DIT UNIVERSITY Dehradun



Detailed Course Structure & Syllabus of

B.A. in Economics

3 Years

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

Introduction

In accordance with the National Education Policy (NEP) 2020, the UGC has formulated a new student-centric "*Curriculum and Credit Framework for Undergraduate Programmes* (CCFUP)" incorporating a flexible choice-based credit system, multidisciplinary approach, and skill development courses. Further, it also recommends that the undergraduate degree will be of either 3 or 4-year duration, with multiple exit options within this period, with appropriate certifications, e.g., a UG certificate after completing 1 year in a discipline or field including vocational and professional areas, or a UG diploma after 2 years of study, or a Bachelor's degree after a 3-year programme. The 4-year multidisciplinary Bachelor's programme, however, shall be the preferred option since it allows the opportunity to experience the full range of holistic and multidisciplinary education in addition to a focus on the chosen major and minors as per the choices of the student.

Advantages of CCFUP:

- Shift in focus from the teacher-centric to student-centric education. Student can curve out their program structure by choosing minimum number of credits from well-defined baskets.
- Student may undertake as many credits as they can cope with.
- CCFUP allows students to obtain 4 year Honors degree with Minor in a discipline of their interest by choosing courses offered by other departments, from various baskets of interdisciplinary, intra-disciplinary, skill oriented, ability enhancing, and from other disciplines.

Features unique to DIT University CCFUP structure:

- 1. A minimum of 120 credits has to be earned by a student to be eligible for a 3 year Under Graduate degree in Sciences and a minimum of 160 credits for a 4-year Undergraduate Degree (Honours) OR (Honours with Research). Each department will decide their total credits for each program, and it can vary across disciplines.
- 2. Courses are categorized into 8 baskets, and a student will have the option to choose courses in most baskets and earn minimum number of credits required in each basket for the award of his/her degree. For each basket, the departments have the flexibility to identify course(s) which will be a core requirement for their program.
- **3.** An Academic Advisory Committee may be formed comprising all HoDs/ Programme Coordinator and one representative each from respective departments. Academic Advisory Committee will meet at the end of every semester after the completion of Board of Examination meeting to discuss and finalize course offerings by respective departments in the upcoming semester. Academic Advisory Committee will be chaired by the Dean Academic Affairs/ Deans of respective Schools/ Competent Authority.
- 4. To provide sufficient flexibility and room during the program for additional Internships, Project, Vocational Studies, 8-week summer semesters (Summer 1, Summer 2, and Summer 3) may have to run. Summer semesters are critical for implementing a fully flexible system. Each department will decide a priori which courses to offer in the summer semester and get them finalized at the Academic Advisory Committee meeting.

- 5. Project based learning has to be incorporated as a core component of evaluation in each course, and depending on the level and type of the course, the project can be of several types Study Oriented Project, Lab Oriented Project, Design Oriented Project, Computer Oriented Project, Projects of Organizational Aspects, Research Projects, or Entrepreneurship and Start Up Projects.
- 6. Courses under each basket may be updated on an annual basis.
- 7. Each student will be advised by a faculty advisor of his/her department for registration of courses from each basket in the beginning of semester, depending upon the availability of seats. A student advising center may be formed where students will have access to department faculty advisers. Faculty advisers should have complete access to view individual student's academic transcript for advising purposes.
- 8. A student getting an F grade in a core course (departmental or otherwise) at the end of the semester will have to earn those credits by registering for the same course whenever it is offered in subsequent semesters. If the course is not a core course, the student may choose to register for any other course next semester in that basket as advised by the department faculty adviser. Additional fees for those number of credits may apply.
- **9.** Students may opt for summer training/internships/industrial tours as advised by the department. However, these activities will not have credits.

Baskets of CCFUP

8 baskets of courses have been identified to provide student comprehensive exposure to a large number of areas, leading to the holistic development of an individual. These baskets are as follows:

S. No	Basket	Details
1	Major (Core)	In-depth study of a particular subject or discipline
2	Minor	 Different interdisciplinary minors After securing the specified credits in minor, student is eligible for a degree in major discipline with minor in the chosen interdisciplinary course
3	Multidisciplinary	 Natural and Physical Sciences: Chemistry, Physics, Biophysics, Astronomy and Astrophysics, Earth and Environmental Science etc. Mathematics, Statistics, and Computer Applications: Python, data analysis software, etc. Library, information, and media science: journalism, mass media, and communication Commerce and Management: Business Management, accountancy, finance. Humanities and Social Sciences: Economics, History, Linguistics, Psychology, sustainable development etc.
4	Ability enhancement courses (AEC)	Modern Indian language and English language focused on language and communication skills
5	Skill enhancement courses (SEC)	Courses on Hands on training, soft skills, institutes may design their own courses also
6 7 8	Value added courses common for all UG Summer Internship Research	 Understanding India Environmental Science, Digital and technological solutions: AI, 3D machining, big data, machine learning etc. Health and Wellness, Yoga, sports and fitness From any firm, industry, training lab, organization, own institution also (Students who exit after 2 semesters must undergo a 4 credit work based learning/internship to get UG certificate) Community engagement/service Field based learning/minor project Students for 4 year degree (Honors with
0	Project/Dissertation	Research) to take up research project under guidance of faculty member

