Banaras Hindu University

Faculty of Social Sciences

Department of Economics

Bachelor of Arts in Economics

(Hons and Hons with Research)

(In force from Session 2024-25)

UG-4 Years Course Structure & Curriculum as Per NEP and BHU Guidelines

Content

1. Guiding Principles for Undergraduate (UG) Four Year Course: As per Minutes of the meeting of the NEP Implementation Committee of BHU, held on 16th January, 2024 at 3.00 PM in the Committee Room No. 2, Central Registry, BHU, the BA Economics Hons will be a 160-credit course. The guiding principle of the course will be as under-

Table-1

Guiding Principles for Undergraduate Course with Economics as Major

SN	Principle	Weight
1	As Pedestal to PG Courses	30%
2	General awareness about economic issues affecting society, nation and humanity	20%
3	Subsiding to Social Sciences	10%
4	Developing broad based understanding and acquiring diverse perspectives of different disciplines	20%
5	Providing proficiency in language, computation and other skills to raise the productivity and utility of the taught	10%
6	Preparing Students for Professional/ Job Oriented Courses and linking them to the job market	10%

2. <u>Structure of BA Economics (Major) Program</u>

i. The BA Economics (Major) Program is a four-year (eight semester) program with exist options at the end of first, second and third year. These options will be formulated and announced by the University as per the decision of the Academic Council.

ii. Four-year BA Economics (Major) Program will be of two types namely-

a. Four Year UG Economics Hons (Major)

b. Four Year UG Economics Hons with Research

While all the students who have been given admission in Economics Hons (Major) will be entitled to do Four Year UG Economics Hons (Major), **only 10%** of the students having **CGPA 7.5 and above** will be allowed to opt UG (Hons with Research) on **merit basis**. The syllabus for the first six semester shall be the same for both the programs.

iii. The Course Structure for these two types of programs offered by the Department is as under-

Table-2

Structure of the BA Economics Hons & Hons with Research Program

SN	Course	Credits	
		Hons.	Hons. with Research
1.	Major	92	80
2.	Minor(Out of these 12 credits have to be from Vocational Courses)	32	32
3.	Multidisciplinary (MD)	9	9
4.	Skill Enhancement Course (SEC)	9	9
5.	Ability Enhancement Course (AEC)	8	8
6.	Value Added Course (VAC)	8	8
7.	Internship*	2	2
8.	Dissertation	-	12

Note: *1 week of internship is equivalent to 1 credit

iv. **Description of the Courses –**

a. Major Courses: - For students taking admission in the Four Year UG Economics (Hons) Program, the major shall be 'Economics'. They will be given proper theoretical and practical grounding in their major. Major courses will be of two types-

i. Core or Compulsory Major which will be compulsory for all the students doing the program.
ii. Electives- Admitted students in the program shall be given a number of options (electives) to choose from.

Details of Core Major and Elective Major Courses have been given in subsequent paragraphs**.** As shown in the Table-2 for students of Four Year UG Economics Hons (Major) program the major will be of 92 (Ninety-two) credits while for students of Four Year UG Economics Hons with Research major will be of 80 (Eighty) credits.

b. **Minor Courses: -** The students admitted to Four Year UG Economics (Hons & Hons with Research) Program will have to study minor courses of 32 credits. The main features of the minor courses will be-

i. Minor Courses have to be chosen from other departments of the Faculty of Social Sciences (FSS) i.e. Economics Hons & Hons with Research students can choose minor from History, Political Science, Psychology etc. taught in the FSS. The University in future might decide to allow students to choose minor courses from other faculties. If it so happens the same will be announced by the University and as per the rules laid down minors will be allotted.
ii. Out of the total 32 credits for minor course, students will have to choose courses with 12 credits that are declared vocational by respective departments.

c. Skill Enhancement Courses (SEC): - Students will be required to pursue 9 credits of Skill Enhancement Courses disciplines related to (a) Information Technology Skill, (b) Communication Skill, (c) Life Skill and (d) Account & Finance Management Skills. As per the present University provision, Four Year UG Economics (Hons & Hons with Research) Program will be allowed to choose Skill Enhancement Courses offered by the Department from within the faculty. Students with hons in other subjects of the faculty may choose from Skill Enhancement Course offered by the Department of Economics the University in future might decide to allow students to choose SEC from other faculties. If it so happens the same will be announced by the University and as per the rules laid down minors will be allotted.

d. **Multidisciplinary Courses (MDC)**: **-** Students will be required to pursue 9 credits of introductory level Multi- disciplinary Courses from the following broad disciplines decided by the University. Students from Four Year UG Economics (Hons & Hons with Research) Program may choose MDC offered by the following faculties-(a) Natural and Physical Sciences, (b) Mathematics, Statistics, and Computer Applications, (c) Library, Information, and Media Sciences, (d) Commerce and Management, (e) Performing Arts and (f) Visual Arts. Students are required to see the MDC being offered by the above faculties and apply for the course they are interested in. The allotment will be made based on the availability of seats and merit of the students. Students from other faculties might opt for the MDC being offered by the Department of Economics.

e. **Value Added Courses: -** Students will be required to pursue Value Added Courses with total of 8 credits from any of the following broad disciplines. These courses may be of 1, 2, 3 or 4 credits depending on course content. (a) Health Well-being, Yoga (b) Culture & Heritage, (d) Geography d. World Civilization, (e) History of India, (f) Constitution of India, (g) Religion & Culture, (h) Indian Knowledge System, (i) Indian Economy, (j) Agricultural Sciences, (k) Environmental Science. Courses which will be taught in a particular academic session shall be announced by the

University and all admitted students will have to opt for/choose from the list of courses announced by the University.

f. **Ability Enhancement Courses (AEC): -** Students will be required to pursue 8 credits of Ability Enhancement Courses, related to Modern Indian Languages (MIL) and English language. These courses will be offered by Department of English, Hindi and other modern Indian languages.

g. Internship: - In order to give practical exposure of the world outside and provide students opportunities to explore the real world outside, every student will have to do two-week internship in some known/reputed organization and prepare an internship report. The weight of internship will be two credits.

h. **Dissertation: -** The students doing Four Year UG Economics Hons with Research program shall have to write a dissertation in the VIII Semester. The dissertation will be of 12 (twelve) credit. The students will be allotted supervisors by the Department/ College (Head of the Department) admitted to the privilege of Banaras Hindu University under whose supervision and guidance the students will be writing the dissertation. 2 copies of dissertation (typed and bound) will be submitted in the main department by the students (both of the main department and colleges) after forwarding and certification by the Supervisor. Last date for the submission of dissertation shall be informed by the Department but in any case, it will be before the beginning of the end semester examination for the VIII semester.

3. Semester wise Structure of the BA Economics Hons & Hons with Research Program: Entire 160 credits of the UG Program will be spread over eight semesters. Each semester will be of 20 (twenty credits) and comprise of different combinations of the courses mentioned above. Semester wise distribution on the courses is as shown in Table-3 given below-

Table-3
Semester wise Description of Program Structure

Sem	**Major (92)**		**Minor (32)**	**Others (36)**	**Total Credits**
I	Major (4)		Minor (4)	VAC1(4), MD1(3), SEC1(3), AEC1(2)	20
II	Major (4)		Minor (4)	VAC2(2), VAC3(2) MD2 (3), SEC2(3), AEC2(2)	20
III	Major (8)		Minor (Voc) (4)	MD3(3), SEC3(3), AEC3(2)	20
IV	Major (14)		Minor (4)	AEC4(2)	20
V	Major (14)		Minor (Voc) (4)	Internship (2)	20
VI	Major (16)		Minor (Voc) (4)		20
VII	**Hons.** Major (16)	**Hons. with Research** Major (16)	Minor (4)		20
VIII	Major (16)	Major (4), Dissertation (12)	Minor (4)		20

Note: **VAC:** Value Added Course, **SEC**: Skill Enhancement Course, **MD:** Multidisciplinary Course AEC**:** Ability Enhancement Course, **VOC:** Vocational Coerces, **Diss**: Dissertation

Table-4: Semester wide Details of Major & Minor Courses to be Taught

Sem	Code	Major			Code	Minor
I	ECOMJ11	Introductory Microeconomics (4)			ECOMN11	Introductory Microeconomics (4)
II	ECOMJ21	Introductory Macroeconomics (4)			ECOMN21	Introductory Macroeconomics (4)
III	ECOMJ31 ECOMJ32	Quantitative Methods-I (4) Indian Economy (4)			ECOMV31	Financial Market (4) Voc
IV	ECOMJ41 ECOMJ42 ECOMJ43 ECOMJ44	Intermediate Microeconomics (4) Intermediate Macroeconomics (4) Statistical Methods-I (3) Quantitative Methods-II (3)			ECOMN41	Intermediate Macroeconomics (4)
V	ECOMJ51 ECOMJ52 ECOMJ53 ECOMJ54	Advance Microeconomics (4) Advance Microeconomics (4) Statistical Methods-II (3) History Economic Thought (3)			ECOMV51	Environmental Impact Assessment (4) (Voc)
VI	ECOMJ61 ECOMJ62 ECOMJ63 ECOMJ64	Advance Macroeconomics (4) Development Economics (4) Public Economics (4) Basic Econometrics (4)			ECOMV61	Survey Methods and Project Evaluation (Voc) (4)
VII	ECOMJ71 ECOMJ72 ECOMJ73-712 ECOMJ713-722	**Hons. Major (16)** Research Methods (4) Advance Econometrics (4) Elective major-I (4) Elective major-I (4)	ECOMJ7R1 ECOMJ7R2 ECOMJ7R3-R6 ECOMJ7R7-R10	**Hons. with Research Major (16)** Research Methods (4) Advanced Econometrics (4) Elective major-I (4) Elective major-I (4)	ECOMN71	Research Methods (4)
VIII	ECOMJ81 ECOMJ81 ECOMJ83-812 ECOMJ813-822	**Hons. Major (16)** International Economics (4) Environmental Economics (4) Elective Major-I (4) Elective Major-II (4)	ECOMJ8R1 ECODS8R2	**Research Major (16)** Applied Econometrics (4) Dissertation (12)	ECOMN81	Environmental Economics (4)

These papers will be offered by the Department to students who have not taken Major in Economics. Students going for Major in Economics shall have to take minor from other subjects of the faculty

*These are Minor Courses that the department is offering as Vocational Course

** Students opting for major in economics have to choose Value Added Courses (VAC) offered at the University level and Skill Enhancement Courses (SEC) offered by the Department of Economics or other Departments of the Faculty. The Ability Enhancement Course (AEC) will be offered by the Department of Languages (Hindi, English etc.). The Economics Major students shall have to select Multidisciplinary courses offered by other Faculties.

4. **Electives-** In order to give opportunity to students in specializing in particular branch of Economics, the Department in Sem-VII will offer following electives divided into two lists- List-A and List-B. Eco Hons. students can opt one Elective paper each from List A and List B given Table-5 A while, Economics Hons with Research can opt for one Elective paper from each from List C and List D given Table-5 B.

Table-5 A
List of Electives Offered in Semester-VII

Code	Elective-I List-A	Code	Elective-II List-B
ECOMJ73	Advance Econometrics-I	ECOMJ713	Operations Research-I
ECOMJ74	Applied Microeconomics	ECOMJ714	Game theory-I
ECOMJ75	Behavioural Economics-I	ECOMJ715	Institutional Economics-I
ECOMJ76	Financial Economics –I	ECOMJ716	Financial Market-I
ECOMJ77	Natural Resource Economics	ECOMJ717	Economics of Natural Disaster-I
ECOMJ78	Agriculture-I	ECOMJ718	Industrial Economics-I
ECOMJ79	Population Studies-I	ECOMJ719	Health Economics-I
ECOMJ710	Labour Economics-I	ECOMJ720	Gender Economics -I
ECOMJ711	Regional Economic-I	ECOMJ721	Poverty, Inequality and Human Development -I
ECOMJ712	Political Economy-I	ECOMJ722	Indian Public Finance-I

Table-5 B
List of Electives Offered in Semester-VII for Students going for Hons with Research

Code	Elective Paper-I (Theory) List-C	Code	Elective Paper-II (Empirical) List-D
ECOMJ7R3	Behavioral Economics	ECOMJ7R7	Large Sample Data Analysis
ECOMJ7R4	Political Economy	ECOMJ7R8	Financial Economics
ECOMJ7R5	Indian Economic thought	ECOMJ7R9	Economics of Climate Change
ECOMJ7R6	Contributions of Nobel Laureate in Economics	ECOMJ7R10	Economics of Natural Disaster

Electives in Semester-VIII for Students who are going for Four Year UG Economics Hons (Major)- Students who are not going for Four Year UG Economics Hon with Research shall have to choose two electives in Semester-VIII. They can choose one Elective paper each from List E and List F given Table-6

Table-6
List of Electives Offered in Semester-VIII for Students going for Hons

Code	Elective-I List-E	Code	Elective-II List-F
ECOMJ83	Advance Econometrics-II	ECOMJ813	Operations Research-II
ECOMJ84	Applied Macroeconomics	ECOMJ814	Game theory-II
ECOMJ85	Behavioural Economics-II	ECOMJ815	Institutional Economics-II
ECOMJ86	Financial Economics-II	ECOMJ816	Financial Market-II
ECOMJ87	Energy Economics	ECOMJ817	Economics of Natural Disaster-II
ECOMJ88	Agriculture-II	ECOMJ818	Industrial Economics-II
ECOMJ89	Population Studies-II	ECOMJ819	Health Economics-II
ECOMJ810	Labour Economics-II	ECOMJ820	Gender Economics -II
ECOMJ811	Regional Economics-II	ECOMJ821	Poverty, Inequality and Human Development -II
ECOMJ812	Political Economy-II	ECOMJ822	Indian Public Finance-II

5. **Multidisciplinary & Skill Enhancement Courses Offered by the Department: -** As per the NEP guidelines the Department of Economics will be offering the following Multidisciplinary courses to UG students of other faculties and Skill Enhancement Courses to students of other departments of the faculty-

Table-7
Multidisciplinary (MD) & Skill Enhancement Courses (SEC) Courses Offered by the Department of Economics

Sem	Code	Paper Name	Code	Paper Name
I	ECOMD11	Understanding Economic Development (3)	ECOSE11	Data Analysis Using Excel (3)
II	ECOMD21	Indian Economic Development (3)	ECOSE21	Statistical Analysis Using R Software (3)
III	ECOMD31	Global Economy & Financial Issues (3)	ECOSE31	Analyzing Qualitative and Quantitative Data (3)

6. **Evaluation/Examination: -** There will be four kinds of evaluation system for different papers taught by the Department of Economics. Table given below summarizes the same-
   a. All Courses except those mentioned at point, b, c and d below shall be evaluated for 100 marks. Out of 100 marks 30 marks will be for Continuous Internal Assessment and remaining 70 marks for the End Semester Examination. The teacher teaching a particular course shall be evaluating the students on a continuous basis for their internal assessment/sessional. There will be a midterm examination for 20 marks and remaining 10 marks could be awarded based on assignments or quiz or any other mode that he/she decides. End Semester examination for 70 marks will be conducted and questions will be set/evaluation done by the panel of examiners suggested by the Board of Examiners of the department.

   b. The evaluation of the Skill Enhancement Courses will be as follows-

Table-8

Evaluation Criteria

Code	Course Name	Examination System
ECOSE11	Data Analysis Using Excel (3)	These courses have applied/ computer-based content so their evaluation will be as follows- A. **Term End Practical Examination-60 Marks** Term end examination of these papers will be in form of computer based practical examination to be conducted at the Computer Lab of the Department. The Board of Examiners of the Department will decide a panel of four examiners who will be conducting term end practical examination for students opting for these SEC. B. **Internal Assessment-40 Marks-** There will be internal assessment done by the teacher teaching these courses. 40 marks of the internal examination shall be split in following ways- i. Offline Quiz -20 Marks- The answer sheet of the quiz will be retained and submitted to the Department ii. Assignment/Presentation/Practical Test/ Viva- Any or combination of these -20 marks
ECOSE21	Statistical Analysis Using R Software (3)	
ECOSE31	Analyzing Qualitative and Quantitative Data (3)	

c. **Internship: -** Students going on Internship shall have to prepare an 'Internship Report" and submit it to the main department. They will have to appear also for a presentation cum interaction in the main department. 50 marks each will be for the Internship Report and presentation cum interaction. The Board of Examiners of the Department will suggest a panel of experts for evaluation of Internship report and conduct of interaction. Experts will be from within the University.

d. **Dissertation: -** The dissertation submitted by the students of Four Year UG Economics Hons with Research program will be evaluated and these students will also have to appear for interaction cum presentation session. 60 marks will be for dissertation and remaining 40 marks for the interaction cum presentation. The Board of Examiners of the Department will suggest a panel of experts for evaluation of 'Dissertation' and conduct of interaction. Experts will be from within the University.

Pass marks and grade for different courses will be in line with the policy of the University.

Semester-I BA. (HONS.) ECONOMICS			
Code	**Paper Name**	**Course Type**	**Credit**
ECOMJ11	Introductory Microeconomics	Major-1	3L+1T= 4
ECOMN11	Introductory Microeconomics	Minor-1	3L+1T= 4
----	Offered at University level	VAC1	3L+1T= 4
ECOMD11	Understanding Economics Development	MD1	3L = 3
ECOSE11	Data Analysis Using Excel	SEC1	3L = 3
---	Offered at University level	AEC1	2L = 2

As per Nep Guideline of the University the Multidisciplinary courses offered by the Department will be for UG students of other faculties and Skill Enhancement Courses for UG students of other departments of the faculty

Course Title	**ECOMJ11 Introductory Microeconomics**			
Category of Course	**Major**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	This course is designed to exhibit for basic understanding of Introductory Microeconomics. This course demonstrate how microeconomic concepts can be practically applied in real-life situations, making the learning experience more engaging and relatable.			
Units	**Course Content**			**Hr. of Teaching**
I	**The Subject Matter of Economics**- Definitions, Central Problems of Economy, Trade-off between Scarcity and choice, Micro vs Macro, Demand and Supply, Concept of Demand and Supply Elasticity.			8
II	**Introduction to Consumer Behaviour & Producer Behaviour:** Consumer equilibrium under Cardinal and ordinal Utility approach, Derivation of Demand curve through both approaches, Decomposition of Price Effect into Income and Substitution Effects. (Graphical Representation). Introduction to short run and long run production functions, producer equilibrium. Cost: Traditional and Modern theory of cost, relationship between cost, revenue and profit.			20
III	**Price and output determination under different market structures:** long run and short run analysis; Monopoly Power and Dead weight Loss; Price Discrimination.			17
Texts /				

References	1. Koutsoyiannis, A. (1979). *Modern microeconomics* (2nd ed.). Palgrave Macmillan. 2. Snyder, C., & Nicholson, W. (2011). *Fundamentals of microeconomics* (11th ed.). Cengage Learning,India. 3. Varian, H. R. (2010). *Intermediate microeconomics: A modern approach* (8th ed.). W.W. Norton & Company/Affiliated East-West Press,India. 4. Mankiw, N. G. (2018). *Principles of microeconomics* (8th ed.). Cengage Learning. 5. Pindyck, R. S., & Rubinfeld, D. L. (2013). *Microeconomics* (8th ed.). Pearson Education, New York.
Learning Outcomes	The course expects students basic understanding microeconomics concepts like: how individuals make decisions as consumers, laws and concept of utility, laws of the production function, and different types of costs along with distinguishing features of both product markets. Expected graphical explanation of markets and real-life problems.

Course Title	**ECOMN11 Introductory Microeconomics**			
Category of Course	**Minor**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	This course is designed to exhibit for basic understanding of Introductory Microeconomics. This course demonstrate how microeconomic concepts can be practically applied in real-life situations, making the learning experience more engaging and relatable.			
Units	**Course Content**			**Hr. of Teaching**
I	**The Subject Matter of Economics**- Definitions, Central Problems of Economy, Trade-off between Scarcity and choice, Micro vs Macro, Demand and Supply, Concept of Demand and Supply Elasticity.			8
II	**Introduction to Consumer Behaviour & Producer Behaviour:** Consumer equilibrium under Cardinal and ordinal Utility approach, Derivation of Demand curve through both approaches, Decomposition of Price Effect into Income and Substitution Effects. (Graphical Representation). Introduction to short run and long run production functions, producer equilibrium. Cost: Traditional and Modern theory of cost, relationship between cost, revenue and profit.			20
III	**Price and output determination under different market structures:** long run and short run analysis; Monopoly Power and			17

	Dead weight Loss; Price Discrimination.	
Texts / References	1. Koutsoyiannis, A. (1979). *Modern microeconomics* (2nd ed.). Palgrave Macmillan.. 2. Snyder, C., & Nicholson, W. (2011). *Fundamentals of microeconomics* (11th ed.). Cengage Learning,India. 3. Varian, H. R. (2010). *Intermediate microeconomics: A modern approach* (8th ed.). W.W. Norton & Company/Affiliated East-West Press,India. 4. Mankiw, N. G. (2018). *Principles of microeconomics* (8th ed.). Cengage Learning. 5. Pindyck, R. S., & Rubinfeld, D. L. (2013). *Microeconomics* (8th ed.). Pearson Education, New York.	
Learning Outcomes	The course expects students basic understanding microeconomics concepts like: how individuals make decisions as consumers, laws and concept of utility, laws of the production function, and different types of costs along with distinguishing features of both product markets. Expected graphical explanation of markets and real-life problems.	

Course Title	**ECOMD11- Understanding Economic Development**			
Category of Course	**Multidisciplinary (MD-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 3	3L	0	3
	Hour of Teaching (Total)	45	0	45
Course Objectives	The aim of this course is to transform basic understanding of economic development concepts. This course covers growth and development, measurement and Indicators of economic development.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Growth and Development-** Concepts of economic development, Growth vs Development, Characteristics of developed and under developed economies, Stages of Economic Development.			15
II	**Measurement of Economic Development**- Economic Welfare, NI, PCI, cost of living, PQLI, HDI, Happiness Index.			15
III	**Development Indicators-** Poverty, Inequality, Deprivation, Employment, Social Indicators- Health and Education, Sen's Capability approach.			15
Texts / References	1. Singh, R. (2024). *Indian economy* (16th ed.). Tata McGraw Hill Publications,New Delhi. 2. Kapila, U. (2023). *Indian economy: Performance and policies* (24th ed.). Academic Foundation.			

	3. Mishra, S. K., Puri, V. K., & Garg, B. (2023). *Indian economy* (41st ed.). Himalaya Publishing House. 4. Kapila, U. (2022). *Indian economy since independence* (33rd ed.). Academic Foundation 5. Dhingra, I. C. (2020). *March of the Indian economy*. Heed Publications Pvt. Ltd. 6. Dutt, G., & Nag, B. (2018). *Datt and Sundaram's Indian economy* (73rd ed.). S Chand & Co. Ltd, New Delhi 7. Jalan, B. (Ed.). (1993). *The Indian economy: Problems & prospects*. Penguin, New Delhi. 8. Brahamananda, P. R., & Panchmukhi, V. R. (Eds.). (1987). *The development process of the Indian economy*. Himalaya Publishing House, Bombay.
Learning Outcomes	The course expects from the students that they can understand the concepts of economic development in the domain of economics.

Course Title	**ECOSE11 Data Analysis Using Excel**			
Category of Course	**Skill Enhancement Course** (**SEC-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 3	3L	0	3
	Hour of Teaching (Total)	45	0	45
Course Objectives	This course provides an introduction to computer usage with a focus on data analysis using Microsoft Excel. Students will learn the fundamental skills needed to effectively use Excel for data entry, manipulation, analysis, and presentation. The course covers a range of topics from basic spreadsheet operations to data analysis techniques.			
Units	**Course Content**			**Hr. of Teaching**
I	**Data Analysis Using Excel-** Overview; Basic Spreadsheet Operations; Menus and Tools; Data Visualization- Creating Tables and Charts; Data Manipulation-Data Sorting and Filtering; Basic Formulas and their uses; Basics of Data Analysis- Descriptive statistics			15
II	**Data Analysis Advance Excel-** Concatenate, V-lookup, H-lookup, Match, Count-if, Text, Trim, PivotTables, Spreadsheet Tools and Making Macros.			15
III	**Data analysis Using Excel add in Package-** Data analysis tool pack; Descriptive statistics, Correlation and regression.			15
Texts / References	1. Rajaraman, V. (2003). *Fundamentals of computers*. Prentice Hall of India, New Delhi.			

	2. Kerns, R. L. (1992). *Essentials of Microsoft Windows, Word and Excel*. Prentice Hall of India, New Delhi. 3. Lipschutz, M. M., & Lipschutz, S. (1980). *Theory and problems of data processing*. Schaum's Outline Series. 4. McFedries, P. (2019). *Microsoft Excel 2019 formulas and functions: Explore the symbology and significance of these divine winged messengers*. Que Publishing. 5. Berk, K. N., & Carey, P. (2010). *Data analysis with Microsoft Excel: Updated for Office 2007*. Brooks/Cole. 6. Nelson, S. L., & Nelson, E. C. (2016). *Excel data analysis for dummies* (2nd ed.). John Wiley & Sons, Hoboken, New Jersey.
Learning Outcomes	The course familiarizes students with the basics of computer operations and Use of excel for data analysis. Students will learn to use Microsoft Excel for data entry, formatting, and analysis and data analysis using ass in package.

Semester-II BA. (HONS.) ECONOMICS			
Code	**Paper Name**	**Course Type**	**Credit**
ECOMJ21	Introductory Macroeconomics	Major	3L+1T= 4
ECOMN21	Introductory Macroeconomics	Minor	3L+1T= 4
---	Offered at University level	VAC2	2L= 2
---	Offered at University level	VAC3	2L=2
ECOMD21	Indian Economic Development	MD2	3L = 3
ECOSE21	Statistical Analysis Using R Software	SEC2	3L = 3
---	Offered at University level	AEC2	2L = 2

As per Nep Guideline of the University the Multidisciplinary courses offered by the Department will be for UG students of other faculties and Skill Enhancement Courses for UG students of other departments of the faculty

Course Title	**ECOMJ21 Introductory Macroeconomics**			
Category of Course	**Major**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	This course is designed to exhibit for basic understanding of Introductory concepts of Macroeconomics. This course demonstrate how economy will work and what are the major macroeconomic variable of interests.			

Units	Course Content	Hr. of Teaching
I	**National Income-** Concept of Stock & Flow, Sectors of the economy; Circular Flow of Income in two, three and four Sector economy; National Income Accounting & Identities: Measurement of National Income, Problems of measurement of National income in India, Structure of Indian Economy through National Account Statistics; Measurement of Cost of Living: CPI, GNP Deflator.	9
II	**Theory of Employment and Income-** Classical analysis of determination of Equilibrium output and Employment, Simple Keynesian theory of employment and income determination: With and Without Government Sector; Ricardian Equivalence- Impact and Efficacy of Policy Action, The Neo-Classical Synthesis- The IS-LM Model and the interaction of the Real and Monetary Sectors. IS-LM model in the open economy under fixed exchange rate without capital mobility.	12
III	**Consumption, Investment & Economic-** Fluctuations- Consumption Function: Keynes' Absolute Income Hypothesis, Theories of Consumption after Keynes- Relative Income Hypothesis, Permanent Income Hypothesis, Life Cycle Hypothesis, Consumption under Uncertainty; Investment Multiplier: Simple and Dynamic, Leakages and limitations; The principle of Acceleration, Interaction of Accelerator and Multiplier; Investment function: Types of investment, Concept of MEC and MEI, Neo-Classical Theory of Investment. *Economic Fluctuations: Trade Cycle:* Nature and Characteristics; Theories of Trade Cycle: Samuelson, Hicks; Control of trade cycle, Recent Recession(s) in the World. (24 Lectures)	24
Texts / References	1. Blanchard, O. (2013). *Macroeconomics (6th ed.).* Pearson Education, New Jersey. 2. Branson, W. (2006). *Macroeconomics: Theory and policy*. AITBS Publishers. 3. Dernberg, T. F. (1985). *Macroeconomics: Concepts, theories, and policies* (7th ed.). McGraw-Hill, New York. 4. Dornbusch, R., Fischer, S., & Startz, R. (2011). *Macroeconomics (11th ed.).* Tata McGraw-Hill Publishing Co. Ltd. 5. Heijdra, B. J., & Ploeg, F. V. (2001). *Foundations of modern macroeconomics*. Oxford University Press, Oxford. 6. Rana, K. C., & Verma, K. N. (2014). *Macro-economic analysis*. Vishal Publishing House. 7. Shapiro, E. (2007). *Macroeconomic analysis*. Galgotia Publications Private Limited, New Delhi. 8. Rangarajan, C., & Dholakia, B. H. (2001). *Principles of macroeconomics*. McGraw-Hill Publisher.	
Learning Outcomes	The course expects students basic understanding macroeconomics concepts like: how economy will work on employment, income, consumption and investment.	

<table>
<tr><td>Course Title</td><td colspan="4">ECOMN21 Introductory Macroeconomics</td></tr>
<tr><td>Category of Course</td><td colspan="4">Minor</td></tr>
<tr><td rowspan="3">Credits & Hour of Teaching</td><td></td><td>Theory</td><td>Practical</td><td>Cumulative</td></tr>
<tr><td>Credits = 4</td><td>3L+1T</td><td>0</td><td>4</td></tr>
<tr><td>Hour of Teaching (Total)</td><td>45+15</td><td>0</td><td>60</td></tr>
<tr><td>Course Objectives</td><td colspan="4">This course is designed to exhibit for basic understanding of Introductory concepts of Macroeconomics. This course demonstrate how economy will work and what are the major macroeconomic variable of interests.</td></tr>
<tr><td>Units</td><td colspan="3">Course Content</td><td>Hr. of Teaching</td></tr>
<tr><td>I</td><td colspan="3">National Income- Concept of Stock & Flow, Sectors of the economy; Circular Flow of Income in two, three and four Sector economy; National Income Accounting & Identities: Measurement of National Income, Problems of measurement of National income in India, Structure of Indian Economy through National Account Statistics; Measurement of Cost of Living: CPI, GNP Deflator.</td><td>9</td></tr>
<tr><td>II</td><td colspan="3">Theory of Employment and Income- Classical analysis of determination of Equilibrium output and Employment, Simple Keynesian theory of employment and income determination: With and Without Government Sector; Ricardian Equivalence- Impact and Efficacy of Policy Action, The Neo-Classical Synthesis- The IS-LM Model and the interaction of the Real and Monetary Sectors. IS-LM model in the open economy under fixed exchange rate without capital mobility.</td><td>12</td></tr>
<tr><td>III</td><td colspan="3">Consumption, Investment & Economic- Fluctuations- Consumption Function: Keynes' Absolute Income Hypothesis, Theories of Consumption after Keynes- Relative Income Hypothesis, Permanent Income Hypothesis, Life Cycle Hypothesis, Consumption under Uncertainty; Investment Multiplier: Simple and Dynamic, Leakages and limitations; The principle of Acceleration, Interaction of Accelerator and Multiplier; Investment function: Types of investment, Concept of MEC and MEI, Neo-Classical Theory of Investment. Economic Fluctuations: Trade Cycle: Nature and Characteristics; Theories of Trade Cycle: Samuelson, Hicks; Control of trade cycle, Recent Recession(s) in the World.</td><td>24</td></tr>
<tr><td>Texts / References</td><td colspan="4">1. Blanchard, O. (2013). Macroeconomics (6th ed.). Pearson Education, New Jersey.
2. Branson, W. (2006). Macroeconomics: Theory and policy. AITBS Publishers.
3. Dernberg, T. F. (1985). Macroeconomics: Concepts, theories, and policies (7th ed.). McGraw-Hill, New York.
4. Dornbusch, R., Fischer, S., & Startz, R. (2011). Macroeconomics (11th</td></tr>
</table>

	ed.). Tata McGraw-Hill Publishing Co. Ltd. 5. Heijdra, B. J., & Ploeg, F. V. (2001). *Foundations of modern macroeconomics*. Oxford University Press, Oxford. 6. Rana, K. C., & Verma, K. N. (2014). *Macro economic analysis*. Vishal Publishing House. 7. Shapiro, E. (2007). *Macroeconomic analysis*. Galgotia Publications Private Limited, New Delhi. 8. Rangarajan, C., & Dholakia, B. H. (2001). *Principles of macroeconomics*. McGraw-Hill Publisher.
Learning Outcomes	The course expects students basic understanding macroeconomics concepts like: how economy will work on employment, income, consumption and investment.

