSTRUCTION					90

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module I –Introduction to Micro Economics

Definitions of economics- Micro-macro distinction- Nature and scope of micro economics, Central problems of economy – scarcity and choice -short run and long run, equilibrium and disequilibrium analysis – General and partial equilibrium - Micro economic policy: Goals - efficiency and equity - microeconomic models – assumptions and reality–maximization hypothesis -ceteris paribus assumption – market mechanism –need for governmental intervention – production possibility frontier.

(10 hrs)

Module II -Demand and Supply Analysis

Demand analysis: Law of Demand, Demand Determinants – individual and market

demand – Demand function measurement and application - changes and shifts in demand – Market demand and elasticity – Exceptions: normal, inferior, and Giffen goods - substitute & complementary goods. Types and degrees of price elasticity – Arc and point elasticity (geometric and arithmetic) Income elasticity of demand – cross elasticity.

Supply analysis: supply schedule and supply curve– changes and shifts in supply - elasticity of supply - measurement and application. Seller's view – Revenues – total, average and marginal revenue and price elasticity – market equilibrium and impact of changes in demand and supply-dynamic demand and supply model: Cobweb. Applications of demand & supply: price rationing, floor price. (25 hrs)

Module III - Theory of Consumer Behaviour

Consumer preference and choice - utility – total and marginal utility –cardinal and ordinal utility. Analysis of consumer behaviour - law of diminishing marginal utility – law of equi-marginal utility – consumer equilibrium under cardinal utility.

Ordinal utility analysis – indifference curve analysis – properties – consumer's income and price constraints: budget line - (response to changes in price and income) under ordinal utility analysis. Application: water – diamond paradox and consumers surplus; Marshall and Hicks.

Income effect and Engel curve – price effect and demand curve – substitution effect – splitting (decomposition) price effect into income and substitution effects: Hicksian and Slutsky approaches – criticisms of ordinal utility approach.

Behaviourist approach - Revealed preference theorem of Samuelson – derivation of demand curve – distinction between weak and strong ordering. New approaches to consumer theory – pragmatic approach & Linear Expenditure System (concepts only) (28 hrs)

Module IV - Theory of Production

Production – production function – total, marginal and average product – (geometric & arithmetical) – short run analysis of production function – returns to a factor - law of variable proportions – three stages. Production function with two variable inputs–Isoquants–properties–Isocost line-production decision - optimal input combination – producers equilibrium – expansion path – long run production function–returns to scale-economies and diseconomies of scale – internal and external economies - empirical production function: Cobb-Douglas

production function – its properties.

(25 hrs)

Module V -Cost Analysis

Theory of costs – traditional theory of costs –short run and long run –real cost money cost, explicit and implicit cost -sunk cost –accounting and economic concepts of cost-fixed cost–variable cost–total cost–average cost–marginal cost
–reasons for the U shape of the average cost curve –short run and long run cost curves -envelope curve –modern theory of cost –short run and long run curves- ‘L’shaped and ‘saucer’ shaped curves.

(20 Hrs)

Books for Reference

1. A. Koutsoyiannis, (1979), Modern Micro Economics, Palgrave Mc Millan
2. Dominick Salvatore, Micro Economics – Theory and Application 4 th ed., Oxford University Press, New Delhi.
3. Robert S. Pindyck, et al., (recent edition) Micro Economics – Pearson Education, Delhi.
4. G.S. Maddala and Ellen Miller (2004), Micro Economics - Theory and Applications, Tata McGraw Hill, Delhi

SEMESTER- III

Core Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
3	19U3CRECO3	Micro Economic Analysis	4	72

Course Outcome:

	COURSE OUTCOME	POs/PSOs	CL	KC	Class Cessions
CO1	Compares the perfectly and imperfectly competitive market forms and various forms of imperfect competition	PO1, PSO1	An	C	10
CO2	Understands the structure of firms and markets	PO1, PSO1, PSO2	U	C	12
CO3	Evaluates various types of markets and the strategies related to the same	PO1, PSO1, PSO2	E	C	8
CO4	Understands the price and output determination in various markets	PO1, PSO1	U	C	10
CO5	Analyses the problems and strategies under oligopoly	PO1, Pso1	An	C	12
CO6	Understands factor pricing and distribution in the economy	PO1, PSO1	U	C	18
CO7	Analyses the welfare issues of the economy	PO1, PSO1	An	C	8
CO8	Develops an understanding of various aspects to be taken in social and economic decisions	PO1, PSO1	U	C	12
TOTAL HOURS OF INSTRUCTION					90

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module I -Firms & Market Structure

Market –structure -Perfect and imperfect markets – perfect competition - characteristics –firm & industry –short run and long run equilibrium of a firm and industry –derivation of supply curve-shutdown point. Imperfect market – monopoly –features –short run and long run - discriminating monopoly -price discrimination - price and output determination under discriminating monopoly

- Measuring monopoly power – Lerner Index – social cost of monopoly - degrees and types of price discrimination–dumping–bilateral monopoly–Monopsony

(18 hrs)

Module II – Monopolistic Competition & Oligopoly

Monopolistic competition –non-price competition and selling costs -short run and long run (group) equilibrium. Ideal output and excess capacity –wastages of monopolistic competition.

Oligopoly–Nature of oligopoly –price stickiness -kinked demand curve -collusive oligopoly –cartels and price leadership –low cost firm –dominant and barometric –Duopoly –market with Asymmetric Information (concept only)

(18 Hrs)

Module III -Factor Pricing and Distribution

Functional versus personal distribution -concepts of total physical product (TPP) APP –VMP –MRP –marginal productivity theory of distribution product exhaustion theory- factor price distribution under perfect competition and imperfect competition- Ricardian and modern theories of rent – quasi rent –money and real wages – wage differentials – effect of labour unions on wages– theories of interest – classical, neo classical & Keynesian- theories of profit- dynamic theory-risk bearing theory–innovation theory of profit.

(21 Hrs)

Module IV -Welfare Economics

Edgeworth Box diagram –contract curve -Criteria of social welfare –growth of GNP as a criterion of welfare –Bentham criterion –cardinalist criterion -Pareto optimality criterion –Kaldor and Hicks compensation criterion –Arrow’s impossibility theorem - Rawlsian concept of justice –Amartya Sen’s concept of social welfare.

(15 Hrs)

Books for Reference

1. A. Koutsoyiannis, (1979), Modern Micro Economics, Palgrave MacMillan
2. Dominick Salvatore, Micro Economics – Theory and Application 4 th ed., Oxford University Press, New Delhi.
3. Robert S. Pindyck, et al., (recent edition) Micro Economics – Pearson

Education, Delhi.

4. G.S. Maddala and Ellen Miller (2004), Micro Economics - Theory and Applications, Tata McGraw Hill, Delhi

SEMESTER III

Core Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
4	19U3CRECO4	Economics of Growth and Development	4	90

Course Outcome:

	Course Outcome	POs/PSO	CL	KC	Class Sessions
CO1	Demonstrate familiarity with some central themes and issues of economic development	PSO1	R	C	15
CO2	Evaluate the structural changes in the development pattern of less developed countries.	PSO1, PSO3	E	C	15
CO3	Demonstrate the difference between economic growth and development and the major growth theories.	PSO1, PSO2	An	C	12
CO4	Assess the potential effectiveness of various policies in combating economic development.	PSO1, PSO2	E	C	15
CO5	Explores interactions between the environment and the economy and the physical constraints that limits the interaction.	PSO1, PSO4	An	C	12
CO6	Develops knowledge of relevant economic theories in understanding and addressing environmental or natural resource issues.	PSO2, PSO4	U	C	15
CO7	Becomes familiar with economic techniques to assess environmental problems and to analyse environmental policies.	PSO2, PSO4	U	C	10
CO8	Understand the market failure for environment goods and its impact on the economy.	PSO1	U	C	14
	TOTAL HOURS OF INSTRUCTION				108

Module I: Introduction to Economics of Growth and Development

Growth and Development – meaning – distinction – determinants and indicators- measurement of development – Income and non-income indices – GDP, PCI, PQLI, HDI, HPI, GEM – (GDI, GNH) – Development redefined– Development as a total social process – Development as freedom – Development as Liberation – Sen’s capability approach – poverty as capability and Entitlement failure –multidimensional poverty index – Quality of life – Education – Health and Nutrition –poverty – absolute and relative – inequality of income and wealth
– Gini coefficient – Lorenz curve Kuznet’s inverted ‘U’- Hypothesis – Development gap(22hrs)

Module II: Approaches to Development

Approaches to Economic Development: Structuralist – dependency - market-friendly approaches (concepts only) – vicious circle of poverty – Stage theory of Rostow – low level equilibrium trap – Critical minimum effort thesis – Big push – Lewis model – balanced vs unbalanced growth strategy – Dualistic theories. (23hrs)

Module III: Theories and Factors in the Development Process

Classical – Marxian – Schumpeterian. Economic Development –role of agriculture –capital – technology – choice of technique - Trade and economic development– process of cumulative causation.(20hrs)

Module IV: Human Resource and Development

Human Resource and Development – man power planning – concept of intellectual capital and its size – role of education and health in economic development – Education and health as joint investment for development– Gender and development – women in the labour force – optimum theory of population –theory of demographic transition – ageing and younging issues(25 hrs)

Books/Journals for Reference

1. Thirlwall, Growth and Development with Special Reference to Developing Countries. Palgrave McMillian, NewDelhi.
2. Benjamin Higgins (1968), Economic Development, Universal Book Stall, NewDelhi.
3. Meier G.M. (2007) Leading Issues in Economic Development, Oxford University Press, NewDelhi.
4. Todaro and Smith, Economic Development, Pearson Education, New Delhi.
5. Debraj Ray, Development Economics. Oxford University Press, NewDelhi.
6. Felix Raj and et. al, Contemporary Development Economics, New Central Book Agency (p)Ltd.