Course Structure

B.A. in Economics (3 year	s)
Category of Courses	Credit Requirements
Major (Undergraduate Core – UC)	72
Minor	16
Inter-disciplinary Courses (IDC)	9
Ability Enhancement Courses (AEC)	8
Skill Enhancement Courses (SEC)	9
Value added courses common for all UG (VAC)	6
Summer Internship	4
Total	124

Course Structure

1st Year

Year: 1st

Course Category	Course Code	Course Title	L	Т	Р	Credit	
UC	ECON106	Microeconomics I	3	1	0	4	
UC	ECON107	Mathematical Economics I	3	1	0	4	
SEC I	HLAN176	Aptitude & Skill Enhancemen I	3	0	0	3	
AEC I	HLAN146	Professional Communication	2	0	2	3	
IDC I	HLAN147	Psychology of Life Skills I	3	0	0	3	
VAC I	HLAN148	Indian Constitution & Polity	3	0	0	3	
		Total Credits				20	

Year: 1st

Semester: II

Semester: I

Course Category	Course Code	Course Title	L	Τ	Р	Credit
UC	ECON108	Macroeconomics I	3	1	0	4
UC	ECON109	Mathematical Economics II	3	1	0	4
SEC II	HLAN177	Aptitude & Skill Enhancement II	3	0	0	3
AEC II	HLAN149	Corporate Communication & Soft Skills	2	0	2	3
IDC II	HLAN156	Industrial Psychology	3	0	0	3
VAC II		Environmental Science & Sustainability	3	0	0	3
		Total Credits				20

Course Structure

2nd Year

Year: 2nd

Semester: III

Course Category	Course Code	Course Title	L	Т	Р	Credit
UC	ECON206	Microeconomics II	3	1	0	4
UC	ECON207	Macroeconomics II	3	1	0	4
SEC III	ECON246	Basic Statistics	2	0	2	3
IDC III	HLAN247	Computer Applications in Social Sciences	2	0	2	3
AEC III	HLAN246	Human Values & Ethics	2	0	0	2
MINOR I		Choose between Maths/Stats/Psychology/English	4	0	0	4
		Total Credits				20

Year: 2nd

Semester: IV

Course Category	Course Code	Course Title	L	Т	Р	Credit
UC	ECON208	Indian Economy	3	1	0	4
UC	ECON209	Economics of Tourism	3	1	0	4
UC	ECON216	Statistics for Economic Analysis	3	0	2	4
UC	ECON217	Introduction to Research Methods	3	1	0	4
MINOR II		Choose between Maths/Stats/Psychology/English				4
		Total Credits				20

Course Structure

3rd Year

Year: 3rd

Semester: V

Course Category	Course Code	Course Title	L	Т	Р	Credit
UC	ECON306	Development Economics	3	1	0	4
UC	ECON307	Basic Econometrics	3	0	2	4
UC	ECON308	History of Economic Thought	3	1	0	4
UC	ECON309	Energy Economics	3	1	0	4
UC	ECON316	Summer Internship	2	0	4	4
MINOR III		Choose between Maths/Stats/Psychology/English				4
		Total Credits				24

Year: 3rd

Semester: VI

Course Category	Course Code	Course Title	L	Т	Р	Credit
UC	ECON317	International Economics	3	1	0	4
UC	ECON318	Public Finance	3	1	0	4
UC	ECON319	Money & Banking	3	1	0	4
UC	ECON326	Agricultural Economics	3	1	0	4
		OR				
UC	ECON327	Undergraduate Project	1	0	6	4
MINOR IV		Choose between Maths/Stats/Psychology/English				4
		Total Credits				20

Detailed Syllabus

Of

B.A. in Economics

Subject Code	ECON 106	Subject Title				Micro	economics	I	
LTP	310	Credit	4	Subject Category	UC	Year	1 st	Semester	Ι

Course Objectives:

- To provide the students a thorough understanding of the principles of economics.
- To provide emphasis on the nature and functions of product markets.
- To provide the understanding on how decisions are made within the larger economic system.

Learning Outcomes:

- Students will learn the basic concepts and tools of demand and supply.
- Students will learn the different market structures.
- Students would be able to apply micro economic concepts to analyse real life situations

Unit 1: Introduction and Basic concepts

Why study economics? Definition & Meaning, Nature and scope of micro economics, Basic Economic Problem - Choice and Scarcity, Inductive and Deductive methods, Positive vs. Normative Economics, Static and Dynamic Analysis.