Course Title	**ECOMD21- Indian Economic Development**			
Category of Course	**Multidisciplinary (MD-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 3	3L	0	3
	Hour of Teaching (Total)	45	0	45
Course Objectives	The aim of this course is to transform basic understanding of Indian economic development concepts. This course covers history of Indian economic development, sectoral performance and social sector.			
Units	**Course Content**			**Hr. of Teaching**
I	**Evolution of Indian Economic Development** - Economic History of India; Emergence and development of Planning exercise in India, Plan models and shift in focus over time, Critique of Nehru – Mahalnobis Model; Crisis of 1991 & New Economic Reforms, Planning commission v/s NITI Aayog, Way Forward			15
II	**Sectoral Performance-** Characteristic, Performance, Composition and Determinants: Agriculture, Industry and Services sectors since Independence.			15
III	**Social Sector-** components and Its trends, social safety Net programme, PDS MNREGA and Right to Employment, Unemployment- trends, structure and types.			15
Texts / References	1. Brahamananda, P. R., & Panchmukhi, V. R. (Eds.). (1987). *The development process of the Indian economy*. Himalaya Publishing House, Bombay. 2. Dhingra, I. C. (2020). *March of the Indian economy*. Heed Publications Pvt. Ltd. 3. Dutt, G., & Nag, B. (2018). *Datt and Sundaram's Indian economy* (73rd ed.). S Chand & Co. Ltd, New Delhi. 4. Jalan, B. (Ed.). (1993). *The Indian economy: Problems & prospects*.			

	Penguin, New Delhi. 5. Kapila, U. (2022). *Indian economy since independence* (33rd ed.). Academic Foundation. 6. Kapila, U. (2023). *Indian economy: Performance and policies* (24th ed.). Academic Foundation. 7. Mishra, S. K., Puri, V. K., & Garg, B. (2023). *Indian economy* (41st ed.). Himalaya Publishing House. 8. Singh, R. (2024). *Indian economy* (16th ed.). Tata McGraw-Hill Publications, New Delhi.
Learning Outcomes	The course expects from the students that they can understand the concepts of Indian since independence, sectoral composition and social sector performance.

Course Title	**ECOSE21- Statistical Analysis Using R Software**			
Category of Course	**Skill Enhancement Course** (**SEC-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 3	3L	0	3
	Hour of Teaching (Total)	45	0	45
Course Objectives	The objective of the course is to provide students with a comprehensive understanding of the R programming language, focusing on data manipulation, visualization, and statistical analysis. The course aims to equip students with the skills necessary to analyze and visualize data effectively using R, enabling them to draw meaningful insights and make data-driven decisions.			
Units	**Course Content**			**Hr. of Teaching**
I	**An Introduction to R-** Overview of R Programming, working setup for R and its packages, data description, Basics of R, data type in R, data creation and curation, file handling, reading and writing data in various formats.			15
II	**Graphics and Data Visualization-** basic plots, scatter plot, 3-D scatter plot, interactive plotting, line plot, mat plot, combine multiple figures in same screen, bar plot, histogram, density plot, dot plot, pie plot, and Venn diagram			15
III	**Basic Statistics-** Descriptive statistics in R, Correlation and Regression in R, Hypothesis Testing in R, and discrete and continuous distribution in R.			15
Texts / References	1. Wickham, H., Çetinkaya-Rundel, M., & Grolemund, G. (2023). *R for data science*. O'Reilly Media, Inc. 2. Matloff, N. (2011). *The art of R programming: A tour of statistical*			

	software design. No Starch Press. 3. Bruce, P., Bruce, A., & Gedeck, P. (2020). *Practical statistics for data scientists: 50+ essential concepts using R and Python*. O'Reilly Media. 4. Kabacoff, R. (2011). *Data analysis and graphics with R*. Manning Publications Co, New York. 5. Crawley, M. J. (2014). *Statistics: An introduction using R*. John Wiley & Sons. 6. Schumacker, R., & Tomek, S. (2013). *Understanding statistics using R*. Springer Science & Business Media, New York.
Learning Outcomes	By the end of this course, students will be able to demonstrate proficiency in basic and advanced features of R, manage and analyze data using R, create and interpret various types of data visualizations in R, perform data entry,

Semester-III BA. (HONS.) ECONOMICS			
Code	**Paper Name**	**Course Type**	**Credit**
ECOMJ31	Quantitative Methods-I	Major-1	3L+1T= 4
ECOMJ32	Indian Economy	Major-2	3L+1T= 4
ECOMV31	Financial Market	Minor-Voc1	3L+1T= 4
ECOMD31	Global Economy and Financial Issues	MD3	3L = 3
ECOSE31	Analyzing Qualitative and Quantitative Data	SEC3	3L = 3
---	Offered at University Level	AEC3	2L = 2

As per Nep Guideline of the University the Multidisciplinary courses offered by the Department will be for UG students of other faculties and Skill Enhancement Courses for UG students of other departments of the faculty

Course Title	**ECOMJ31- Quantitative Methods-I**			
Category of Course	**Major-1**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The objective of this course is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level. In this course, particular set theory, linear Algebra and differentiation but the means for illustrating the method of applying mathematical techniques to apply in economics.			
Units	**Course Content**			**Hr. of**

		Teaching
I	**Set and its operations-** Set and its operations, Relation & Functions, Types of Functions: polynomial, exponential, logarithmic, Limit & Continuity	10
II	**Linear Algebra-** Matrix Operation, determinants, transpose and Inverse matrix, Linear and quadratic forms, Solution of Equation: Crammers Rule, matrix application to market, national income and input-output models.	15
III	**Differentiation-** One & two Variable rules, partial differentiation, comparative statistics and its application. Second and higher order derivatives: total deferential rules, derivatives of implicit function.	20
Texts / References	1. Bhardwaj, R. S. (2007). *Mathematics for economics and business*. Excel Books India. 2. Wainwright, K. (2005). *Fundamental methods of mathematical economics*. McGraw-Hill. 3. Rosser, M. (2003). *Basic mathematics for economists* (2nd ed.). Routledge. 4. Sydsaeter, K., & Hammond, P. (2002). *Mathematics for economic analysis*. Pearson Education. 5. Yamane, T. (1975). *Mathematics for economists*. Prentice Hall of India, New Delhi.	
Learning Outcomes	The course upgrades the mathematical economics understating of students. These analytical tools help students to understand different functions, which are used in analysis of economic theories and problems. These tools are necessary for anyone seeking employment as an analyst in the corporate world.	

Course Title	**ECOMJ32- Indian Economy**			
Category of Course	**Major-2**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The objective of this course is to transmit the body of knowledge on the issue and problem of Indian economy.			
Units	**Course Content**			**Hr. of Teaching**
I	**Indian Economy Since Independence**- Basic features and problems of Indian Economy, Economic History of India Since Independence, Change in Indian Economic structure after Globalization, Emergence and development of Planning exercise			18

	in India – historical debates, plan models and shift in focus over time, Evaluation of Five-Year Plans, Planning commission v/s NITI Aayog, Black Economy, Demonetization, HDI, MDGs and SDGs in India.	
II	**Sectoral Performance of Indian Economy-** Sectoral Composition of Indian Economy: Agricultural Crisis & Policy response, Trends in Agricultural Production and Productivity, Evaluation of land reforms & Green, White and Blue Revolution, Trends and Patterns of Industrial Sector Growth with focus on PSUs and policy of Disinvestment, MSMEs– Growth, Structure, Policy & Performance, Dualism and Labour Absorption, Service sector & Leap frog jump in India.	17
III	**External Sector in India**- India's foreign trade – composition, trends, India's Balance of payment since 1991, Convertibility of Rupee, Foreign Capital routes, MNCs & Impact of Globalization, WTO and India.	10
Texts / References	1. Kapila, U. (2020). *Indian economy: Performance and policies* (21st ed.). Academic Foundation. 2. Kapila, U. (2019). *Indian economy since independence*. Academic Foundation. 3. Dutt, G., & Sundaram. (2017). *Indian economy*. S Chand & Co. Ltd, New Delhi. 4. Singh, R. (2020). *Indian economy* (12th rev. ed.). Tata McGraw-Hill. 5. Jalan, B. (2000). *The Indian economy: Problems & prospects*. Viking, New Delhi. 6. Mishra, S. K., & Puri, V. K. (2017). *Indian economy and its development experience*. Himalaya Publishing House. 7. Brahamananda, P. R., & Panchmukhi, V. R. (Eds.). (1987). *The development process of the Indian economy*. Himalaya Publishing House, Bombay. 8. Dhingra, I. C. (2017). *March of the Indian economy*. Heed Publications Pvt. Ltd. 9. Dantwala, M. L. (1995). *Dilemmas of growth: The Indian experience*. Sage Publications.	
Learning Outcomes	After the completing course expected that student can understand the problem of Indian economy and what are the theoretical and empirical solution to overcome form these economic problem	

Course Title	**ECOMV31-Financial Market**			
Category of Course	**Minor Voc-1**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching	45+15	0	60

	(Total)			
Course Objectives	The aim of this course the students to understand the Financial Market structure and its operation. It covers financial market structure, derivatives and risk involved in the market.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Financial Economics-** Market, instruments, risk, return and diversification, investment process, financial decisions, finance-macro interlinkages; Financial Assets: characteristics, pricing, debt and equity.			10
II	**Derivatives**- Use and Perspectives on Derivatives, Role of Financial Markets, Derivatives in Practice, Derivative instruments – Forward, Option and Swaps, Types of Financial Derivatives – Equity Derivatives, Foreign Exchange, Derivatives, Interest Rate Derivatives, Commodity Derivatives and Credit Derivatives.			20
III	**Risk Management-** Credit Risk, Market Risk, Operational Risk, Measurement and Management of risk, BASEL – I , II and III.			15
Texts / References	1. Arditti, F. D. (1996). *Derivatives: A comprehensive resource for options, futures, interest rate swaps, and mortgage securities*. Harvard Business School Press. 2. Hull, J. C. (2010). *Fundamentals of futures and options markets* (7th ed.). Prentice Hall. 3. Luenberger, D. (2013). *Investment science* (2nd ed.). Oxford University Press. 4. Damodaran, A. (2012). *Investment valuation* (3rd ed.). Wiley Finance. 5. Sharpe, W., Alexander, G. J., & Bailey, J. V. (2002). *Investments* (6th ed.). Prentice Hall International (UK) Limited. 6. Bodie, Z., Kane, A., Marcus, A. J., & Mohanty, P. (2006). *Investments* (6th ed.). The McGraw-Hill Publications. 7. Back, K. (2005). *A course in derivative securities: Introduction to theory and computation*. Springer. 8. Elton, E. J., Gruber, M. J., Brown, S. J., & Goetzmann, W. N. (2010). *Modern portfolio theory and investment analysis* (8th ed.). Wiley Publications. 9. Hull, J. C., & Sankarshan. (2011). *Options, futures, and other derivatives* (8th ed.). Prentice Hall. 10. Ritchken, P. (1996). *Derivative markets: Theory, strategy, and applications*. HarperCollins. 11. Bailey, R. E. (2005). *The economics of financial markets*. Cambridge University Press. 12. Francis, J. C., Toy, W. W., & Whittaker, J. G. (2000). *The handbook of equity derivatives* (Revised ed.). Wiley Series in Financial Engineering.			
Learning Outcomes	The course expects that student can know the financial market structure, derivatives and risk involved in the market			

Course Title	**ECOMD31- Global Economy and Financial Issues**			
Category of Course	**Multidisciplinary (MD-3)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 3	3L	0	3
	Hour of Teaching (Total)	45	0	45
Course Objectives	The aim of this course is to transform basic understanding of Indian economic development concepts. This course covers labour market and trade, global fiancé and geopolitics.			
Units	**Course Content**			**Hr. of Teaching**
I	**Labour Market and Trade**- Trends, the role of changing demographics and population dynamic, Changing nature of Labour Market, Trade Liberalisation and its effect on Labour market in India, Cost of Labour force, Productivity and FDI.			15
II	**Global Finance**- Forecast, Inflationary trends, Financial Issues of Debt Money, Credit, Global Finance and De-finance, foreign capital and Investment.			15
III	**Geopolitics-** Growth of Digital technologies and structural transformation, Issues of climate change sustainability for and energy sector, India as a Global leader.			15
Texts / References	1. Turner, A. (2015). *Between debt and devil: Money, credit and fixing global finance*. Princeton University Press. 2. Tooze, A. (2019). *Crashed: How a decade of financial crises changed the world*. Penguin Books. 3. Bulatov, A. (2023). *World economy and international business: Theories, trends, and challenges textbook*. Springer. 4. King, B. (2012). *Bank 3.0: Why banking is no longer somewhere you go but something you do*. Wiley. 5. Reed, E. R. (2023). *A comprehensive guide to understanding economics effortlessly*. 6. Daniels, J. P., & VanHoose, D. D. (2017). *Global economic issues and policies* (1st ed.). Cengage Learning. 7. Vietor, R. H. K. (2007). *How countries compete: Strategies, structure, and government in the global economy*. Harvard Business Review Press.			
Learning Outcomes	The course expects from the students that they can understand on lobal labour market and trade, global finance and geopolitics.			

Course Title	**ECOSE31- Analyzing Qualitative and Quantitative Data**
Category	**Skill Enhancement Course** (**SEC-3)**

<table>
<tr><td>of Course</td><td colspan="4"></td></tr>
<tr><td rowspan="3">Credits & Hour of Teaching</td><td></td><td>Theory</td><td>Practical</td><td>Cumulative</td></tr>
<tr><td>Credits = 3</td><td>3L</td><td>0</td><td>3</td></tr>
<tr><td>Hour of Teaching (Total)</td><td>45</td><td>0</td><td>45</td></tr>
<tr><td>Course Objectives</td><td colspan="4">The objective of the course is to provide students with a thorough understanding of the principles and techniques involved in measurement, scaling, data collection, and data analysis. The course aims to equip students with the skills to analyze both qualitative and quantitative data effectively, employing various statistical methods and software tools to build and validate models for research purposes.</td></tr>
<tr><td>Units</td><td colspan="3">Course Content</td><td>Hr. of Teaching</td></tr>
<tr><td>I</td><td colspan="3">Measurement and Scaling- Variables in Research, Measurement, and scaling – Different scales, Construction of instrument, Validity, and Reliability of instrument, Data Collection methods – primary and secondary data, Processing of Data: Editing of Data, Coding of Data, Classification of Data, Statistical Series. Qualitative vs Quantitative data analyses – Univariate, Bivariate and Multivariate statistical techniques.</td><td>15</td></tr>
<tr><td>II</td><td colspan="3">Processing and Analysis of Quantitative Data- Measures of Central Tendency, Dispersion, correlation and Regression, Chi-square test: Applications, Steps, characteristics, limitations, Analysis of Variance and Co-variance, Factor analysis – Discriminant analysis – cluster analysis – multiple regression and correlation – multidimensional scaling – Conjoint Analysis - Application of statistical software for data analysis.</td><td>15</td></tr>
<tr><td>III</td><td colspan="3">Processing and Analysis Qualitative of Data- Fundamentals of Qualitative Data Analysis, Methods of Exploring, Describing, Ordering, Explaining and Predicting the Qualitative Data, Drawing and Verifying Conclusion.</td><td>15</td></tr>
<tr><td>Texts / References</td><td colspan="4">1. Cooper, D. R., Schindler, P. S., & Sun, J. (2006). Business research methods (Vol. 9). McGraw-Hill Irwin.
2. Creswell, J. W., & Creswell, J. D. (2017). Research design: Qualitative, quantitative, and mixed methods approach. Sage Publications.
3. Kothari, C. R. (2004). Research methodology: Methods and techniques. New Age International.
4. Krishnaswamy, K. N. (2006). Management research methodology: Integration of principles, methods and techniques. Pearson Education India.
5. Sekaran, U., & Bougie, R. (2016). Research methods for business: A skill building approach. John Wiley & Sons.
6. Miles, M. B., & Huberman, A. M. (1994). Qualitative data analysis: An expanded sourcebook. Sage Publications.</td></tr>
<tr><td>Learning Outcomes</td><td colspan="4">By the end of this course, students will be able to understand Measurement and Scaling, Analyze Qualitative and Quantitative Data, Apply Statistical</td></tr>
</table>

	Software for Data Analysis, and Conduct Qualitative Data Analysis

Semester-IV BA. (HONS.) ECONOMICS			
Code	**Paper Name**	**Course Type**	**Credit**
ECOMJ41	Intermediate Microeconomics	Major-1	3L+1T= 4
ECOMJ42	Intermediate Macroeconomics	Major-2	3L+1T= 4
ECOMJ43	Statistical Methods-I	Major-3	3L= 3
ECOMJ44	Quantitative Methods-II	Major-4	3L= 3
ECOMN41	Intermediate Macroeconomics	Minor-3	3L+1T= 4
---	Offered at University Level	AEC4	2L = 2

Course Title	**ECOMJ41- Intermediate Microeconomics**			
Category of Course	**Major-1**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	This course is a sequel to Introductory Microeconomics and designed to provide a sound training in microeconomic theory to analyse the individual economic behaviour. The emphasis will be on mathematical approach to understanding of the concepts and real-life situations, making the learning experience more engaging and relatable.			
Units	**Course Content**			**Hr. of Teaching**
I	**Consumer Optimization (Mathematical Approach)-** Preferences and Utility, Axioms of Utility Function, Utility Maximization and Expenditure Minimization, Comparative Static Equilibrium, Uncompensated Vs Compensated (Hicks and Slutsky) Demand Curves. Slutsky's Approach of Decomposition of Price Effect. *Demand and Supply Analysis:* Partial Market Equilibrium- A linear and Non-Linear Model, General Market Equilibrium, Comparative Static Equilibrium Model -Shifts in Equilibrium, Consumer Surplus.			18
II	**Producer Optimization (Mathematical Approach)-** Homogenous functions: Properties, Cobb-Douglas and CES production functions. Cost and Revenue Analysis: Relationship among Total, Marginal and Average Concepts, Marginal Concepts and Elasticity, Cost Minimization and Profit Maximization.			12

III	**Factor Market and Distribution (Mathematical Approach)-** Marginal Productivity Theory of Distribution and Eulers theorem, Determination of Factor Prices under Perfect Competition and Monopoly, Rent: Ricardian, Modern and Quasi Theory of Rent. Wage: Modern Theory of Wages; Collective Bargaining and Wage theory. Interest: Classical, Loanable Funds and Keynesian theory of interest. Profit: Schumpeter's Innovation Theory and Dynamic Theory of Profits.	15
Texts / References	1. Bernheim, B. D., & Whinston, M. D. (2014). *Microeconomics* (2nd ed.). McGraw-Hill/Irwin, New York. 2. Snyder, C., & Nicholson, W. (2010). *Fundamentals of Microeconomics (11th ed),* Cengage Learning (India). 3. Varian, H. R. (2010). *Intermediate microeconomics: A modern approach* (8th ed.). W.W. Norton & Company/Affiliated East-West Press. 4. Varian, H. R. (2019). *Microeconomic analysis* (3rd ed.). W.W. Norton & Company. 5. Prasad, A. R., & Mohan, I. (2022). *A study on the theory of consumer demand (An exposition with simple mathematics)* Part I-III. Himalaya Publishing House Pvt. Ltd.	
Learning Outcomes	The course expects from students to solve the problem related the consumer and producer behaviour using mathematical approach, especially consumer and producer optimization problems.	

Course Title	**ECOMJ42- Intermediate Macroeconomics**			
Category of Course	**Major-2**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	This course is a sequel to Introductory Macroeconomics and provide a deep understating of Classical, New Classical, Keynesian, New Keynesian and Post Keynesian macroeconomics models and Inter-temporal Decision Making of economy.			
Units	**Course Content**			**Hr. of Teaching**
I	**Money & Inflation**- Post Keynesian Theories of Demand for Money-Baumol, Tobin and Patinkin-An Overview, Friedman and the Modern Quantity, Theories of Inflation- Structural and			14

	Monetarist Approaches; Phillips Curve Controversy, The Natural Rate of Unemployment Hypothesis-Adaptive Expectation and Rational Expectation models, NRU and full employment, NRU and NAIRU, Understanding Inflation in India.	
II	**New Classical & New Keynesian Macroeconomics-** New-Classical Model of Macroeconomics: Models of Income and Employment Determination: An Overview, New Classical Macroeconomics, The Real Business Cycle Theory –The Model of Kydland and Prescott, Understanding Recent Economic Crises. *New-Keynesian Model of Macroeconomics:* -Wage and Price Stickiness- Normal Rigidities-Wage Contract Models, Real Rigidities- Search Models-An Elementary Treatment, Staggered Price Adjustment Model-Menu Cost Argument, Sources of Rigidity-Imperfect Information & Coordination Failure.	21
III	**Inter-temporal Decision Making & Macroeconomics Policies**-Inter-temporal Decision Making: - Representative Agent Model of Ramsey and Overlapping Generation Model- Only Introduction OLG. Macro Policy- Coordination of Fiscal and Monetary Policy, Taylor Rule, Rules versus Discretion, Monetary Transmission Mechanism and Targeting.	10
Texts / References	1. Frisch, H. (1984). *Theories of inflation*. Cambridge University Press. 2. Dornbusch, R., Fischer, S., & Startz, R. (2018). *Macroeconomics (12th ed)*. Tata McGraw-Hill Publishing Co. Ltd. 3. Snowdon, B., & Vane, H. R. (2005). Modern macroeconomics: Its origins, development, and current state. Edward Elgar Publishing. 4. Shapiro, E. (2013). *Macroeconomic analysis (5th ed)*. Golgotia Publications Pvt. Ltd. 5. Blanchard, O., & Fischer, S. (1989). *Lectures on macroeconomics*. MIT Press. 6. Mankiw, G., & Romer, D. (1991). *New Keynesian economics* (Vol. 1 & 2). MIT Press. 7. Lewis, M. K., & Mizen, P. D. (2000). *Monetary economics*. Oxford University Press (UK). 8. Thorn, R. S. (Ed.). (1976). *Monetary theory and policy: Major Contributions to Contemporary Thought*. Praeger Publishers. 9. Levacic, R., & Rebman, A. (1982). *Macroeconomics: An introduction to Keynesian and neo-classical controversies (2nd ed)*. Palgrave Macmillan.	
Learning Outcomes	The course expects from students to solve the problem related the economy as whole, especially related to money & inflation, Employment, Incime and Investment.	

Course	**ECOMJ43- Statistical Methods-I**

Title				
Category of Course	**Major-3**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 3	3L	0	3
	Hour of Teaching (Total)	45	0	45
Course Objectives	The objective of this course is to transmit the body of knowledge of Statistical Methods at the undergraduate level. The course offers elementary understanding of statistics, which includes data description, correlation, regression, time series and Index numbers.			

Units	**Course Content**	**Hr. of Teaching**
I	**Meaning and Scope of Statistics-** collection, organisation, summarization and presentation of data; Data description – measure of location, spread, position and symmetry.	10
II	**Correlation & Regression** – Correlation-types, partial & multiple correlation coefficients, methods- Karl Pearson and rank correlation, and properties; regression – regression lines, method of least square, standard error of the estimate and limitations, covariance and correlation coefficients	20
III	**Time Series & Index Number**– components and measurements; interpolation and extrapolation; Index Numbers- construction, types, test of adequacy and base shifting & splicing.	15

Texts / References	1. Levine, D. M., Stephan, D.F., & Szabat, K.A. (2021). *Statistics for managers using MS Excel (9th ed)*. Pearson. 2. Bluman, A. G. (2014). *Elementary statistics: A step by step approach* (9th ed): *A brief version* (8th ed.). McGraw-Hill Education (New York). 3. Gupta, S. C. (2023). *Fundamentals of Statistics* (8th Rev ed). Himalaya Publishing House. 4. Nagar, A. L., & Das, R. K. (1997). *Basic statistics* (2nd ed). Oxford University Press. 5. Gupta, S. C., & Kapoor, V. K. (2014). *Fundamentals of applied statistics(4th ed)*. Sultan Chand & Sons.
Learning Outcomes	The course develops basic understating of statistical methods which are widely applied. This course help students to understand the statistical methods used for data interpretation and analysis. The knowledge of statistical methods will help students seeking employment in the academia and corporate world.

Course Title	**ECOMJ44- Quantitative Methods-II**

<table>
<tr><td>Category of Course</td><td colspan="4">Major-4</td></tr>
<tr><td rowspan="3">Credits & Hour of Teaching</td><td></td><td>Theory</td><td>Practical</td><td>Cumulative</td></tr>
<tr><td>Credits = 3</td><td>3L</td><td>0</td><td>3</td></tr>
<tr><td>Hour of Teaching (Total)</td><td>45</td><td>0</td><td>45</td></tr>
<tr><td>Course Objectives</td><td colspan="4">The objective this course is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory and macroeconomic theory. In this course, particular, constrained and unconstrained optimisation, use of calculus in mathematical analysis of economic theory.</td></tr>
<tr><td>Units</td><td colspan="3">Course Content</td><td>Hr. of Teaching</td></tr>
<tr><td>I</td><td colspan="3">Unconstrained Optimization-global and local extrema of real-valued functions, necessary and sufficient conditions for the extrema values of functions of one variable or several variables; Hessian determinant, optima of convex and concave functions-one and several variables; Applications in Economics. Constrained Optimization: The Lagrange Multiplier method and Hessian Conditions-Application in consumer and producer behaviour.</td><td>20</td></tr>
<tr><td>II</td><td colspan="3">Integral Calculus- Indefinite Integral: Integration by substitution, Parts, and Partial Fraction; Definite Integral: Area under or between Curves and Improper Integrals; Applications of Definite Integral in Economics.</td><td>12</td></tr>
<tr><td>III</td><td colspan="3">Difference and Differential Equations- Introduction to First-order linear differential & Difference equations, Applications in Economics</td><td>13</td></tr>
<tr><td>Texts / References</td><td colspan="4">1. Chiang, A. C., & Wainwright, K. (2005). Fundamental methods of mathematical economics (4th ed.). McGraw-Hill.
2. Dowling, E. T. (2004). Introduction to mathematical economics (3rd ed.). Tata McGraw-Hill.
3. Renshaw, G. (2011). Math’s for economics (3rd ed.). Oxford University Press (Oxford).
4. Simon, C. P., & Blume, L. (2018). Mathematics for Economists. Viva Books.
5. Sydsaeter, K., & Hammond, P. J. (2002). Mathematics for economic analysis. Pearson Educational (India).
6. Yamane, T. (2012). Mathematics for economists: An elementary survey. Prentice Hall.</td></tr>
<tr><td>Learning Outcomes</td><td colspan="4">The course provides the mathematical foundations necessary for further study of a variety of disciplines including postgraduate economics, finance and data analytics. The analytical tools introduced in this course have applications wherever optimization techniques are used in business decision-</td></tr>
</table>

	making for managers and entrepreneurs alike.

Course Title	**ECOMN41- Intermediate Macroeconomics**			
Category of Course	**Minor-3**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	This course is a sequel to Introductory Macroeconomics and provide a deep understating of Classical, New Classical, Keynesian, New Keynesian and Post Keynesian macroeconomics models and Inter-temporal Decision Making of economy.			
Units	**Course Content**			**Hr. of Teaching**
I	**Money & Inflation**- Post Keynesian Theories of Demand for Money- Baumol, Tobin and Patinkin-An Overview, Friedman and the Modern Quantity, Theories of Inflation- Structural and Monetarist Approaches; Phillips Curve Controversy, The Natural Rate of Unemployment Hypothesis-Adaptive Expectation and Rational Expectation models, NRU and full employment, NRU and NAIRU, Understanding Inflation in India.			14
II	**New Classical & New Keynesian Macroeconomics-** New-Classical Model of Macroeconomics: Models of Income and Employment Determination: An Overview, New Classical Macroeconomics, The Real Business Cycle Theory –The Model of Kydland and Prescott, Understanding Recent Economic Crises. *New-Keynesian Model of Macroeconomics:* -Wage and Price Stickiness- Normal Rigidities-Wage Contract Models, Real Rigidities- Search Models-An Elementary Treatment, Staggered Price Adjustment Model-Menu Cost Argument, Sources of Rigidity-Imperfect Information & Coordination Failure.			21
III	**Inter-temporal Decision Making & Macroeconomics Policies**- Inter-temporal Decision Making: - Representative Agent Model of Ramsey and Overlapping Generation Model- Only Introduction OLG. Macro Policy- Coordination of Fiscal and Monetary Policy, Taylor Rule, Rules versus Discretion, Monetary Transmission Mechanism and Targeting.			10
Texts / References	1. Frisch, H. (1984). *Theories of inflation*. Cambridge University Press. 2. Dornbusch, R., Fischer, S., & Startz, R. (2018). *Macroeconomics (12th ed)*. Tata McGraw-Hill Publishing Co. Ltd.			

	3. Snowdon, B., & Vane, H. R. (2005). Modern macroeconomics: Its origins, development, and current state. Edward Elgar Publishing. 4. Shapiro, E. (2013). *Macroeconomic analysis (5th ed)*. Golgotia Publications Pvt. Ltd. 5. Blanchard, O., & Fischer, S. (1989). *Lectures on macroeconomics*. MIT Press. 6. Mankiw, G., & Romer, D. (1991). *New Keynesian economics* (Vol. 1 & 2). MIT Press. 7. Lewis, M. K., & Mizen, P. D. (2000). *Monetary economics*. Oxford University Press (UK). 8. Thorn, R. S. (Ed.). (1976). *Monetary theory and policy: Major Contributions to Contemporary Thought*. Praeger Publishers. 9. Levacic, R., & Rebman, A. (1982). *Macroeconomics: An introduction to Keynesian and neo-classical controversies (2nd ed)*. Palgrave Macmillan.
Learning Outcomes	The course expects from students to solve the problem related the economy as whole, especially related to money & inflation, Employment, Incime and Investment.