SEMESTER - IV

Core Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
5	19U4CRECO5	Principles of Macroeconomics	4	90

Course Outcome

	COURSE OUTCOME	POs/PSOs	CL	KC	CLASS SESSIONS
CO1	Compare and contrast micro and macro economics and understand the basics, the importance and applications of macro economics	PO1/PSO1	An	C	8
CO2	Understand the different economic variables and the forces that determining economic variables	PO1/PSO1	U	C	7
CO3	Understands national income concepts, different methods of calculating it, merits and demerits of each method and they should be able describe the method of calculation of national income in India and calculates NI, PI, DI etc	PO1/PSO5	U	C	9
CO4	demonstrate the circular flow model and understand the importance of each sectors of the economy in the income and output generation	PO2/PSO1	Ap	C	7
CO5	Understand the contributions made by the classical economists in macro economics and its relevance	PO1/PSO1	U	C	18
CO6	Compares the principles of Keynesian economics with classical theory	PO1/PSO1	An	C	16
CO7	Demonstrate the Keynesian model of income determination	PO2/PSO1	Ap	C	15
CO8	understand the concept of IS LM model of income determination	PO1/PSO1	U	C	10
	TOTAL HOURS OF INSTRUCTION				90

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module- I: Introduction–

Main issues in Macro Economics, Micro and Macro Economics – Statics, comparative statics and dynamics – Circular flow of economic activity in a two sector model – Variables - stock – flow - endogenous and exogenous - Macroeconomic models - Identities and equations. National Income – Concepts, Methods of measurement: Value added, income and expenditure methods– Social accounting method –

Limitations of national income accounting, Real and Nominal GNP -actual GNP and Potential GNP - Environmental concerns in national income accounts - Net Economic Welfare - Green GNP.(20 hrs)

Module-II: Classical Macro Economics:

Main postulates - Say's Law of Markets - Classical theory of Employment and output determination – Wage-price flexibility and full employment equilibrium – Classical theory of interest – Quantity Theory of money (Fisher's version) – Cash transactions and cash balance approach – Pigou effect – Neutrality of money – Classical Dichotomy. Keynes' criticism of Classical Theory.(20hrs)

Module III: Keynesian Macroeconomics:

The background of Keynesian macroeconomics –Principle of effective demand - Consumption function, Psychological law of consumption – Factors determining consumption - Savings function– Graphical, algebraic and numerical illustration and estimation of APC,MPC,APS and MPS. The investment function - Determinants of investment - MEC- MEI and the role of expectations. (25 hrs)

Module IV: Keynesian Model of Income Determination:

Two sector Keynesian cross model of income determination - Algebraic derivation - Under employment equilibrium - The effects of changes in autonomous investment on income multiplier analysis - static and dynamic multiplier - three sector Keynesian Cross model - The effects of changes in taxes and public expenditure on income-Balanced budget multiplier - Four sector Keynesian Cross model-foreign trade multiplier (concept only).Two sector IS-LM model of income determination(model only). (25hrs)

Readings

1. N.Gregory Mankiw(recent edition),Macro Economics,Worth Publications, NewYork
2. Richard T. Froyen (recent edition), Macro Economics - Theories and Policies, Pearson Education.
3. Lipsey R.G and K.A Christ al (1999) "Principles of Economics" 9th Ed. Oxford UniversityPress.
4. Branson,W.A(1989),"Macroeconomics:TheoryandPolicy",3rdEd.Harper

and Harper and Row, NewYork

5. Eugene Diulio (2004), Macro Economics – Schaum’s Outline Series, Tata McGraw Hill, NewDelhi.
6. Shapiro, Edward (1982), Macro Economic Analysis, Galgotia Publications (reprintedition)
7. Sampat Mukerjee (2008), Analytical Macro Economics: From Keynes to Mankiw, New Central Book Agency, Calcutta.
8. Andrew B. Abel (2011), Macro Economics, Pearson, Delhi.

SEMESTER IV

Core Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
6	19U4CRECO6	Public Economics	4	72

Course Outcome:

	COURSE OUTCOME	POs/PSOs	CL	KC	Class Sessions
CO1	Identifies areas of market failures and need for government intervention	PO1,PSO1	An	C	6
CO2	Understands the fiscal functions of the government and goals of government	PO3, PSO2	U	C	10
CO3	Critically evaluates different types of taxes and their effects and incidence.	PO3, PSO1	E	M	7
CO3	Understands the budgetary process techniques and importance of budget	PO1, PSO2	U	P	8
CO4	Examines the principles and effects of public expenditure	PO1, PSO1	An	C	8
CO5	Analyses the types, burden and effects of public debt and methods of debt redemption	PO5, PSO1	An	C	9
CO6	Critically evaluates the problems a of federal system of government and identifies solutions	PO5, PSO1	E	C	8
CO7	Evaluates the role of Panchayati Raj institutions	PO3, PSO1	E	C	7
CO 8	Examines the working of union and state finance commissions	PO1, PSO1	A	C	9
TOTAL HOURS OF INSTRUCTION					72

Module I - INTRODUCTION TO PUBLIC ECONOMICS

Nature and scope of Public Economics – comparison of public and private finance –role of state in economic activities(allocation, distribution &stabilization functions) public goods vs private goods -conditions of efficiency -- freed rider problem-Merit goods–principle of maximum social advantage.(18Hrs)

Module II - PUBLIC REVENUE

Public Revenue – Tax and Non-tax revenue – Taxes – canons of taxation –types of taxes – Income tax in India – Goods and Service tax and its impact-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 concepts of revenue account, capital account, gender budgeting, fiscal deficit, revenue deficit, primary deficit- zero base budgeting and rotating zero base budgeting-budgetary procedure(18Hrs)

Module III - PUBLIC EXPENDITURE AND PUBLIC DEBT

Meaning – Canons of public expenditure – effects – theories of expenditure growth-Wagner’s hypothesis Peacock- Wiseman hypothesis- development and non-development expenditure public debt – types – debt redemption – burden of public debt–public debt in India.(18Hrs)

MODULE IV - FISCAL FEDERALISM

Meaning and Importance – vertical and horizontal equity in fiscal federalism - fiscal federalism in India – role of Finance commission -- report of latest finance commission-grants in aid- State Finance Commission and Panchayati Raj institutions(18Hrs)

Books/Journals for Reference

1. HarveyRosen,(2008)Public Finance,McGrawHill,NewYork.
2. BernardP.Herber,Modern Public Finance (RichardIrvinInc)
3. H.L. Bhatia., Public Finance, Vikas Publishing House Pvt Ltd., New Delhi (recentedition)
4. B.P.Tyagi.,PublicFinance,JaiPrakashNath&Co.,Meerut(recentedition)
5. Musgrave and Musgrave (1984), Public Finance in Theory and Practice, McGraw Hill, NewDelhi

SEMESTER - V

Core Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
7	19U5CRECO7	Quantitative Techniques for Economic Analysis	4	108

Course outcome:

	Course Outcome	POs/PSOs	CL	KC	Class Sessions
CO1	Helps understand the role of statistics in economic analysis	PO1/PSO1	U	C	8
CO2	Students will be able to identify, explain, and use economic concepts, theories, models, and data-analytic techniques.	PO1/PSO5	Ap	C	20
CO3	Students will acquire the knowledge of economics, mathematics, statistics, and computing flexibly in a variety of contexts thereby providing the foundation for success in their studies and careers.	PO1/PSO5	Ap	C	15
CO4	Students will develop the skills to measure and analyze statistical data in order to draw conclusions about various economic problems.	PO1/PSO5	Ap	C	25
CO5	Students will develop the necessary skills for preparing questionnaires, collection and classification of data and presentation in charts and graphs.	PO1/PSO6	Ap	C	25
CO6	Students will acquire the skills to deliver effective presentations in which they combine visual communication design with oral arguments and/or the written word.	PO1/PSO6	Ap	C	15
TOTAL HOURS OF INSTRUCTION					108

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module I:

Role of Statistics in Economics – Functions performed –limitations. Statistical data: Primary and Secondary – their sources: Census and sampling techniques –Sample designs – preparation of questionnaires and schedules – classification and Tabulation of statistical data – Presentation of data with the help of graphs and diagrams (Histogram, Polygon, frequency curve, Bar diagram, Pie diagram, Ogives)

(30 Hrs)

Module II

Central Tendency and Dispersion - Various central tendency measures - Arithmetic mean – properties – merits and demerits. Median –definition – merits and demerits –graphic Method – Mode – merits and demerits – methods of calculation: significance of dispersion, methods, absolute and relative measures – Range, quartile deviation, mean deviation, standard deviation – Lorenz curve and its economic applications. (30Hrs.)