Unit 2: Demand and Supply

Law of Demand, demand of a firm and Market; Concept of Elasticities –Price, Cross and Income Elasticity of Demand; Law of supply, types of supply, Elasticity of supply and its measurement.

Unit 3: Consumer Theory

Introduction to Utility, Cardinal vs ordinal Utility approach, Budget Constraint, Preferences; Indifference curve, Consumers equilibrium. MRS, Price, Income and Substitution effects (Hicks Allen & Slutsky method), Revealed Preference Theory, Consumer and Producer Surplus.

Unit 4: Theory of Production and Cost

Production Function –The Law of Variable Proportions; Returns to Scale-Isoquant; Isocost lines; Cobb-Douglas Production function, MRTS, Least Cost Combination and Producer's Equilibrium, Expansion path, concepts of Costs.

Unit 5: Market Structure

Prefect competition: Features, Price determination in short and long run, Equilibrium of Firm and Industry; Monopolistic competition; Monopoly: Price and output determination, Price discrimination; Monopsony: Features.

(10 Lectures)

(10 Lectures)

(5 Lectures)

(10 Lectures)

(10 Lectures)

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Text books [TB]:

- 1. Modem Microeconomics: Theory and Applications, H.L. Ahuja, Sultan Chand and Co., New Delhi, 2006.
- 2. Modern Microeconomics, A. Koutsoyiannis, 2nd edition, Macmillan Press, London, 1979.
- **3.** *Economics: Principles and Applications*, N. Gregory Mankiw, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited.

Reference books [RB]:

- 1. Mathematical Statistics, John E. Freund, Prentice Hall, 1992.
- 2. An Introduction to Mathematical Statistics and its Applications, Richard J. Larsen and Morris L. Marx, Prentice Hall, 2011.
- 3. Basic Statistics, A.M. Gun, M.K. Gupta, B. Dasgupta, World Press Private Limited Nagar.
- **4.** Kumar, Dinesh U. 2017. Business Analytics: The Science of Data-Driven Decision Making. India: Wiley India.

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Subject Code	ECON1 07	Subject Title			M	athemat	ical Econoi	nics I	
LTP	310	Credit	4	Subject Category	UC	Year	1 st	Semester	Ι

Course Objectives:

- To introduce basic mathematical principles used in of economic theory.
- To introduce students to linear algebra.
- To provide the use of differentiation in economies theories.

Learning Outcomes:

- The students will be familiar with equations of a straight line and simultaneous equations.
- The students will be familiar with linear algebra.
- The students will be familiar with basic differentiation.

Unit 1: Basic Concepts

Number system; Variables and parameters; Set theory; Functions and their graphs; Factorization.

Unit 2: Introduction to Equations

Equations – simple, quadratic and simultaneous and Identities; Equation of a straight line, concept of slope; logarithms and exponents.

Unit 3: Matrics and Determinants

Matrix and its types; Transpose: adjoint and inverse of matrices; Solution of a system equations by matrix inverse and Cramer's methods; Determinants and its properties; Linear independence and dependence of vector.

Unit 4: Differentiation

Concepts of limit, continuity & differentiation; Simple differentiation – concept and applications; Partial and total differentiation; Homogenous function-degree of homogeneity, Euler's theorem and its application.

Text books:

- 1. Fundamental Methods of Mathematical Economics, A.C. Chiang, and K. Wainwright, Fourth Edition. McGraw-Hill, 2005.
- 2. Mathematical Methods and Models for Economists, Angel de la Fuente, Cambridge University Press, 2000.

Reference books :

- 1. Mathematics for Economics and Business, I. Jacques, 5th Edition, Prentice Hall, 2009.
- 2. Mathematics for Economics, M. Wisniewski, 3rd Edition, Palgrave Macmillan, 2003.
- 3. Mathematics for Economic Analysis, K. Sydsaeter and P. Hammond, Pearson Educational Asia: Delhi, 2002.

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(9 Lectures)

(8 Lectures)

(8 Lectures)

(10 Lectures)

Subject Code	LAN146	Subjec t Title		Professional Communication							
LTP	202	Credit	3	Subject Category	AEC I	Year	1 st	Semester	Ι		

Course Summary:

This course is to enhance the Communication Skills of the students. It also focuses on Basic facets of communication. It introduces the students to LSRW and Non-verbal Language and how to master these aspects to be an effective communicator.

Course Objectives:

- The course aims at developing the LSRW skills of students for effective communication.
- Also, to equip them for a business environment.
- It also focuses at preparing the students understand and present themselves effectively.