Semester-V BA. (HONS.) ECONOMICS			
Code	**Paper Name**	**Course Type**	**Credit**
ECOMJ51	Advance Microeconomics	Major-1	3L+1T= 4
ECOMJ52	Money, Banking and Financial Market	Major-2	3L+1T= 4
ECOMJ53	Statistical Methods -II	Major-3	3L= 3
ECOMJ54	History of Economic Thought	Major-4	3L= 3
ECOMV51	Environmental Impact Assessment	Minor-Voc-2	3L+1T= 4
ECOIN51	Internship	Internship	2L = 2

Course Title	**ECOMJ51- Advance Microeconomics**			
Category of Course	**Major-1**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	This course is a sequel to Intermediate Microeconomics which is designed to provide a sound training in microeconomic theory by making them aware of mathematical tools along with the conceptual clarity of general equilibrium			

	and welfare and asymmetric information.	
Units	**Course Content**	**Hr. of Teaching**
I	**General Equilibrium and Welfare Economics-** The Walrasian System, Existence, Uniqueness and Stability of an Equilibrium, Two-Consumer General Equilibrium System, General equilibrium models of Consumption, production and exchange; Welfare Economics - First and Second Fundamental Theorems of Welfare Economics, Welfare Criteria - Fairness; Pareto optimality; Kaldor efficiency; Scitovsky Criterion; Samuelson Criterion; Social Choice; Social Welfare Function; Arrow's Impossibility Theorem and the related results.	15
II	**Asymmetric Information-** Externalities; public goods and markets with asymmetric information.	10
III	**Game Theory-** Rules of the Game, The Extensive and Strategic form of Games. Solutions: Dominant Strategy, Dominance Solvability, Nash Equilibrium. Applications: Cournot Duopoly, Stackelberg model, the commons problem; Mixed strategies and their applications: Natural Monopoly and Bankruptcy Law, Zero-sum games, playing safe: Maximin, playing sound: Minimax, playing both safe and sound: Playing Nash	20
Texts / References	1. Snyder, C., & Nicholson, W. (2010). *Fundamentals of microeconomics*. Cengage Learning India. 2. Varian, H. R. (2010). *Intermediate microeconomics: A modern approach* (8th ed.). W.W. Norton and Company/Affiliated East-West Press, India. 3. Koutsoyiannis, A. (1979). *Modern microeconomics* (2nd ed.). Palgrave Macmillan. 4. Osborne, M. J. (2004). *An introduction to game theory*. Oxford University Press, New York. 5. Pindyck, R. S., & Rubinfeld, D. L. (2013). *Microeconomics* (8th ed.). Pearson Education, New York.	
Learning Outcomes	The expects conceptual clarity of general equilibrium and welfare and asymmetric information of the students. The course trains the students of economics about the basic terminologies used in game theory.	

Course Title	**ECOMJ52- Money, Banking and Financial Market**			
Category of Course	**Major-2**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course	The objective of the course is to provide a seep training on money, banking			

Objectives	and financial market. It covers the money & Inflation related problem and solutions, Banking Related issues facing the economics and financial market in detail.	
Units	**Course Content**	**Hr. of Teaching**
I	**Money & Inflation- Money-** Meaning & Functions, Gresham's Law; High Powered Money and Money Multiplier; RBI Approach to Supply of Money; Value of money: Cash Transaction Approach, Cash Balance Approach; Keynesian theory of demand for money. *Inflation:* Types, Effects, Demand pull and cost push Inflation, structural inflation; Inflation and Unemployment-The Phillips Curve-Short run & Long run; concept of Inflationary Gap, Double Inflationary Gap, Trends, causes and control of inflation in India.	20
II	**Banking-Commercial Banking**- Meaning and Functions, Process of Credit Creation; Concept of Micro-finance. Central Banking-Functions; Methods of Credit Control; Recent Reforms in Banking Sector in India; Monetary Policy: Objectives & Limitations with reference to India.	12
III	**Financial Market-** Role and structure of Money Market; Capital market: Primary and secondary market in India; Introduction to BSE and NSE; SEBI: Functions and role; Financial Instruments: Government securities, derivatives, futures, options and swaps, bond, debentures & equities.	13
Texts / References	1. Ackley, G. (1978). *Macroeconomics: Theory & policy*. Macmillan, New York. 2. Baye, M., & Jansen, D. (1996). *Money, banking and financial markets*. AITBS Publishers, India. 3. Laidler, D. E. W. (1978). *The demand for money: Theories & evidence* (2nd ed.). Dun Donnelley Publishing Corporation, New York. 4. Makinen, G. E. (1978). *Macroeconomics: Concepts, theories and policies, money, the price level and interest rate*. Prentice Hall India Ltd. 5. Jadhav, N. (2006). *Monetary policy, financial stability & central banking*. Macmillan. 6. Lewis, M. K., & Mizen, P. D. (2000). *Monetary economics*. Oxford University Press, England. 7. Kotwal, O. P. (1987). *Theories of inflation: A critical survey*. Tata-McGraw-Hill Publishing Co. Ltd., New Delhi. 8. Rana, K. C., & Verma, K. N. (2014). *Macro-economic analysis* (12th ed.). Vishal Publishing House. 9. Shekhar, K. C., & Shekhar, L. (2013). Banking theory & practice (21st ed.). Vikash Publishing House Pvt. Ltd.	
Learning Outcomes	The expects clarity of students on money, baking and financial market related problem and how they are working.	

Course Title	**ECOMJ53- Statistical Methods -II**			
Category of Course	**Major-3**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 3	3L	0	3
	Hour of Teaching (Total)	45	0	45
Course Objectives	The objective of this course is to transmit the body of knowledge of inferential statistics at the undergraduate level. The course offers, probability theory, probability distribution and statistical inferences.			

Units	**Course Content**	**Hr. of Teaching**
I	**Probability Theory -** Sample spaces and events; probability axioms and properties; counting techniques; conditional probability and Bayes' rule.	10
II	**Probability Distribution-** Random variables; Probability functions & characteristics; discrete and continuous distributions- uniform, binomial, normal, poison and exponential random variables.	15
III	**Statistical Inference-** Estimation of parameters -point and interval estimation; properties of good estimators; Law of large numbers & central Limit theorem; Hypothesis testing- Z-test, t-test, F-test, Chi-Square.	20

Texts / References	1. Anderson, D. R., Sweeney, D. J., Williams, T. A., Camm, J. D., & Cochran, J. J. (2014). *Essentials of statistics for business and economics*. Cengage Learning, Boston. 2. roxton, F. E., & Cowden, D. J. (1964). *Applied general statistics* (2nd ed.). Prentice Hall of India Private Limited, New Delhi. 3. Freund, J. E., & Perles, B. M. (2007). *Modern elementary statistics* (12th ed.). Prentice Hall, New Jersey. 4. Gupta, S. C., & Kapoor, V. K. (2020). *Fundamentals of mathematical statistics* (12th ed.). Sultan Chand & Sons. 5. Devore, J. L. (2020). *Probability and statistics for engineering and the sciences* (9E, Metric ed.). Cengage Learning, Boston.
Learning Outcomes	The course introduces the probability theory and distribution for discrete and continuous variables. The basic knowledge of inferential statistics will enable students seeking employment in the academia and corporate world.

Course Title	**ECOMJ54- History of Economic Thought**
Category of Course	**Major-4**

Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 3	3L	0	3
	Hour of Teaching (Total)	45	0	45
Course Objectives	The objective of this course is to transmit the body of knowledge of history of economic thoughts. The course offers, Indian economic though, western thought and contemporary economics thinkers.			
Units	**Course Content**			**Hr. of Teaching**
I	**Indian Economic Thought-** Kautilya; The View of Welfare State, Taxation, Agriculture and Wage Policy; Valluvar: The View of Wealth, Factor of Production and Welfare State; The Economic View of Naoroji, Pt Madan Mohan Malviya, Mahatma Gandhi, J. K. Mehta and Pt. Deendayal Upadhayay.			15
II	**Western Economic Thought-** Thought Features of Physiocracy, Mercantilism and Colonialism, Classical School of Economics – Adam Smith, Ricardo, J.B. Say and J.S. Mill, Scientific Socialism – Karl Marx, Economic Ideas of Marshall, Sismondi, Pigou and Keynes			15
III	**Contemporary Economic Thinkers**- Economic Idea of Samuelson- Consumer Behaviour; Idea of Lewis of Economic Development; Economic View of Robert Solow, Amartya Sen, Paul Romar and Claudia Goldin.			15
Texts / References	1. Dalrymple, W. (2019). *The anarchy: The East India Company, corporate violence, and the pillage of an empire*. Bloomsbury Publishing. 2. Dasgupta, A. K. (1993). *A history of Indian economic thought*. Routledge. 3. Dutt, R. C. (2018). *The economic history of India in the Victorian age: From the accession of Queen Victoria in 1837 to the commencement of the 20th century*. Franklin Classics. 4. Hajela, T. N. (2015). *History of economic thought* (18th ed.). Ane Books Pvt. Ltd. 5. Haney, L. H. (2009). *History of economic thought*. University of Michigan. 6. Lokanathan, V. (2018). *A history of economic thought* (10th ed.). S Chand Publication. 7. Mishra, A. K. (2010). *A compilation of Indian economic thought (From Kautilya to Kalam)*. Worldman Publication, New Delhi. 8. Paul, R. R. (2014). *History of economic thought*. Kalyani Publishers. 9. Roy, T. (2020). *The economic history of India, 1857–2010*. Oxford University Press, India.			
Learning Outcomes	This course expects the understanding of historical development of economics ideas and theories. The knowledge of thoughts will enable students to know about the development of the subject of economics.			

<table>
<tr><td>Course Title</td><td colspan="4">ECOMV51 Environmental Impact Assessment</td></tr>
<tr><td>Category of Course</td><td colspan="4">Minor Voc-2</td></tr>
<tr><td rowspan="3">Credits & Hour of Teaching</td><td></td><td>Theory</td><td>Practical</td><td>Cumulative</td></tr>
<tr><td>Credits = 4</td><td>3L+1L</td><td>0</td><td>4</td></tr>
<tr><td>Hour of Teaching (Total)</td><td>45+15</td><td>0</td><td>60</td></tr>
<tr><td>Course Objectives</td><td colspan="4">The "Environmental Impact Assessment (EIA)" course provides an in-depth understanding of the processes, methodologies, and principals involved in assessing environmental consequences of proposed projects or policies. Covering topics like environmental legislation, stakeholder engagement, risk assessment, and mitigation strategies.</td></tr>
<tr><td>Units</td><td colspan="3">Course Content</td><td>Hr. of Teaching</td></tr>
<tr><td>I</td><td colspan="3">Introduction to Environment Management & EIA- Introduction, understanding the need of EIA, Historical development and evolution of EIA, key principles and objectives of EIA, Linkages between EIA and Sustainable Development, Legal, Policy & Regulatory Framework: Legal & Regulatory Frameworks, national and international EIA Regulations, Compliance and Enforcement Mechanisms</td><td>15</td></tr>
<tr><td>II</td><td colspan="3">EIA Procedure- Scoping & Screening and Establishing Baseline Conditions: Key definitions and examples of Screening and scoping, Key types of projects and the categories that require screening and scoping, Approaches to screening ad scoping in India.</td><td>15</td></tr>
<tr><td>III</td><td colspan="3">EIA Methodologies- EIA Process & Stakeholder Engagement, Stakeholder Identification and Engagement Strategies, EIA Methods & Techniques, Risk Assessment in EIA, Environmental and Social Impact Assessment, EIA Documentation & Reporting, Technology in EIA Documentation.</td><td>15</td></tr>
<tr><td>Texts / References</td><td colspan="4">1. Wathern, P. (1990). Environmental impact assessment: Theory and practice. Routledge
2. Marriott, B. (1997). Environmental impact assessment: A practical guide. McGraw-Hill.
3. Shrivastava, A. K., Baxter, N., & Grimm, J. (2003). Environmental impact assessment. APH Publishers.
4. Anjaneyulu, Y., & Manickam, V. (2011). Environmental impact assessment methodologies. CRC Press.
5. Glasson, J., Therivel, R., & Chadwick, A. (2012). Introduction to environmental impact assessment (4th ed.). Oxford Brookes University.
6. World Bank. (2010). Definition of the scope of work for the EIA and</td></tr>
</table>

	feasibility study for regional SWM facilities. Washington, DC: World Bank.
Learning Outcomes	The course expect student using a multidisciplinary approach, drawing from environmental science, ecology, geography, and policy analysis. The students gain practical skills for conducting effective environmental assessments, identifying potential impacts, and developing monitoring and management strategies

Semester-VI BA. (HONS.) ECONOMICS			
Code	**Paper Name**	**Course Type**	**Credit**
ECOMJ61	Advance Macroeconomics	Major-1	3L+1T= 4
ECOMJ62	Development Economics	Major-2	3L+1T= 4
ECOMJ63	Public Economics	Major-3	3L+1T= 4
ECOMJ64	Basic Econometrics	Major-4	3L+1T= 4
ECOMV61	Survey Methods and Project Evaluation	Minor-Voc-3	3L+1T= 4

Course Title	**ECOMJ61- Advance Macroeconomics**			
Category of Course	**Major-1**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	This course is a sequel to Intermediate Macroeconomics which is designed to provide a deep understanding of model of economic growth, endogenous growth and related problems.			
Units	**Course Content**			**Hr. of Teaching**
I	**Problem of Economic Growth-** Problem of Economic Growth- Problem of Economic Growth and the General Solution; Growth Equilibrium: Existence, Uniqueness and Stability.			5
II	**Models of Economic Growth-** Models of Economics , Harrod and Domar model of economic Growth, Growth-Neo-Keynesian Models of Growth & Distribution- N. Kaldor, L. Pasinetti and Mrs. Joan Robinson; Concept of Golden Age and Golden Rule of Accumulation. Technology and Growth- Hicks, Harrod and Solow-Neutrality of Technical Change, Technical Progress and Steady State-Solow and Kaldor. Money and Growth- James Tobin and			20

	H.G. Johnson.	
III	**Endogenous Growth & Convergent Analysis-** Endogenous Growth Models- AK Models, Lucas Model of Human Capital, Romer Model of Endogenous Innovation. Convergence Analysis- The Classical Approach to Convergence Analysis, Growth Accounting and Structural Breaks.	20
Texts / References	1. Barro, R. J., & Sala-i-Martin, X. (2004/1996). *Economic growth* (2nd ed.). MIT Press. 2. Blanchard, O., & Fischer, S. (1993/1989). *Lectures on macroeconomics*. MIT Press. 3. Cass, D. (1965). Optimum growth in an aggregative model of capital accumulation. *Review of Economic Studies*, 32, 233-240. Oxford University Press. 4. Jones, H. G. (1975). *An introduction to modern theories of economic growth*. McGraw-Hill Book Company. 5. Hahn, F. H. (1971). *Readings in theory of growth*. Macmillan McGraw-Hill Book Company. 6. Jones, C. I. (1997). *Introduction to economic growth*. W.W. Norton & Company. 7. Koopmans, T. (1965). On the concept of optimal growth. In *The econometric approach to development planning* (pp. 225-284). Rand-McNally. 8. Romer, D. (2018). *Advanced macroeconomics* (5th ed.). New York: McGraw-Hill. 9. Sen, A. K. (Ed.). (1970). *Growth economics*. Penguin Books. 10. Stiglitz, J. E., & Uzawa, H. (1969). *Readings in modern theory of economic growth*. MIT Press. 11. Thirlwall, A. P., & Pacheco-López, P. (2017). *Economics of development: Theory and evidence*. Bloomsbury Academic.	
Learning Outcomes	The course expects the theoretical knowledge of growth models and its related problems. The course trains the students of economics about the growth different related issues in different types of economies.	

Course Title	**ECOMJ62- Development Economics**			
Category of Course	**Major-2**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching	45+15	0	60

	(Total)			
Course Objectives	The aim of course is to provide a depth understanding of economic development like, theories of economic development, dualism, poverty, inequality related to different types of economies.			
Units	**Course Content**			**Hr. of Teaching**
I	**Nature & Importance; Economic Development**: Concept and measurements- traditional economic measures, the new economic view of development, Core Values of Development, Objectives of Development; Characteristics of developing world; Economic growth vs. Economic Development; Millennium Development Goals; Sustainable development goals. *Dualism:* Concepts and Definition; Theories of Dualism: Technical, economic, social, financial and structural.			17
II	**Theories of Economic Development:** Lewis's theory of unlimited supply of labour, Rostow stages of economic growth, Low Level Equilibrium Trap- Nelson Model, Critical Minimum Effort Thesis, Theory of Big Push Rosenstein Rodan, Theory of Balanced Growth- Ragner Nurkse, Unbalanced Growth Strategy- Hirschman, Gunnar and Myrdal Model of Economic Development.			20
III	**Inequality:** Measurement of Poverty: headcount ratio, poverty gap index, FGT index; Inequality measures: size distribution, Lorenz curve, Gini coefficients; Kuznets's Inverted-U Hypothesis; Growth and Poverty.			8
Texts / References	1. Thirlwall, A. P. (1994). *Growth and development* (5th ed.). Macmillan Education. 2. Ray, D. (1998). *Development economics*. Oxford University Press. 3. Ghatak, S. (2003). *Introduction to development economics*. Routledge. 4. Hayami, Y., & Godo, Y. (2005). *Development economics: From the poverty to the wealth of nations* (3rd ed.). Oxford University Press. 5. Dasgupta, P. (1995). *An inquiry into well-being and destitution*. Oxford University Press. 6. Meier, G. M., & Rauch, J. E. (2005). *Leading issues in economic development* (8th ed.). Oxford University Press. 7. Todaro, M. P., & Smith, S. C. (2014/2008). *Economic development* (12th ed.). Pearson Education. 8. Basu, K., Majumdar, M., & Mitra, S. (Eds.). (1993). *Capital, investment and development: Essays in memory of Sukhamoy Chakravarty*. Oxford University Press. 9. Sen, A. (1999). *Development as freedom*. Oxford University Press. 10. Sen, A. (1983). *Poverty and famine: Essays on entitlement and deprivation*. Oxford University Press. 11. Basu, K. (1984). *Analytical development economics: The less developed*			

	economy revisited. Oxford University Press.
Learning Outcomes	The course expects the theoretical knowledge of economic development concepts, theories and poverty and inequality related problems. The course trains the economics students as per the market need.

Course Title	**ECOMJ63- Public Economics**			
Category of Course	**Major-3**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of course is to provide a depth understanding of public economic. It covers theories of public expenditure, role of government, provision of public good and social choice theories.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Public Economics**- Economic Rationale of Mixed Economy; Public Finance and shift to Public Economics, Theories of Public Expenditure; Wagner's Law of Increasing and the Wiseman-Peacock Hypothesis, Role of Government; Efficiency markets and Governments, Equity and the Social Welfare Function; Market failure and role of government, Asymmetric Information and market Failure			15
II	**Public goods**– Concept, Characteristics and Types of Public Goods; Efficient Provision of Public Goods; Pure Theories of Public Goods – Bowen Model, Lindahl Model, Pigou Model, Preference revelation Mechanisms for Public Goods, Pareto efficiency; The Principle of Maximum Social Advantage.			15
III	**Social Choice Theory**– Public Policy &Social Choice, State, Civil Society & Public Opinion, An Economic Theory of Democracy: Rent Seeking and Directly Unproductive Profit Seeking Activities, Structure of Social Decision rules with restricted domain; Liberty and Rights			15
Texts / References	1. Sury, M. M. (2020). *Public economics* (1st ed.). New Century Publications. 2. Hyman, D. N. (2020). *Public finance: A contemporary application of theory to policy*. Cengage Learning. 3. Atkinson, A. B., & Stiglitz, J. E. (2015). *Lectures on public economics: Updated edition*. Princeton University Press/McGraw-Hill.			

	4. Kocherlakota, N. R. (2010). *The new dynamic public finance*. Princeton University Press. 5. Cullis, J., & Jones, P. (2009). *Public finance and public choice*. Oxford University Press. 6. Jha, R. (1999). *Modern public economics*. London & New York. 7. Muller, D. C. (1989). *Public choice II*. Cambridge University Press. 8. Arrow, K. J. (1963). *Social choice and individual values*. Yale University Press.
Learning Outcomes	The course expects the theoretical knowledge of public economic concepts, theories and problems. The course trains the economics students as per the market need.

Course Title	**ECOMJ64- Basic Econometrics**			
Category of Course	**Major-4**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The objective of this course is to transmit the body of basic knowledge of econometrics at the undergraduate level. The course offers, simple linear regression model, multivariate linear regression and violation of CLRM assumption & specification.			
Units	**Course Content**			**Hr. of Teaching**
I	**Simple Linear Regression Model-** Introduction to econometrics, Assumption, OLS Estimation, Properties, Gauss-Markov theorem, Goodness of fit, CNLRM, Method of maximum likelihood.			15
II	**Multivariate Linear Regression-** Estimstion, R^2 and adjusted R^2; testing hypotheses; Introduction to dummy variables. revelation Mechanisms for Public Goods, Pareto efficiency; The Principle of Maximum Social Advantage.			10
III	**Violation of CLRM Assumption & Specification-** Heteroscedasticity, Auto-correlation, Multicollinearity- Causes, Consequences, Detection and Remedies; Specification Analysis: Omission of a relevant variable; Inclusion of irrelevant variable; Functional forms of regression models, Tests of specification.			20
Texts / References	1. Kmenta, J. (1997). *Elements of econometrics*. University of Michigan Press.			

	2. Gujarati, D. N. (2021). *Econometrics by example* (1st ed.). Palgrave Macmillan. 3. Studenmund, A. H. (2014). *Using econometrics: A practical guide* (7th ed.). Pearson. 4. Wooldridge, J. M. (2018). *Introductory econometrics: A modern approach*. Cengage Learning. 5. Adkins, L. C., & Hill, R. C. (2011). *Using Stata for principles of econometrics*. John Wiley & Sons.
Learning Outcomes	The course develops basic theoretical and empirical understating of the economic problems. This Couse help students to understand the basics econometrics and its assumption to apply. The basic knowledge of econometrics is necessary for anyone seeking employment as an analyst in the academia and corporate world.

Course Title	**ECOMV61- Survey Methods and Project Evaluation**			
Category of Course	**Minor-Voc-3**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course to deliver method of survey and project evaluation. This course covers the survey method, sampling techniques and project evaluation.			

Units	**Course Content**	**Hr. of Teaching**
I	**Survey Methods** - Types of survey -objective and importance of socio – economic survey in India. Planning of socio-economic survey, pilot survey - documentary sources, secondary and primary data, census and sample survey	10
II	**Sampling Techniques:** sampling distribution and standard error – confidence interval, - measure of efficiency of sampling design. Types of sampling design, Questionnaire / Schedule - general principles of design, difference between questionnaire and schedule, meaning and types of interviewing – formal and informal interviewing, Processing of data - classification - tabulation - interpretation of table and relationship.	15
III	**Project Evaluation-** Project meaning, The Project Planning and Analysis, Project Evaluation Methods- Return on Investment, Cost-Benefit Analysis, Net Present Value, Internal Rate of Return, Risk Adjustment Discount Rate, Benefit-Cost Ratio. Theoretical tools for estimating the costs and benefits, Basic knowledge of Project	20

	Evaluation and Review Technique (PERT).	
Texts / References	1. Moser, C. A., & Kalton, G. (2017). *Survey methods in social investigation*. Routledge. 2. Goode, W. J., & Hatt, P. K. (2017). *Methods in social research*. Asia Law House. 3. Galtung, J. (1968). *Theory and methods of social research*. Allen & Unwin. 4. Cochran, W. G. (2015). *Sampling techniques* (3rd ed.). Wiley. 5. Glock, C. Y. (1967). *Survey research in social science*. Russell Sage Foundation. 6. Ikpe, L. (1999). *Project analysis and evaluation*. Impressed Publishers.	
Learning Outcomes	The course expects the basic understanding of survey method, sampling techniques and project evaluation that would help employability in academia and research.	

Semester-VII BA. (HONS.) ECONOMICS			
Code	**Paper Name**	**Course Type**	**Credit**
ECOMJ71	Research Methods	Major-1	3L+1T= 4
ECOMJ72	Advance Econometrics	Major-2	3L+1T= 4
ECOMN71	Research Methods	Minor-4	3L+1T= 4
ECOMJ73-12	Elective 1 List A	Major-3	3L+1T= 4
ECOMJ713-22	Elective 2 List B.	Major-4	3L+1T= 4

Course Title	**ECOMJ71- Research Methods**			
Category of Course	**Major-1**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of course is to provide a deep of research methods. It covers both qualitative and quantitative methods, research proposal, design, data collection and report writing.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Research**- Distinction between social science research and science research, Research Methods V/s Methodology. Types and approaches of Research: Introduction to Descriptive, Analytical, Fundamental, Inductive and Deductive,			15

	Historical, Experimental and Ex Post Facto Research Approaches. Research Onion & Aspects of Research Process, Introductory Understanding of Research Paradigm.	
II	**Problem, Proposal & Research Design**- Formulation of a Research Problem, Writing of Research Proposal, Review of literature, Introduction to citation & reference style, Hypothesis, its Sources and Types. Research Design- Introduction to Quantitative, Qualitative & Mixed Method Research Designs.	15
III	**Data Collection & Report Writing**- Sampling Methods: Probability & Non-probability sampling methods and their types, Preparation of Questionnaire/ Schedule, pilot survey, Reliability and Validity. Report writing: Structure of Research Report/dissertation, Ethics in research: Falsification, Fabrication and Plagiarism (FFP)	15
Texts / References	1. Kothari, C. R. (2004). *Research methodology: Methods and techniques* (2nd ed.). New Age International. 2. Cooper, D. R., Schindler, P. S., & Sun, J. (2006). *Business research methods* (8th ed.). McGraw-Hill, NewYork. 3. Ethridge, D. (2004). *Research methodology in applied economics: Organizing, planning, and conducting economic research (*2nd ed.*)*. Blackwell Publishing. 4. Goode, W. J., & Hatt, P. K. (1952). *Methods in social research*. McGraw-Hill, NewYork. 5. Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press, London. 6. Jackson, S. L. (2015). *Research methods and statistics: A critical thinking approach* (3rd ed.). Cengage Learning. 7. Lansing, J. B., & Morgan, J. N. (1971). *Economic survey methods*. McGraw-Hill. 8. Medhi, J. (1992). *Statistical methods: An introductory text* (2nd ed.). New Age International, New Delhi. 9. Lee, N., & Lings, I. (2008). *Doing business research: A guide to theory and practice*. Sage, London. 10. Panneerselvam, R. (2011). *Research methodology*. PHI Learning Private Ltd, New Delhi. 11. Sarangi, P. (2010). *Research methodology*. Taxman Publications Private Ltd, New Delhi. 12. Kumar, R. (2018). *Research methodology: A step-by-step guide for beginners* (5th ed.). Sage, Australia.	
Learning Outcomes	The course expects deep knowledge of research methods, techniques applied in social science research.	

Course Title	**ECOMJ72- Advance Econometrics**			
Category of Course	**Major-2**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The objective of this course is to transmit the body of knowledge of advance econometrics at the undergraduate level. In this course, particular offer, simultaneous equation, time series econometrics, and panel data regression models.			

Units	**Course Content**	**Hr. of Teaching**
I	**Simultaneous Equation-** Simultaneous Equation Bias; Structural Models; Reduced form Models; Identification Problem; Tests for Simultaneity and Exogeneity; ILS, 2SLS	15
II	**Time Series Econometrics-** Introduction to time series; test of stationarity: Correlogram, DF & ADF; ARIMA-Box-Jenkins; Multivariate Models- Cointegration and Error Correction, Introduction to Dynamic Regression Model – Koyck & Almon Approach	20
III	**Panel Data Regression-** Pooled Regression, fixed effects; random effects model.	10
Texts / References	1. Dougherty, C. (2016). *Introduction to econometrics* (5th ed.). Oxford University Press, New York. 2. Gujarati, D. N**.** (2021). *Econometrics by example* (1st ed.). Palgrave, New Delhi. 3. Gujarati, D. N., & Porter, D. C. (2009). *Basic econometrics* (5th ed.). McGraw-Hill, New Delhi. 4. Koutsoyiannis, A. (1973). *Theory of econometrics*. Harper & Row, New York. 5. Wooldridge, J. M. (2018). *Introductory econometrics: A modern approach* (7th ed.). Cengage Learning.	
Learning Outcomes	The course develops theoretical and empirical understating of the economic problems. This course help students to understand the advance econometrics models based on real data. The knowledge of advance econometrics is necessary for anyone seeking employment as an analyst in the academia and corporate world.	

Course Title	**ECOMN71- Research Methods**

Category of Course	**Minor-4**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of course is to provide a deep of research methods. It covers both qualitative and quantitative methods, research proposal, design, data collection and report writing.			

Units	**Course Content**	**Hr. of Teaching**
I	**Introduction to Research**- Distinction between social science research and science research, Research Methods V/s Methodology. Types and approaches of Research: Introduction to Descriptive, Analytical, Fundamental, Inductive and Deductive, Historical, Experimental and Ex Post Facto Research Approaches. Research Onion & Aspects of Research Process, Introductory Understanding of Research Paradigm.	15
II	**Problem, Proposal & Research Design**- Formulation of a Research Problem, Writing of Research Proposal, Review of literature, Introduction to citation & reference style, Hypothesis, its Sources and Types. Research Design- Introduction to Quantitative, Qualitative & Mixed Method Research Designs.	15
III	**Data Collection & Report Writing**- Sampling Methods: Probability & Non-probability sampling methods and their types, Preparation of Questionnaire/ Schedule, pilot survey, Reliability and Validity. Report writing: Structure of Research Report/dissertation, Ethics in research: Falsification, Fabrication and Plagiarism (FFP)	15

Texts / References

1. Kothari, C. R. (2004). *Research methodology: Methods and techniques* (2nd ed.). New Age International.
2. Cooper, D. R., Schindler, P. S., & Sun, J. (2006). *Business research methods* (8th ed.). McGraw-Hill, NewYork.
3. Ethridge, D. (2004). *Research methodology in applied economics: Organizing, planning, and conducting economic research (*2nd ed.*)*. Blackwell Publishing.
4. Goode, W. J., & Hatt, P. K. (1952). *Methods in social research*. McGraw-Hill, NewYork.
5. Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press, London.
6. Jackson, S. L. (2015). *Research methods and statistics: A critical thinking approach* (3rd ed.). Cengage Learning.
7. Lansing, J. B., & Morgan, J. N. (1971). *Economic survey methods*. McGraw-Hill.
8. Medhi, J. (1992). *Statistical methods: An introductory text* (2nd ed.). New

	Age International, New Delhi. 9. Lee, N., & Lings, I. (2008). *Doing business research: A guide to theory and practice*. Sage, London. 10. Panneerselvam, R. (2011). *Research methodology*. PHI Learning Private Ltd, New Delhi. 11. Sarangi, P. (2010). *Research methodology*. Taxman Publications Private Ltd, New Delhi. 12. Kumar, R. (2018). *Research methodology: A step-by-step guide for beginners* (5th ed.). Sage, Australia.
Learning Outcomes	The course expects deep knowledge of research methods, techniques applied in social science research.