Module III

Correlation and regression analysis: their significance in Economics – Correlation and regression compared – types of correlation – measurement, scatter diagram, Karl Pearson's correlation coefficient (for raw data only). Rank correlation –Regression- meaning and significance-regression equations/regression lines-the line of best fit – prediction based on regression equations. Relation between correlation and regression. (25Hrs.)

Module IV:

Time series analysis: uses, components, measurement of trend free hand method, semi average method, Moving average method, Method of least squares. (13hrs)

Module V

Skewness, Kurtosis, Moments: Types of Skewness–measurement - Kurtosis – Definition and types (graphic presentation) Moments: central and raw moments (for ungrouped data only). (10Hrs.)

Reference

1. Sharma J.K. Business statistics. Pearson Education. Noida, India
Richard Levin et.al. Statistics for management. Pearson Education.
India.
2. Srivastava U.K et.al. Quantitative techniques for managerial
decisions. New Delhi: New Age International Publishers. India.
3. Chiang A.C. (2005), Fundamental Methods of Mathematical
Economics, McGraw Hill. Gupta S.P., Statistical Methods, Sultan
Chand & Sons, New Delhi.Allen R.G.D., Mathematical Analysis for
Economists, palgrave macmillan.
4. Monga G.S., Mathematics and Statistics for Economists, Vikas
Publishing House, NewDelhi.
5. Thomas P.M., Quantitative Economics, Chinnu Publications,
Kottayam.
6. Barauh.S, Basic Mathematics and Its Application in Economics,
Macmillan,2002.
7. Taro Yamane, Mathematics for Economists: An Elementary
Survey, Prentice Hall of India

SEMESTER- V

Core Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
8	19U5CRECO8	Macroeconomic Analysis	5	108

Course Outcome

	COURSE OUTCOME	POs/PSOs	CL	KC	Class Sessions
CO1	Understand the consumption function and illustrates it numerically	PO1/ PSO1	U		7
CO2	understand the relevance of different consumption theories	PO1/PSO1	U		6
CO3	Critically examines the concept of investment ,its determinants ,investment theories and its relative importance	PO1/PSO1	An		8
CO4	Compares the determination of general price level in an economy according to Classical and Keynesian economics	PO1/PSO1	An		6
CO5	understand the concept of inflation , its types and different theories	PO1/PSO1	U		20
CO6	Evaluate the inflation levels of various countries and its impact on the respective economies	PO1/PSO3	E		8
CO7	Analyze fiscal and monetary policy decisions to counter business cycle swings by using macro-economic models	PO2/PSO1	A		15
CO8	Understand the contributions made by post Keynesian economists	PO2/PSO1	U		20
	TOTAL HOURS OF INSTRUCTION				90

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module I- Theories of Consumption and Investment

Consumption Function - Kuznets's consumption puzzle - Conflict between short-run and long run consumption functions - relative income hypothesis – permanent income hypothesis - life-cycle hypothesis. Theory of capital and theory of

investment-Present Value Criterion-Accelerator theory of Investment

- Tobin's q theory (25 Hrs)

Module II- Money, Inflation and Unemployment

Money - classical approach – Keynesian liquidity preference theory and interest rate determination - liquidity trap - Keynes effect - supply of money - sources - high-powered money - money multiplier - measures of money supply in India. Inflation: types – Demand-pull and cost-push inflation – inflationary and deflationary gap-causes and effects of inflation – stagflation - control of inflation

- Meaning and types of unemployment - Okun's law - inflation and unemployment - the Phillips curve – long run Phillips curve – Natural rate of unemployment (38Hrs)

Module III- Trade Cycles, Monetary and Fiscal Policies

Trade cycles - Types and phases – Theories of trade cycles: Hawtrey, Hayek, Keynes - Stabilization policies - Active or passive. Monetary and fiscal policy: objectives and instruments (concepts only) – Monetary and fiscal policy in the IS-LM context (closed economy only) - Financial Crises & Regulatory response.(20Hrs)

Module IV- Post Keynesian Schools of Macroeconomic Thoughts

Monetarism- Monetarist propositions and the Quantity Theory Restatement - New Classical Economics - Rational Expectations (concept)- Lucas' critique(Policy ineffectiveness proposition) Supply Side Economics - Tax cut policy and the Laffer Curve Analysis New Keynesian School – Nominal Wage Rigidity model (Overview)(25Hrs)

Readings

1. B Snowdon & Howard Vane. A Modern Guide to Macro Economics. EdwardElgar
2. R T Froyen . (Recent Edition)Macroeconomics – Theories and Policies. PearsonEducation
3. N Gregory Mankiw. Macroeconomics. New York; WorthPublications
4. R Dornbusch, S Fisher. Macroeconomics. Tata McGrawHill
5. Arthur O' Sullivan et al. (2015). Macroeconomics principles, applications and Tools. New Delhi: Pearson Education SouthAsia.
6. Macro Economics Simplified - "An introduction to keynesian and Classical

macroeconomic systems” by Nicoli Natrass and G.Visakh Verma,
Published by Sage, NewDelhi.2014

7. C Ram Manohar Reddy (2017) De monetisation and Black Money, Orient BlackSwann.
8. G Omkarnath (2012) Economics – A primerfor India, Orient Black Swann.

SEMESTER - V

Core Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
9	19U5CRECO9	Environmental Economics	4	90

	COURSE OUTCOME	POs/PSOs	CL	KC	Class Sessions
CO1	Understands the discipline of Environmental Studies, its inter disciplinary nature and scope.	PO4, PSO4	U	C	8
CO2	analyses the resource base of the world- Types, nature, limited availability and need for sustainable use	PO4, PSO1, PSO4	An	C	12
CO3	Analyses the structure, functions characteristics and threats to various eco systems	PO4, PO6, PSO4,	An	C	10
CO4	Critically evaluates the importance, and threats to biodiversity, and gets convinced of the need for conservation of nature and biodiversity.	PO4, PSO4	E	M	10
CO5	Develops knowledge about various Social issues and possible initiatives related to environment, environmental ethics and legislation	PO4, PO5 PSO4	U	C	15
CO6	Examines the Environment-economy linkage, need for sustainability and global efforts to bring balance between Economy and environment	PO4&PO6 PSO2, PSO4	An	M	10
CO7	Understands the problem of human rights in India	PO3, PSO2	U	C	12
CO 8	Understands Relationship between environment and human rights.	PO3, PSO4	U	C	13
Total Hours of Instruction					90

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates, M-Meta

Cognitive

Module I Unit 1 : Multidisciplinary nature of environmental studies

Definition, scope and importance (2 hrs)

Need for public awareness.

Unit 2 : Natural Resources :

Renewable and non-renewable resources: Natural resources and associated problems.

a) Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people.

b) Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.

c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.

d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.

e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, Case studies.

f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification

- Role of individual in conservation of natural resources.
- Equitable use of resources for sustainable lifestyles. (10hrs)

Unit 3: Ecosystems

- Concept of an ecosystem
- Structure and function of an ecosystem

- Producers, consumers and decomposers
- Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids.
- Introduction, types, characteristic features, structure and function of the given ecosystem:-
 - a. Forest ecosystem

(6hrs)

Module -II Unit 1: Biodiversity and its conservation

- Introduction
- Bio-geographical classification of India

- Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values.
- India as a mega-diversity nation
- Hot-spots of biodiversity
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts
- Endangered and endemic species of India

(8hrs)

Unit 2: Environmental Pollution

Definition

Causes, effects and control measures of: -

- a. Air pollution
 - b. Water pollution
 - c. Soil pollution
 - d. Marine pollution
 - e. Noise pollution
 - f. Thermal pollution
 - g. Nuclear hazards
- Solid waste Management: Causes, effects and control

measures of urban and industrial wastes.

- Role of an individual in prevention of pollution
- Pollution case studies
- Disaster management: floods, earthquake, cyclone and landslides.

(8 hrs.)

Unit 3: Social Issues and the Environment

- Urban problems related to energy
- Water conservation, rain water harvesting, water shed management
- Resettlement and rehabilitation of people: its problems and concerns, Case studies
- Environmental ethics: Issues and possible solutions
- Climate change, global warming, acid rain, ozone layer depletion , nuclear accidents and holocaust, Case studies
- Consumerism and waste products
- Environment Protection Act
- Air(Prevention and Control of Pollution)Act
- Water(Prevention and control of Pollution)Act
- Wildlife Protection Act
- Forest Conservation Act
- Issues involved in enforcement of environmental legislation
- Public awareness (10hrs.)