Learning Outcomes:

- To communicate smoothly and to present themselves effectively.
- Greater self-confidence and knowledge of life skills helps them to develop healthier interpersonal relationships.
- Prepares the students to face future challenges and excel in their personal and professional lives.

Unit 1: Communication

Communication: Meaning, Types of Communication: General & Technical Communication Knowledge and adoption of Non Verbal cues of communication: Kinesics, Proxemics, Chronemics, Oculesics, Haptics, Para linguistics; Barriers to Communication, Overcoming strategies.

Unit 2: Listening & Speaking Skills

Listening Comprehension: identifying General & Specific information, Note taking and drawing inferences; Introduction to Phonetics: Articulation of consonants and vowel sounds.

Unit 3: Reading Skills & Technical Writing Skills

Reading Strategies and Vocabulary Building Reading Comprehension; Paragraph development; Intra-office Correspondence: Notice, Agenda, Minutes and Memorandum Technical Proposal & Technical Report

Unit 4: Communication at Work

Business Letter Writing; Job Application Letter & Resume; Interview Skills, Impression Management SWOT Analysis (Identifying Strength & Weakness); EQ and Its Dimensions

(7 Lectures)

(8 Lectures)

(4 Lectures)

(7 Lectures)

Lab

- Lab 1: Neutralizing Mother Tongue Influence
- Lab 2: Listening (Biographies through software) & Presentation of Biographies
- Lab 3: Listening & Role Play on Situational/ Telephonic Conversation (through software)
- Lab 4: Picture Perception
- Lab 5: Public Speaking
- Lab 6: Group Discussion
- Lab 7: Case Studies
- Lab 8: SWOT Analysis
- Lab 9: Mock Interview
- Lab 10: Final Evaluation

Textbooks [TB]:

- 1. Rizvi, Ashraf. Effective Technical Communication, McGraw Hill, New Delhi. 2005.
- **2.** Raman, Meenakshi and Sangeeta Sharma, Technical Communication: Principles and Practice, 2nd Edition. New Delhi: Oxford University Press. 2011.

Reference Books [RB]:

- 1. Aslam, Mohammad. Introduction to English Phonetics and Phonology Cambridge.2003.
- 2. Ford A, Ruther. Basic Communication Skills; Pearson Education, New Delhi.2013.
- 3. Gupta, Ruby. Basic Technical Communication, Cambridge University Press, New Delhi.2012.
- 4. Kameswari, Y. Successful Career Soft Skills and Business English, BS Publications, Hyderabad. 2010.
- 5. Tyagi, Kavita& Padma Misra. Basic Technical Communication, PHI, New Delhi. 201

Subject Code	HLAN176	Subject Title	Aptitude & Skill Enhancement I						
LTP	300	Credit	3	Subject Category	SEC I	Year	1 st	Semester	I

Course Summary:

Aptitude and Verbal Ability training module is crafted to bridge the gap between skills possessed by the students and the abilities that are looked for by the organization. It not only provides career guidance about the selection process but also helps students in profile building and enhancing their cognitive skills and enhance their employability quotient.

Course Objectives:

- Interpret the questions of aptitude building objectively and prepare for various competitive examinations/campus recruitment exams.
- Understand the optimized approach of dealing with placement questions
- Learn ways of representing themselves effectively in formal settings

Course Outcomes:

By the end of this semester, students will be able to perceive and analyze the requirements of placement trends as detailed information about the selection process would be provided by career guidance. They will be more confident and will be able to develop a professional profile, both online and offline.

QUANTITATIVE APTITUDE

Number System

Types of numbers; Factors; Divisibility test; Place and face Value; Base system; Remainder theorem; digits at the unit places and finding last two digits in a given expression; Calculating number of zeroes, Finding maximum power of any prime number or any composite number in any factorial, HCF and LCM.

Fractions–Types of fractions; Conversion of terminating and non-terminating types of decimal into fraction; Subtraction, addition and multiplication of terminating and non-terminating decimals.

Percentage

Basic concepts; Conversion from fraction to percentage; Application of percentage in – Expenditure, Cost, Consumption problems; Population increase or decrease problems; Production, Manpower and Working hour problems; successive increment or decrement; Comparison of salary or numbers; Percentage change in area or volume, etc.

Time Speed Distance

Introduction & types; Speed, Distance and Time: Average Velocity; Race tracks - Straight and Circular; Trains; Boats and Streams

Time and Work & Partnership

Basic concepts (relationship between men, days and work); Understanding group efficiency; Alternate work; Negative work; Wages; Pipes and Cisterns. Concept of partnership.

Simple / Compound Interest

Simple Interest and compound Interest: Basic concept of Principal, Time, Amount and Rate of Interest; Concept of Lent money.

Profit and Loss

Introduction; Concept of single, double and triple discount and marked price.