Semester-VII
BA. (HONS.) ECONOMICS
MAJOR ELECTIVE PAPERS- LIST A

Code	Elective Paper-I	Couse Type	Credit
ECOMJ73	Advance Econometrics-I	Major Elective-I	3L+1T = 4
ECOMJ74	Applied Microeconomics	Major Elective-I	3L+1T = 4
ECOMJ75	Behavioural Economics-I	Major Elective-I	3L+1T = 4
ECOMJ76	Financial Economics -I	Major Elective-I	3L+1T = 4
ECOMJ77	Natural Resource Economics	Major Elective-I	3L+1T = 4
ECOMJ78	Agriculture-I	Major Elective-I	3L+1T = 4
ECOMJ79	Population Studies-I	Major Elective-I	3L+1T = 4
ECOMJ710	Labour Economics-I	Major Elective-I	3L+1T = 4
ECOMJ711	Regional Economics-I	Major Elective-I	3L+1T = 4
ECOMJ712	Political Economy-I	Major Elective-I	3L+1T = 4

Course Title	**ECOMJ73 Advance Econometrics-I**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in advance econometrics models and its operation. It covers time series, spatial data, and Modeling			

	Volatility Clustering.	
Units	**Course Content**	**Hr. of Teaching**
I	**Time Series Data & Models -**Recap of Distributed Lag and Autoregressive Models, Deterministic and stochastic trends, trend stationery and difference stationary process; Integrated process and random walk, random walk with drift, Unit root and tests for unit root-Dickey-Fuller and Augmented Dickey Fuller tests, Phillips-Perron Test and KPSS test, Unit Roots and Structural Breaks, Unit roots in regression residuals and spurious regression. *Time Series Models* -Stationary time series models: AR, MA and ARMA processes – their properties, conditions for stationarity and invertibility, autocorrelation function (ACF), partial autocorrelation function (PACF), identification based on ACF and PACF, estimation, order selection and diagnostic tests. Non-stationary models: ARIMA model, Box-Jenkins Approach- Identification, estimation, diagnostic checking; Forecast function; SARIMA Modeling for seasonal data.	16
II	**Spatial Data Models** -*Spatial Data Models Linear Models for Spatial Data*- Modelling Spatial Data, Stationarity; Best Linear Unbiased Prediction of Spatial Data- Block Kriging; Prediction Based on the Semivariogram; Measurement Error and the Nugget Effect; The Effect of Estimated Covariances on Prediction; Models for Covariance Functions and Semivariograms; Covariance Models for Lattice Data; Estimation of Covariance Functions and Semivariograms. *Difference in Differences Regression* -Treatment Effects, Examining the effects of discrete policy changes. *Cointegration and Error-correction Models* **-**Linear Combinations of Integrated Variables, Cointegration and Common Trends, Cointegration and Error Correction, testing for Co integration -The Engle–Granger Methodology, Error Correction Model; Johansen Procedure, ARDL Bounds Testing Approach. *Causality:* Causal Relations in Bivariate Models; Causality Tests- Granger Causality test, Haugh Pierce Test, Hsiao Procedure, Toda-Yamamoto test; Causality Tests in a Multivariate Setting.	13
III	**Modeling Volatility Clustering-***Volatility*-Meaning and measurement, Volatility clustering, Econometric models of volatility, ARCH Processes; GARCH Processes, Properties of GARCH Processes, and Maximum Likelihood Estimation of GARCH Models. *Multi-equation Time-Series Models*-Intervention Analysis, Transfer	16

	Function Models, estimating a Transfer Function, Limits to Structural Multivariate Estimation, Introduction to VAR Analysis, Estimation and Identification, The Impulse Response Function, Testing Hypothesis, Structural VARs. The Blanchard and Quah Decomposition. *Forecasting* -Simple exponential smoothing, Holt-Winters method, minimum MSE forecast, forecast error, in-sample and out-of-sample forecast. *Frequency Domain Analysis of Time Series*-Spectral density function and its properties, Spectral density function of AR, MA and ARMA processes, and periodogram analysis.	
Texts / References	1. Gujarati, D. N., Porter, D. C., & Gunasekar, S. (2012). *Basic econometrics* (5th ed.). Tata McGraw-Hill Education. 2. Kirchgässner, G., Wolters, J., & Hassler, U. (2012). *Introduction to modern time series analysis* (2nd ed.). Springer. 3. Enders, W. (2008). *Applied econometric time series* (3rd ed.). John Wiley & Sons. 4. Christensen, R. (2019). *Advanced linear modeling: Statistical learning and dependent data* (3rd ed.). Springer Nature. 5. Greene, W. H. (2003). *Econometric analysis* (5th ed.). Pearson Education India. 6. Hyndman, R. J., & Athanasopoulos, G. (2018). *Forecasting: Principles and practice* (2nd ed.). OTexts. 7. Brockwell, P. J., & Davis, R. A. (2016). *Introduction to time series and forecasting* (3rd ed.). Springer. 8. Chatfield, C. (2013). *The analysis of time series: Theory and practice* (6th ed.). Springer. 9. Shumway, R. H., & Stoffer, D. S. (2000). *Time series analysis and its applications* (3rd ed.). Springer, New York. 10. Maddala, G. S., & Kim, I. M. (1998). *Unit roots, cointegration, and structural change*. Cambridge University Press. 11. Tsay, R. S. (2005). *Analysis of financial time series* (2nd ed.). John Wiley & Sons. 12. Hill, R. C., Griffiths, W. E., & Lim, G. C**.** (2018). *Principles of econometrics* (5th ed.). John Wiley & Sons.	
Learning Outcomes	The course expects that student can know the advance econometric modeling and application in economics sciences.	

Course Title	**ECOMJ74 Applied Microeconomics-I**			
Category of Course	**Major-3 (Elective-1)**			
Credits &		Theory	Practical	Cumulative

Hour of Teaching	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in applied econometrics models and its uses. It covers the time series application in consumer demand theories, demand system, and in estimation of production & cost functions.			

Units	**Course Content**	**Hr. of Teaching**
I	**Consumer Demand Theories-**Preference and Utility Maximization, Duality and Consumer Demand, Restrictions in Consumer Demand, Static Versus Dynamic Demand Relation: Distributed Lag Demand Function, Nerloves stock adjustment Principle, Short run and long run demand function, Houthakker and Taylor's habit creation principle, The Cobb Douglas & Constant Elasticity of Demand Function, Nested CES Utility Function.	12
II	**Partial & Complete Demand System** -*Partial Demand System:* Empirical Content (numerical estimates) to Various Partial Demand System – Engel Expenditure Model: marginal propensities to consume and income elasticities of demand, Estimates of various Engel Functions, Engel Expenditure Elasticities using Cross-section Data; Comparing Linear versus Log –Log Demand function, Consumption Expenditure Function: Estimation of MPC and Elasticity of Consumption Expenditure with respect to Level of Income using Time-series Data. *Complete Demand System:* Demand Function for Commodities –LES Demand, AIDS Model – Linear and Quadratic, Own Price, Cross Price and Income Elasticities of Demand. Application: Estimation of Demand function for India, some studies using the above models.	18
III	**Production Function & Cost Function Estimation**-Production functions: Duality: Profit Maximization& Cost minimization, Estimation of Factor Demand, Cobb-Douglas, Leontief, CES, VES, Transcendental, Translog Production Function and Its Properties; Efficiency and Total Factor Productivity. *Derivation of Cost Function from Production Function, Empirical Cost Studies* – Polynomial Cost Function: Linear, Quadratic and Cubic Cost Functions. Application: Estimation of Production & cost function & TFP, some studies using the above models, Methods of measuring efficiency: Parametric and non-parametric**.**	15
Texts / References	1. Deaton, A. (1992). *Understanding consumption*. Oxford University Press. 2. Deaton, A., & Muellbauer, J. (1980). *Economics and consumer behavior*. Cambridge University Press. 3. Deaton, A., & Muellbauer, J. (1980). *An almost ideal demand system. American Economic Review.* 4. Banks, J., Blundell, R., & Lewbel, A**.** (1997). *Quadratic Engel curves and consumer demand*. *Review of Economics and Statistics.*	

	5. Pollak, R. A., & Wales, T. J. (1992). *Demand system specification and estimation*. Oxford University Press. 6. Barnett, W. A., & Serletis, A. (2008). Consumer preferences and demand systems. *Journal of Econometrics*. 7. Haque, M. O. (2006). *Income elasticity and economic development: Methods and applications*. Springer Science & Business Media. 8. Phlips, L. (2014). *Applied consumption analysis: Advanced textbooks in economics*. Elsevier. 9. Heathfield, D. F. (2016). *An introduction to cost and production functions*. Macmillan International Higher Education. *10.* Stone, R. (1954). Linear expenditure systems and demand analysis: An application to the pattern of British demand. *The Economic Journal*. 11. Krishna, K. L. (Ed.). (1997). *Econometric applications in India*. Oxford University Press. 12. Radhakrishnan, R. (2019). *Essay on the econometrics of consumer behavior*. Academic Foundation. *13.* Edgerton, D. L., Assarsson, B., Hummelmose, A., Laurila, I. P., Rickertsen, K., & Vale, P. H. (1996). *The econometrics of demand systems: With applications to food demand in the Nordic countries*. Springer Science & Business Media. 14. Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics: Methods and applications*. Cambridge University Press. *15.* Keller, W. J. (1976). *A nested CES-type utility function and its demand and price-index functions*. *European Economic Review.*
Learning Outcomes	The course expects that student can use econometric models for testing economic theories and problems.

Course Title	**ECOMJ75 Behavioural Economics-I**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized behavioral economics and its operational problems. It covers introduction of behavioral economics, non-expected utility theories and spatial data, and time discontinuity and preference.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction of Behavioural Economics**-Past, Present, Future,			12

	The Historical Context of Behavioural Economics, The Methods of Behavioural Economics, Basic Concepts Intertemporal Choice, Time Discounting, Preference over Risky and Uncertain Outcomes, Fairness and Social Preferences. Endowment Effect, Bilateral Bargaining and Coase Theorem, Choices Between Goods, Mental Accounting-Mental Accounting Decision Making the Framing of Gains and Losses- The Value Function, Hedonic Framing, Transaction Utility, Payment Decoupling, Self-Control and Gift Giving, The Diversification Heuristic	
II	**Non-Expected-Utility Theories**- Choice Under Risk, Expected Utility Theory, The "Fanning-Out" Hypothesis, Non-Conventional Theories: The Procedural Approach and Reference Dependence, Nontransitive Preference Theory. Prospect Theory, The Equity Premium, The Disposition Effect, Asymmetric Price Elasticities of Consumer Goods, Savings and Consumption: Insensitivity to Bad Income News, Racetrack Betting: The Favourite-Longshot Bias	14
III	**Time Discounting and Time Preference**- Discounted-Utility Model, Utility Independence, Consumption Independence, Stationary Instantaneous Utility, Discounted Utility Anomalies- Hyperbolic Discounting, the "Sign Effect", The "Magnitude Effect", The "Delay-Speedup" Asymmetry, Preference For Improving Sequences, Models of Hyperbolic Discounting, Self-Awareness, Explaining Bargaining Impasse, Psychological Research on the Self-Serving Bias, Theory and Experiment in the Analysis of Strategic Interaction. *Fairness as a Constraint on Profit Seeking:* Reference Transactions, The Coding of Outcomes, Occasions for Pricing Decisions, Enforcement, Economic Consequences, Inequity- Aversion, Fairness, Retaliation, and Competition, Market Game with Responder Competition, Cooperation and Retaliation—Cooperation Games, Dictator and Gift Exchange Games, Incorporating Fairness into Game Theory and Economics.	19
Texts / References	1. Akerlof, G. A. (1991). Procrastination and obedience. *American Economic Review.* 2. Camerer, C. F. **(**1987). Do biases in probability judgment matter in markets? Experimental evidence. *American Economic Review.* 3. Dreyfus, M. K., & Viscusi, W. K. (1995). *Rates of time preference and consumer valuations of automobile safety and fuel efficiency. Journal of Law and Economics.* 4. Green, J., & Jullien, B. (1988). *Ordinal independence in nonlinear utility theory. Journal of Risk and Uncertainty.* 5. Gul, F. (1991). *A theory of disappointment in decision making under uncertainty. Econometrica.* 6. Hagen, O. (1979). Towards a positive theory of preferences under risk. In M. Allais & O. Hagen (Eds.), *Expected utility hypotheses and the Allais paradox*. Reidel.	

	7. Hammack, J., & Brown, G. M., Jr. (1974). *Waterfowl and wetlands: Toward bio-economic analysis*. Johns Hopkins University Press. 8. Kahneman, D., Knetsch, J. L., & Thaler, R. (1986). *Fairness as a constraint on profit seeking: Entitlements in the market*. *American Economic Review.* 9. Marwell, G., & Ames, R**.** (1981). *Economists free ride, does anyone else? Experiments on the provision of public goods, IV. Journal of Public Economics.* 10. Olmstead, A. L., & Rhode, P. (1985). *Rationing without government: The West Coast gas famine of 1920. American Economic Review.* 11. Prelec, D., & Simester, D. (1998). Always leave home without it. *MIT Sloan School* Working Paper. 12. Rabin, M. (1998). *Risk aversion, diminishing marginal utility, and expected-utility theory: A calibration theorem. University of California, Berkeley* Working Paper. 13. Shefrin, H., & Statman, M. (1985). The disposition to sell winners too early and ride losers too long. *Journal of Finance.* 14. Siegel, J., & Thaler, R. (1997). The equity premium puzzle. *Journal of Economic Perspectives.* 15. Siegel, J., & Thaler, R. **(**2003). *Behavioral game theory: Experiments on strategic interaction*. Princeton University Press.
Learning Outcomes	The course expects that student can know behavioral economics theories and application problems.

Course Title	**ECOMJ76 Financial Economics-I**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized financial economics and its operation. It covers introduction to financial economics, fixed income analysis, security market and asset pricing theories			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Financial Economics-** Market, instruments, risk, return and diversification, investment process, financial decisions, finance-macro interlinkages; Financial Assets: characteristics, pricing, debt and equity; Basic accounting, Balance sheet and income statement analysis, cash flow analysis and financial			12

	models.	
II	**Fixed Income Analytics and Securities Markets-** *Fixed Income Analytics*: Fixed Income Indentures, Types of Fixed Income Securities, Fixed Income Pricing, Price Volatility characteristics and term structure of interest rates. *Securities Markets and Their Efficiency:* Stock Exchanges, the over-the-counter market, operational efficiency; Random walk of speculative market prices: Random Walk, Efficient Market Hypothesis, Utility Theory, Empirical illustrations.	18
III	**Asset Pricing Theories and Portfolio Analysis-** Mean Variance Portfolio theory, Portfolio Optimization (Markowitz Model), Single Index Model, Capital Asset Pricing Model, Arbitrage Pricing Theory, Black Litter man Model. Measuring Portfolio Performance: Sharpe's Measure, Jensen's Measure, Treynor's Measures.	15
Texts / References	1. Luenberger, D. (2013). *Investment science* (2nd ed.). Oxford University Press. 2. Bodie, Z., Kane, A., Marcus, A. J., & Mohanty, P. (2006). *Investments* (6th ed.). McGraw-Hill. 3. Sharpe, W., Alexander, G. J., & Bailey, J. V. **(**2002). *Investments* (6th ed.). Prentice-Hall International, London. 4. Elton, E. J., Gruber, M. J., Brown, S. J., & Goetzmann, W. N. (2010). *Modern portfolio theory and investment analysis* (8th ed.). Wiley Publications. 5. Damodaran, A. (2012). *Investment valuation* (3rd ed.). Wiley Finance. 6. Bailey, R. E. (2005). *The economics of financial markets*. Cambridge University Press.	
Learning Outcomes	The course expects that student can know the financial economics theories, modeling and application.	

Course Title	**ECOMJ77 Natural Resource Economics-I**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized natural resource economics and its operation. It covers natural resource, capital theory, Exhaustible Resource Management, renewable resource and property rights.			
Units	**Course Content**			**Hr. of**

		Teaching
I	**Introduction to Natural Resources: and -** Meaning, Types, Classifications (Renewable and Non-Renewable and Environmental; Energy and Mineral, Exhaustible and Inexhaustible); Resource Scarcity; Dimensions of Resource Scarcity: Physical Measures and Economic Measures- Mc. Kelvy Diagram.	10
II	**Theories of Natural Resources Economics- Elementary Capital Theory:** Discounting and choice of discount rate; social discount rate, Net Present Value, Internal Rate of Return, payback period, Resources and Asset Prices; Inter-temporal Choice: time preference. *Optimal Depletion of Exhaustible Resources:* (a) A Simple Model of Optimal Depletion, (b) Cake Eating Theory, (c) Resource Substitution Theory, (d) Time Preference and Discounting.	20
III	**Exhaustible Resource Management-** Conditions and Principles: User Cost, the Fundamental Principle: Hotelling's Rule, Backstop Substitute, Extraction and Price Paths, Exploration and Technological Progress, Resource Extraction and Environment Cost. Economics of coal, petroleum and natural gas; pricing of exhaustible resources; energy prices– theory and empirics; economic regulation of energy markets; electricity regulation and restructuring.	15
Texts / References	1. Clark, C. W. (2010). *Mathematical bioeconomics: The mathematics of conservation*. Wiley-Blackwell, New Jersey. 2. Common, M. S. (1996). *Environmental and resource economics: An introduction*. Longman Group UK Limited, London. 3. Conrad, J. M., & Clark, C. (1987). *Natural resource economics: Notes and problems*. Cambridge University Press, New York. 4. Conrad, J. M., & Rondeau, D. (2020). *Natural resource economics: Analysis, theory and applications*. Cambridge University Press, New York. 5. Dasgupta, P., & Heal, G. M. (1979). *Economic theory and exhaustible resources*. Cambridge University Press, Cambridge. 6. Grafton, Q., Adamowicz, W., Dupont, D., Nelson, H., Hill, R. J., & Renzetti, S. (2004). *The economics of environment and natural resources*. Wiley-Blackwell, New Jersey. 7. Hanley, N., & Spash, C. L. (1993). *Cost benefit analysis and the environment*. Edward Elgar, Cheltenham. 8. Hoel, M. (2016). *Optimal control theory with applications to resource and environmental economics* (Memorandum No. 8). Department of Economics, University of Oslo. 9. Karp, L., & Traeger, C. (2013). *Dynamic methods in environmental and resource economics*. Retrieved from [Traeger homepage]. 10. Kneese, A. V., & Sweeney, J. (1993). *Handbook of natural resource and energy*. North Holland Publishers, Amsterdam. 11. Kula, E. (1992). *Economics of natural resources and the environment*.	

	Springer, Netherlands. 12. Lewis, L., & Tietenberg, T. H. (2019). *Natural resource economics: The essentials*. Routledge, London. 13. Prato, T. (1999). *Natural resource and environmental economics*. Wiley-Blackwell, New Jersey. 14. Tietenberg, T. H. (2018). *Environmental and natural resource economics*. Routledge, London.
Learning Outcomes	The course expects that student can know the natural resource economics and its application.

Course Title	**ECOMJ78 Agriculture Economics-I**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in Agriculture economics and its operation. It covers theoretical models, land & water resource, and agriculture credit.			
Units	**Course Content**			**Hr. of Teaching**
I	**Conceptual Framework-** Schultz model of transforming traditional agriculture, Boserup's theory of agrarian change, Mellor's theory of Agricultural Development, Overview of approaches to agricultural development (basic idea) – frontier model, conservation model, urban industrial impact model, diffusion model and high payoff input model.			13
II	**Land and water Resources in Agriculture-** Land and it carrying capacity, Effects of urbanization on agricultural land use, Process of conversion of agricultural land to non-agricultural use; Peri Urban Agriculture Shift in cropping pattern, factors influencing it and its implications for food security, Economics of share tenancy. *Water Resources in Agriculture:* Agricultural water use, Water Saving Technologies, Issues related to large and small irrigation works; Institutional arrangements in water allocation in agriculture: water rights (user groups, water users' cooperatives, Pani panchayat, Public- private participation), Water markets, Water pricing.			24
III	**Credit in Indian Agriculture-** Sources of finance and changes in			8

	their respective share. Factors determining demand for credit, Imperfections in rural credit markets in India, recent policy changes in regard to farm credit and their implications.	
Texts / References	1. Schultz, T. W. (1964). *Transforming traditional agriculture*. Yale University Press, New Haven. 2. Newlove, M. (1998). *Transforming economics: Theodore W. Schultz* (WP 98-28). Department of Agricultural and Resource Economics, The University of Maryland. 3. Boserup, E. (1993). *The conditions of agricultural growth: The economics of agrarian change under population pressure*. Routledge. 4. Grigg, D. (1979). Ester Boserup's theory of agrarian change: A critical review. 5. Mellor, J. W. (1966). *The economics of agricultural development*. Cornell University Press. 6. Mellor, J. W. (2017). *Agricultural development and economic transformation: Promoting growth with poverty reduction*. Palgrave Macmillan. 7. Ruttan, V. W., & Hayami, Y. (1972). *Strategies for agricultural development and resources in agriculture*. 8. Street, J. M. (1969). An evaluation of the concept of carrying capacity. *The Professional Geographer*. 9. Quian, Y., et al. (2015). A comparative analysis on assessment of land carrying capacity with ecological footprint analysis and index system method. *PLoS ONE*. Retrieved from [PLoS ONE website]. 10. Patra, S., et al. (2018). Impacts of urbanization on land use/cover changes and its probable implications on local climate and groundwater level. *Journal of Urban Management*. 11. Bryant, C. (2016). The impact of urbanization on rural land use. *Encyclopedia of Life Support Systems*. 12. Telentilo, D., Marshall, F., & Bhupal, D. S**.** (2001). *Urban and peri-urban agriculture: FAO briefing guide*. FAO. 13. Mruthyunjaya, & Kumar, P. (1989). Crop economics and cropping pattern changes. *Economic and Political Weekly*.	
Learning Outcomes	The course expects that student can know the agriculture economics theories and their application.	

Course Title	**ECOMJ79 Population Studies-I**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60

Course Objectives	The aim of this course the students to specialized in population studies and its operation. It covers measurement of population data, nuptiality & fertility, mortality, morbidity and health	
Units	**Course Content**	**Hr. of Teaching**
I	**Population, Data and its Measurement**-Meaning and scope of Demography, Components of Population Growth and their interdependence, Measures of Population Change, Spatial and temporal changes in the size, composition and distribution of population: global perspective with special reference to India, Demographic, social and economic composition. *Sources of Population Data*-Demographic Events, Identification of the different sources of population data, Census, Registration of vital events, Demographic surveys and population Register, Importance and limitations of Population Data Census of India-2021: Operations & Challenges.	15
II	**Fertility and Nuptiality**-Concept and measures of Nuptiality and Fertility, Nuptiality indicators – their computation and source of data, Marriage & divorce, Fertility indicators– their computation and sources of data, Crude birth rate (CBR), General Fertility rate (GFR), Age Specific Fertility Rate (ASFR), Total Fertility Rate (TFR), Gross Reproduction rate (GRR), Net Reproduction Rate (NRR), Cohort.	15
III	**Mortality, Morbidity and Health** -Mortality concept and measures, Mortality indicators – their computation and sources of data, Crude Death rate (CDR), Age Specific death rate (ASDR), Infant Mortality Rate (IMR), Maternal Mortality rate (MMR), Causes of Death Statistics, Concept and definition of Health and Morbidity, Sources of Morbidity Data, Pandemic, Epidemic and Endemic.	15
Texts / References	1. Haupt, A., & Kane, T. T. (2004). *Population handbook* (5th ed.). Population Reference Bureau. 2. Bhende, A. A., & Kanitkar, T. (2011). *Principles of population studies* (21st ed.). Himalaya Publishing House. 3. Bose, A. (2006). *Beyond demography: Dialogue with people*. B R Publishing Corporation. 4. Gupta, M. D., Chen, L. C., & Krishnan, T. N. (1999). *Health, poverty & development in India*. Oxford University Press. 5. Hansraj. (n.d.). *Fundamentals of demography*. Surjeet Publications. 6. Srinivasan, K. (2017). *Population concerns in India: Shifting trends, policies and programs*. Sage Publications. 7. Newell, C. (1990). *Methods and models in demography*. 8. Patra, A. K., & Panigrahy, R. L. (Eds.). (2010). *Population and health*. Discovery Publishing House. 9. Jain, R. K. (2013). *Textbook of population studies*. Neha Publishers & Distributors. 10. Ramachandrudu, G., & Prasada Rao, M. (Eds.). (2004). *Census 2001 and human development in India*. Serials Publications.	

	11. Ranganathan, C. R. (2006). *A first course in mathematical models of population growth (with MATLAB programs)*. Associated Publishers. 12. Rawat, I. M. (Ed.). (2001). *Ageing and human development: Global perspectives*.
Learning Outcomes	The course expects that student can know the population studies and its application.

Course Title	**ECOMJ79 Labour Economics-I**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this courses the students to specialized in labour economics and its operation. It covers demand & supply of labour, theories of wages and labour institutions.			
Units	**Course Content**			**Hr. of Teaching**
I	**Supply and Demand of Labour**- Meanings of Labour - Labour Process: Alternative Approaches. Concept of Labour Force, Determinants of Labour Force Participation, Unemployment, Issues relating to Quality of Labour and Human Capital, Migration. Theories of Labour Demand in the Short Run and the Long Run, Technological Change and Labour Demand; Reserve Army of Labour.			18
II	**Theories of Wages**- Wage Differentials, Market Rigidities and Flexibilities, Internal Labour Markets, Segmented Labour Markets, Labour Market as a Social Institution.			12
III	**Labour Institutions**- Labour Legislation, Collective Action, Trade Unions etc. and their implications for Wages, Employment Security and Efficiency; Linkage between Labour Institutions and Macro-Economic outcomes in general.			15
Texts / References	1. Abraham, K. G., & McKersie, R. B. (Eds.). (1990). *New developments in labour market: Towards a new institutional paradigm*. 2. Akerlof, G. A., & Yellen, J. L. (Eds.). (1996). *Efficiency wage models of the labour market*. 3. King, J. E. (1983). *Labour economics*. Springer. 4. Smith, R. S., & Ehrenberg, R. G**.** (2012). *Modern labour economics: Theory and public policy*.			

	5. Hicks, J. R. (1963). *The theory of wages*. Macmillan/St. Martin's Press. 6. Berg, J., & Kucera, D. (Eds.). (2008). *In defence of labour market institutions: Cultivating justice in the developing world.*
Learning Outcomes	The course expects that student can know the labour economics theories and their application.

Course Title	**ECOMJ711 Regional Economics-I**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in regional economics and its operation. It covers concepts of regional economics, regional growth, and regional analysis.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Regional Economics:** Concepts – meaning and importance of regional economics; different types of regions; regional income; problems of estimation; indictors of regional development, Location of firms – one market one input case. More generalized version. Locational interdependence; Hotelling phenomena; general equilibrium; uncertainty; maximizing vs. satisficing.			15
II	**Regional Growth – Neo – Classical growth models** – cumulative causation model; Center – periphery model; growth pole analysis; convergence and divergence of disparities in per capita regional income.			10
III	**Techniques of regional analysis** – regional and inter-regional input – output analysis; attraction model; Gravity model; Shift Share analysis; Impact studies. *Regional policy* – People prosperity versus place prosperity; formulation of inter-regional objectives; consistency between national and regional objectives; alternative regional policy measures; Historical evidence. Inter- regional differentials in India's development – Agriculture, Industry, physical infrastructure, social sector. Regional policy in India			20
Texts / References	1. Chand, M. (2012). *Regional planning in India*. Allied Publishers, New Delhi. 2. Hoover, E. M. (1971). *An introduction to regional economics*. Alfred A. Knopf, New York. 3. Isard, W. (1960). *Methods of regional analysis*. MIT Press, Cambridge.			

	4. Richardson, H. W. (1972). *Regional economics*. Weidenfeld and Nicolson, London. 5. Dholakia, R. H. (1985). *Regional disparity in economic growth in India*. Himalaya Publishing House, Bombay. 6. Friedman, J. (2003). *Regional policy: Readings in theory & application* (W. Alonso, Ed.). MIT Press. 7. Rao, H. (1985). *Regional disparities & development in India*. Ashish Publishing House, New Delhi. 8. Richardson, H. W. (1972). *Input-output and regional economics*. John Wiley, New York. 9. Seth, V. K. (1988). *Industrialization in India: A spatial perspective*. Commonwealth Publishers, New Delhi. 10. Siebert, H. (1969). *Regional economic growth: Theory & policy*. International Textbook Company, Scranton.
Learning Outcomes	The course expects that student can know the regional economic theories and their application.