Module – III Unit I: Economics and Environment

Environmental Economics – Definition – Scope – Meaning – importance – Environment-Economy interaction (linkages) – material balance model – ecosystem – structure and functions – relation between environment and development – Environment as a necessity and luxury-environmental issues and global concern-Stockholm Conference – Helsinki Convention

Montreal Protocol – Kyoto Protocol – Rio Summit – Paris Convention. Population

growth and Environment – market failure – tragedy of commons-sustainable development-policy approach to sustainable development (An overview only). (16hrs)

Module IV Unit 1: Framework and Criteria for Environmental Analysis

Evaluation of environmental benefits – Contingent Valuation Method – Hedonic approach–travel cost method–preventive expenditure method
- surrogate market approach – property value approach and wage differential approach - cost benefit analysis – UNIDO analysis –Little- Mirrlees approach
- Environmental Impact Analysis. Pollution control
- socially optimum level of pollution – environmental policies and legislations in India. (18hrs)

Module – V Unit 1- Human Rights– An Introduction to Human Rights, Meaning, concept and development, Three Generations of Human Rights (Civil and Political Rights; Economic, Social and Cultural Rights).

Unit-2 Human Rights and United Nations–contributions, main human rights related organs - UNESCO, UNICEF, WHO, ILO, Declarations for women and children, Universal Declaration of Human Rights.

Human Rights in India – Fundamental rights and Indian Constitution, Rights for children and women, Scheduled Castes, Scheduled Tribes, Other Backward Castes and Minorities

Unit-3 Human Rights and environmental rights - Right to Clean Environment and Public Safety: Issues of Industrial Pollution, Prevention, Rehabilitation and Safety Aspect of New Technologies such as Chemical and Nuclear Technologies, Issues of Waste Disposal, Protection of Environment

Conservation of natural resources and human rights: Reports, Case studies and policy formulation. Conservation issues of western Ghats-mention Gadgil committee report, Kasthurirangan

report. Over exploitation of ground water resources, marine Fisheries, sand mining etc. (12Hrs)

Reference

1. Agarwal, K.C 2001 Environmental Biology, Nidi Publ. Ltd, Bikaner.
1. Bharucha Erach, Text Book of Environmental Studies for undergraduate Courses. University Press, IIInd Edition 2013 (TB)
2. Brunner. R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p
3. Clark. R.S., Marine Pollution, Clarendon Press Oxford (TB)
4. Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001. Environmental Encyclopedia, Jaico Publ. House. Mumbai. 1196p
5. Dc A.K. Environmental Chemistry, Wiley Eastern Ltd.
6. Down to Earth, Centre for Science and Environment (R)
7. Gleick, J.P. 1993 Water in crisis, Pacific Institute for Studies in Dev. Environment & Security. Stockholm Environment Institute Oxford University Press 473p
8. Hawkins R.E, Encyclopedia of Indian Natural History, Bombay Natural History Society, Bombay (R)
9. Heywood, V.H & Watson, R.T. 1995. Global Biodiversity Assessment, Cambridge University Press 1140p
10. Jadhav. H & Bhosale. V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284p
11. Mearns, M.L & Schock. R.M. 1996 Environmental Science Systems & Solutions. Web enhanced edition 639p
12. Mhaskar A.K., Matier Hazardous, Techno-Science Publications (TB)
13. Miller T.G. Jr., Environmental Science, Wadsworth Publishing

- Co. (TB)
14. Odum.E.P 1971. Fundamentals of Ecology. W.B. Saunders Co. USA574p
 15. Rao.M.N&Datta.A.K. 1987 Waste Water treatment Oxford & IBII PublicationCo.Pvt.Ltd.345p
 16. Sharma B.K., 2001. Environmental Chemistry. Geol Publ. House,Meerut
 17. Survey of the Environment, The Hindu(M)
 18. Townsend C., Harper J, and Michael Begon, Essentials of Ecology, Blackwell Science (TB)XI
 19. Trivedi R.K., Handbook of Environmental Laws, Rules Guidelines, Compliances and Standards, Vol I and II, EnviroMedia(R)
 20. Trivedi R. K. and P.K. Goel, Introduction to air pollution, Techno-Science Publication(TB)
 21. Wanger K.D., 1998 Environmental Management. W.B. Saunders Co. Philadelphia, USA499p
 22. (M) Magazine (R) Reference (TB)Textbook
 23. Rabindra N Bhattacharya. (2007). Environmental Economics an Indian Perspective. Oxford University Press.
 24. Charls D. Kolstad.(2007). Environmental Economics. New Delhi: OUP.
 25. Ramaprasad Senguptha.(2009).Ecology and Economics. New Delhi: OUP.
 26. Janet Thomas.(2009). Environmental Economics. New Delhi: Cenage Learning.
 27. S.P. Mirsa, S.N. Pandey (2008). Essential Environmental Studies. New Delhi: AneBooks.
 28. Katar Singh and Shishodia. (2007) Environmental Economics- Theory and application. New Delhi: Sagepublication.
 29. Tom Tietenberg. (2004). Environmental and Natural Resource Economics. PearsonEducation.

30. Karpagam.M.(2008).Environmental Economics.New Delhi: Sterling Publishers.
31. R.K. Lekhi et al. (2008). Developmental and Environmental Economics. Ludhiana: Kalyan publishers.
32. Ulaganathan Sankar. (2009) Environmental Economics. New Delhi: OUP.
33. N. Das Gupta (1997). Environmental Accounting. Wheeler and Co New Delhi.
34. Thomas and Callan (2007). Environmental Economics. Thomas South-Western.
35. Paul Ackin .(2000) Economic Growth and Environmental sustainability, Routledge, London.
36. Nick Hanley. (2009) Environmental Economics in Theory and Practice. Palgrave Macmillan, New York.
37. Fisher A.C. (1981). Resource and Environmental Economics. Cambridge University Press, Cambridge.
38. Baumol. (1988). Theory of Environmental Policy (second edition). Cambridge University Press, Cambridge
39. Prasanna Chandra: Projects- Planning, Analysis, Financing, Implementation & Review. (5th edition) Tata McGraw Hill.
40. PR Trivedi. (2014) Environmental Impact Assessment. APH Publishing Corporation.
41. Erach Baraucha (2014) Test book of Environmental studies, Orient Black Swann.

SEMESTER-5

Core CourseNo	Course Code	Course Title	No. of Credit	No. of Teaching Hours
10	19U5CRECO10	Introductory Econometrics	4	90

Course Outcomes

	Course Outcome	POs/PSOs	CL	KC	Class Sessions
CO1	Understands the meaning and methodology of econometrics	PO1/PSO1	U	C	15
CO2	Understands the importance of random variable in economic data analysis	PO1/PSO1	U	C	10
CO3	Understands the concept of Ordinary Least Square estimators and its various assumptions	PO1/PSO1	U	C	13
CO4	Understands the consequences of relaxing the assumptions of OLS estimation	PO1/PSO1	U	C	17
CO5	Develops the skills to build predictive models that help in decision making	PO1/PSO1	Ap	C	25
CO6	Understands the various econometric tools that enable to make valid inferences.	PO1/PSO1	Ap	C	10
TOTAL HOURS OF INSTRUCTION					90

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module I: Introduction to Econometrics

Definition and Scope of Econometrics, Methodology of Econometrics, Basic Concepts of estimation, Point estimation and interval estimation- properties of estimators- unbiasedness, efficiency, consistency and sufficiency. (20 Hours)

Module II: Simple Linear Regression Model

Classical Liner Regression Model—Meaning and methodology—Population regression function (PRF)—The concept of linearity in econometrics—stochastic

interpretation and its significance—Sample regression function(SRF), Estimation of an equation – OLS method, assumptions, Gauss –Markov theorem, Goodness of Fit. R^2 , interpreting the results (30hrs)

Module III: Multiple Regression Model

Introduction to multiple regression model – Three variable model, Assumptions, interpretation of multiple regression equation. Functional forms of regression models – Choice of functional forms – double log model – semi log models, interpretation of estimated parameters, Standard error, t test, F test. **(20 hrs.)**

Module IV: Problems in Regression Analysis

Relaxing the assumption of classical linear regression model- Heteroscedasticity—nature, estimation in its presence—detection and remedial measures—Autocorrelation—nature and estimation in its presence— detection and remedial measures – Multicollinearity—nature, estimation in its presence—detection and remedial measures. (20hrs)

Readings:

1. Gujarati, Porter and Gunasekhar(2007),Basic Econometrics, Fifth Edition, Tata McGraw Hill, NewDelhi
2. A Koutsoyiannis, Theory of Econometrics, Second Edition, Palgrave Macmillan
3. Chandan Mukherjee, Howard White and Marc Wytus, Econometrics and Data Analysis for Developing Countries”,Routledge
4. James H stock and Mark W (2007).Watson, Introduction to Econometrics,PearsonEducation;3rdedition
5. Ramu Ramanathan, Introductory Econometrics with Applications, S.Chand&Company Ltd; 5th Revised edition
6. ChristopherDougherty,IntroductiontoEconometrics.NewDelhi:OxfordUniversity Press
7. Johnston. J. Econometric Methods.McGrawHill.
8. GS Maddala and Kajal Lahiri, Introduction to Econometrics, Wiley India, New Delhi
9. Dominick Salvatore, Derrick Reagle, Schaum's Outline of Statistics and Econometrics, Second Edition, McGraw-Hill Education