LOGICAL REASONING

Coding Decoding and Sequences

Coding Decoding, Crypt arithmetic, Sequence and Series - Finding the missing term/wrong term in the logical sequence of letter/number/word/alphanumeric, Continuous pattern series.

Deductive Logic

Conditional Arguments- If-then, only if then, If and only if, Either or; Premises and conclusion structure, Quality of deductive argument, Syllogism,

Blood Relation and Direction Sense

Blood Relation- Indicating form / puzzle form / coding form, Direction Sense, Direction puzzles.

Verbal Analogies and Odd man out

Verbal Analogy based on various parameters - Antonym / synonym relationship, Quantity and unit, Individual and Group, Product and Raw material, cause and Effect etc.

Odd man out based on several kind of relationship – Relationship based on meaning, functional relationship, even- odd or prime-composite, divisibility rule, etc.

VERBAL APTITUDE

Tenses and Grammar drills.

Creative Writing: Essay, Report Writing, Article, Letters, E-mail: difference between formal and informal tone, appropriate use of transition words, creating a signature, understanding different situations and the responses they require (situation-based writing), Proper use of connectors.

Textbooks:

- 1. Quantitative Aptitude: How to prepare for Quantitative Aptitude, Arun Sharma, McGraw Hill.
- **2.** Logical Reasoning: A Modern Approach to Verbal & Non-Verbal Reasoning by R.S. Aggarwal, S Chand Publishing.
- 3. Verbal Aptitude: English is Easy- Chetanand Singh, BSC Publication

Reference Book:

- Quantitative Aptitude: Quantitative Aptitude for Competitive Examinations- R.S. Agarwal S. Chand Publications Quantitative Aptitude: Quantitative Aptitude- Saurabh Rawat and Anushree Sah Rawat Savera Publishing House
- 2. Logical Reasoning: Analytical & Logical Reasoning by Peeyush Bhardwaj-Arihant Publications

Logical Reasoning: Analytical Reasoning by M.K.Pandey BSC publishing.

3. Verbal Aptitude: Oxford Guide to English Grammar- John Eastwood, Oxford University.

Subjet Code	HLAN 147	Subject Title			P	sycholo	gy of Life S	kills	
LTP	300	Credit	3 Subject Category IDC I Year 1 st Semester I						Ι

Course Objectives:

- This course will enable students to understand core life skills, its concept, process and practice.
- Student will be able to understand how to cope with the new demands and challenges of life.
- Student will also learn how to empower at psychosocial level. It will further enhance their wellbeing.
- Student will learn various social and coping skills for their personal effectiveness to grow in life.

Learning Outcomes:

- Critically think on a particular problem.
- Work in groups & teams to solve problems.
- Will learn high sense of social competency.

Unit 1: Life Skill

Life Skill: Concept, meaning, definition, need, Importance, ten core life skills. Goals of life skills.

Unit 2: Self-awareness

Self-awareness: self-concept, importance of self-awareness, skills to become self-aware and benefits of self-awareness in real life.

Unit 3: Coping

Coping Strategies: Coping with emotion, stress, challenges, Emotional Intelligence Life Skills work in Combination- Thinking Skills, Social Skills, and Coping Skills, Resilience

Unit 4: Thinking

Thinking: Creative and critical, Problem solving and decision making, importance of effective decision making in real life, career decision making.

References

- Hurlock, B.E. (2007). Developmental Psychology. New Delhi: Tata MC Grew Hill Publishing Co. Ltd.
- Nelson Jones, R. (2007). Life Counselling Skills. New Delhi: Sage Publishers
- Rajasenan, U. (2010). Life skills, Personality and Leadership. Chennai, RGNIYD
- UNESCO and Indian National Commission for Cooperation (2001). Life skills in Non formal Education; A Review. Paris. UNESCO-http://www.unesco.org
- Indian Journal of Life Skills Education, Rajiv Gandhi National Institute of Youth Development, Tamil Nadu
- Nair. A. Radhakrishnan, (2010). Life Skills Training for Positive Behaviour, Rajiv Gandhi National Institute of Youth Development, Tamil Nadu
- RGNIYD. (2008). Facilitators Manual on Enhancing Life Skills. Tamil Nadu

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(8 Hours)

(8 hours)

(8 hours)

(8 hours)

Subject Code	HLAN148	Subject Title	Indian Constitution & Polity							
LTP	300	Credit	3	Subject Category	VAC I	Year	1 st	Semester	Ι	

Course Summary

The Constitution of India is the supreme law of India. The document lays down the framework demarcating fundamental political code, structure, procedures, powers, and duties of government institutions and sets out fundamental rights, directive principles, and the duties of citizens. The course will provide knowledge of their constitutional rights to the students and familiarize the students with the features of the Indian Constitution.