Course Title	**ECOMJ712 Political Economy-I**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aims of this course is to specialize the students in political economy and its operation. It covers theoretical approach, state & finance, and social dimension of globalization.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Political Economy-** Perspective on political economy with a historical overview: capitalist development in the pre-second world war period, the golden age and later. Changing Dynamics of Capitalist Production, Organisational Form and Labour Process; Fordist and post-Fordist production; changing dynamics of organisation of production, markets and labour process; the changing nature of job security and labour rights.			15
II	**The State in the Era of Globalisation and Changing role of Finance**- Welfare, development and autonomy globalisation and the limits of the welfare state, development and state autonomy. The changing role of finance; The changing role of finance in capital accumulation and corporate structure; finance and			18

	globalisation - financialisation, financial liberalisation and financial crisis.	
III	**The Social Dimension Globalisation and uneven development**– growth, inequality and exclusion. New Perspectives Gender in work, accumulation and globalisation; issues in environment and sustainability; alternatives ahead.	12
Texts / References	1. Beaud, M. (2001). *A history of capitalism, 1500-2000* (T. Dickman & A. Lefebvre, Trans.). Monthly Review Press, New York. 2. Amin, A. (1994). *Post-Fordism: A reader*. Blackwell, Oxford. 3. Tonkiss, F. (2008). Contemporary economic sociology: Globalisation, production, inequality. In *Fordism and after* (Chapter 4). Routledge, India. 4. Hymer, S. (1975). The multinational corporation and the law of uneven development. In H. Radice (Ed.), *International firms and modern imperialism*. Penguin Books, London. 5. Gereffi, G., Humphrey, J., & Sturgeon, T. (2005). The governance of global value chains. *Review of International Political Economy*. 6. Reddy, N. (2003). Economic globalisation, past and present – The challenges to labour. In J. K. S. Jomo & K. K. Jin (Eds.), *Globalization and its discontents, revisited*. Sephis - Tulika Books. 7. Harvey, D. (2005). *A brief history of neoliberalism*. Oxford University Press, Oxford. 8. Glyn, A. (2006). Challenges to capital. In *Capitalism unleashed: Finance, globalization and welfare*. Oxford University Press, Oxford. 9. Dumenil, G., & Levy, D. (2011). *The crisis of neoliberalism*. Cambridge, Harvard University Press. 10. Jomo, K. S. (2006). *The long twentieth century: The great divergence: Hegemony, uneven development and global inequality*. Oxford University Press, Oxford. 11. Dymsky, G. (2005). Financial globalization, social exclusion and financial crisis. *International Review of Applied Economics*. 12. Stockhammer, E. (2010). Financialization and the global economy. In G. Epstein & M. H. Wolfson (Eds.), *The political economy of financial crises* (pp. 240). Oxford: Oxford University Press. Also in Working Paper Series No. 240, Political Economy Research Institute, University of Massachusetts Amherst. 13. Smith, J. P., & Ward, M. P. (1989). Women in the labour market and in the family. *Journal of Economic Perspectives.* 14. Power, M. (2004). Social provisioning as a starting point for feminist economics. *Feminist Economics.* 15. Foster, J. B. (2002). *Ecology against capitalism*. Monthly Review Press, New York.	
Learning Outcomes	The course expects that student can know the issue of political economy and solution for them.	

Semester-VII BA. (HONS.) ECONOMICS MAJOR ELECTIVE PAPERS- LIST B			
Code	**Elective Paper-II**	**Course**	**Credit**
ECOMJ13	Operations Research-I	Major Elective-II	3L+1T= 4
ECOMJ14	Game theory-I	Major Elective-II	3L+1T= 4
ECOMJ15	Institutional Economics-I	Major Elective-II	3L+1T= 4
ECOMJ16	Financial Market-I	Major Elective-II	3L+1T= 4
ECOMJ17	Economics of Natural Disaster-I	Major Elective-II	3L+1T= 4
ECOMJ18	Industrial Economics-I	Major Elective-II	3L+1T= 4
ECOMJ19	Health Economics-I	Major Elective-II	3L+1T= 4
ECOMJ20	Gender Economics -I	Major Elective-II	3L+1T= 4
ECOMJ21	Poverty, Inequality and Human Development -I	Major Elective-II	3L+1T= 4
ECOMJ22	Indian Public Finance-I	Major Elective-II	3L+1T= 4

Course Title	**ECOMJ713 Operation Research-I**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in operation research and its operation. It covers introduction OR, linear and non-linear programming, transportation and assignment problems.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Operation Research-** Definition, significance, scope and limitations of Operations Research, Basics of Mathematical Programming, Development of A Programming Problem; Linear and Nonlinear, Static and Dynamic, Single and Multiple Goals. Programming and Decision Making			8
II	**Linear and Non-linear Programming-** Assumptions, formulation and solution by graphic method and simplex methods; Duality in LP programming and its economic interpretation, difference between primal and dual, dual simplex method; Sensitivity analysis; Some special cases: unbounded solution, infeasibility, multiple optimal solution *Non-Linear programming:* Non-Linear programming, Mathematical formulation; Concepts of global			20

	minima and local minima; Lagrange multipliers and Kuhn-Tucker conditions; Duality in non-linear programming; Integer programming: Algorithms for integer programming.	
III	**Transportation Problem and Assignment Problem-** Transportation problem, mathematical models for transportation problem, the transportation method, methods for finding initial solution, test for optimality, assignment problem: different approaches to find solution, Critical Path Method (CPM), and PERT	17
Texts / References	1. Sharma, J. K. (2012). *Operations research: Theory and applications* (5th ed.). Chand. 2. Chiang, A. C. (2005). *Fundamental methods of mathematical economics* (4th ed.). McGraw-Hill. 3. Natarajan, B., Tamilarasi, A., & Balasubramani, R. (2014). *Operations research* (2nd ed.). Pearson. 4. Cheema, D. S. (2006). *Operations research*. Laxmi Publications, New Delhi. 5. Hillier, F. S., & Lieberman, G. J. (2005). *Introduction to operations research*. Tata McGraw-Hill, New Delhi. 6. Hillier, F. S. (2001). *Introduction to operations research* (7th ed., with CD). Tata McGraw-Hill Publishing Co. Ltd, New Delhi. 7. Shah, N., et al. (2007). *Operations research*. Prentice-Hall of India Pvt. Ltd, New Delhi. 8. Panneerselvam, R. (2006). *Operations research*. Prentice-Hall of India Pvt. Ltd, New Delhi. 9. Taha, H. A. (2008). *Operations research: An introduction* (8th ed.). Pearson Education, Singapore.	
Learning Outcomes	The course expects that student can know the operation research problems and their applications.	

Course Title	**ECOMJ714 Game Theory-I**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course is to specialize the students in game theory and its operation. It covers normal games, extensive forms games and Bayesian games.			
Units	**Course Content**			**Hr. of**

		Teaching
I	**Normal form games-** the normal form; dominant and dominated strategies; dominance solvability; mixed strategies; Nash equilibrium; symmetric single population games; applications	12
II	**Extensive form games with perfect information-** Extensive games with perfect information; strategies and outcomes; Nash equilibrium; subgame perfect equilibrium; backward induction in finite games; commitment; bargaining; Stackelberg's model of duopoly; a race; other illustrations	15
III	**Simultaneous move and Bayesian games**- Entry into a monopolized industry; electoral competition with strategic voters; committee decision-making; exit from a declining industry. *Bayesian games* Strategies; Bayesian Nash equilibrium; Cournot's duopoly game with imperfect information; providing a public good; auctions; juries; other applications	18
Texts / References	1. Osborne, M. (2004). *An introduction to game theory*. Oxford University Press, Oxford. 2. Fudenberg, D., & Tirole, J. (1991). *Game theory*. MIT Press, Cambridge. 3. Dutta, P. K. (1999). *Strategies and games: Theory and practice*. MIT Press, Cambridge. 4. Gibbons, R. (1992). *Game theory for applied economists*. Princeton, NJ: Princeton University Press.	
Learning Outcomes	This course expects that student can know the different types of games and their application.	

Course Title	**ECOMJ715 Institutional Economics-I**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in institutional economics and its operation. It covers introduction, institutional analysis, transaction cost and property rights.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Institutional Economics-** The concept of institution in the New Institutional Economics: Adam Smith's The Theory of the Moral Sentiments. TB Veblen: The Theory of the Leisure Class. R Commons and JK Galbraith – formal (legalized) institutions, Scientific investigation methods. WC Mitchell-			15

	Establishment of Institutions. G Myrdal – interdependence of social, political, economic and institutional phenomena, modernization ideals. Religion as an institution.	
II	**Institutional Analysis and Transaction Cost-** Institutions and organizations. Interaction situations and the types of norms: prisoners' dilemma-type situation; co-ordination situation; inequality situation. Enforcement characteristics. Institutional structure of a society. Formal and informal institutions. *Transaction Cost:* The concept of transaction. Market and intra firm transactions. Transaction costs as friction in the economy Transaction costs and transformation costs. Interdependency between transaction costs and transformation costs, Transaction costs, the main types of economic exchange and their institutional structure.	15
III	**Economic Theory of Property Right-** The definition of property rights. Property rights in different legal traditions. The property rights approach: some basic concepts. The Coase Theorem, Critic of Coase Alternative property rights regimes. Common property (open access), Exclusive property rights. The optimistic theory of the emergence of property rights (naïve model). The interest-group theory of property rights. The costs of collective action. The theory of rent-seeking. Interest-groups and rent-seeking in an economy.	15
Texts / References	1. Eggertsson, T. (1990). *Institutions and economic behaviour*. Cambridge University Press. 2. North, D. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press, Cambridge. 3. Cooter, R. (1996). The theory of market modernization of law. *International Review of Law and Economics*. 4. Posner, E. (2000). Social norms and the law. Harvard University Press, Cambridge. Chapter 2: A model of cooperation and the production of social norms. 5. Ullman-Margalit, E. (1977). *The emergence of norms*. Clarendon Press, Oxford. 6. Young, P. H. (1996). The economics of convention. *Journal of Economic Perspectives*. 7. Coase, R. (1937). The nature of the firm. *Economica*. 8. Milgrom, P., & Roberts, J. (1992). *Economics, organization and management*. Upper Saddle River, NJ: Prentice-Hall. 9. North, D. (1990). Institutions, institutional change and economic performance. Cambridge University Press, Cambridge. 10. Niehans, J. (1987). Transaction costs. In *The Palgrave Dictionary of Economics*. Macmillan, London. 11. North, D. (1994). Integrating institutional change and technical change in economic history: A transaction cost approach. *Journal of Institutional and Theoretical Economics*. 12. Williamson, O. (1985). *The economic institutions of capitalism*. The Free Press, New York. 13. Coase, R. H. (1960). The problem of social cost. *Journal of Law and*	

	Economics. 14. Kreps, D. (1990). Corporate culture and economic theory. In *Perspectives on positive political economy*. Cambridge University Press, Cambridge. 15. Menard, C. (1996). Inside the black box: The variety of hierarchical forms. In J. L. Groenewegen (Ed.), *Transaction cost economics and beyond*. Kluwer Academic Publishers, Dordrecht. 16. Shelanski, H., & Klein, P. (1995). Empirical research in transaction cost economics: A review and assessment. *Journal of Law, Economics and Organization*. 17. Williamson, O. (1996). Comparative economic organization: The analysis of discrete structural alternatives. In *Mechanisms of governance*. Oxford University Press, Oxford. 18. Williamson, O. (1998). *The economic institutions of capitalism*. The Free Press, New York. 19. Kreps, D. (1990). Corporate culture and economic theory. In *Perspectives on positive political economy*. Cambridge University Press, Cambridges.
Learning Outcomes	This course expects that student can know the institutional economics theories and their application.

Course Title	**ECOMJ716 Financial Market-I**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in financial market and its operation. It covers financial system, primary and secondary security market, derivative market and its instruments.			
Units	**Course Content**			**Hr. of Teaching**
I	**Financial System & Its Components-** Financial System and Economic Development, Reforms in Financial system, Money market & Capital Market-Its Instruments, Money market Derivatives**,** Reserve Bank of India and Money Market Regulation, Reforms in Capital market.			10
II	**Primary and Secondary Market for Securities-** Book Building, Resource mobilization from International Market, Special Features of the Different Types of Equity and Debt Instruments, The Procedure and mechanism of trading in Capital Market including			20

	Dematerialization of Securities and Dematerialised Trading, Dividend Capitalization – Valuation and Listing of Security in India- BSE Index & Sensex, Stock Exchanges in India BSE, NSE and OTCEI, SEBI: Organization, Management, Functions and Powers, its Impact on the Working of Capital Market in India.	
III	**Derivative Market & its Instruments-** Derivatives- Meaning, types and uses; Mechanics of future markets and price determination, hedger, speculators, hedging strategies, Options and option pricing, the payoffs from buying and selling of options, put call ratio and parity, Mechanics and properties of stock options. *Role of Financial institutions & Insurance***-** Risk Management: Role of Non-Banking Financial Corporation's (NBFCs), Different Types of Foreign Capital Investment in India –NRI Investments and Deposits, Investment by Foreign Institutional Investors, Expansion and Growth of India's Financial Market, Measures of Financial Risk Management.	15
Texts / References	1. Paul, J., & Suresh, P. (2008). *Management of banking and financial services*. Pearson Education, Delhi. 2. Khan, M. Y. (2007). *Financial services*. Tata McGraw Hill, New Delhi. 3. Hull, J. (2002). *Introduction to futures and options market*. Prentice Hall of India, New Delhi. 4. Gardon, E., & Natarajan, K. (2016). *Financial markets & services*. Himalaya Publishing House, Mumbai. 5. Avadhani, V. A. (2007). *Financial services and markets*. Himalaya Publishing House, Mumbai. 6. Sharma, R., & Gupta, A. (2019). *Financial services* (6th ed.). Kalyani Publishers, New Delhi. 7. Desai, V. (2011). *The Indian financial system*. Himalaya Publishing House, Mumbai.	
Learning Outcomes	The course expects that student can know the financial market and their application.	

Course Title	**ECOMJ717 Economics of Natural Disaster-I**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in economics of natural disaster and its operation. It covers credit introduction to natural disaster, critical infrastructure and Early warning system.			

Units	**Course Content**	**Hr. of Teaching**
I	**Introduction to the Economics of Natural Disasters-** Types of natural disasters and their economic impacts, Direct and Indirect Economic Losses: Assessing direct damages and losses, Estimating indirect economic impacts, Macro and Micro damages, Economic vulnerability and resilience.	15
II	**Critical Infrastructure and Key Resources-** Economic importance of critical infrastructure, Strategies for protecting and strengthening key resources, Learnings from zero casualty policy	16
III	**Early Warning Systems and Economic Benefits-** Role of early warning systems in disaster risk reduction, Cost-benefit analysis of early warning systems	14
Texts / References	1. Pine, J. (2008). *Natural hazards analysis: Reducing the impact of disasters*. Auerbach Publications. 2. The World Bank. (2010). *Natural hazards, unnatural disasters: The economics of effective prevention*. 3. The World Bank. (2010). *Handbook for estimating the socio-economic and environmental effects of disasters: Main report (English)*. World Bank Group, Washington, D.C. 4. Sharma, S. K., & Quah, E. (Eds.). (2018). *Economics of natural disasters*. World Scientific. 5. Guha-Sapir, D., Santos, I., & Borde, A. (Eds.). (2013). *The economic impacts of natural disasters*. Oxford University Press. 6. Alexander, D. (2018). *Natural disasters*. Routledge. 7. Pelling, M. (Ed.). (2003). *Natural disasters and development in a globalizing world*. Psychology Press. 8. Tatano, H., & Kajitani, Y. (Eds.). (2022). *Methodologies for estimating the economic impacts of natural disasters* (pp. 11-25). Springer, Singapore. 9. Okuyama, Y. (2003). *Economics of natural disasters: A critical review*.	
Learning Outcomes	The course expects that student can know the economics of natural disaster and their application.	

Course Title	**ECOMJ718 Industrial Economics-I**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60

Course Objectives	The aim of this courses the students to specialized in industrial economics and its operation. It covers market structure and business goals, and competition.	
Units	**Course Content**	**Hr. of Teaching**
I	**Framework of Industrial Economics-** Development of Industrial Economics and Structural Change, Concept of Firm – ownership, control and objectives of the firm; Industrial Profile : Private sector - Performance and Problems; Public Sector - Role, Performance and Disinvestment ,Mixed Economy & PPP	15
II	**Market Structure & Conduct -**Market Structure-Elements & Market concentration, Economies of scale and profitability; Theories of industrial location – Weber and Sargent Florence; Market Conduct-Business Goals & Behaviour, Investment Decisions , Vertical and Horizontal combinations, Mergers ,Acquisitions & Joint Ventures, Rise of Indian MNCs; Foreign capital : Direct Investment & Foreign Institutional Investment, NRI policy of India	15
III	**Market Performance and Profitability-** Market Performance: Growth, size, and profitability of the firm and Constraints on firm's growth Productivity and capacity utilization – Concept and measurement, Tools of Performance Measurements-Cost Benefit Analysis, Global Industrial Trends	15
Texts / References	1. Andreosso,Bernadette , Jacobson, David, (2005) *Industrial Economics and Organisation*, McGraw-Hill Publishing Co 2. Bains, J. S. (1996). Industrial Organization, Cheltenham, U.K. An Elgar Critical Writings Reader. 3. Barthwal R.R. (2021); I*ndustrial Economics: An Introductory Textbook*, New Age Internationals Private Limited 4. Belleflamme, Paul & Peitz, Martin (2012) *Industrial Organization Markets and Strategies,* Cambridge University Press. 5. Cabral, Luis M.B., (2000) *Introduction to Industrial Organization*, MIT Press, 6. Church, Jeffrey and Ware, Roger, (2000) *Industrial Organization: A Strategic Approach,* McGraw-Hill 7. Das,Satya P, (2007) *Microeconomics for Business* ,Sage Publications Pvt. Ltd, 8. Divine, P. J. and R. M. Jones et. al. (1976), An Introduction to Industrial Economics, George Allen and Unwin Ltd., London 9. Don Waldman and Elizabeth Jensen. S, (2000) *Industrial Organization*, 2nd edition 10. Dwivedi D.N., (2015) *Managerial Economics,* Vikas Publishing House 11. George, Kenneth D., Joll, Lynk, Caroline, E. L., (1992) *Industrial Organization: Competition, Growth and Structural Change*, Routledge, 12. Gupta C.B., (2014) *A Textbook of Organisational Behaviour*, S Chand &	

	Company 13. Hay, D. A and Morris, D. J. (1991). Industrial Economic: Theory and Evidence. Oxford University Press. 14. J. Tirole, (1988) *The Theory of Industrial Organization*, MIT Press 15. Jotwani, Kiran & Patil, Ameya Anil (2023*) Industrial Economics*, Nirali Publications 16. Kei-Mu Yi, Michael Sposi, Jing Zhang, (Ed) (2019) *Recent Developments in the Economics of Structural Change,* Edward Elgar Publishing 17. Kumar, N. (2020) *Industrial Economics*, Lakshmi Narayan Agarwal Publisher. 18. Lehmann, Erik E., Keilbach, Max (Eds.) (2019) *From Industrial Organization to Entrepreneurship A Tribute to David B. Audretsch*, Springer 19. Marshall, A. (2003): Elements of Economics of Industry, Simon Publications, UK 20. Marshall, A. and Marshall, M. P. (2012): The Economics of Industry, Ulan Press, UK 21. Mehrotra M.A. (2016) *Industrial Structure Organization*, Disha International, New Delhi 22. Singh Manoj Kumar, (2019); Industrial Economics and Principles of Management, New Age International (P) Ltd., Publishers 23. Singh, S.P. (2008),*Industrial Economics and Management*,Aitbs Publisher 24. Spulber, Daniel F., Market (1999) *Microstructure: Intermediaries and the Theory of the Firm,* Cambridge University Press, 25. Teece David J.(Edited) (2019);The Evolution of the Theory of the Firm, Volume 1,Basic Elements, Edward Elgar publishing 26. U.C.Mathur, (2005) Corporate Governance and Business Ethics.
Learning Outcomes	This course expects that student can know the industrial economics and their application.

Course Title	**ECOMJ719 Health Economics-I**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in health economics and its operation. It covers introduction to health economics, demand and supply			

	of health services, valuing and damage of health.	
Units	**Course Content**	**Hr. of Teaching**
I	**Introduction to Health Economics** -The state and scope of health economics; Human capital and health; Health as a Social Indicator; Health and Economic Development: Inter-linkage, Determinants of health: Poverty, Malnutrition and Environmental quality; Change of health status over time; Components of economic appraisal of health programmes.	12
II	**Demand and supply of Health Services** -Theoretical and empirical investigations; health insurance and demand for medical care, adverse selection, moral hazard and consumer incentive in health care. Supply of health and healthcare services, Relevance of production function, Issues and Challenges of healthcare production; Estimating a Household (health) health production functions. Factors affecting the supply of healthcare services; Public-Private Dichotomy in Providing Healthcare Services.	16
III	**Valuing and Damage of Health** -Human capital approach: measurement of mortality: value of life, years of life lost; morbidity valuation: cost of illness, Burden of disease: Meaning and significance, DALY: A measure of the burden, The DALY framework: Components and postulates, DALY and QALY; The GBD assessment, BD and DALY: A critical appreciation. *Health Accounting*- National health accounts, from SNA to NHA, Health expenditure efforts.	17
Texts / References	1. Cuyler, A. J., & Joseph, P. (Eds.). (2000). *Handbook of health economics*. Newhouse. Elsevier Science, North Holland. 2. Clewar, A., & Perkins, D. (1998). *Economics for health care management*. Prentice Hall, London. 3. Folland, S., Goodman, A. C., & Stano, M. (2001). *The economics of health and health care* (3rd ed.). Macmillan, New York. 4. Rice, T. (1998). *The economics of health reconsidered*. Chicago: Health Administration Press. 5. Folland, S., Goodman, A. C., & Stano, M. (2004). *The economics of health and health care* (4th ed.). Prentice Hall. 6. Santerre, R. E., & Neun, S. P. (2004). *Health economics: Theories, insights, and industry studies*. Thomson/South Western. 7. Feldstein, P. J. (1979). *Health care economics*. John Wiley & Sons, New York. 8. Folland, S., Goodman, A. C., & Stano, M. (1997). *The economics of health and health care*. Prentice Hall, New Jersey. 9. Musgrove, P. (1996). *Public and private roles in health: Theory and financing patterns* (Discussion Paper No. 319). World Bank, Washington, DC.	
Learning Outcomes	This course expects that student can know the health economics and its application.	

Course Title	**ECOMJ720 Gender Economics-I**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in gender economics and its operation. It covers introduction to gender economics, gender issues under micro, macroeconomics and development economics.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Gender Economics and Microeconomics-** Exploitation vs. oppression – Issue of private property Access and control over economic resources. Gender and Microeconomics: Gender Bias in the Theories of Value and Distribution – issues and alternative theories of rationality, consumption, production and exchange – Gender critic of rational choice, externalities, social welfare function and welfare economics – Human capital and discrimination theories.			15
II	**Gender and Macroeconomics-** Engendering macroeconomic perspectives, approaches and methodologies – political economy of macroeconomic modelling – Gendering fiscal and monetary policies – concept, critic and methods of gender budget analysis.			15
III	**Women and Development-** Engendering developmental theories – Gender Development Index and Gender Empowerment Measures – Visibility of women and biases inherent in data system – Limitation of National Income Statistics - Mainstreaming gender into development policies – Gender planning techniques - Gender sensitive governance - Paradigm shifts from women's well-being to women's empowerment – Democratic decentralization (panchayats) and women's empowerment in India.			15
Texts / References	1. Government of India. (1974). *Towards equality: Report of the Committee on the Status of Women in India*. Department of Social Welfare, Ministry of Education and Social Welfare, New Delhi. 2. International Labour Organization (ILO). (n.d.). *Women's participation in the economic activity of Asian countries*. 3. Kabeer, N., & Subrahmanian, R. (1997). *Institutions, relations and outcomes: A framework and case studies for gender-aware planning*. Zed Books, London. 4. Kalpagam, U. (1994). *Labour and gender: Survival in urban India*. Sage Publications, New Delhi. 5. Krishnaraj, M., Sudarshan, R. M., & Shariff, A. (1998). *Gender,*			

	population and development. Paris: UNESDOC. 6. Papola, T. S., & Sharma, A. N. (1999). *Gender and employment in India*.
Learning Outcomes	This course expects that student can know the gender economics and their application.

Course Title	**ECOMJ721 Poverty, Inequality and Human Development -I**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course is to aware the students about the basic concepts of Poverty, Inequality and Human development with special reference to Indian scenario.			
Units	**Course Content**			**Hr. of Teaching**
I	**Concept and Measure of Poverty**- Poverty Lines and Measures of Poverty, Dimension of Poverty: Income and Non-Income, National and Global Scenario: Great India Poverty Debates, Anti- Poverty Policies, Case Studies from Countries. Estimation of Poverty using Consumer Expenditure Survey Data of National Sample Survey (NSS). Multidimensional poverty			13
II	**Concept of Inequality-** Concept of Inequality in access and Opportunity, Measurement of Inequality, Class and Inequality, Social Inequality. Income and Wealth Inequality, Inequality Trends in India, Estimation of Inequality & Lorenz curve using Consumer Expenditure Survey Data of National Sample Survey (NSS).			15
III	**Pro-poor and Inclusive Growth-** Linkage between Growth, Inequality and Poverty, Concept of Trickle-down Theory, Pro-poor Growth, Pro-poor Growth Indices, Growth Incidence Curve, Inclusive Growth, India's 12th Five-year Plan and Inclusive Growth, Estimation of Pro-poor Growth Index (PPGI), Poverty Equivalent Growth Rate (PEGR) and Growth Incidence Curve (GIC) using Consumer Expenditure Survey Data of National Sample Survey (NSS).			17
Texts / References	1. Anand, S., & Sen, A. (1994). *Human Development Index: Methodology and measurement*. 2. Ravallion, M. (2015). *The economics of poverty: History, measurement, and policy*. Oxford University Press. 3. Ravallion, M. (2008). Poverty lines. In *The new Palgrave dictionary of economics* (2nd ed.).			

	4. Subramanian, S. (2019). *Inequality and poverty: A short critical introduction*. Springer. 5. Ravallion, M., & Datt, G. (2002). Why has economic growth been more pro-poor in some states of India than others? *Journal of Development Economics, 68*(2), 381-400. https://doi.org/10.1016/S0304-3878(02)00112-7. 6. Ravallion, M. (2004). Pro-poor growth: A primer. Available at SSRN: https://ssrn.com/abstract=610283. 7. United Nations Development Programme (UNDP). *Human Development Report*. 8. Niti Aayog. (2016). *National Multidimensional Poverty Index*. Government of India.
Learning Outcomes	It will enable student to do any kind of future research on the mentioned area and to be associated with any academic bodies for Planning and research.

Course Title	**ECOMJ722 Indian Public Finance-I**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course is to specialized the students in Indian public finance and its operation. It covers public budget, tax structure, goods and services taxes in India.			

Units	**Course Content**	**Hr. of Teaching**
I	**Introduction to Public Budget**- Kinds of Budgets, Revenue and Capital Budgets, Economic and Functional Classification of Budget, Budgetary Procedure in India – Preparation, Enactment, Presentation and Execution of the Budget; Consolidated, Contingency Funds, Public Account, Votable and Non-Votable Items. Critical evaluation of the Recent Budget in India.	8
II	**Tax Structure in India-** Union *Taxes;* Taxation of Income: Concept of Income, basis of liability to Tax, Rate Structure, Tax Incentive/Tax Expenditure, Double Taxation; Corporation Tax in India; trends in receipts from Income and Corporation Taxes in India, Taxation of Capital Gains. Taxes on Commodities and Services: Changing scenario in respect of receipts from Commodities and Services; Customs Duties; Union Excise Duties. Tax Revenue Receipts and Tax-GDP Ratios. *State Taxes:* Taxes on Income: Agriculture Income Tax, Tax on Professions. Taxes on	20

	Property and Capital transaction – Stamps and Registration Fees, Land Revenue, Urban Immovable Property Tax, State Excise Duties, Share in Central taxes.	
III	**Goods and Services Tax (GST) and Non-Tax Revenue Sources-** Evolution Goods GST and problems. Non-Tax Revenue Sources: Union Government– Contribution of PSUs, Interest Receipt, Fiscal Services, General Services, Social &Community Services, Economic Services. State Government - Contribution of PSUs, Interest Receipts, General Services, Social and Community Services, Economic Services, Grants from Centre. Major Issues in Taxes: Tax Reforms after 1991, Changes in Composition of Tax Structure, Tax Administration, Tax Avoidance and Evasion, GAAR, Proposed Direct Tax Code (DTC).	17
Texts / References	1. Ministry of Finance, Government of India. (n.d.). *Annual reports*. [Latest reports]. 2. Jha, P. (Ed.). (2011). *Progressive fiscal policy in India*. Sage Publications India Pvt. Ltd. 3. Kumar, A. (1999). *The black economy in India*. Penguin Books. 4. Kumar, A. (2017). *Demonetization and the black economy*. Penguin Books. 5. Srivastava, D. K. (Ed.). *Fiscal federalism in India*. 6. Srivastava, D. K. (2005). *Issues in Indian public finance*. New Century Publications. 7. Bhargava, P. K. (1991). *India's fiscal crisis*. Ashish Publishing House. 8. Bhargava, R. N. (1971). *The theory and working of union finance in India*. Chaitanya Publishing House. 9. Chelliah, R. J. (1969). *Fiscal policy in underdeveloped countries*. George Allen and Unwin Ltd. 10. Chelliah, R. J. (Ed.). (1996). *Towards sustainable growth: Essays in fiscal and financial sector reforms in India*. Oxford University Press. 11. Gaur, A. K. (1988). *Federal finance in India*. Deep & Deep Publications. 12. Government of India, Ministry of Finance. (2002). *Reports of the task force on direct and indirect taxes*. 13. Government of India. *Economic survey* and *Union budget* [Various years].	
Learning Outcomes	This course expects that student can know the Indian public finance and their application.	

Semester-VII BA. (HONS.) ECONOMICS WITH RESEARCH			
Code	**Paper Name**	**Course Type**	**Credit**
ECOMJ7R1	Research Methods	Major-1	3L+1T= 4
ECOMJ7R2	Advance Econometrics	Major-2	3L+1T= 4
ECOMN7R1	Research Methods	Minor-4	3L+1T= 4
ECOMJ7R3-6	Elective 1 List A	Major-3	3L+1T= 4

ECOMJ7R7-10	Elective 2 List B	Major-4	3L+1T= 4

Course Title	**ECOMJ7R1- Research Methods**			
Category of Course	**Major-1**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of course is to provide a deep of research methods. It covers both qualitative and quantitative methods, research proposal, design, data collection and report writing.			
Units	**Course Content**			**Hr. of Teaching**
I	**Research: An Introduction-** Introduction to Research: Distinction between social science research and science research, Research Methods V/s Methodology. Types and approaches of Research: Introduction to Descriptive, Analytical, Fundamental, Inductive and Deductive, Historical, Experimental and Ex Post Facto Research Approaches. Research Onion & Aspects of Research Process, Introductory Understanding of Research Paradigm.			15
II	**Problem, Proposal & Research Design**- Formulation of a Research Problem, Writing of Research Proposal, Review of literature, Introduction to citation & reference style, Hypothesis, its Sources and Types. Research Design- Introduction to Quantitative, Qualitative & Mixed Method Research Designs.			15
III	**Data Collection & Report Writing**- Sampling Methods: Probability & Non-probability sampling methods and their types, Preparation of Questionnaire/ Schedule, pilot survey, Reliability and Validity. Report writing: Structure of Research Report/dissertation, Plagiarism and ethics in research.			15
Texts / References	1. Bryman, A. (2016). *Social research methods*. Oxford University Press. 2. Cooper, D. R., Schindler, P. S., & Sun, J. (2006). *Business research methods* (Vol. 9). McGraw-Hill. 3. Ethridge, D. (2004). *Research methodology in applied economics: Organizing, planning, and conducting economic research*. Blackwell Publishing. 4. Goode, W. J., & Hatt, P. K. (1952). *Methods in social research*. 5. Jackson, S. L. (2015). *Research methods and statistics: A critical thinking approach*. Cengage Learning. 6. Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International. 7. Kumar, R. (2018). *Research methodology: A step-by-step guide for*			

	beginners. Sage. 8. Lansing, J. B., & Morgan, J. N. (1971). *Economic survey methods*. 9. Lee, N., & Lings, I. (2008). *Doing business research: A guide to theory and practice*. Sage. 10. Medhi, J. (1992). *Statistical methods: An introductory text*. New Age International. 11. Panneerselvam, R. (2011). *Research methodology*. PHI Learning Private Limited. 12. Sarangi, P. (2010). *Research methodology*. Taxman Publications Private Limited.
Learning Outcomes	The course expects deep knowledge of research methods, techniques applied in social science research.