SEMESTER - VI

Core Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
11	19U6CRECO11	Quantitative Methods for Economic Analysis	4	108

Course Outcomes

	Course Outcome	POs/PSOs	CL	KC	Class Sessions
CO1	Helps understand the role of statistics in economic analysis	PO1/PSO1	U	C	8
CO2	Students will be able to identify, explain, and use economic concepts, theories, models, and data-analytic techniques.	PO1/PSO1	Ap	C	20
CO3	Students will acquire the knowledge of economics, mathematics, statistics, and computing flexibly in a variety of contexts thereby providing the foundation for success in their studies and careers.	PO1/PSO1	Ap	C	15
CO4	Students will develop the skills to measure and analyze statistical data in order to draw conclusions about various economic problems.	PO1/PSO5	Ap	C	25
CO5	Students will develop the necessary investigative skills for conducting original economic research and participating effectively in project teams.	PO1/PSO1	Ap	C	25
CO6	Students will acquire the skills to deliver effective presentations in which they combine visual communication design with oral arguments and/or the written word.	PO1/PSO6	Ap	C	15
TOTAL HOURS OF INSTRUCTION					108

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module I:

Basic Mathematics for Economic Analysis – Basic concepts: variables, constants, parameters, equations, sequences, progression: Arithmetic progression and Geometric progression, Calculation of simple interest and compound interest, The real number system. Types of numbers – properties of real numbers – set theory – Types – Set operations – Venn diagrams – Functions: Important economic functions – Ordered pairs and Cartesian products. (25Hrs)

Module II

Differential Calculus: Its significance in Economics. Rules of differentiation – First order and second order derivatives – some practical applications – Maxima and Minima of functions. Integration- Basics. (15Hrs.)

Module III

Introduction to matrices – Definition and types of matrices, Order of matrix, Transpose of matrix Matrix Algebra – addition, subtraction and multiplication, Determinants, Minors and cofactors, Inverse of a matrix, Cramer's Rule. (10 Hrs)

Module IV

Probability and Distribution: Concept – Rules of probability (addition and multiplication theorem – statement only) – Different approaches – Important terms related to probability (Random experiments, sample space, events) – Simple problems based on theorems – Probability distribution – binomial and normal – their properties and uses – Estimation of probabilities using standard normal table. (33Hrs.)

Module V:

Index numbers – Different types – Importance and limitations, Problems in construction – Weighted and Unweighted price index numbers – Different methods of construction (Price indices only) – Simple aggregative, simple average of price relatives, Laspeyre's, Paache's, Fisher's and Marshall Edgeworth's indices, Cost of living index numbers: significance and construction (Family budget method only). (25hrs)

Readings

1. John E.Freund (1992), Mathematical Statistics, Prentice Hall, NewDelhi.
2. Richard J Larsen and Morris L Marx (2011), An introduction to Mathematical Statistics and its applications, Prentice Hall, NewDelhi.
3. Lipwchutz and John Schiller(2005), Introduction to probability and Statistics, Schaums outline Series, Tata McGraw –Hill Education Private Limited, NewDelhi.
4. ChiangA.C.(2005),Fundamental Methods of Mathematical Economics, McGrawHill.
5. GuptaS.P. ,Statistical Methods, SultanChand&Sons, NewDelhi.
6. Allen R.G.D., Mathematical Analysis for Economists, Palgrave Macmillan.
7. Monga G.S., Mathematics and Statistics for Economists, Vikas Publishing House, New Delhi.
8. Thomas P.M., Quantitative Economics, Chinnu Publications,Kottayam.
9. Taro Yamane, Mathematics for Economists: An Elementary Survey, Prentice Hall of India
10. Anderson, Sweeney and Williams, Statistics for Business and Economics, Thomson Education

SEMESTER- VI

Core Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
12	15U1CRECO12	International Economics	4	90

Course Outcome:

	COURSE OUTCOME	POs/PSOs	CL	KC	Class Sessions
CO1	Understands the basic concepts and tools of international economics	PO1,PSO3	U	C	9
CO2	Analyses the basic factors lying behind international trade	PO6, PSO3	An	C	10
CO3	Understands the balance of payments accounting and concepts related to it	PO6, PSO3	U	C	12
CO3	Critically evaluates reasons for BOP disequilibrium and methods of correction	PO6, PSO3	E	C	10
CO4	Examines the structure and working of foreign exchange markets	PO6, PSO3	An	C	9
CO5	Evaluates the theories of exchange rate determination	PO1, PSO3	E	C	12
CO6	Develops basic knowledge about currency derivatives	PO1, PSO3	U	C	10
CO7	Evaluates the role and importance of commercial policy	PO5, PSO3	E	C	8
CO 8	Develops understanding regarding international monetary system and international monetary organisations	PO1, PS31	U	C	10
TOTAL HOURS OF INSTRUCTION					90

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module I - Introduction to the Theory of International Trade

International Economics – Meaning and Significance – Pure theory of international trade – Basic concepts – terms of trade – meaning and types - offer curve – community indifference curve –opportunity cost – Absolute advantage – Comparative advantage- Reciprocal Demand – the Heckscher– Ohlin theory – Factor price equalization theorem- Leontief Paradox – gains from trade – static and dynamic gains. (25hrs)

Module II - Balance of Payments

Meaning and structure of balance of payments – equilibrium and disequilibrium in the balance of payments – measures to correct disequilibrium – Devaluation and Balance of Payments –effects of currency depreciation and capital movements on BOPs Marshall Lerner condition-J-curve effect (20 hours)

Module III - Foreign Exchange Rate

Equilibrium Rate of Exchange – theories of exchange rate determination – purchasing power parity theory – BOP theory – Fixed and flexible exchange rate - forward rate – spot rate – nominal, real, and effective rate of exchange –

Foreign exchange risks – hedging and speculation –currency derivatives –future options – currency swaps- international liquidity (25 hrs)

Module IV - Trade Policy and Financial Systems

Commercial policy – free trade vs protection – Tariffs and Quotas - their effects – Gold standard& Mint parity- Bretton Woods System - IMF – IBRD; WTO - Economic integration- trade creation and trade diversion (25 hrs)

Books/Journals for Reference

1. Sodersten, Bo. And Geoffry Reed, International Economics, Palgrave macmillan
2. Dominic Salvatore, (recent edition) International Economics. John Wiley and Sons, Delhi.
3. Francis Cherunilam (2008), International Economics, Tata McGraw Hill, Delhi.
4. Giancarlo Gandolfo (2006) Elements of International Economics, Springer (India) Private Limited.
5. Dominic Salvatore, Schaum's Outlines, Theory and Problems of International Economics. Tata McGraw Hill, Delhi.

SEMESTER- VI

Core Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
13	15U1CRECO13	Money and Financial System	4	90

Course Outcome

	Course Outcome	POs/PSO	CL	KC	Class Sessions
CO1	Gains knowledge on the basics of Indian financial system	PSO1, PSO2	U	C	12
CO2	Examines the functioning of Indian capital market and money market.	PSO1, PSO2	An	C	15
CO3	Understand functions and forms of money	PSO1, PSO2	U	F	10
CO4	Understand the importance of the financial system in directing the use of scarce capital.	PSO2, PSO3	U	F	12
CO5	Explores the components of the financial system	PSO1	An	C	10
CO6	Understand the major instruments of money market and capital market	PSO2, PSO3	U	C	12
CO7	Familiar with internet based trade and transactions	PSO1	Ap	C	8
CO8	Develops knowledge on the derivative segment of the capital market.	PSO1, PSO3	U	C	11
	TOTAL HOURS OF INSTRUCTION				90

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module 1: Introduction to Money and Financial System

Static and Dynamic Functions of money, near money, inside money and outside money – Monetary aggregates –M1, M2, M3, and M4-High powered money and

money multiplier.

Financial system- functions and structure –Financial markets- Financial Instruments, Financial system and Economic development (Role). (15 Hrs)

Module 2: Money Market

Money market – Meaning -Functions, Instruments of money market-Call loans, Collateral loans, Bills of Exchange, Treasury Bills, Gilt edged securities, Certificate of Deposits', Commercial papers, REPOS, Components of money market-Call money market, Collateral loan market, Acceptance market, Bill market, certificate of deposit and commercial paper market, CBLO market, Institutions of money market- Acceptance houses, Discount houses, Central bank, Commercial bank-Features of Indian money market, DFHI and RBI in Indian Money market.(25Hrs)

Module 3: Capital Market

Capital market- Meaning – Functions-Structure-Primary and Secondary markets-Primary market (New issue market)-Functions of NIM- Intermediaries in NIM (merchant bankers, underwriters, registrar and share transfer agents, bankers to an issue, stock broker), Instruments of Capital market- -Preference shares, Deferred shares, Equities Ordinary shares, bonus shares-Bonds and debentures, Government promissory notes, Public sector bonds, exchange traded funds (ETF), stock split -IPO and FPO, Methods of public issue, -Book Building, ESOP, Depository-Functioning of depository-

Secondary Market- Nature and functions of stock exchanges -Settlement and trading in stock exchange- Players in stock exchanges-Speculators-Bulls, Bears, Lamé duck, Stag.