Course Objectives

- To familiarize the students with the features of the Indian Constitution
- To provide a knowledge of their constitutional rights

Learning Outcomes

- Enable the students to be aware of their civilian rights.
- The students will be engaged in the political system of India.

Unit 1: Introduction

Constitution- meaning of the term, basic features Indian Constitution: Sources and constitutional history, Features: Citizenship, Preamble, Fundamental Rights and Duties, Directive, Principles of State Policy.

Unit 2: Union Government and its Administration

Structure of the Indian Union: Federalism, Centre-State relationship, President: Role, power and position, PM and Council of ministers, Lok Sabha, Rajya Sabha, Parliament and Judiciary.

Unit 3: State Government and its Administration

Governor: Role and Position, CM and Council of ministers, State Secretariat: Organisation, Structure and Functions.

Unit 4: Local Administration

District's Administration head: Role and Importance, Municipalities: Introduction, Pachayati raj: Introduction, Block level: Organizational Hierarchy (Different departments), Village level: Role of Elected and Appointed officials, Election Commission: Role and Functioning

Text Books

- 1. Abbas, H., Kumar, R. & Alam, M. A. (2011) Indian Government and Politics. New Delhi: Pearson, 2011.
- 2. Chandhoke, N. & Priyadarshi, P. (eds.) (2009) Contemporary India: Economy, Society, Politics. New Delhi: Pearson.

(Lectures 8)

(Lectures 8)

(Lectures 6)

(Lectures 6)

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Reference Books

- 1. Chakravarty, B. & Pandey, K. P. (2006) Indian Government and Politics. New Delhi: Sage.
- 2. Chandra, B., Mukherjee, A. & Mukherjee, M. (2010) India After Independence. New Delhi: Penguin.
- 3. Singh, M.P. & Saxena, R. (2008) Indian Politics: Contemporary Issues and Concerns. New Delhi: PHI Learning.
- 4. Vanaik, A. & Bhargava, R. (eds.) (2010) Understanding Contemporary India: Critical Perspectives. New Delhi: Orient Blackswan.

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Subject Code	ECON108	Subject Title	Macroeconomics I						
LTP	310	Credit	4	Subject Category	UC	Year	1 st	Semester	II

Course Objectives

- To introduce the nature and scope of Macroeconomics.
- To explore the concepts associated with the determination and measurement of macroeconomic variables.
- To explain how Macroeconomics deals with the aggregate economy.

Learning Outcomes

- Students will be able to understand what is macroeconomics is and why it is important.
- Students will be able to understant, how macroeconomic variables are determined.
- Students will be able to know how macroeconomic variables are useful to analyse real economic situations.

Unit 1: Introduction to Macroeconomics

Nature and scope of macroeconomics, Difference between micro and macroeconomics and importance of macroeconomics. Concepts, measurement and limitations of national income statistics, Circular flow of income in two, three and four sector economy.

Unit 2: Consumption Theory

Consumption function-APC and MPC; Saving function- APS and MPS; Keynesian Psychological Law of Consumption and its Implications. Income – consumption relationship: Absolute and relative income hypothesis and permanent income hypothesis.

Unit 3: Investment Theory

Investment function and its types, Inventory investment (autonomous and induced investment), present and future value of money in investment, determination of level of investment, MEC. Classical and Keynesian theory of investment (marginal efficiency of investment), Saving –investment equality.

Unit 4: Income and Employment

The full employment model- Classical theory of income and employment determination, Say's Law market, Keynes objections to classical theory, Keynesian theory of income and employment determination; Keynes critique of classical theory-price flexibility and unemployment.

Unit 5: Business Cycles and Policy Prescriptions

Business cycles: Phases of business cycles-feature of business cycles- Theories of business cycles), policy prescriptions to reduce the occurance of business cycles.

(10 Lectures)

(10 Lectures)

(8 Lectures)

(8 Lectures)

(9 Lectures)

Text books

- 1. Economics: Principles and Applications, N. Gregory Mankiw, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited.
- 2. Macroeconomics, Andrew B. Abel and Ben S. Bernanke, 7th edition, Pearson Education, Inc., 2011.
- 3. Dornbush, Fisher and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.

Reference books:

- 1. Macroeconomics, Olivier Blanchard, 5th edition, Pearson Education, Inc., 2009.
- 2. Principles of Economics, R.G. Lipsey and K.A. Christal, 9th Editon, Oxford University Press, 1999.
- 3. Principles of Macroeconomics, J. E. Stiglitz and Carl E. Walsh, W.W. Norton and Company, New York, 2002.

Subject Code	ECON109	Subject Title			Mat	hematic	al Econo	mics II	
LTP	310	Credit	4	Subject Category	UC	Year	1 st	Semester	II

Course Objectives

- To introduce students the concepts of optimization.
- To introduce integration to students.
- To explore input ouput analysis.