Course Title	**ECOMJ7R2- Advance Econometrics**			
Category of Course	**Major-2**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The objective of this course is to transmit the body of knowledge of advance econometrics at the undergraduate level. In this course, particular offer, simultaneous equation, time series econometrics, and panel data regression models.			
Units	**Course Content**			**Hr. of Teaching**
I	**Simultaneous Equation-** Simultaneous Equation Bias; Structural Models; Reduced form Models; Identification Problem; Tests for Simultaneity and Exogeneity; ILS, 2SLS			15
II	**Time Series Econometrics:** Introduction to time series; test of stationarity: Correlogram, DF & ADF; ARIMA-Box-Jenkins; Multivariate Models- Cointegration and Error Correction, Introduction to Dynamic Regression Model – Koyck & Almon Approach			20
III	**Panel Data Regression:** Pooled Regression, fixed effects; random effects model.			10
Texts / References	1. Gujarati, D. N., & Porter, D. C. (2009). *Basic econometrics* (5th ed.). McGraw Hill, New Delhi. 2. Gujarati, D. N. (2021). *Econometrics by example* (1st ed.). Palgrave. 3. Wooldridge, J. M. (2018). *Introductory econometrics: A modern approach* (7th ed.). 4. Dougherty, C. (2016). *Introduction to econometrics* (5th ed.). Oxford University Press.			

	5. Koutsoyiannis, A. (1973). *Theory of econometrics*. Harper & Row.
Learning Outcomes	The course develops theoretical and empirical understating of the economic problems. This course help students to understand the advance econometrics models based on real data. The knowledge of advance econometrics is necessary for anyone seeking employment as an analyst in the academia and corporate world.

Course Title	**ECOMN7R1- Research Methods**			
Category of Course	**Minor-4**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of course is to provide a deep of research methods. It covers both qualitative and quantitative methods, research proposal, design, data collection and report writing.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Research:** Distinction between social science research and science research, Research Methods V/s Methodology. Types and approaches of Research: Introduction to Descriptive, Analytical, Fundamental, Inductive and Deductive, Historical, Experimental and Ex Post Facto Research Approaches. Research Onion & Aspects of Research Process, Introductory Understanding of Research Paradigm.			15
II	**Problem, Proposal & Research Design**- Formulation of a Research Problem, Writing of Research Proposal, Review of literature, Introduction to citation & reference style, Hypothesis, its Sources and Types. Research Design- Introduction to Quantitative, Qualitative & Mixed Method Research Designs.			15
III	**Data Collection & Report Writing**- Sampling Methods: Probability & Non-probability sampling methods and their types, Preparation of Questionnaire/ Schedule, pilot survey, Reliability and Validity. Report writing: Structure of Research Report/dissertation, Plagiarism and ethics in research.			15
Texts / References	1. Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International. 2. Cooper, D. R., Schindler, P. S., & Sun, J. (2006). *Business research methods* (9th ed.). McGraw-Hill. 3. Ethridge, D. (2004). *Research methodology in applied economics: Organizing, planning, and conducting economic research*. Blackwell Publishing. 4. Goode, W. J., & Hatt, P. K. (1952). *Methods in social research*.			

	5. Bryman, A. (2016). *Social research methods*. Oxford University Press. 6. Jackson, S. L. (2015). *Research methods and statistics: A critical thinking approach*. Cengage Learning. 7. Lansing, J. B., & Morgan, J. N. (1971). *Economic survey methods*. 8. Medhi, J. (1992). *Statistical methods: An introductory text*. New Age International. 9. Lee, N., & Lings, I. (2008). *Doing business research: A guide to theory and practice*. Sage. 10. Panneerselvam, R. (2011). *Research methodology*. PHI Learning Private Limited. 11. Sarangi, P. (2010). *Research methodology*. Taxman Publications Private Limited. 12. Kumar, R. (2018). *Research methodology: A step-by-step guide for beginners*. Sage.
Learning Outcomes	The course expects deep knowledge of research methods, techniques applied in social science research.

Semester-VII **BA. (HONS.) ECONOMICS WITH RESEARCH** **MAJOR ELECTIVE PAPER LIST-C**			
Code	**Elective Paper-I (Theory)-C**	**Course Type**	**Credit**
ECOMJ7R3	Behavioral Economics	Major Elective-I	3L+1T =4
ECOMJ7R4	Political Economy	Major Elective-I	3L+1T =4
ECOMJ7R5	Indian Economic thought	Major Elective-I	3L+1T =4
ECOMJ7R6	Contributions of Nobel Laureate in Economics	Major Elective-I	3L+1T =4

Course Title	**ECOMJ7R3 Behavioural Economics**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	This course introduces the core principles of behavioral economics, exploring how psychological factors influence real-world decision-making beyond traditional rational models. Students will examine how cognitive biases, social preferences, and bounded rationality affect economic behavior and policy design.			
Units	**Course Content**			**Hr. of Teaching**

I	**Introduction:** Nature of Behavioural Economics, History and Development of Behavioural Economics, The Methods of Behavioural Economics, Endowment Effect and Coase Theorem, The Economics of Fairness and Retaliation, Non-Expected-Utility Theories, Time Discounting and Time Preference.	12
II	**Mental Accounting and Its Applications:** Mental Accounting and Decision Making, The Value Function, *Applications in Macroeconomics*- Mental Accounting, Saving, and Self-Control, Self-Control and Temptation, The Differential Marginal Propensity to Consume (MPC) Hypothesis, Pensions and Saving, Individual Retirement Accounts, Housing Wealth, Saving Adequacy, Nonproportionality, Policy Implications. *Applications in Labour Economics:* The Fair Wage-Effort Hypothesis and Unemployment, Equity Theory, Relative Deprivation Theory, Social Exchange Theory, Wage-Salary Secrecy, Wage Patterns, Patterns of Unemployment.	18
III	**Behavioral Game Theory:** Behavioural Game Theory: Predicting Human Behaviour in Strategic Situations, Social Utility, Iterated Reasoning in First-Period Play and One-Shot Games, Judgment and Choice in Games, Framing, Coordination, and Representation. Cooperative Game Theory, Evolutionary Game Theory, Signaling Games, Coordination Games, Unstructured Bargaining.	15
Texts / References	1. Akerlof, G. A., & Shiller, R. J. (2009). *Animal spirits: How human psychology drives the economy, and why it matters for global capitalism*. Princeton University Press. 2. Camerer, C. F., Loewenstein, G., & Rabin, M. (Eds.). (2011). *Advances in behavioral economics*. Princeton University Press. 3. Crawford, V., & Broseta, B. (1998). What price coordination? The efficiency-enhancing effect of auctioning the right to play. *American Economic Review, 88*(1), 198-225. 4. Crawford, V., & Haller, H. (1990). Learning how to cooperate: Optimal play in repeated coordination games. *Econometrica, 58*(3), 571-595. 5. Forsythe, R., Kennan, J., & Sopher, B. (1991). An experimental analysis of strikes in bargaining games with one-sided private information. *American Economic Review, 81*(2), 253-270. 6. Friedman, D. (1996). Equilibrium in evolutionary games: Some experimental results. *Economic Journal, 106*(438), 1-25. 7. Fudenberg, D., & Levine, D. (1998). *The theory of learning in games*. MIT Press. 8. Fudenberg, D., & Tirole, J. (1991). *Game theory*. MIT Press. 9. Gale, J., Binmore, K., & Samuelson, L. (1995). Learning to be imperfect: The ultimatum game. *Games and Economic Behavior, 8*(1), 59-60. 10. Goeree, J., & Holt, C. (1999). Stochastic game theory: For playing games, not just for doing theory. *Proceedings of the National Academy of Sciences, 96*(19), 10564-10567. 11. Holbrook, R. (1966). Windfall income and consumption: Comment.	

	American Economic Review, 56(3), 534-540. 12. Kahneman, D. (2011). *Thinking, fast and slow*. Farrar, Straus and Giroux. 13. Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica, 47*(2), 263-291. 14. Laibson, D., & Zeckhauser, R. J. (1998). Amos Tversky and the ascent of behavioral economics. *Journal of Risk and Uncertainty, 16*(1), 7-47. 15. Shea, J. (1995). Union contracts and the life cycle/permanent-income hypothesis. *American Economic Review, 58*(1), 186-200. 16. Souleles, N. (1995). The response of household consumption to income tax refunds. *Mimeo*, MIT. 17. Thaler, R. H. (2016). *Misbehaving: The making of behavioral economics*. W.W. Norton & Company. 18. Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press. 19. Tidd, K. L., & Lochard, J. S. (1978). Monetary significance of the affiliative smile: A case for reciprocal altruism. *Bulletin of the Psychonomic Society, 11*(5), 344-346.
Learning Outcomes	Students will understand key behavioral economics concepts and the limitations of traditional models. They will analyze how psychological factors shape economic outcomes and apply these insights to areas such as consumption, labor markets, and public policy, developing critical skills in evaluating and applying behavioral economics.

Course Title	**ECOMJ7R4 Political Economy**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in political economy and its operation. It covers historical overview, role of state in the era of globalization and social discrimination.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction -** Political Economy: Historical Evolution, Capitalism as an Evolving Economic System: Basic Features of Capitalism, Capitalism as a historical process; The Materialist Conception of History			10
II	**Understanding & Debating Capitalism-** Marxist Philosophy on Capitalism The method of historical materialism; the transition from feudalism to capitalism (debate between Maurice Dobb & Paul Sweezy); Economic Crises and Falling Rate of Profit, Crisis theory of political economy capitalism as a historical process			17

	– alternative perspectives, Critical Views on Capitalism, Liberal Views on Capitalism, Neo-Liberal Views on Capitalism.	
III	**State & Imperialism-** The concept of the State, The Role of State, The state and the economy, Mutual interdependence between state and economy- Traditional Views, Mutual interdependence between state and economy - Modern Views, Conflict in Capitalism - State as an arena of conflict , Imperialism- Concept of Imperialism, Introduction to theories on Imperialism , Economic Imperialism – concept, Imperialism - A Political Phenomenon, Neo- Imperialism- Basic Insights	18
Texts / References	1. Tonkiss, F. (2008). *Contemporary economic sociology: Globalisation, production, inequality* (Chapter 4, Fordism and after). Routledge India. 2. Hymer, S. (1975). The multinational corporation and the law of uneven development. In H. Radice (Ed.), *International firms and modern imperialism* (pp. 1-23). Penguin Books. 3. Reddy, N. (2003). Economic globalisation, past and present – The challenges to labour. In J. K. S. Jomo & K. K. Jin (Eds.), *Globalization and its discontents, revisited* (pp. 99-117). Sephis - Tulika Books. 4. Harvey, D. (2005). *A brief history of neoliberalism*. Oxford University Press. 5. Glyn, A. (2006). Challenges to capital. In *Capitalism unleashed: Finance, globalization and welfare* (pp. 157-174). Oxford University Press. 6. Dumenil, G., & Levy, D. (2011). *The crisis of neoliberalism*. Harvard University Press. 7. Jomo, K. S. (Ed.). (2006). *The long twentieth century: The great divergence: Hegemony, uneven development and global inequality*. Oxford University Press. 8. Stockhammer, E. (2010). Financialization and the global economy. In G. Epstein & M. H. Wolfson (Eds.), *The political economy of financial crises* (pp. 125-146). Oxford University Press.	
Learning Outcomes	This course expects that student can know the political economy and their application.	

Course Title	**ECOMJ7R5 Indian Economic Thought**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in Indian economic thought and its operation. It covers, ancient, Indian, western thoughts.			
Units	**Course Content**			**Hr. of**

		Teaching
I	**Indian Economic Thought**- Ancient economic ideas mentioned in Hindu Vedic Dharma Sahitya and Shukra Niti, Kautilya: The Idea of Welfare State in Arthashastra, Saint Valluvar: Welfare state in Tirukkural	15
II	**Economic Doctrines of Ancient Indian Dynasties-** Indus Valley Civilization & Aryans in North India to Sangam Age in Southern India, Holistic Ideas of wealth in Buddhist, Jain and Charvaka philosophy	15
III	**Ideas of Indian Visionaries: Dadabhai Naoroji-** Theory of Economic Drain, Pt. Madan Mohan Malviya, M. G. Ranade, G.K. Gokhale, Mahatma Gandhi, J.K. Mehta and Pt. Deendayal Upadhayay.	15
Texts / References	1. Roy, T. (2020). *The economic history of India, 1857–2010*. Oxford University Press. 2. Dalrymple, W. (2019). *The anarchy: The East India Company, corporate violence, and the pillage of an empire*. Bloomsbury Publishing. 3. Dutt, R. C. (2018). *The economic history of India in the Victorian age: From the accession of Queen Victoria in 1837 to the commencement of the twentieth century*. Franklin Classics. 4. Lokanathan, V. (2018). *A history of economic thought*. S. Chand Publication. 5. Paul, R. (2018). *History of economic thought*. K Publisher. 6. Hajela, T. N. (2015). *History of economic thought* (18th ed.). Ane Books. 7. Mishra, A. K. (2010). *A compilation of Indian economic thought (from Kautilya to Kalam)*. Worldman Publication. 8. Haney, L. H. (2009). *History of economic thought*. University of Michigan. 9. Dasgupta, A. K. (1993). *A history of Indian economic thought*. Routledge.	
Learning Outcomes	This course expects that student can know the Indian economic thought and their application.	

Course Title	**ECOMJ7R6 Contributions of Nobel Laureate in Economics**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this courses the students to specialized in Nobel convolution in economics and its relevance. It covers introduction of economics Nobel price, Indian and important contributors.			
Units	**Course Content**			**Hr. of Teaching**

I	**Nobel Prize in Economics: An Introduction** -Nobel Prize in Economic Science- A brief history, Major Country Specific & Global Awards and Recognition in the field of Economics, Sir Alfred Nobel and introduction of Nobel Prize in 1901, The Sveriges Riksbank initiatives and introduction of 'Prize in Economic Science dedicated to the memory of Alfred Nobel' in 1967, Controversies related to introduction of Nobel Prize in economics and its nomenclature, The process of granting the Nobel Prize, Nobel Prize Winners- distribution across nations, academic affiliations, age and gender, disciplines and sub-disciplines, Major Controversies related to the award- Controversies related to Friedman and John John Nash.	8
II	**Indian Nobel Prize Winners-** Nobel Prize in Economics winners of Indian origin and their contribution- **Amartya Sen (1998)** and his contributions to Social Choice, Welfare Distributions, and Poverty- The Theory of Social Choice and Indices of Welfare & Poverty, Sen's contribution to Welfare Economics, **Abhijeet Bannerjee (2019)** –The experimental approach to alleviating global poverty, Contribution of Abhijeet Banerjee, Esther Duflo and Michael Kremer.	12
III	**Some Important Nobel Prize Winners and their Contributions-** First Nobel Prize (1969)-Ragnar Frisch & Jan Tinbergen, Milton Friedman (1976), James Edward Meade & Bertil Ohlin (1977), Robert Solow (1987), Robert Lucas Jr (1995), George A. Akerlof, A. Michael Spence & Joseph E. Stiglitz (2001), Peter A. Diamond, Dale T. Mortensen & Christopher A. Pissarides (2010), Nobel Prize Awarded since 2020.	25
Texts / References	1. Dymond, L. H. (2015). *A recent history of recognized economic thought: Contributions of the Nobel laureates to economic science* (Paperback). Lulu Publishing Services. 2. McCarty, H. M. (2001). *The Nobel laureates: How the greatest economic minds of our time shaped modern thought*. McGraw-Hill Inc. 3. Weinberg, B. A., & Galenson, D. (2005). Creative careers: The life cycles of Nobel laureates in economics. *The Journal of Economic Perspectives, 19*(4), 123-144. 4. Vane, H. R., & Mulhearn, C. (2005). *The Nobel Memorial laureates in economics: An introduction to their careers and main published works*. Edward Elgar Publishing. 5. Sahoo, S. P., Padhi, A., Rout, B., & Kumari, I. G. (2024). Nobel Prize in Economic Sciences from 1969-2021: A bibliometric description. *International Journal of Management Concepts and Philosophy, 17*(1), 98-121.	
Learning Outcomes	This course expects that student can know the Nobel contribution in economics and their application.	

Semester-VII BA. (HONS.) ECONOMICS WITH RESEARCH MAJOR ELECTIVE PAPER LIST-D			
Code	**Optional Paper-II (Empirical)-D**	**Course Type**	**Credit**
ECOMJ7R7	Large Sample Survey Data Analysis	Major Elective-2	3L+1T= 4
ECOMJ7R8	Financial Economics	Major Elective-2	3L+1T= 4
ECOMJ7R9	Economics of Climate Change	Major Elective-2	3L+1T= 4
ECOMJ7R10	Economics of Natural Disaster	Major Elective-2	3L+1T= 4

Course Title	**ECOMJ7R7 Large Sample Survey Data Analysis**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course is to specialize the students in large sample data base and its operation.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction large sample survey:** Understanding Unit level data of NSSO, The design and content of Household survey.			12
II	**Basics of Unit level data:** Handling of CES, EUS, PLFS: Merging of Files, Coding -Decoding, Tabulations, Estimation of MPCE, Poverty, Inequality, Lorenz Curve, LFPR/WFPR, Unemployment Rate etc.			15
III	**Econometrics Issues in Survey Data:** Spatial Econometrics using Survey Data, Regression Analysis using Dummy variable, Qualitative Response Model and Limited Dependent Variable, Writing Report Using Unit level data.			18
Texts / References	1. Deaton, A. (1997). *The analysis of household surveys: A microeconometric approach to development policy*. World Bank Publications. 2. Cameron, A. C. (2005). *Microeconometrics: Methods and applications*. Cambridge University Press. 3. Greene, W. H. (2018). *Econometric analysis*. Pearson Education. 4. Ministry of Statistics and Programme Implementation (MOSPI), Government of India. (2011-12, 2022-23). *Consumer expenditure survey*. 5. Ministry of Statistics and Programme Implementation (MOSPI),			

	Government of India. (2011-12). *Employment-unemployment survey*. 6. Ministry of Statistics and Programme Implementation (MOSPI), Government of India. (2017-18, 2021-22). *Periodic Labour Force Survey*.
Learning Outcomes	This course expects that student can know the large sample data base and their application.

Course Title	**ECOMJ7R8 Financial Economics**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in financial economics and its operation. It covers theories of investment and portfolio analysis, Options, Futures and Derivatives, and Corporate Finance.			
Units	**Course Content**			**Hr. of Teaching**
I	**Investment Theory and Portfolio Analysis-** Deterministic cash-flow streams; discounting and present value; internal rate of return; evaluation criteria; fixed-income securities; bond prices and yields; interest rate sensitivity and duration; immunisation; the term structure of interest rates; yield curves; spot rates and forward rates. Single-period random cash flows. *Random asset returns;* portfolios of assets; portfolio mean and variance; feasible combinations of mean and variance; mean-variance portfolio analysis: Markowitz model and the two-fund theorem; risk-free assets and the one-fund theorem. *CAPM* - The capital market line; the capital asset pricing model; the beta of an asset and of a portfolio; security market line; use of the CAPM model in investment analysis and as a pricing formula.			18
II	**Options, Futures and Derivatives-** Derivatives and options; forward and futures contracts; options; other derivatives; forward and future prices; stock index futures; interest rate futures; the use of futures for hedging; duration-based hedging strategies; option markets; call and put options; factors affecting option prices; put-call parity; Introduction to option trading strategies: spreads; straddles; strips and straps; strangles; the principle of arbitrage; discrete processes and the binomial tree model; risk-neutral valuation.			15
III	**Corporate Finance** Corporate financing: common stock; debt; preferences; convertibles; Capital structure and the cost of capital; corporate debt and dividend policy; Modigliani- Miller theorem and			12

	its modifications.	
Texts / References	1. 1.Luenberger, D. G. (1997). *Investment science*. Oxford University Press, USA. 2. Hull, J. C. (2005). *Options, futures and other derivatives* (6th ed.). Pearson Education. 3. Copeland, T. E., Weston, J. F., & Shastri, K. (2003). *Financial theory and corporate policy* (4th ed.). Prentice Hall. 4. Brealey, R. A., Myers, S. C., & Allen, F. (2012). *Principles of corporate finance* (12th ed.). McGraw-Hill. 5. Ross, S. A., Westerfield, R. W., & Jordan, B. D. (2005). *Fundamentals of corporate finance* (7th ed.). McGraw-Hill. 6. Malkiel, B. G. (2003). *A random walk down Wall Street*. W.W. Norton & Company. Sharpe, W., Alexander, G., & Bailey, J. (2003). *Investments* (6th ed.). Prentice Hall of India.	
Learning Outcomes	This course expects that student can know the financial economics theories and their application.	

Course Title	**ECOMJ7R9 Economics of Climate Change**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in economics of climate change and its operation. It covers the climate crisis, impact of climate change, Approaches to mitigate Climate Change			
Units	**Course Content**			**Hr. of Teaching**
I	**The Climate Crisis-** Defining Climate Change as an Economic Problem; Economics of the environment; Introduction to the economics of climate change; Causes of climate change, The Science and Economics of Climate Change.			15
II	**Impacts of Climate Change-** Impact on Health, Agriculture, Infrastructure, Water System and Biodiversity. Climate Change and the poor, Livelihood effects of Climate change, Social Cost of Carbon.			15
III	**Approaches to Mitigate Climate Change**- Dealing with climate change – Adaptation measures and Mitigation measures, The way forward: Climate finance, Redistribution and green technology transfers, Climate Action Agenda; Local, National, and Global actions on climate change –treaties and agreements.			15
Texts /	1. Seo, S. N., & Seo. (2021). *Climate change and economics*. Springer			

References	International Publishing. 2. Hanley, N., & Owen, A. D. (2004). *The economics of climate change*. Routledge. 3. Maréchal, K. (2013). *The economics of climate change and the change of climate in economics*. Routledge. 4. FitzRoy, F. R., & Papyrakis, E. (2016). *An introduction to climate change economics and policy*. Routledge. 5. Grubb, M., Hourcade, J. C., & Neuhoff, K. (2014). *Planetary economics: Energy, climate change and the three domains of sustainable development*. Routledge. 6. Adger, W. N., Lorenzoni, I., & O'Brien, K. L. (Eds.). (2009). *Adapting to climate change: Thresholds, values, governance*. Cambridge University Press. 7. Stern, N. (2007). *The economics of climate change*. Cambridge University Press.
Learning Outcomes	This course expects that student can know the economics of climate change and its application.

Course Title	**ECOMJ7R10 Economics of Natural Disaster**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in economics of disaster management and its operation. It covers introduction, impact and mitigation strategies to reduce the risk.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to the Economics of Natural Disasters-** Types of natural disasters and their economic impacts, Direct and Indirect Economic Losses: Assessing direct damages and losses, Estimating indirect economic impacts, Macro and Micro damages, Economic vulnerability and resilience			12
II	**Economic and Community Impacts of Natural Disasters:** Short-term and long- term economic consequences, Social Capital, Social and community resilience, *Case Studies and Lessons Learned:* Analysis of specific natural disasters and their economic impacts, best practices, and lessons learned from past disasters			18
III	**Sustainable Mitigation and Risk Reduction Strategies:** Economic incentives for disaster risk reduction, integrating			15

	economic considerations into mitigation planning *Future Challenges and Opportunities:* Emerging risks and economic vulnerabilities, Innovative approaches to disaster risk management.	
Texts / References	1. Pine, J. (2008). *Natural hazards analysis: Reducing the impact of disasters*. Auerbach Publications. 2. The World Bank. (2010). *Natural hazards, unnatural disasters: The economics of effective prevention*. 3. The World Bank. (2010). *Handbook for estimating the socio-economic and environmental effects of disasters: Main report* (English). Washington, D.C.: World Bank Group. 4. Sharma, S. K., & Quah, E. (Eds.). (2018). *Economics of natural disasters*. World Scientific. 5. Guha-Sapir, D., Santos, I., & Borde, A. (Eds.). (2013). *The economic impacts of natural disasters*. Oxford University Press. 6. Alexander, D. (2018). *Natural disasters*. Routledge. 7. Pelling, M. (Ed.). (2003). *Natural disasters and development in a globalizing world*. Psychology Press. 8. Tatano, H., & Kajitani, Y. (Eds.). (2022). *Methodologies for estimating the economic impacts of natural disasters* (pp. 11-25). Springer. 9. Okuyama, Y. (2003). *Economics of natural disasters: A critical review*. Regional Research Institute Working Papers, 131.	
Learning Outcomes	This course expects that student can know the economics of disaster management and their application.	

Semester-VIII **BA. (HONS.) ECONOMICS**			
Code	**Paper Name**	**Course Type**	**Credit**
ECOMJ81	International Economics	Major-1	3L+1T= 4
ECOMJ82	Environmental Economics	Major-2	3L+1T= 4
ECOMN81	Environmental Economics	Minor-5	3L+1T= 4
ECOMJ83-12	Elective 1 List E	Major-3	3L+1T= 4
ECOMJ813-22	Elective 2 List F	Major-4	3L+1T= 4

Course Title	**ECOMJ81- International Economics**			
Category of Course	**Major-1**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60

Course Objectives	The aim of course is to provide a depth understanding of International economic. It covers theories of international trade, trade policy and international trade Policy.	
Units	**Course Content**	**Hr. of Teaching**
I	**Theories of International Trade-** The Ricardian, The Mills, The Haberler theories of trade, specific factors, and Heckscher-Ohlin models; new trade theories; the international location of production; firms in the global economy, outsourcing and multinational enterprises.	15
II	**Trade Policy-** International trade direction, composition and determinants, An overview of world trade, Instruments of trade policy; political economy of trade policy; controversies in trade policy.	15
III	**International Macroeconomic Policy**- Balance of Payments: Concept and Components; Fixed versus flexible exchange rates; foreign trade multiplier, international monetary systems; financial globalization and financial crises.	15
Texts / References	1. Krugman, P., Obstfeld, M., & Melitz, M. (2012). *International economics: Theory and policy* (9th ed.). Addison-Wesley. 2. Salvatore, D. (2011). *International economics: Trade and finance* (10th ed.). John Wiley International Student Edition. 3. Cherunilam, F. (2006). *International economics* (4th ed.). Tata McGraw-Hill Companies. 4. Sodersten, B. O., & Reed, G. (2003). *International economics*. Macmillan Press Ltd. 5. Mannur, H. G. (2007). *International economics* (2nd ed.). Vikas Publication House.	
Learning Outcomes	The course expects the theoretical knowledge of International economic along with empirical applications. The course trains the economics students as per the market need.	

Course Title	**ECOMJ82- Environmental Economics**			
Category of Course	**Major-2**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of course is to provide a depth understanding of environmental economic. It covers introduction, theories of environment regulation, and valuation problem.			
Units	**Course Content**			**Hr. of Teaching**

I	**Introduction to Environmental Economics-** History and Origin, Economy and Ecology; Definition, Scope and Subject matter; Distinction between Ecological, Environmental and Natural Resources Economics. Economy and Environment Interaction; Biophysical Foundations of Economic activity; Ecosystems: Meaning and Functions; Sources and Sink functions of the ecosystem. Material Balance approach. The Economic Problem of Environmental Pollution; Market Failure, Pollution as Public Good or Bad, Role of Externality as the fundamental determinant.	15
II	**Theories of Environmental Regulation and Policy-** The socially optimal level of pollution and attainment of optimal pollution. Command-and-control policies; Market based Incentives: Pigovian Taxes and Subsidies and Uniform Standards; Pollution fees and Tradable Permits; refundable deposits.	15
III	**Valuation of Environmental Goods and Services-** Meaning, need and justification Total Economic Value: Components of Total Economic Value; Valuation methods (only an introductory approach). Sustainable Economic Development; Meaning and Definition, Evolution and Importance, The Components of Sustainable Development; Approaches and Indicators of Sustainable Development, SDGs.	15
Texts / References	1. Kolstad, C. (2010). *Environmental economics*. Oxford University Press. 2. Common, M. (1988). *Environmental and resource economics: An introduction*. Longman Group UK Limited. 3. Conrad, J. M. (2010). *Resource economics*. Cambridge University Press. 4. Eugene, T. (2011). *Environmental economics*. Vrinda Publication (P) Ltd. 5. Field, B., & Field, M. (2016). *Environmental economics: An introduction*. McGraw-Hill Education. 6. Hanley, N., Shogren, J. F., & White, B. (2013). *Introduction to environmental economics*. Oxford University Press. 7. Hussen, A. M. (2019). *Principles of environmental economics and sustainability*. Routledge. 8. Karpagam, M. (2012). *Environmental economics: A textbook*. Sterling Publishers. 9. Singh, K., & Shishodia, A. (2007). *Environmental economics: Theory and applications*. Sage. 10. Muthukrishnan, S. (2015). *Economics of environment*. Prentice Hall India Inc. 11. Pearce, D. W., & Turner, R. K. (2014). *Economics of natural resources and the environment*. The Johns Hopkins University Press. 12. Perman, R., Ma, Y., Common, M., Maddison, D., & McGilvray, J. (2011). *Natural resource and environmental economics* (4th ed.). Addison-Wesley.	
Learning	The course expects the theoretical knowledge of environmental economic	

Outcomes	along with empirical methos for valuation of environment goods and services.

Course Title	**ECOMN81- Environmental Economics**			
Category of Course	**Minor-5**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of course is to provide a depth understanding of environmental economic. It covers introduction, theories of environment regulation, and valuation problem.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Environmental Economics-** History and Origin, Economy and Ecology; Definition, Scope and Subject matter; Distinction between Ecological, Environmental and Natural Resources Economics. Economy and Environment Interaction; Biophysical Foundations of Economic activity; Ecosystems: Meaning and Functions; Sources and Sink functions of the ecosystem. Material Balance approach. The Economic Problem of Environmental Pollution; Market Failure, Pollution as Public Good or Bad, Role of Externality as the fundamental determinant.			15
II	**Theories of Environmental Regulation and Policy-** The socially optimal level of pollution and attainment of optimal pollution. Command-and-control policies; Market based Incentives: Pigovian Taxes and Subsidies and Uniform Standards; Pollution fees and Tradable Permits; refundable deposits.			15
III	**Valuation of Environmental Goods and Services-** Meaning, need and justification Total Economic Value: Components of Total Economic Value; Valuation methods (only an introductory approach). Sustainable Economic Development; Meaning and Definition, Evolution and Importance, The Components of Sustainable Development; Approaches and Indicators of Sustainable Development, SDGs.			15
Texts / References	1. Kolstad, C. (2010). *Environmental economics*. Oxford University Press. 2. Common, M. (1988). *Environmental and resource economics: An introduction*. Longman Group UK Limited. 3. Conrad, J. M. (2010). *Resource economics*. Cambridge University Press. 4. Eugene, T. (2011). *Environmental economics*. Vrinda Publication (P) Ltd.			