Derivatives Market: Derivatives – meaning- Benefits- types - Forwards, Futures, options, Swaps, warrants and options, Credit derivatives - Forex derivatives. (30Hrs)

Module 4: Indian Financial System

Structure of Indian Financial System-Organization and management of Indian Stock Exchanges-SEBI -Stock exchanges in India –OTCEI, BSE and NSE- INDO next- BOLT, Online trading, Stock indices in India and abroad -BSE Sensitive index and Nifty indices; Dow Jones, NASDAQ, FTSE, Nikkei, Depositories in

India-NSDL,CSDL,Credit rating agencies in India-CRISIL,ICRI, CARE, NBFIs – Insurance Companies, Pension funds, Provident funds, Mutual Funds, Venture capital funds. (20Hrs)

References

1. L.M. Bhole, Jitendra Mahakud. Financial institutions and markets – Structure, growth and innovations. (Latest edition), Tata McGraw Hill Education Private Limited, NewDelhi.
2. Bharati V. Pathak (2014), Indian Financial System, Pearson Education, Delhi (Fourth Edition) Ch.4 and 5,
3. S.B. Gupta (2001). Monetary Economics: Institutions, Theory and Policy, S. Chand & Co, New Delhi, Part I
4. V.A. Avadhani, Investment and Securities Market in India, Himalaya Publishing House, Bombay (recent edition)
5. Zvi Bodie, Robert C Merton et al. (2009), Financial Economics, Pearson Education (Ch.1(1.1,1.2), Ch.2(2.1,2.5,2.7) only.
6. M.Y. Khan (recent edition) Indian Financial System, Tata McGrawHill, New Delhi.
7. Frederik S Mishkin, The Economics of Money, Banking and Financial Markets, Eleventh Edition, Pearson Education.
8. F. S. Mishkin and S. G. Eakins, Financial Markets and Institutions, Pearson Education, 6th edition, 2011.
9. Jadhav, Monetary Policy, Financial Stability and Central Banking in India, Macmillan, 2006.
10. Keith, P Ibeam (2005): Finance and Financial Markets, 2nd ed, Palgrave McMillan.
11. Guru Swamy, S (2009): Financial Markets and Institutions, 3rd ed, Vijay Nicole Imprints Pvt. Ltd, Chennai, TATA Mc Graw Hills Co Ltd, New Delhi.
12. Faboozi, J Frank, Modigliani Franco (2008): Capital Markets-Institution and Instruments, 4th ed, Pearson Education, NewDelhi

SEMESTER - VI

Open Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
14	19U6CRECO14	Indian Economy	4	90

Course Outcome

	COURSE OUTCOME	POs/PSOs	CL	KC	Class Cessions
CO1	Understands the economy of India before independence	PO6, PSO3	U	C	8
CO2	Understands the economy of India during the colonial rule	PO6, PSO3	U	C	10
CO3	Critically analyses the achievements and issues of the economy	PO6, PSO3	An	C	14
CO4	Evaluates the problems and prospects of Indian economy as an emerging economic power	PO1, PSO2	E	C	10
CO5	Develops the skills to connect the economy of India with economic theories	PO1, PSO2	E	C	14
CO6	Develops an analytical approach to the problems of Indian Economy	PO1, PSO2	U	P	16
TOTAL HOURS OF INSTRUCTION					72

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module I: Economic Development Strategy since Independence

Mixed Economic Framework - Key and Strategic Role of PSUs – Economic Crisis of 1990 –Macro Economic Reforms Implemented Since 1991-Structural Adjustment Programmes - Globalization, Liberalization and Privatization – Performance of Indian Economy before and after Economic Reforms -External Sector Reforms since 1991 - Trade and Currency Reforms, - foreign capital - FDI, portfolio investments and MNCs.

(25hrs)

Module II- Demographic Features

Population–size, structure (sex and age) – characteristics – population change –

rural– urban migrations, occupational distribution, problems of over population, population dividend, population policy, Gender inequality, women empowerment, education, health, malnutrition.

(15hrs)

Module III: Agriculture, Industry and Service Sector

Role of Agriculture in Indian Economy-Land Reforms-New Agricultural Strategy – Green Revolution – Need for Second Green Revolution - Agricultural Growth and Performance-New Agricultural Policy–Changes in Land use and Cropping Pattern-Agricultural Finance and Issues - Agriculture during Economic Reform Period - WTO and Indian Agriculture – crop Insurance- food security and PDS in India. Industrial growth during pre-reform and post reform period- Industrial Policy Resolution of 1956 and 1991 – Recent industrial policies: national Manufacturing policy 2011-Make in India – Start up India, Role of Micro, Small and Medium Scale Industries (MSMEs) in Indian Economy Its problems and remedies- Role and Performance of Service sector in Indian Economy.

(20 hrs)

Module IV: Economic Planning and Development Issues

Meaning and rationale of Planning-Basic Strategies, Objectives and Achievements of planning in India- Inclusive Development- NITI Aayog - Trends in India's National Income and per capita income – Magnitude of poverty and inequality in India-unemployment, black money and corruption–rising prices
- energy crisis – Micro finance and its significance – importance of infrastructure in India's economic development.

(15hrs)

Module V: Kerala Economy

Features, Kerala model of development - Structural change and economic growth in Kerala - Land reforms - current issues in agriculture – food crisis – changes in cropping pattern – agricultural indebtedness – unemployment - IT sector in Kerala - fiscal crisis in Kerala, Gulf migration, energy policy and energy crisis, decentralized planning in Kerala, Changes in the Health Profile of Kerala – Emerging issues.

(15hrs)

Readings

1. Misra and Puri(recent edition), Indian Economy, Himalaya Publishing House, Mumbai. Gaurav Datt & Ashwani Mahajan (recent Edition), Datt & Sundharam Indian Economy, S.Chand & Co., New Delhi
2. Meera Bai M.(ed)(2008), Kerala Economy, Serials Publication, New Delhi.
3. Prakash BA(2004) Kerala's Economic Development, Sage Publications, New Delhi
4. George K K (1993) Limits to Kerala Model of Development, CDS, Trivandram
5. B A Prakash (2009), The Indian Economy since 1991: Economic reforms and performance , Pearson Education
6. Sunil Mani et al. (ed) (2006), Kerala's Economy : Crouching Tiger, Sacred Cows, D C Books, Kottayam
7. State Planning Board, Economics Review , Government of Kerala, Thiruvananthapuram (latest issue)
8. Pulapre Balakrishnan (ed) (2011) Economic Reforms and Growth in India, Orient Black Swann.
9. Y V Reddy (2011) Global crisis, Recession and Uneven Recovery, Orient Black Swann.

Open Course

The course Economics of Everyday life is designed for students of other disciplines to familiarize with economic concepts, principles and practices that they have to engage in the usual course of life

SEMESTER-V

Open Course No.	Course Code	Course Title	No. of Credits	No. of Contact hours
01	19U5OCECO1	Economics for Everyday Life	3	72

Course Outcome

	COURSE OUTCOME	POs/PSOs	CL	KC	Class Sessions
CO1	Understands basic concepts and tools used in the discipline of economics	PO1, PSO1	U	C	5
CO2	Develops the skill to analyse the revenue expenditure and budgetary activities of the government	PO3, PSO1, PSO4	An	P	4
CO3	Evaluates the role of government and monetary authority in stabilizing the market economy	PO1, PSO2,	E	C	7
CO4	Understand the banking products, procedures and means of fund transfer in modern times	PO1, PSO1	U	C	8
CO5	Understands the various types of financial instruments.	PO3, PSO1,	U	C	14
CO6	Familiarises the student with financial markets, activities in the financial markets, instruments traded and stock market indices	PO5, PSO1	An	C	9
CO7	Understands the international relationships between nations and concepts like BOT, BOP, TOT etc	PO6, PSO4	U	C	8
CO 8	Evaluates the means of financial adjustments in a federal set up	PO1, PSO1	E	C	10
Total Hours of Instruction					72

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module 1: Basic Concepts

Economics – micro and macroeconomics – deductive and inductive reasoning – basic economic problems – production possibility curve. Utility - total and marginal. Law of Demand – elasticity of demand – concept of elasticity –price- income and cross elasticity- Law of supply. National income – meaning - components of national income (12Hrs)

Module 2: Public Economics

State vs Market - public revenue - public expenditure – tax and non-tax revenue – direct and indirect taxes – goods and service tax in India - budget – types - fiscal deficit - revenue deficit- public debt – trade cycle and its phases - fiscal and monetary policies as tools for combating inflation and deflation.(12Hrs)

Module 3: Banking and Financial System

Commercial banks and their functions- Core Banking, Internet Banking, Mobile Banking, ATM/Debit & Credit Cards, IFSC,NEFT,RTGS–NPA in Indian banking sector Negotiable and non-negotiable instruments – cheques – drafts – bills of exchange –promissory notes-letter of credit - certificate of deposits – commercial papers - RBI– functions - money and capital market– major financial instruments – shares, debentures and bonds – stock exchange– BSE, NSE – stock market indices–SEBI-mutual funds.(24hours)

Module4 International trade, economic planning and federal finance

Gains from trade-Terms of trade - balance of trade - balance of payments- foreign exchange - exchange rate – spot – forward – fixed – floating - IMF, World Bank – WTO. Planning in India- Objectives- planning commission and Niti Ayog- change in the sectoral contribution of GDP in India -Finance commission and its functions- federal finance- division of powers and devolution of resources.(24 Hrs)

Books/Journals for Reference

1. Samuelson&Nordhaus: Economics(Indian Adaptation)19eMcGrawHill
2010
2. Dominic Salvatore :Micro economic Theory Shaum outline Series Indian

Edition2017

3. Sundharam V : Money Banking & Public Finance Alfa Publications2009
4. Giancarlo Gandolfo (2006) Elements of International Economics, Springer (India) Private Limited.