Learning Outcomes

- The students will be able to apply calculus for optimization in economics.
- The students will learn applications of integrals in economics.
- The students will learn how to apply the concepts of input-output matrix.

Unit 1: Applications of Differentiation

Maxima and minima of functions of one and two variables; Elasticity of demand; concept of marginal functions- total cost, total revenue, profit, utility, production.

Unit 2: Functions of Real Variables

Geometric representation; graphs and level curves, second order derivatives; properties and application, the implicit function and comparative statics problems; unconstrained optimization.

Unit 3: Application of Integration

Basic integration and its applications- derived demand, total cost, total revenue, total profit, utility, consumption, investment and production function using integration.

Unit 4: Input-output Analysis and Linear Programming

Input-output analysis -input-output table, Leontief matrix; Linear programing -Graphical and simplex methods (with two variables), Optimum and feasible soloution, and its applications in economics.

Text books

- 1. Fundamental Methods of Mathematical Economics, A.C. Chiang, and K. Wainwright, Fourth Edition. McGraw-Hill.
- 2. Mathematics for Economic Analysis, K. Sydsaeter and P. Hammond, Pearson Educational Asia, Delhi, 2002.

Reference books

- 1. Mathematics for Economics and Business, I. Jacques, 5th Edition, Prentice Hall.
- 2. Mathematics for Economics, M. Wisniewski, 3rd Edition, Palgrave Macmillan.
- 3. An Introduction to Mathematical Economics, D C Bose, Himalaya Publishing House, Bombay, 1996.

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(12 Lectures)

(11 Lectures)

(11 Lectures)

(11 Lectures)

Subject	HLAN14	Subject	Corporate Communication and Soft Skills						
Code	9	Title							
LTP	202	Credit	3	Subject Category	AEC II	Year	1 st	Semester	П

Course Summary

This course is to enhance the soft skills of the students. It also focuses on Business communication. It will help the students to develop professional skills and how to be effective communicator at work place.

Course Objectives

- To introduce to students to the business & corporate environment and its expectations.
- To help students to identify and sharpen their personal and professional skills.
- To ensure employability of students through a perfect blend of hard & soft skills.

Learning Outcomes

Students identify their goals and through enhanced soft skills work towards achieving them.

- Greater self-confidence and knowledge of life skills helps them to develop healthier interpersonal relationships.
- Prepares the students to face future challenges and excel in their personal and professional lives.

Unit 1: Business Communication

Importance & Features of Business Communication, Flow of Communication: Channels &Networks Business Presentation, Business Etiquette, Telephonic Etiquette

Unit 2: Self-Management

SWOT Analysis: Self-Assessment, Identifying Strength & Weakness Self-Awareness, Self-Disclosure & Self-Management (Stress, Anger) Interview Skills, Impression Management

Unit 3: Personal Skills for Corporate Communication

Goal Setting: Personal & Professional Goals, SMART-ER Goals Human Perception: Understanding People, Perceptions, Attitudes Personality (Personality Test)

Unit 4: Professional Skills for Corporate Communication (

Decision Making: Techniques, Six Thinking Hats: Creative Thinking, Lateral Thinking Team Building & Leadership Skills Time Management, Conflict Management

Lab

- Lab 1 Telephone Etiquette: Making an appointment, answering calls (Role Play)
- Lab 2Telephone Etiquette: Making an appointment, answering calls (Role Play)
- Lab 3 Business Presentations (PPT Presentation)
- Lab 4 Business Presentations (PPT Presentation)
- Lab 5 Interview Skills: Mock Interview
- Lab 6 Interview Skills: Mock Interview

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

(Lectures 6)

(Lectures 6)

(Lectures 6)

(Lectures 6)

- Lab 7 Panel Discussion
- Lab 8Panel Discussion
- Lab 9 Conflict & Negotiation (Situational Role Play)
- Lab 10 Conflict & Negotiation (Situational Role Play)
- Lab 11 Evaluation
- Lab 12 Evaluation

Textbook

- 1. Rizvi, Ashraf. Effective Technical Communication, McGraw Hill, New Delhi. 2005.
- 2. Gulati, Sarvesh. Corporate Soft skills, Rupa & Company, 2006

Reference Books

- 1. Steven R. Covey. The Seven Habits of Highly Effective People, Simon and Schuster, London, 2007.
- 2. Robbins, Stephen. Management, Pearson Prentice Hall. 2009
- 3. Carnegie, Dale. How to Win Friends and Influence People, Simon and Schuster, London, 2009.
- 4. Dr. Alex. Soft Skills: Know Yourself & Know the World, S. Chand Publications, 2001.
- 5. Gopalswamy, Ramesh. The ACE of Soft Skills: Attitude, Communication and Etiquette for Success, Pearson, New Delhi, 2008.
- 6. Ghosh, B. N. Managing Soft skills for Personality development, Laxmi Publications Ltd., New Delhi, 2013.
- 7. Elizabeth B. Hurlock. Personality Development, TMH Publication, 2010.