	5. Field, B., & Field, M. (2016). *Environmental economics: An introduction*. McGraw-Hill Education. 6. Hanley, N., Shogren, J. F., & White, B. (2013). *Introduction to environmental economics*. Oxford University Press. 7. Hussen, A. M. (2019). *Principles of environmental economics and sustainability*. Routledge. 8. Karpagam, M. (2012). *Environmental economics: A textbook*. Sterling Publishers. 9. Singh, K., & Shishodia, A. (2007). *Environmental economics: Theory and applications*. Sage. 10. Muthukrishnan, S. (2015). *Economics of environment*. Prentice Hall India Inc. 11. Pearce, D. W., & Turner, R. K. (2014). *Economics of natural resources and the environment*. The Johns Hopkins University Press. 12. Perman, R., Ma, Y., Common, M., Maddison, D., & McGilvray, J. (2011). *Natural resource and environmental economics* (4th ed.). Addison-Wesley.
Learning Outcomes	The course expects the theoretical knowledge of environmental economic along with empirical methos for valuation of environment goods and services.

Semester-VIII
BA. (HONS.) ECONOMICS
MAJOR ELECTIVE PAPERS LIST-E

Code	**Elective Paper-I List-E**	**Course Type**	**Credit**
ECOMJ83	Advance Econometrics-II	Major Elective-1	3L+1T= 4
ECOMJ84	Applied Macroeconomics	Major Elective-1	3L+1T= 4
ECOMJ85	Behavioural Economics-II	Major Elective-1	3L+1T= 4
ECOMJ86	Financial Economics-II	Major Elective-1	3L+1T= 4
ECOMJ87	Energy Economics	Major Elective-1	3L+1T= 4
ECOMJ88	Agriculture-II	Major Elective-1	3L+1T= 4
ECOMJ89	Population Studies-II	Major Elective-1	3L+1T= 4
ECOMJ810	Labour Economics-II	Major Elective-1	3L+1T= 4
ECOMJ811	Regional Economics-II	Major Elective-1	3L+1T= 4
ECOMJ812	Political Economy-II	Major Elective-1	3L+1T= 4

Course Title	**ECOMJ83 Advance Econometrics-II**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4

Teaching	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in advance econometric and its operation. It covers introduction to panel data, panel data models and dynamic panel data models.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Panel data Analysis**- Advantages of Panel data, Issues of Panel data, Non-stationarity, Panel Co-integration.			10
II	**Panel Data Models** -Fixed and Random effect models: Specification, estimation and inference; Error components: A variance decomposition, GLS within groups and between groups, testing for correlated unobserved Heterogeneity, Arellano Specification test, Robust Alternative; Introduction to unbalanced Panel data models.			15
III	**Dynamic Panel Data Models and Non-Parametric Estimation** - Lagged dependent variable model, GMM Estimation, Time Varying co-efficient model, Simultaneous Equation model in Panel Data. *Bayesian and Non-Parametric Estimation* -Non parametric estimation- theoretical bias and variance of Nadaraya – Watson estimators, confidence interval, Band width choice, treatment effect, Introduction to Bayesian Regression.			20
Texts / References	1. Baltagi, B. (2008). *Econometric analysis of panel data*. John Wiley & Sons. 2. Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics: Methods and applications*. Cambridge University Press. 3. Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. MIT Press. 4. Greene, W. H. (2011). *Econometric analysis (7th ed)*. Pearson Education. 5. Baltagi, B. H. (Ed.). (2015). *The Oxford handbook of panel data*. Oxford Handbooks. 6. Arellano, M. (2003). *Panel data econometrics*. Oxford University Press. 7. Baltagi, B. H., & Pesaran, M. H. (2007). Heterogeneity and cross section dependence in panel data models: Theory and applications introduction(vol 22), Journal of applied econometric. 8. Baltagi, B. H., & Song, S. H. (2006). Unbalanced panel data: A survey. *Statistical Papers, 47*(4), 493–523. 9. Biørn, E. (2016). *Econometrics of panel data: Methods and applications*. Oxford University Press. 10. Breitung, J., & Pesaran, M. H. (2008). Unit roots and cointegration in panels. In *The econometrics of panel data* (pp. 279–322). Springer, Berlin, Heidelberg.			

	11. Frees, E. W. (2004). *Longitudinal and panel data*. Cambridge University Press. 12. Elhorst, P., Zandberg, E., & De Haan, J. (2013). The impact of interaction effects among neighbouring countries on financial liberalization and reform: A dynamic spatial panel data approach. *Spatial Economic Analysis, 8*(3), 293–313. 13. Hsiao, C. (2014). *Analysis of panel data* (No. 54). Cambridge University Press. 14. Lee, L. F., & Yu, J. (2010). Some recent developments in spatial panel data models. *Regional Science and Urban Economics, 40*(5), 255– 271. 15. Pesaran, M. H. (2015). *Time series and panel data econometrics*. Oxford University Press.
Learning Outcomes	This course expects that student can know the advance econometrics and their application.

Course Title	**ECOMJ84 Applied Macroeconomics-II**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in applied microeconomics and its operation. It covers growth and regional disparities, aggregate demand estimation and other economic variables			

Units	**Course Content**	**Hr. of Teaching**
I	**Growth and Regional Disparities-** National Income: Method of Splicing a time series data, non-stationarity & Stationarity, Identification of Structural Breaks –Exogeneity & Endogeneity, Different test: Chow, Zivot- Andrew, Bai-perron Computation of Growth Rates – CAGR, Annual Average. Empirical Measurement of Regional Disparity – Sigma & Beta Convergence Analysis, Discussion on Literatures on Growth & Regional Disparities on India.	12
II	**Aggregate Demand Estimation-** Consumption Function-Estimation of Consumption Function-Absolute Income, Life Cycle	12

	and Permanent Income Hypotheses, Investment: Estimation of Investment Function, Accelerator & Distributed Lag Models, Neoclassical Models, Endogeneity and Dynamic Models. Empirical Estimation of Demand Function for and Supply Function of Exports.	
III	**Money, Inflation Dynamics and Macro Econometrics Models for India-** Demand Function for Money-Short-run and long-run demand functions for money; Inflation targeting and Sacrifice Ratio, monetary policy and Taylor rule, Estimation of Philips curve, Supply Response Function- estimates of linear, log-linear and short-run and long run price elasticities. *Macro Econometrics Models for India:* Evolution of Macro-econometric models for India, Estimating Macro-econometrics Models for Indian Economy, Structural Equation Models, Estimation of Interaction of different markets, Policy Simulation.	21
Texts / References	1. Flaschel, P., Groh, G., Proaño, C., & Semmler, W. (2008). *Topics in applied macrodynamic theory* (Vol. 10). Springer Science & Business Media. 2. Hoover, K. D. (2011). *Applied intermediate macroeconomics*. Cambridge University Press. 3. Heijman, W. J. M. (2000). *Applied macroeconomics*. Cereales. 4. Acemoglu, D. (2012). Introduction to economic growth. *Journal of Economic Theory, 147*(2), 545-550. 5. Mills, T., & Patterson, K. (Eds.). (2009). *Palgrave Handbook of Econometrics: Volume 2: Applied Econometrics* (Vol. 2). Springer. 6. Bårdsen, G., Jansen, E. S., Eitrheim, Ø., & Nymoen, R. (2005). *The econometrics of macroeconomic modelling*. Oxford University Press. 7. Balakrishnan, P. (2010). *Economic growth in India: History and prospects*. Oxford University Press. 8. Das, P. (2007). Economic growth and structural break in India: Testing unit root hypothesis. *The Journal of Income and Wealth, 29*(2), 29-43. 9. DeLong, J. B. (2003). India since independence: An analytic growth narrative. In *In search of prosperity: Analytic narratives on economic growth* (pp. 184-204). 10. Cherodian, R., & Thirlwall, A. P. (2015). Regional disparities in per capita income in India: Convergence or divergence? *Journal of Post Keynesian Economics, 37*(3), 384-407. 11. Bakshi, S., Chawla, A., & Shah, M. (2015). Regional disparities in India: A moving frontier. *Economic and Political Weekly*, 44-52. 12. Ghosh, M. (2013). *Liberalization, growth and regional disparities in India*. Springer Science & Business Media. 13. Krishnamurthy, K. (2002). Macro-econometric models for India: Past, present and prospects. *Economic and Political Weekly, 37*(42), 4295–4308.	

	14. Yoshino, N., Paramanik, R. N., & Gopakumar, K. U. (2020). *An aggregate-level macro model for the Indian economy*. 15. Rangarajan, C., & Arif, R. R. (1990). Money, output and prices: A macro econometric model. *Economic and Political Weekly*, 837-852. 16. Jadhav, N., & Singh, B. (1990). Fiscal-monetary dynamic nexus in India: An econometric model. *Economic and Political Weekly*, 159- 165. 17. Bodkin, R. G., Klein, L. R., & Marwah, K. (1991). *A history of macro-econometric model-building*. Books. 18. Krishna, K. L., Krishnamurthy, K., Pandit, V., & Sharma, P. D. (1991). Macro-econometric modelling in India: A selective review of recent research. In *Econometric modelling and forecasting in Asia*. 19. Krishnamurthy, K., & Pandit, V. (1984). Macro-econometric modelling of the Indian economy: An overview. *Indian Economic Review, 19*(1), 1-15. 20. Pandit, V., & Bhattacharya, B. B. (1987). Resource mobilization, growth, and inflation: A trade-off analysis for India. *Asia Pacific Economies: Promises and Challenges*, *Research in International Business and Management, 6*(Part A). 21. Padoan, P. C. (1990). Macro-econometric modelling of the Indian economy. *Studies on inflation and growth*. 22. Boumans, M., & Duarte, P. G. (2019). The history of macro-econometric modelling: An introduction. *History of Political Economy, 51*(3), 391-400. 23. Kalirajan, K., & Bhide, S. (2017). *A disequilibrium macro-econometric model for the Indian economy*. Routledge.
Learning Outcomes	This course expects that student can know the applied microeconomics and their application.

Course Title	**ECOMJ85 Behavioural Economics-II**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in behavioral economics and its operation. It covers competitive game theory, fairness and relation and macroeconomics.			
Units	**Course Content**			**Hr. of Teaching**

I	**Behavioral and Cooperative Game Theory**- Predicting Human Behaviour in Strategic Situations, Social Utility, Iterated Reasoning in First-Period Play and One-Shot Games, Judgment and Choice in Games, Framing, Coordination, and Representation Cooperative Game Theory, Evolutionary Game Theory, Signaling Games, Coordination Games, Unstructured Bargaining.	14
II	**Fairness and Retaliation-** The Economics of Reciprocity, Positive and Negative Reciprocity, Public Goods to Social Norms, Reciprocity as a Contract Enforcement Device, Work Motivation and Performance Incentives, Wage Rigidity, Rent-Sharing, and Competition, Foundations of Incomplete Contracts, The Effect of Incentives and Punishments, Decision Theory.	12
III	**Applications in Macroeconomics-** Mental Accounting, Saving, and Self-Control, Self-Control and Temptation, The Differential Marginal Propensity to Consume (MPC) Hypothesis, Pensions and Saving, Individual Retirement Accounts, Housing Wealth, Saving Adequacy, Nonproportionality, Policy Implications, Golden Eggs and Hyperbolic Discounting, The Consumption Decision, Equilibrium Strategies. *Applications in Labour Economics:* The Fair Wage-Effort Hypothesis and Unemployment, Equity Theory, Relative Deprivation Theory, Social Exchange Theory, Wage-Salary Secrecy, Wage Patterns, Patterns of Unemployment. *Applications in Finance:* Money Illusion, Earnings, Transactions, Contracts, Money Illusion in Solow's Model of Efficiency Wages.	19
Texts / References	1. Crawford, V., & Broseta, B. (1998). What price coordination? The efficiency-enhancing effect of auctioning the right to play. *American Economic Review, 88*, 198–225. 2. Crawford, V., & Haller, H. (1990). Learning how to cooperate: Optimal play in repeated coordination games. *Econometrica, 58*, 571–95. 3. Forsythe, R., Kennan, J., & Sopher, B. (1991). An experimental analysis of strikes in bargaining games with one-sided private information. *American Economic Review, 81*, 253–70. 4. Friedman, D. (1996). Equilibrium in evolutionary games: Some experimental results. *Economic Journal, 106*, 1–25. 5. Fudenberg, D., & Levine, D. (1998). *The theory of learning in games*. Cambridge: MIT Press. 6. Fudenberg, D., & Tirole, J. (1991). *Game theory*. Cambridge: MIT Press. 7. Gale, J., Binmore, K., & Samuelson, L. (1995). Learning to be imperfect: The ultimatum game. *Games and Economic Behavior, 8*, 59–60. 8. Goeree, J., & Holt, C. (1999). Stochastic game theory: For playing games, not just for doing theory. *Proceedings of the National Academy of Sciences, 96*, 10564–67.	

	9. Holbrook, R. (1966). Windfall income and consumption: Comment. *American Economic Review, 56*, 534–40. 10. Manchester, J. M., & Poterba, J. M. (1989). Second mortgages and household saving. *Regional Science and Urban Economics, 19*, 325–46. 11. Rea, S. A., Jr. (1984). Efficiency implications of penalties and liquidated damages. *Journal of Legal Studies, 13*, 147–67. 12. Souleles, N. (1995). The response of household consumption to income tax refunds. *Mimeo, MIT*. 13. Williamson, O. (1985). *The economic institutions of capitalism*. New York: Free Press. 14. Walster, E., Walster, G. W., & Berscheid, E. (1977). *Equity: Theory and research*. Boston: Allyn and Bacon. 15. Yellen, J. L. (1984). Efficiency wage models of unemployment. *American Economic Review, 74*, 200–0.
Learning Outcomes	This course expects that student can know the behavioral economics and their application.

Course Title	**ECOMJ86 Financial Economics-II Major**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in financial economics and its operation. It covers introduction financial derivatives, Option, Forwards, Futures and Swaps, pricing of derivatives.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Financial Derivatives-** *Derivatives:* Use and Perspectives on Derivatives, Role of Financial Markets, Derivatives in Practice, Derivative instruments – Forward, Option and Swaps, Types of Financial Derivatives – Equity Derivatives, Foreign Exchange Derivatives, Interest Rate Derivatives, Commodity Derivatives and Credit Derivatives.			12
II	**Option, Forwards, Futures and Swaps-** *Options:* Option markets; call and put options; factors affecting option prices; put- call parity; Option trading strategies: spreads; straddles; strips and straps; strangles			18

	Financial Forward and Futures – Prepaid Forward Contracts on Stock, Forward Contracts on Stock, Future Contracts, Use of Index Futures, Currency Contracts, Eurodollar Futures, Commodity Forwards and Futures, Interest Rate Forward and Futures, Swaps – Commodity Swap, Interest Rate Swaps, Currency Swaps, Commodity Swaps, Swaptions, Total Return Swaps.	
III	**Pricing Derivatives and Risk Management-** The Stochastic Process of Stock Prices, The Binomial Option Pricing Model, The Black – Scholes option pricing Model, Merton's model, implied volatility, Exotic options. *Risk Management:* Credit Risk, Market Risk, Operational Risk, Measurement and Management of risk, BASEL -1, 2 & 3, Predatory Pricing.	15
Texts / References	1. Arditti, F. D. (1996). *Derivatives: A comprehensive resource for options, futures, interest rate swaps, and mortgage securities*. Harvard Business School Press. 2. Back, K. (2005). *A course in derivative securities: Introduction to theory and computation*. Berlin: Springer. 3. Ritchken, P. (1996). *Derivative markets: Theory, strategy, and applications*. HarperCollins. 4. Hull, J. C. (2010). *Fundamentals of futures and options markets* (7th ed.). Prentice Hall. 5. Hull, J. C., & Sankarshan. (2011). *Options, futures, and other derivatives* (8th ed.). Prentice Hall. 6. Francis, J. C., Toy, W. W., & Whittaker, J. G. (Eds.). (1999). *The handbook of equity derivatives* (Vol. 14). John Wiley & Sons.	
Learning Outcomes	This course expects that student can know the financial economics and their application.	

Course Title	**ECOMJ87 Natural Resource Economics-II**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in natural resource economics and its operation. It covers water, land, renewable resource and CPRs.			
Units	**Course Content**			**Hr. of Teaching**
I	**Land and Water Management-** Water and Land Resource, Economic approaches and mathematical methods for the study of			15

	water scarcity, economic allocation rules and management. the supply of and demand for land, economic principles of land use, the issues of land use planning and public direction of land use in India	
II	**Economics of Renewable Resources** the Allocation Problem and the Method of Lagrange Multiplier. Economic models of fisheries: Net Biological growth: Functional Forms, Production Functions, The Yield-Effort Function, Models of Open Access: Static and Dynamic Analysis. Economics of optimal harvest cycles of forests.	15
III	**Common Property Resources and Management Issues:** Types of Common Property Resource, Problems of Common Property Resource, Theories of Common Property Resource Management-Game Theoretic Approach and Evolutionary Model, Management of Common Property Resources in India Tragedy of the Commons; Management Issues.	15
Texts / References	1. Baland, J.-M., & Platteau, J.-P. (1996). *Halting degradation of natural resources: Is there a role for rural communities?* Oxford University Press. 2. Bromley, D. W., & Cernea, M. M. (1996). The management of common property natural resources: Some conceptual and operational fallacies. *World Bank Discussion Papers* No. 57. Washington, D.C. 3. Hardin, G. J. (1968). The tragedy of the commons. *Science, 162*(3859), 1243–1248. 4. Kadekodi, G. K. (2004). *Common property resource management: Reflections on theory and the Indian experience*. Oxford University Press. 5. Singh, K. (1994). *Managing common pool resources: Principles and case studies*. Oxford University Press. 6. Meran, G., Siehlow, M., & von Hirschhausen, C. (2021). *The economics of water: Rules and institutions* (p. 301). Springer Nature. 7. Barlowe, R. (1978). *Land resource economics*. In *The economics of real estate*.	
Learning Outcomes	This course aims at a practical knowledge in Natural Resource management (Renewable Resources) and their applications.	

Course Title	**ECOMJ88 Agriculture Economics-II**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching	45+15	0	60

	(Total)			
Course Objectives	The aim of this course the students to specialized in agriculture economics and its operation. It covers agriculture growth and policy, agriculture market and sustainable agriculture.			
Units	**Course Content**			**Hr. of Teaching**
I	**Agriculture Growth and Policy-** Incentives and Disincentives, Resource allocation and its Impact on agricultural growth after 1991, Public and private investment in agriculture, Issues related to agricultural Subsidy. Agricultural Price Policy-Fixation of Prices, Terms of trade between agricultural and nonagricultural sectors, Supply Response in Indian Agriculture**,** Issues relating to misspecification of supply response function.			15
II	**Agricultural Markets and India-** Regulated markets; Role of FPOs in agricultural marketing, Recent policies with respect to agricultural marketing, Political Economy of Indian Agriculture: Land reforms, The Farm size and productivity relation in Indian agriculture, Agricultural growth after 1991 and doubling farmers' income.			15
III	**Sustainable Agriculture and WTO-** Meaning and importance, Indicators of Sustainable Agriculture, Issues related to genetically modified seeds in India, Legislation on Plant Varieties and Farmers' Rights Protection, Contract Farming - Present Status and Future directions, Organic farming in India, Climate change in agriculture. WTO and Indian Agriculture**:** Agreement on Agriculture, The issue of farm subsidies (North vs South Debate).			15
Texts / References	1. The World Bank. (2005). *Reenergizing the agricultural sector to sustain growth and reduce poverty*. Oxford University Press. 2. Confederation of Indian Industry. (1998). *An agenda for reforms in Indian agriculture sector*. 3. Kumar, A., Dey, A., & Sharma, R. (2020). Changing composition of private investment in Indian agriculture and its relationship with public investment and input subsidies. *IFPRI Discussion Paper 01905*. 4. Bbisaliah, S., & Dev, S. M. (2010). Private capital formation in Indian agriculture. Retrieved from http://FAO.org 5. Dhawan, B. D., & Yadav, S. S. (1997). Public investment in Indian agriculture: Trends and determinants. *Economic and Political Weekly, 32*(14), 1001–1005. 6. Akber, N., & Paltasingh, K. R. (2019). Is public investment complementary to private investment in Indian agriculture? Evidence from the NARDL approach. *Agricultural Economics, 50*(5). 7. Ramaswamy, B. (2019). Agricultural subsidies (Study prepared for XV Finance Commission). Retrieved from http://fincomindia.nic.in 8. Gautam, M. (2015). Agricultural subsidies: Resurging interest in a perennial debate. *Indian Journal of Agricultural Economics, 70*(1), 1– 9.			

	9. OECD. (2018). *Agricultural policies in India*. Retrieved from https://oecd-ilibrary.org 10. Saini, S., & Gulati, A. (2017). Price distortions in Indian agriculture. International Bank for Reconstruction and Development. Retrieved from http://icrier.org 11. Raghavan, M. (2004). Terms of trade between agriculture and non-agriculture in India, 1950/51 to 2000/01. *Social Scientist, 32*(3/4), 33–50. 12. Palanivel, T. (1995). Aggregate supply response in Indian agriculture: Some empirical evidence and policy implications. *Indian Economic Review, New Series, 30*(2), 145–159. 13. Mmythili, G. (2012). Supply response of Indian farmers: Pre and post-reforms. *WP-2006-009*. Retrieved from http://oii.igidr.ac.in 14. Rao, M. (1989). Agricultural supply response: A survey. *Agricultural Economics, 3*(1), 1–15. 15. Chand, R. (2020). New farm acts: Understanding the implications. NITI Aayog. Retrieved from http://niti.gov.in 16. NABARD. (2020). Farmer producers' organization (FPOs): Status, issues and policy reforms. National Paper PLP 2019-20. Retrieved from http://nabard.org 17. Ministry of Agriculture and Farmers' Welfare, Government of India. (2018). *Report of the committee on doubling of farmers' income* (Vols. I & II). 18. Ghatak, M., & Roy, S. (2007). Land reform and agricultural productivity in India: A review of the evidence. *Oxford Review of Economic Policy, 23*(2), 219–232. Retrieved from https://personal.lse.ac.uk/ghatak 19. Dorner, P. (1972). *Land reforms and economic development*. Penguin. 20. Dantwala, M. L., & Shah, C. H. (1971). *Evaluation of land reforms*. University of Bombay Press. 21. Rada, N. E., & Fuglie, K. O. (2019). New perspectives on farm size and productivity. *Food Policy, 84*, 1–13. Retrieved from https://sciencedirect.com 22. Saini, G. R. (1969). Farm size, productivity and returns to scale. *Economic and Political Weekly, 4*(26), 1073–1076. 23. Rao, C. H. H. (1965). *Agricultural production functions, costs and returns in India*. Asia Publishing House. 24. Dyer, G. (1998). Farm size and productivity: A new look at the old debate revisited. *Economic and Political Weekly, 33*(26), 1567–1573. 25. FAO. (2020). *Methodological note on SDG indicator 2.4.1*. Retrieved from http://FAO.org
Learning Outcomes	This course expects that student can know the agriculture economics issues and their solutions.

<table>
<tr><td>Course Title</td><td colspan="4">ECOMJ89 Population Studies-II</td></tr>
<tr><td>Category of Course</td><td colspan="4">Major-3 (Elective-1)</td></tr>
<tr><td rowspan="3">Credits & Hour of Teaching</td><td></td><td>Theory</td><td>Practical</td><td>Cumulative</td></tr>
<tr><td>Credits = 4</td><td>3L+1T</td><td>0</td><td>4</td></tr>
<tr><td>Hour of Teaching (Total)</td><td>45+15</td><td>0</td><td>60</td></tr>
<tr><td>Course Objectives</td><td colspan="4">The aim of this course the students to specialized in population economics and its operation. It covers theories of population studies, migration & urbanization and population movement.</td></tr>
<tr><td>Units</td><td colspan="3">Course Content</td><td>Hr. of Teaching</td></tr>
<tr><td>I</td><td colspan="3">Theories of Pollution Studies -Theories of Population Growth – Malthus to Modern, Hebert Spencer, Pearl &Reed, Dumont, Karl Marx, Leibeinstein., Meadows, Enke, and Simon’s view on Population, Limits to population Growth, Optimum theory of Population, Theory of Demographic Transition.</td><td>15</td></tr>
<tr><td>II</td><td colspan="3">Migration and Urbanization- Basic concepts and definition of Migration and Urbanization, Types of Migration – Internal and International, Determinants and Consequences of Migration, concept and definition of Urban, Trends and Patterns of Migration in India, Issues in Urbanization and Urban Problems in developing countries with focus in India.</td><td>15</td></tr>
<tr><td>III</td><td colspan="3">Population Movements- Basic Concept and Definition, Difference between Migration and Mobility, theories of Migration, Pull and Push Factors, lee’s Theory of Migration, Ravenstein’s Law of Migration, Stouffer’s model of intervening opportunities and competing Migration, Gravity Model, Harris- Todaro Model of Migration, Rural – Urban Movement, Population projection.</td><td>15</td></tr>
<tr><td>Texts / References</td><td colspan="4">1. Haupt, A., & Kane, T. T. (2004). Population reference bureau: Population handbook (5th ed.).
2. Bhende, A. A., & Kanitkar, T. (2011). Principles of population studies (21st ed.). Himalaya Publishing House.
3. Bose, A. (2006). Beyond demography: Dialogue with people. B R Publishing Corporation.
4. Gupta, M. D., Chen, L. C., & Krishnan, T. N. (Eds.). (2016). Health, poverty & development in India. Oxford University Press.
5. Krishnamurthy, S. (2017). Population concerns in India: Shifting trends, policies and programs. Sage Publications.
6. Newell, C. (1990). Methods and models in demography.
7. Patra, A. K., & Panigrahy, R. L. (Eds.). (2010). Population and health. Discovery Publishing House.</td></tr>
<tr><td>Learning Outcomes</td><td colspan="4">This course expects that student can know the population studies and their application.</td></tr>
</table>

Course Title	**ECOMJ810 Labour Economics-II**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in labour economics and its operation. It covers labour-capital relation, labour market, and labour welfare.			
Units	**Course Content**			**Hr. of Teaching**
I	**Labour-Capital Relations** -Historical trajectories of class formation, Taylorism, Fordism and Post-Fordism, New International Division of Labour, Globalization and Labour.			12
II	**Labour Market-** Nature and characteristics of labour markets in developing countries; Paradigms of Labour Market Analysis- Classical, New Classical and dualistic economy; demand for labour in relation to size and pattern of investments; Supply of labour in relation to growth of labour force; Segmented labour markets –Discrimination in Labour market, Labour flexibility, Informal sector.			13
III	**Labour Welfare**- Approaches to labour welfare – The Paternalistic Approach, The Industrial Efficiency Approach and Social Approach; Theories of labour welfare- Policy Theory, Religious Theory Public Relation Theory and the Functional Theory; ILO and labour welfare work. Decent Work- Concept, Measurement and Policy Response, Conditions of work Labour Questions-South-South, North-South, North-North Coordination.			20
Texts / References	1. Bharadwaj, K. (1976). *Classical political economy and rise to dominance of supply and demand theories*. 2. Bharadwaj, K. (1980). *On some issues of method in the analysis of social change*. 3. Bhattacharya, S., & Lucassen, J. (Eds.). (2005). *Workers in the informal sector: Studies in labour history 1800-2000*. 4. Bieler, A., et al. (Eds.). (2008). *Labour and the challenges of globalisation: What prospects for transnational solidarity?* 5. Boeri, T., et al. (Eds.). (2001). *The role of unions in the twenty-first century*. 6. Braverman, H. (1974). *Labour and monopoly capital*. 7. Burawoy, M. (1985). *The politics of production*. 8. Cazes, S., & Verick, S. (Eds.). (2013). *Perspectives on labour*			

	economics for development. 9. Jha, P., et al. (2021). *Labour questions in the global South*.
Learning Outcomes	This course expects that student can know the labour economics and their application.

Course Title	**ECOMJ811 Regional Economics-II**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in regional economics and its operation. It covers regional inequality and rural development, regional development planning and management.			

Units	**Course Content**	**Hr. of Teaching**
I	**Regional Inequalities and Rural Development-** Growth, density and spatial inequalities of population distribution, spatial patterns and characteristics of occupational types *Rural Development***:** Meaning, scope and overview of rural development, Historical Perspective: Rural Development Programmes in India, Problem/perception and Identification, Rural area Planning-Programmes for Rural Development, their coverage and outcomes, Rural Infrastructure Development – Bharat Nirman, Rural Building Centers, PMGSY, IAY, Rajiv Gandhi Technology Mission, Central Rural Sanitation Programme, PURA, Rural Employment Schemes	15
II	**Regional Development Planning and Management-** Role of Regional Planning Experience of regional planning in India, Five Year Plans, Integrated rural development programmes, Panchayati Raj and Decentralized Planning, Command Area Development, Watershed Management, Planning for backward area, desert, drought prone, hill, tribal area development, multilevel planning, development of island territories *Regional Planning and Management:* Planning for Rural Areas, Planning Challenges for Rural Areas and Mega Cities, Housing and Community Planning, Metropolitan Region Planning, Special Area Planning	20
III	**Regional Development Policies in India-** Policies aimed at industrialization of lagging regions, development of irrigation agriculture and allied activities, providing infrastructural facilities, policy measures to abolish regional imbalance in India, Regional Development in Uttar Pradesh	10

Texts / References	1. Chand, M. (Year). *Regional planning in India*. Allied Publishers. 2. Puri, V. K., & Hoover, E. M. (Year). *An introduction to regional economics*. Alfred A. Knopf. 3. Isard, W. (Year). *Methods of regional analysis*. MIT Press. 4. Richardson, H. W. (Year). *Regional economics*. Weidenfeld and Nicolson. 5. Dholakia, R. H. (Year). *Regional disparity in economic growth in India*. HPH. 6. Friedman, J. (Eds.). (Year). *Regional policy: Readings in theory & application*. MIT Press. 7. Rao, H. (Year). *Regional disparities & development in India*. Ashish Publishing House. 8. Richardson, H. W. (Year). *Input-output and regional economics*. John Wiley. 9. Seth, V. K. (Year). *Industrialization in India: A spatial perspective*. Commonwealth Publishers. 10. Siebert, H. (Year). *Regional economic growth: Theory & policy*. International Textbook Company.
Learning Outcomes	This course expects that student can know the regional economics and their application.