Choice Based Elective Courses
SEMESTER- VI

Choice Based Elective Course	Course Code	Course Title	No. of Credits	No. of Contact hours
01	19U6ELECO1	Modern Banking	3	72

Course Outcomes

	COURSE OUTCOME	POs/PSOs	CL	KC	Class Sessions
CO1	Understands different systems of banking and the historical context of their development	PO1, PSO1	U	C	5
CO2	Understands how banks manage their portfolios to strike a balance between liquidity profitability and security	PO9, PSO1	U	C	6
CO3	Analyses the structure and functioning of Indian banking system	PO1, PSO1	An	C	7
CO3	Understands different systems and operations of central banking	PO6, PSO1	U	C	10
CO4	Evaluates the strength and weaknesses of Indian banking system and identifies areas of banking sector reforms	PO1, PSO2	E	C	8
CO5	Develops understanding and ability to use IT based banking services	PO3, PSO1	Ap	P	9
CO6	Develops basic knowledge about practical and legal aspects of banker- customer relationship	PO3, PSO1	U	C	8
CO7	Compares different types of negotiable instruments and their uses	PO3, PSO1	An	C	10
CO 8	Understands the modes of creating charge by banks to secure loans	PO5, PSO1	U	C	9
TOTAL HOURS OF INSTRUCTION					72

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module I - Banking: Structure and Theories

Evolution of Banking - Italy and England - Brief history of commercial banking in India – Structure of commercial banks – Functions – Credit creation – Branch banking – Unit banking – Mixed banking – Chain banking – Theories of Banking,

Real Bills Doctrine – Shiftability theory – Anticipated Income theory – Theories of portfolio management – liquidity, safety and profitability – prime lending and sub-prime lending – NPA – Development banks – IFCI, UTI, SIDBI – Co-operative Banks in India—their role in the field of rural credit.(22hrs)

Module II - Central Bank

Central Bank – meaning – Central Banking in USA and India. Functions of Central Bank with reference to RBI – Monetary policy of RBI – Repo rate and Reverse Repo rate – Call rate – SLR. –Marginal Standing Facility. (15 Hrs)

Module III – Banking Sector Reforms and Emerging Trends

Banking sector reforms – Narasimham Committee Reports – New generation banks and emerging trends in banking–e-banking, ATM, Debit and Credit cards – Internet banking – Core banking – Mobile banking, RTGS, NEFT, SWIFT, MICR cheques / drafts. Cheque Truncation. ECS-smart card- risks in e-banking, Digital Payment System in India – Prepaid Payments instruments, Non-performing assets. (15 Hrs)

Module IV – Practical Banking

Practical Banking – Banker-customer relationship – General and special relations – Garnishee order – Negotiable instruments – Credit instruments – Cheques, drafts, promissory notes, bills of exchange. Types of credit – loans and advances – cash credit – overdraft – discounting of bills of exchange. Modes of creating charges – lien, pledge, mortgage & hypothecation. (20 Hrs)

Readings

1. Jyotsna sethi and Niswan Bhatia (2008) prentice hall india
2. Hajela,T.N.,(2009)Money and Banking,AneBooksPvtLtd.,NewDelhi.
3. Sundharam KPM, Banking: Theory, Law and Practice, Sultan Chand and Sons, New Delhi (recent edition)
4. M.R. Baye, D.W. Jansen (1996), Money, Banking and Financial Markets, AITBS (Indian ed.)
5. K.C. Sekhar: Banking – Theory and Practice, Vikas Publishing House, New

SEMESTER- VI

Choice Based Elective Course	Course Code	Course Title	No. of Credits	No. of Contact hours
02	19U6ELECO2	Human Resource Management	3	72

Course Outcome

	Course Outcome	POs/PSO	CL	KC	Class Sessions
CO1	Understand the meanings of the terminology and tools used in managing employees effectively	PSO1	U	C	10
CO2	Analyse the role of recruitment and selection in relation to the organization's business and HRM objectives.	PSO1	An	C	8
CO3	Administer and contribute to the design and evaluation of the performance management program.	PSO1, PSO2	Ap	C	12
CO4	Develop, implement, and evaluate employee orientation, training, and development programs.	PSO1, PSO2	Ap	C	8
CO5	Gains skills to conduct research, produce reports, and recommend changes in human resources practices.	PSO1, PSO2	Cr	C	10
CO6	Understand the characteristics of human capital and its effective utilisation.	PSO2	U	C	9
CO7	Facilitate and support effective employee and labour relations in both non-union and union environments.	PSO1	U	C	7
CO8	Become familiar with the human resources component of the organization's business plan.	PSO1, PSO2	U	C	8
	TOTAL HOURS OF INSTRUCTION				72

Module I: Nature and scope of Human Resource Management – HRM and the related terms - evolution of HRM - changing environment of HRM - work ethics
- human resource management departments and their tasks –career development
–professional activities – HRM in India. (15Hrs)

Module II: Human Resource Planning – importance of HRP – process of human resource planning - forecasting demand and supply of labour - Training and development activities – induction programme – developing HR information system. (17Hrs)

Module III: Individuals and jobs – job analysis - rewards - work motivation - motivational processes – employee participation - prestige and morale- measurement and improvement of morale - Employee performance - methods of performance appraisal - error identification and reduction – job satisfaction – employee retention. (20Hrs)

Module IV: Compensation policy - objectives – methods of wage payments - promotion and transfer of employees – employee welfare and social security measures - job evaluation - recruitment and selection – methods and sources of recruitment - placement.

(20 Hrs)

Readings

1. Dessler, *Human Resource Management*, 11th edition, Pearson Education, Delhi
2. Biswanath Ghosh, *Human Resource Development and Management*, Vikas Publishing House, Delhi
3. Anuradha Sharma & Aradhana Khandekar (2006), *Strategic Human Resource Management*, Response Books, NewDelhi
4. Bohlander and Shell (2007), *Human Resource Management*, Cengage Learning, Delhi.
5. Aswathappa, *Human Resource and Personnel Management*, 3rd edition, Tata McGraw Hill, Delhi

SEMESTER- VI

Choice Based Elective Course	Course Code	Course Title	No. of Credits	No. of Contact hours
03	19U6ELECO3	Mathematical Economics	3	72

Course Outcome

	Course Outcome	POs/PSOs	CL	KC	Class Sessions
CO1	Helps understand the role of Mathematics in economic analysis	PO1/PSO1	U	C	10
CO2	Students will be able to identify, explain, and use Mathematical concepts, theories, functions in economic analysis.	PO1/PSO1	Ap	C	10
CO3	Students will acquire the knowledge about multivariable functions, implicit and inverse function rules and its economic applications	PO1/PSO1	An	C	15
CO4	Students will develop the Mathematical skills to measure and analyze the consumer and producer surplus	PO1/PSO1	Ap	C	15
CO5	Students will acquire knowledge about integral calculus and its properties	PO1/PSO1	U	C	12
CO6	Students will understand the basic concepts like integration, differentiation, functions etc for economic applications	PO1/PSO1	U	C	10
TOTAL HOURS OF INSTRUCTION					72

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module I: Functions of one real variable

Types of functions- constant- polynomial- rational-exponential-logarithmic- Graphs and graphs of functions-Limit and continuity of functions-slope of curvilinear function. The Derivatives—rules of differentiation- higher –order derivatives- implicit differentiation- Economic applications. (25 Hours)

Module II: Calculus of multivariable functions

Functions of several variable- partial derivatives- rules of partial derivatives- second order partial derivatives. Optimization of multivariate functions- constrained optimization with Lagrange multiplier. Differentials-total and partial differentials-total derivatives-implicit and inverse function rules-Economic applications. (25Hours)

Module III: Integral Calculus

The indefinite integral-integration-rule of integration-integration by substitution and by part. The definite integral- properties of definite integrals- area under a curve- area between curves- Economic application- consumer and producer surplus. (22Hours)

Readings

1. Dowling, Edward T(2008): Introduction to MathematicalEconomics,3rd
2. Ed,Schaum’s Outline Series, McGraw Hill.(Chapters3-6,16-17)
3. Knut Sydsaeter, Peter Hammond and Arne Strom(2012): Essential Mathematics for Economic Analysis 4th Ed, Pearson India,.(Chapters-4-9)
4. MikWisneiwski(1998):Introductory Mathematical Methods in Economics, 2nd Ed McGraw- Hill,.(Chapters -7-10 and 13).

5. Michael Hoy, et.al(2009): Mathematics for Economics, 2nd Ed, PHI.(Chapters-Part IV- 11-12 and PartV-16).
6. Geoff Renshaw(2009): Maths for Economics, 2nd Ed, OUP.(Ch-6-9, 14-16 and 18).
7. K.Holden and A.W.Pearson(2010):Introductory Mathematics for Economics and Business, 2nd Ed. Macmillan.(Ch-5-7).
8. Ian Jacques(2015): Mathematics for Economics and Business, 5th Ed, PH.(Ch-4-6).
9. Akihito Asano(2013): An Introduction to Mathematics for Economics, CUP, (Ch-4-7)

SEMESTER- VI

Choice Based Elective Course	Course Code	Course Title	No. of Credits	No. of Contact hours
04	19U6ELECO4	Business Economics	3	72

Course Outcome

	Course Outcome	POs/PSO	CL	KC	Class Sessions
CO1	Understand the role of economic principles in business decision making	PO1/PSO1	U	C	10
CO2	Understand the conceptual framework of economics applicable to decision making	PO1/PSO1	U	C	8
CO3	Understands the determinants of demand for products and services sold in the market	PO1/PSO1	U	C	12
CO4	Estimates future demand on the basis of present and past demand patterns	PO1/PSO1	Ap	C	8
CO5	Understands various cost concepts relevant to business decisions	PO1/PSO1	U	C	10
CO6	Examines how the goals of a firm affects its market strategy	PO1/PSO1	An	C	9
CO7	Examines the theories of profit and pricing strategies of the firm	PO1/PSO1	An	C	7
CO8	Understands how the firm plans its long term investment strategies	PO1/PSO1	U	C	8
	TOTAL HOURS OF INSTRUCTION				72

Note: R-remember U-Understand, Ap- Applies An-Analyses, E-Evaluates, Cr- Creates

Module I: Introduction to Business Economics

The scope and methods of Business Economics – role in managerial decision making – decision making – approaches to managerial decision making theory and firms– basic concepts in economics – scarcity – choice – resource allocation

– fundamental concepts and principles : the incremental concept – the time perspective – the discounting principle – the opportunity cost concept – the equi-marginal principle(concepts only). (12hrs)

Module II: Demand Analysis and Forecasting

Demand – types – determinants of demand – Law of demand – changes in demand – elasticity of demand – income – price – cross (with numerical illustration) – Demand determinants of non-durable consumer goods – durable consumer goods – capital goods – demand forecasting – types – methods of demand forecasting – forecasting demand for new products – criteria for a good forecasting method.(15hrs)

Module III: Production and Cost Analysis

Production function: Production function with empirical studies – Cobb Douglas production function – Cost concepts and classification – accounting cost and economic cost – actual cost and opportunity cost – explicit cost and implicit or imputed cost – out of pocket cost – book cost – direct and indirect cost – historical cost and replacement cost – short run and long run cost – total cost – average cost – marginal cost – cost estimation – accounting cost method – engineering cost method – objective of the firm: managerial theory of firm- by William J. Baumol.(15hrs)

Module IV: Pricing and Profits

Pricing methods – cost oriented pricing – competition oriented pricing – practical methods of pricing – peak-load pricing – pricing of a new product – multi product pricing – Dual pricing – administered pricing – transfer pricing – profit – profit theories – risk bearing theory – market imperfection theory – innovation theory – accounting and economic profit – profit planning – Break- even analysis (with numerical illustration). (15hrs)

Module V: Long Term Investment Decisions

Capital budgeting – meaning and need demand for capital – methods of investment criteria – payback period method – Average Rate of Return method – Discounted cash flow method – Net Present Value method – Profitability index – Internal Rate of Return method – (with numerical illustration) – cost of capital. (15hrs)

References

1. Dominick Salvatore. (2008) Managerial economics: Worldwide

applications. NewDelhi.

2. Nellis and Parker (2006). Principles of Business Economics. Pearson Education. NewDelhi.
3. P.l. Mehta. Managerial Economics. Sultan Chand Publications.
4. H.L. Ahuja. Business Economics.S.Chand
5. S. Sankaran. (2002). Managerial Economics. Margham Publication
6. Mankar and Pillai. (2000). Business and managerial Economics. Himalaya.
7. Mote Paul and Gupta (2000) Managerial Economics. Tata Mc GrawHill.
8. R.L. Varshney and K.L. Maheshwari. Managerial Economics. Sultan Chand.
9. Sampat Mukherjee. Business and Managerial Economics. New Central Book Agency (p)Ltd.
10. Francis Cherunilam. BusinessEconomics

PROJECT (15U6PJECO1)

All students must do a project. It can be done individually or as a group. However, the viva voce examination on this project will be conducted individually. The projects are to be identified during the V semester of the programme with the help of the supervising teacher. The report of the project is to be submitted to the department for valuation by the examiners appointed by the College.

A project is a scientific and systematic study of real issue or a problem intended to resolve the issue with application of concepts, principles, theories and processes. It should entail scientific collection, analysis and interpretation of data to valid conclusions.

TOPIC SELECTION:

The first step of the project work is to choose a suitable topic for study. This choice will be entirely personal from the area of interest or career prospects of students. The study can deal with any issue of social and economic relevance in an area, organization, related issues of contemporary relevance or a case-study to investigate and describe a phenomenon within its real life context.

PROJECT WORK AND EXPERIENTIAL LEARNING:

Project Work is the best way to practice what you have learnt. It provides an opportunity to investigate a problem by applying concepts in a scientific manner. It enables the application of conceptual knowledge in a practical situation and to learn the art of conducting a study in a systematic way and presenting its findings in a coherent report. The project work helps the students to address and resolve a range of issues an economy faces and become part of valuable learning experience.

PROJECT GUIDELINES:

1. Project work may be done individually or as a team of students not exceeding 5 in number.
2. Team should be, to the extent possible, diverse in composition with different capabilities (weak, strong, creative, analytical etc.) and different orientation (liberal, conservative etc.) to enable cross learning.
3. Divide the project up into a series of smaller steps or parts. Put the parts of the project into a time sequence (literature survey, acquiring a sampling frame, data, analysis etc.)

4. The project topic should be on economic issues / theoretical / case study type bearing on the economic aspects of social life
5. Project topic should be identified in the V semester and the project work should be completed by the end of the VI semester.
6. Project work should be done under the supervision and guidance of teachers.
7. A copy of the project report in English (printed or typed) should be submitted by the student/team on or before 31 March of the year concerned.
8. The valuation of the project will be done at two stages:
 - a. Internal evaluation (supervising teachers will assess the project and award grades)
 - b. External evaluation (The team will comprise of an external examiner appointed by the College and the HOD of the institution concerned or his nominee)
 - c. A Viva voce related to the project work will also be conducted by the external evaluation team. All candidates should undergo the Viva voce test individually.
 - d. **Grades will be awarded to candidates combining the internal grade, team grade and Viva voce grade.**
9. Length of the project report - 20 to 35 pages. The report may be organized in 3 chapters (minimum). The use of simple statistical tools in data analysis may be encouraged.
10. Project evaluation and the Viva voce should be conducted immediately after the completion of the regular classes / written examination.
- 11. The chairman of the VI semester exam should form and coordinate the evaluation teams and their work.**
12. The project external evaluation should be completed before the commencement of the centralized valuation.
13. External Examiners will be appointed by the Chairperson board from the list of VI semester Board of Examiners.

PROJECT EVALUATION

Internal	
Component	
Topic and area selected	2
Experimentations/ Selected Data	5
Punctuality – Regularity	3
Compilation	5
Content	5
Presentation	5
TOTAL	25

A MODEL PROJECT DESIGN

The project work can be designed by considering the following elements.

1. Selection of a Topic
2. Pilot Survey—a trial run of questionnaire/interviews
3. Significance / Social relevance of the Study
4. Review of Literature
5. Formulation of Research Questions /Issues
6. Research Objectives (Minimum 2)
7. Coverage (Universe / Sample & period of study)
8. Data source(Primary/Secondary)
9. Methods of Analysis i.e., Tools and Techniques
10. Limitations of the study
11. Chapter outline
12. Result Chapter(s)
13. Conclusion

STRUCTURE OF THE REPORT

The report should be organized in the following sequence:

- i) Title page
- ii) Name of the candidate, Name and designation of the supervising teacher

- iii) Declaration of the student and certificate of the supervising teacher
- iv) Acknowledgements
- v) List of tables, List of figures, table of contents
- vi) Introduction
- vii) Significance of the study
- viii) Related works, if any
- ix) Objectives, methodology and data sources
- x) Chapter scheme
- xi) Main text, summary conclusions and recommendations
- xii) Bibliography

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.

Pattern of questions for external examination for theory paper without practical.

	Total no. of questions	Number of questions to be answered	Marks of each question	Total marks
	10	10	1	10
	10	8	2	16
	7	5	5	25
	4	2	12	24
TOTAL	31	25	-	75