Course Title	**ECOMJ812 Political Economy-II**			
Category of Course	**Major-3 (Elective-1)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course is to specialize the students in political economy and its operation. It covers, analysis of social change, capitalism and economy.			

Units	**Course Content**	**Hr. of Teaching**
I	**Analysing Social Change in Historical Perspective-** The method of historical materialism; the transition from feudalism to capitalism; capitalism as a historical process – alternative perspectives.	15
II	**Capitalism as an Evolving Economic System-** Basic features; accumulation and crisis; the modern corporation; monopoly capitalism— alternative perspectives.	15
III	**The State in Capitalism and the economy** – contestation and	15

	mutual interdependence; the state as an arena of conflict; imperialism – the basic foundations.	
Texts / References	1. Gurley, J. (1978). The materialist conception of history. In R. Edwards, M. Reich, & T. Weisskopf (Eds.), *The capitalist system* (2nd ed.). 2. Lange, O. (1963). *Political economy* (Vol. 1). 3. Hunt, E. K. (2004). *History of economic thought* (Indian ed.). M.E. Sharpe; Shilpi Publications. 4. Habib, I. (1995). Capitalism in history. *Social Scientist, 23*, 15-31. 5. Heilbroner, R. L. (1987). Capitalism. In *The New Palgrave Dictionary of Modern Economics*. Macmillan. Also reprinted in *Behind the veil of economics* (Ch. 2). W.W. Norton. 6. Sweezy, P. (1942). *The theory of capitalist development*. Monthly Review Press. (Chapters 2, 4, 5, 6, 8, & 10). 7. Shaikh, A. (2000). Economic crises and falling rate of profit. In T. Bottomore et al. (Eds.), *The dictionary of Marxist thought* (Indian ed.). OUP; Maya Blackwell. 8. Vakulabharanam, V. (2009). The recent crisis in global capitalism: Towards a Marxian understanding. *Economic and Political Weekly, 44*(13), 144-150. 9. Baran, P. (1957). *The political economy of growth* (Pelican ed., 1973). Chapter 3. 10. Heilbroner, R. (1985). The role of the state. In *The nature and logic of capitalism* (Ch. 4). 11. Kalecki, M. (1972). Political aspects of full employment. In E. K. Hunt & J. G. Schwarz (Eds.), *A critique of economic theory*. Penguin Books. 12. Bhaduri, A. (2002). Nationalism and economic policy in the era of globalization. In D. Nayyar (Ed.), *Governing globalization: Issues and institutions* (Ch. 2). OUP.	
Learning Outcomes	This course expects that student can know the political economy and their application.	

Semester-VIII
BA HONS. ECONOMICS
MAJOR ELECTIVE PAPER LIST-F

Code	Elective Paper-II List-F	Course Type	Credit
ECOMJ813	Operations Research-II	Major Elective-2	3L+1T= 4
ECOMJ814	Game theory-II	Major Elective-2	3L+1T= 4
ECOMJ815	Institutional Economics-II	Major Elective-2	3L+1T= 4
ECOMJ816	Financial Market-II	Major Elective-2	3L+1T= 4
ECOMJ817	Economics of Natural Disaster-II	Major Elective-2	3L+1T= 4

ECOMJ818	Industrial Economics-II	Major Elective-2	3L+1T= 4
ECOMJ819	Health Economics-II	Major Elective-2	3L+1T= 4
ECOMJ829	Gender Economics -II	Major Elective-2	3L+1T= 4
ECOMJ821	Poverty, Inequality and Human Development -II	Major Elective-2	3L+1T= 4
ECOMJ822	Indian Public Finance-II	Major Elective-2	3L+1T= 4

Course Title	**ECOMJ813 Operation Research-II**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in operation research and its operation. It covers game theory, input-output analysis, and dynamic optimization.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Games Theory-** two person zero -sum game, pay off matrix, optimal strategy, maximin & mini-max strategies, value of game, pure strategy, dominance rule. Mixed strategy: Nash equilibrium, Solution of Game problems with Linear Programming: Graphical methods and Simplex method.			14
II	**Input-Output Analysis-** Concepts, Features, Assumptions, Importance and Uses; Types of Input- Output Model: Static and Dynamic; Method of the Input-Output analysis: the Open Input-Output model, Input-Output Transaction Table, Input Coefficient, Input-Output Technological coefficient, Determination of Equilibrium Prices, the Hawkin-Simon Conditions, the Closed Input-Output model.			15
III	**Dynamic Optimisation & Optimal Control Theory-** *Dynamic Optimisation:* Discrete time – Deterministic and Stochastic Model, Continuous Time. *Optimal Control Theory:* Calculus of variation and optimal control problem, control, state, and co-state variables, Hamiltonian – current value and present value, transversality conditions; Economic applications.			16
Texts / References	1. Sharma, J. K. (2016). *Operations research: Theory and applications* (2nd ed.). Chand. 2. Chiang, A. C. (2005). *Fundamental methods of mathematical*			

	economics (4th ed.). McGraw-Hill. 3. Natarajan, B., Balasubramani, & Tamilarasi. *Operations research*. Pearson. 4. Ten Raa, T. (2006). *The economics of input-output analysis*. Cambridge University Press. 5. Peterson, W. (1991). *Advances in input-output analysis: Technology*. Oxford University Press. 6. Miller, R. E., & Blair, P. D. (2009). *Input-output analysis: Foundations and extensions* (2nd ed.). Cambridge University Press. 7. Bierman, S. H., & Fernandez, L. (1998). *Game theory with economic applications*. Pearson Education. 8. Eichberger, J. (1992). *Game theory for economists*. Harcourt College. 9. Osborne, M. J., & Rubinstein, A. (1994). *A course in game theory*. MIT Press. 10. Vega-Redondo, F. (2003). *Economics and the theory of games*. Cambridge University Press. 11. Osborne, M. J. (2006). *An introduction to game theory*. Oxford University Press. 12. Chiang, A. C. (1999). *Elements of dynamic optimization*. Waveland Press.
Learning Outcomes	This course expects that student can know the operation research and their application.

Course Title	**ECOMJ814 Game Theory-II**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aims of this course to specialize the students in game theory and its operation. It covers simultaneous move game, information economics and repeated games.			
Units	**Course Content**			**Hr. of Teaching**
I	**Simultaneous move games with incomplete information Strategies-** Strategies; Nash equilibrium; beliefs and sequential equilibrium; perfect Bayesian equilibrium; signaling games; applications.			16
II	**Information economics-** Adverse selection; moral hazard; signaling game, Stable equilibrium, the intuitive criterion, iterated weak dominance, epistemic foundations			15
III	**Repeated Games-** Payoffs, strategies, Nash equilibrium and			14

	subgame perfect equilibrium of repeated games, Cooperative vs Non-Cooperative Games	
Texts / References	1. Osborne, M. (2004). *An introduction to game theory*. Oxford University Press. 2. Fudenberg, D., & Tirole, J. (1991). *Game theory*. MIT Press. 3. Dutta, P. K. (1999). *Strategies and games: Theory and practice*. MIT Press. 4. Gibbons, R. (1992). *Game theory for applied economists*. Princeton University Press.	
Learning Outcomes	This course expects that student can know the game theory and their application.	

Course Title	**ECOMJ815 Institutional Economics-II**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in institutional economics and its operation. It covers theory of contract, institution theory of firms, theory of institutional change and state.			
Units	**Course Content**			**Hr. of Teaching**
I	**Theory of Contract-** The definition of a contract. Legal and economic approach to contracts. Freedom of contract, Bounded rationality and contractual incompleteness. Asymmetric information and opportunistic behaviour. Adverse selection and the closing of markets. Signaling, screening and self-selection. Principal-agent problem and agency costs. Attributes of transactions and the choice of a contract. Asset specificity, types of specific assets, Institutional environment and its role in the choice of contract. The role of trust.			15
II	**The Institutional Theory of The Firm-** Explanations of the firm in the New Institutional theory (F.Knight, R. Coase, A. Alchian and H.Demsetz, O.Williamson,), The market andthe firm. Comparative analyses of the alternative coordination forms. Internal market and influence costs. The boundaries of the firm. Ownership structure of the firm., Separation of ownership and control in the open corporation. Opportunistic behaviour of the managers and corporate control.			10
III	**The Theory of Institutional Change and State-** Stability of institutions and institutional change. The main sources of			20

	institutional change. The role of the state in the process of institutional change. The problem of compensation of the disadvantaged groups. *The Institutional Theory of State:* Social mechanisms for constraining open access. Contractual theories of the state. Hobbes predatory theory of the state. North's model of the state. Corruption and its economics: the principal-agent framework; incentive structures; the threat system and the authority; collusion, Rent-seeking behaviour and free-riding. Basil model of corruption and its analysis.	
Texts / References	1. Eggertsson, T. (1990). *Economic behavior and institutions: Principles of neoinstitutional economics*. Cambridge University Press. 2. North, D. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press. 3. Cooter, R. (1996). The theory of market modernization of law. *International Review of Law and Economics*, 16, 141-172. 4. Posner, E. (2000). *Social norms and the law*. Harvard University Press. 5. Ullman-Margalit, E. (1977). *The emergence of norms*. Clarendon Press. 6. Young, P. H. (1996). The economics of convention. *Journal of Economic Perspectives*, 10, 105-122. 7. Coase, R. (1937). The nature of the firm. *Economica*, 4, 386-405. 8. Milgrom, P., & Roberts, J. (1992). *Economics, organization and management*. Prentice-Hall. 9. North, D. (1990). *Institutions, institutional change and economic performance* (Ch. 8). Cambridge University Press. 10. Niehans, J. (1987). Transaction costs. In *The Palgrave Dictionary of Economics* (pp. 676-679). Macmillan. 11. North, D. (1994). Integrating institutional change and technical change in economic history: A transaction cost approach. *Journal of Institutional and Theoretical Economics*, 150, 609-624. 12. Williamson, O. (1985). *The economic institutions of capitalism* (Ch. 2, pp. 43-67). The Free Press. 13. No citation provided for "Economic theory of property rights" (main reading). 14. Coase, R. H. (1960). The problem of social cost. *Journal of Law and Economics*, 3, 1-44. 15. 15. Kreps, D. (1990). Corporate culture and economic theory. In *Perspectives on positive political economy*. Cambridge University Press.	
Learning Outcomes	This course expects that student can know the institutional economics and their application.	

Course Title	**ECOMJ816 Financial Market-II**
Category of Course	**Major-4 (Elective-2)**

Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in financial market and its operation. It covers financial services and investment trusts, mutual funds, leasing, factoring and corporate restructuring.			
Units	**Course Content**			**Hr. of Teaching**
I	**Financial Services and Investment Trusts:** An overview: Concept of Financial Services, Organization and Growth of Financial Services in India. *Investment Trusts*- Meaning & Types. Merchant Banking, Concept, functions and regulation by SEBI, Issue Management Function, Merchant Banking in India, Underwriting of Capital Issues – Concept, Organisational Set-up and Regulation of Underwriting of Capital Issue, Recent Trends in Underwriting in India.			13
II	**Mutual Funds** – Concept and Objectives, Types of Mutual Funds and Designing, Launching and Marketing of Mutual Fund Schemes, Regulation of Mutual Funds, Asset Management Company, Income Funds, Gilt Funds, Open-ended and close ended schemes, Venture Capital Funds – Concept and Functions, Regulations of Venture Capital Funds, Trends in Venture Capital Funds in India.			10
III	**Leasing, Factoring and Corporate Restructuring-** *Leasing* Concept and Types of Leases, Leasing Services in India. Factoring and Forfaiting – Nature and Functions, Types of Factoring Services, Factoring Services in India. Insurance Services- Principles & Kinds of Insurance, Insurance Sector after Liberalisation, Inobal nobalRDA. *Corporate Restructuring*-Legal and Procedural Aspects of Mergers, Amalgamations and Acquisitions, Credit Rating and Depository Services: Credit Rating – Concept and Need for Credit Rating, Credit Rating Agencies in India – CRISIL, ICRA and CARE. Depository Services Need, Functions and Present Arrangement for Depository Services in India.			22
Texts / References	1. Paul, J., & Suresh, P. (2008). *Management of banking and financial services*. Pearson Education. 2. Khan, M. Y. (2007). *Financial services*. Tata McGraw Hill. 3. Hull, J. (2002). *Introduction to futures and options market*. Prentice Hall of India. 4. Gardon, E., & Natarajan, K. *Financial markets & services*. Himalaya Publishing. 5. Avadhani. *Financial services and markets*. Himalaya Publishing House. 6. Sharma, & Gupta. *Financial services*. Kalyani Publishers.			

	7. Desai, V. *The Indian financial system*. Himalaya Publishing House.
Learning Outcomes	This course expects that student can know the financial market and their application.

Course Title	**ECOMJ817 Economics of Natural Disaster-II**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in economics of natural disaster and its operation. It covers insurance, disaster, and alternative financing, community, and sustainable migration.			
Units	**Course Content**			**Hr. of Teaching**
I	**Insurance, Disaster Relief, and Alternative Financing-** Traditional insurance mechanisms for disaster recovery, Government disaster relief programs, Innovative financing tools (e.g., catastrophe bonds)			10
II	**Economic and Community Impacts of Natural Disasters:** Short-term and long- term economic consequences, Social Capital, Social and community resilience, *Case Studies and Lessons Learned:* Analysis of specific natural disasters and their economic impacts, best practices, and lessons learned from past disasters			18
III	**Sustainable Mitigation and Risk Reduction Strategies:** Economic incentives for disaster risk reduction, integrating economic considerations into mitigation planning *Future Challenges and Opportunities:* Emerging risks and economic vulnerabilities, Innovative approaches to disaster risk management.			17
Texts / References	1. Pine, J. (2008). *Natural hazards analysis: Reducing the impact of disasters*. Auerbach Publications. 2. The World Bank. (2010). *Natural hazards, unnatural disasters: The economics of effective prevention*. 3. World Bank. (2010). *Handbook for estimating the socio-economic and environmental effects of disasters: Main report (English)*. Washington, D.C.: World Bank Group. 4. Sharma, S. K., & Quah, E. (Eds.). (2018). *Economics of natural disasters*. World Scientific Publishing Co. Pte. Ltd. 5. Guha-Sapir, D., Santos, I., & Borde, A. (Eds.). (2013). *The economic impacts of natural disasters*. Oxford University Press.			

	6. Alexander, D. (2018). *Natural disasters*. Routledge. 7. Pelling, M. (Ed.). (2003). *Natural disasters and development in a globalizing world*. Psychology Press. 8. Tatano, H., & Kajitani, Y. (Eds.). (2022). Methodologies for estimating the economic impacts of natural disasters (pp. 11-25). Singapore: Springer. 9. Okuyama, Y. (2003). *Economics of natural disasters: A critical review*. Regional Research Institute Working Papers, 131. https://researchrepository.wvu.edu/rri_pubs/131
Learning Outcomes	This course expects that student can know the economics of natural disaster and their application.

Course Title	**ECOMJ818 Industrial Economics-II**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in industrial economics and its operation. It covers principles of management, practices, and financial management.			
Units	**Course Content**			**Hr. of Teaching**
I	**Indian Industrial Growth and Pattern** Classification of Indian Industries, Shift in Industrial policy since 1991, Recent initiatives , Growth and Trends, Index for Industrial production ,Performance Indicators in Ease of Doing Business, Sector -wise evaluation of Indian industry, Urban –Rural Migration & Reverse Migration			15
II	**MSMEs & Large Scale Industries Performance** Industrial Policies for MSMEs -Structural shift , Problem & challenges posed by globalization, Recent Initiatives, Key performance indicators for Small Business, Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012, Government Schemes for MSMEs, Corporate Governance and Business Ethics, Privatization of PSUs, Disinvestment Policy; Corporate Social Responsibility Act 2005,& 2013, Social Security and Labour Reforms in India			15
III	**Market and Distribution Channels** Marketing Concepts, Channels and Intermediaries, Manufacturing Sector in India-size, Investment, Government initiatives–Make in			15

	India, Skill India Digital India, Startup India and road ahead, ,Role of Advertising and new market strategies, Ecommerce & M-Commerce, Digital marketing	
Texts / References	1. Ahluwalia, I. J. (1985), Industrial Growth in India- Stagnation since Mid Sixties, Oxford University Press, New Delhi. 2. Bajpai, N. (2017). *Business research methods*. Pearson Education. 3. Barthwal R.R. (2021); Industrial Economics: An Introductory Textbook, New Age Internationals Private Limited 4. Cherunilam, F. (1994), Industrial Economics : Indian Perspective (3rd Edition),Himalaya Publishing House, Mumbai. 5. Desai, B. (1999); Industrial Economy in India (3rd Edition), Himalaya Publishing House, Mumbai. 6. Hay, D. A., & Morris, D. J. (1991). *Industrial economics and organization: Theory and evidence* (Revised ed.). Oxford University Press. 7. Kaul, V. K. (2015). *Principles and practices of management*. Vikas Publishing House. 8. Khan, M. Y., & Jain, P. K. (1984). *Management accounting* (3rd ed.). McGraw-Hill Education. 9. Khan, M. Y., & Jain, P. K. (2018). *Financial management: Text, problems and cases*. McGraw-Hill Education. 10. Khan, M. Y., & Jain, P. K. (2018). *Financial management: Text, problems and cases* (8th ed.). McGraw-Hill Education. 11. Koontz, H. (1972). *Principles of management: An analysis of managerial functions*. McGraw-Hil 12. Mahajan, J. P. (2015). *Managing human resources*. Vikas Publishing House. 13. Pandey, I. M. (2016). *Financial management*. Vikas Publishing House. 14. Pasad, L. M. (2019). *Principles and practice of management*. Sultan Chand & Sons. 15. Pillai, R. S. N., & Kala, S. (2013). *Principles and practice of management*. S. Chand & Co. 16. Sandesara, J. C. (1992), Industrial Policy and Planning – 1947-1991 : Tendencies,Interpretations and Issues, Sage Publications, India Pvt. Ltd., New Delhi. 17. Sengupta, P. S. (2010). *Principles and practices of management*. Vikas Publishing House. 18. Shejwalkar, & Ghanekar. (2011). *Principles and practices of management* (20th ed.). Everest Publishing House 19. Sherlekar, S. A. (1990). *Modern business organisation and management: Systems-based contingency approach to the organisation and management of business*. Himalaya Publishing House. 20. Singh, A. and A. N. Sadhu (1988), Industrial Economics, Himalaya Publishing House,Bombay.	
Learning Outcomes	This course expects that student can know the industrial economics and their application.	

Course Title	**ECOMJ819 Health Economics-II**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in health economics and its operation. It covers resource allocation, cost-benefit of health services, financing of health services.			
Units	**Course Content**			**Hr. of Teaching**
I	**Introduction to Health Economics and Resource Allocation-** Arrow's Concept of the Health Care Consumer, The Demand for Medical Care: Conceptual Framework. The National and International Health Scenario- Health output and input indicators and their correlation with the level of economic development and with the public expenditure on health. Resource Allocation in Health Sector- Magnitude of Healthcare Needs/Expenditure: Implications for Resource Mobilisation; Resource Allocation problem in private and government hospitals, productivity, efficiency and equity considerations applied to the hospital sector, spatial distribution of health care facilities, Pricing of Health Services the problems of multiple services of a hospital and pricing of these services, the trade-off between quantity and quality.			20
II	**Costs and Benefits of Health Services**-Private benefits and costs of providing health services, Impact of Technological Change on the Cost of Health Services; the failure of the market to provide essential health services, the provision of health services by the government, application of cost benefit analysis to public health and family planning projects, benefits and costs (both private and social) of training to professional manpower in health sector.			10
III	**Financing of Health Services-**A review of per capita expenditure on health services over time and space, An analysis of the sources of public finance for health, Financing health services through specific (health cess) and general (direct and indirect taxes) local government revenue, the role of development financing institutions in financing health services, public private partnership in financing health care services, The need for general health insurance, the need for special health insurance for the poor, disabled and the aged. A review of the Indian National Health Policy and discussion of feasible alternatives.			15
Texts / References	1. Preker, A. S., & others. (2000). 'Make or buy' decisions in the production of healthcare goods and services: New insights from			

	institutional economics and theory. *Bulletin of the World Health Organization, 78*(6), 779-790. 2. O'Donnell, O., & others. (2005a). *Who pays for health care in Asia?* EQUITAP Working Paper 1. Erasmus University, Rotterdam, and Institute for Policy Studies, Colombo. 3. O'Donnell, O., & others. (2005b). *Who benefits from public spending on health care in Asia?* EQUITAP Working Paper 3. Erasmus University, Rotterdam, and Institute for Policy Studies, Colombo. 4. Gottret, P., & Schieber, G. (2006). *Health financing revisited – A practitioner's guide*. The World Bank
Learning Outcomes	This course expects that student can know the health economics and their application.

Course Title	**ECOMJ820 Gender Economics-II**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in gender economics and its operation. It covers women and work, decision making factors, and social security.			
Units	**Course Content**			**Hr. of Teaching**
I	**Women and Work-** Unpaid activity and Valuation of women's work - Factors affecting female entry in labour market - Supply and demand for female labour - Wage differentials in female activities - Determinants of wage differentials - Impact of technology on women's work participation.			12
II	**Factors affecting decision making by women** - Property rights, access to and control over economic resources and assets - Power of decision making at household, class, community level - Economic status of women and its effect on work-participation rate, income level, health, and education in developing countries and India – Female contribution to national income.			15
III	**Social Security of Women-** Women and their access to nutrition - Health, education, and social and community resources. Entitlements - ensuring economic independence and risk coverage - Access to credit and insurance markets - Labour market biases and gender discrimination - Affirmative action for women and improvement in their economic and social status.			18
Texts /	1. Government of India. (1974). *Towards equality: Report of the*			

References	*Committee on the Status of Women in India*. Department of Social Welfare, Ministry of Education and Social Welfare, New Delhi. 2. International Labour Organization (ILO). *Women's participation in the economic activity of Asian countries*. 3. Kabeer, N., & Subrahmanyam, R. (Eds.). (1996). *Institutions, relations, and outcomes: A framework and case studies for gender- aware planning*. 4. Kalpagam, U. (1994). *Labour and gender: Survival in urban India*. Sage Publications, New Delhi. 5. Krishnaraj, M., Sudarshan, R. M., & Shariff, A. (1998). *Gender, population and development*. Oxford University Press, New York. 6. Papola, T. S., & Sharma, A. N. (Eds.). (1999). *Gender and employment in India*. Indian Society of Labour Economics and Institute of Economic Growth, Delhi.
Learning Outcomes	This course expects that student can know the gender economics and their application.

Course Title	**ECOMJ821 Poverty, inequality Human Development -II**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course is to aware the students about the basic concepts of Poverty, Inequality and Human development with special reference to Indian scenario.			
Units	**Course Content**			**Hr. of Teaching**
I	**Human Growth and Human Development** - Basic Needs Approach, limitations of per capita GDP as an indicator, Physical Quality of Life Index (PQLI), Capability Approach, Social Capability Index. Human Development: meaning and definition, importance, and objectives. Human Development Index, HDI as compared to per capita GDP, Human Development: meaning and definition, importance, and objectives.			15
II	**Measuring Human Development-** Need for indices - Method of computing HDI, Critique of HDI, Other indices: Human Poverty Index (HPI), Multidimensional Poverty Index, Gender-related Development Index (GDI) - Gender Empowerment Measure (GEM). Principal Component Analysis, Estimation of indices using NFHS, NSSO, Census data.			17
III	**Sustainable Development Goals (SDGs)-** Understanding the			13

	SDGs - Linkages between human development and the SDGs, Indian Perspectives and Experience with Human Development: Approach to human development in national plans.	
Texts / References	1. Anand, S., & Sen, A. (1994). *Human Development Index: Methodology and Measurement*. New York 2. Ravallion, M. (2015). *The economics of poverty: History, measurement, and policy*. Oxford University Press. 3. Ravallion, M. (2008). *Poverty lines*. In *The New Palgrave Dictionary of Economics*. 4. Subramanian, S. (2019). *Inequality and poverty: A short critical introduction*. Springer. 5. Ravallion, M., & Datt, G. (2002). Why has economic growth been more pro-poor in some states of India than others. *Journal of Development Economics, 68*(2), 381-400. 6. Ravallion, M. (2004). *Pro-poor growth: A primer*. Available at SSRN 610283. 7. Human Development Report, UNDP. Retrieved from https://hdr.undp.org/ 8. Niti Aayog. (2023). *National Multidimensional Poverty Index*. Retrieved from https://www.niti.gov.in/sites/default/files/2023- 08/India-National-Multidimentional-Poverty-Index-2023.pdf	
Learning Outcomes	It will enable student to do any kind of future research on the mentioned area and to be associated with any academic bodies for Planning and research.	

Course Title	**ECOMJ822 India Public Finance-II**			
Category of Course	**Major-4 (Elective-2)**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course the students to specialized in Indian public finance and its operation. It covers Indian public expenditure, fiscal policy and fiscal federalism.			
Units	**Course Content**			**Hr. of Teaching**
I	**Indian Public Expenditure-** Union Government – Growth and Composition of Expenditure – Revenue and Capital, Development and Non-Development, reasons for growth in Public Expenditure, Subsidies: Explicit Subsidies of the Union Government and Problem of increasing Subsidies. State Government – Growth and Composition of states' Expenditure, Non-Development and			15

	Development Expenditure, Revenue and Capital Expenditure, reasons for growth in States' Public Expenditure.	
II	**Fiscal Policy, Deficit and Public Debt-** Revenue Deficit, Effective Revenue Deficit, Primary Deficit, Fiscal deficit, Trends in Deficit Indicators. Problem of increasing Deficit at the Central and State levels, Fiscal Sector Reforms in India–Fiscal Consolidation; Fiscal Responsibility and Budget Management Act-2003; Fiscal Crisis in India, Roadmap for future Fiscal reforms in India. *Public Debt:* Internal Public Debt: Trends in India's Internal Public Debt, Composition of Public Debt of the Union and State Government, Public Debt Management in India. External Public Debt.	17
III	**Fiscal Federalism-** A brief scenario of Federal Finance in India, Constitutional provisions and Statutory provisions relating to appointment of Finance Commission, issues and approaches of various Finance Commission, changing criteria for Transfer of Resources from Central to States, Devolution of Resources and Grants from Central to States; Problems of Horizontal and Vertical Imbalances, Increasing dependence of States on the Centre, Recommendations of the Fourteenth and Fifteenth Finance Commission- Criteria of Devolution, Move from Planning Commission to NITI Aayog.	16
Texts / References	1. Bhargava, P. K. (1991). *India's fiscal crisis*. Ashish Publishing House, New Delhi. 2. Bhargava, R. N. (1971). *The theory and working of union finance in India*. Chaitanya Publishing House, Allahabad. 3. Chelliah, R. J. (1969). *Fiscal policy in underdeveloped countries*. George Allen and Unwin Ltd., London. 4. Chelliah, R. J. (Ed.). (1996). *Towards sustainable growth: Essays in fiscal and financial sectors reforms in India*. Oxford University Press, Bombay. 5. Gaur, A. K. (1988). *Federal finance in India*. Deep & Deep Publications, New Delhi. 6. Government of India, Ministry of Finance. (2002). *Reports of the task force on direct and indirect taxes*. 7. Jain, A. K., & Jain, P. (2007). *Reforms in direct taxes through union budgets: A commentary*. RBSA Publishers, Jaipur. 8. Jha, P. (Ed.). (2011). *Progressive fiscal policy in India*. Sage Publications India Pvt. Ltd., New Delhi. 9. Singh, T. (2000). *The corporation tax in India*. Classical Publishing Company, New Delhi. 10. Srivastava, D. K. (2005). *Issues in Indian public finance*. New Century Publications, New Delhi.	
Learning Outcomes	This course expects that student can know the Indian public finance and their application.	

Semester-VIII **BA. (HONS.) ECONOMICS WITH RESEARCH**			
Code	**Paper Name**	**Course Type**	**Credit**
ECOMJ8R1	Applied Econometrics	Major-1	3L+1T= 4
ECOD81	Dissertation	Dissertaion-1	12= 12
ECOMN8R1	Environmental Economics	Minor-5	3L+1T= 4

Course Title	**ECOMJ8R1- Applied Econometrics**			
Category of Course	**Major-1**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 4	3L+1T	0	4
	Hour of Teaching (Total)	45+15	0	60
Course Objectives	The aim of this course is to transmit the body of knowledge of applied econometrics at the undergraduate level. It offers, qualitative response model, advance time series models, panel data models and impact evaluation models using real economy data.			

Units	**Course Content**	**Hr. of Teaching**
I	**Qualitative response models-** Probabilistic Choice Model, limited dependent variable model and Heckman improvement, Multinomial regression model.	10
II	**Advance time series and panel models-** ARCH, GARCH, VAR, ARDL; Dynamic Panel Regression Model- Lagged dependent variable model, GMM Estimation, Time Varying co-efficient model, Simultaneous Equation model in Panel Data.	20
III	**Impact evaluation models-** Impact Evaluation for Policy Decisions, Difference between process and outcome evaluation, identification of counterfactual, Experimental and quasi- experimental evaluation design, Average treatment effect model, Difference-in Difference method, Propensity score matching method, Quantile and distributional Treatment Effects.	15

Texts / References	1. Pindyck, R. S., & Rubinfeld, D. L. (1990). *Econometric models and econometric forecasts* (4th ed.). McGraw-Hill, New York. 2. Greene, W. H. (2002). *Econometric analysis* (5th ed.). Pearson Education India. 3. Enders, W. (2008). *Applied econometric time series*. John Wiley & Sons. 4. Baltagi, B. (2008). *Econometric analysis of panel data*. John Wiley & Sons. 5. Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics: Methods and applications*. Cambridge University Press. 6. Gertler, P. J., Martinez, S., Premand, P., Rawlings, L. B., & Vermeersch, C. M. (2016). *Impact evaluation in practice*. World Bank Publications. 7. Khandker, S. R., Koolwal, G. B., & Samad, H. A. (2009). *Handbook on impact evaluation: Quantitative methods and practices*. World Bank Publications.
Learning Outcomes	This course expects to empirically test the economic theories and models based on real data. The knowledge of applied econometrics is necessary for anyone seeking employment as an analyst in the academia and corporate world.

Course Title	**ECOD81- Dissertation**			
Category of Course	**Dissertation**			
Credits & Hour of Teaching		Theory	Practical	Cumulative
	Credits = 12	--	-	12
	Hour of Teaching (Total)	--	-	--
Course Objectives	The aim of dissertation is to transmit the theoretical of knowledge of economics into solution of real-life economic problems using empirical data.			
Units	**Course Content**			**Hr. of Teaching**
	Choose any topics for dissertation writing form the domain of economics science with the help of their assigned supervisors.			
Texts / References				
Learning Outcome	This course expects to produce a quality dissertation on chosen topic and publish their work into a quality research paper as final outcome.			