Subject Code	HLAN17 7	Subject Title		1	Aptitud	le and S	kill Enhan	cement II	
LTP	300	Credit	3	Subject Category	SEC II	Year	1 st	Semester	П

Course Summary

Aptitude and Verbal Ability training module is crafted to bridge the gap between skills possessed by the students and the abilities that are looked for by the organization. It not only provides career guidance about the selection process but also helps students in profile building and enhancing their cognitive skills and hence their employability quotient.

Course Objectives

- Interpret the questions of aptitude building objectively and prepare for various competitive examinations/campus recruitment exams.
- Understand the optimized approach of dealing with placement questions
- Learn ways of representing themselves effectively in formal settings

Course Outcomes

By the end of this semester, students will be able to perceive and analyze the requirements of placement trends as detailed information about the selection process would be provided by career guidance. They will be more confident and will be able to develop a professional profile, both online and offline.

QUANTITATIVE APTITUDE

Ratio and Proportion

Ratio- Introduction; Types of ratios; Comparison of Ratios; Concept of duplicate, triplicate, subduplicate and sub-triplicate ratios. Proportion and variation – Concept of direct, inverse, continuous and mean proportions. Concept of Average and Weighted Average, Mixtures and Allegation.

Data Interpretation

Introduction: Different ways of representing data- Narration based, pictorial, pie chart, Bar graph, line charts; various questions based upon them.

Permutation and Combination

Basic Principles of Counting (Addition and Multiplication); Arrangements, circular permutation, selection, grouping and distribution.

Probability

Introduction, various types of events; Classical definition of probability; Random and Discrete variables; Bayes' Theorem and question types.

Miscellaneous

Progression: Sequence and Series, Logarithm, Quadratic Equations (concept of determinant, real, non-real, rational and conjugate roots); Mensuration

LOGICAL REASONING

Seating Arrangements

Seating Arrangements – Linear / Circular / Distribution / comparison/ Floor and box arrangement /Quant based arrangements/ etc.

Puzzles

Grouping and selection, Binary logic- truth teller-lie teller, Team formation and miscellaneous puzzles.

Input Output – Sequential output tracing of logical operations applied on machine input, Ranking and Order- Test - Ordering of measurable attributes like height / weight / performances, etc., Eligibility test.

Clocks & Calendar

Problems related to clocks and calendar, Water & Mirror Images problems.

Data Sufficiency

Data Sufficiency based on logical reasoning field like Coding-Decoding / Puzzle Test / Blood Relations / Mathematical calculations / clock / calendar / etc.

Set Theory and Critical Reasoning

Union and Intersection of sets, Use of Venn diagrams in problem solving with two, three, four set, concept of maxima-minima through Venn diagram.

Critical Reasoning

Statement and assumptions, course of action, statement and conclusion, probably true/false. Statement and Inferences, cause and Effects, Statement and Arguments- Strengthen or Weaken the argument, Statement Assertion and Reason.

Verbal Analogies and Odd man out

Verbal Analogy based on various parameters - Antonym / synonym relationship, Quantity and unit, Individual and Group, Product and Raw material, cause and Effect etc.

Odd man out based on several kind of relationship – Relationship based on meaning, functional relationship, even- odd or prime-composite, divisibility rule, etc.

VERBAL ABILITY

Creative Writing: Essay, Report Writing, Article, Letters, E-mail: difference between formal and informal tone, appropriate use of transition words, creating a signature, understanding different situations and the responses they require (situation- based writing), Proper use of connectors.

Textbooks

- 1. Quantitative Aptitude: How to prepare for Quantitative Aptitude, Arun Sharma, McGraw Hill
- 2. Logical Reasoning: A Modern Approach to Verbal & Non-Verbal Reasoning by R.S. Aggarwal, S Chand Publishing
- 3. Verbal Aptitude: English is Easy- Chetanand Singh, BSC Publication

Reference Books

- 1. Quantitative Aptitude: Quantitative Aptitude for Competitive Examinations- R.S. Agarwal S. Chand Publications
- 2. Quantitative Aptitude: Quantitative Aptitude- Saurabh Rawat and Anushree Sah Rawat Savera Publishing House
- 3. Logical Reasoning: Analytical & Logical Reasoning by Peeyush Bhardwaj-Arihant Publications
- 4. Logical Reasoning: Analytical Reasoning by M.K.Pandey BSC publishing
- 5. Verbal Aptitude: Oxford Guide to English Grammar- John Eastwood, Oxford University

Subject Code	HLAN15 6	Subject Title			In	dustrial	Psycholog	У	
LTP	300	Credit	3	Subject Category	IDC II	Year	1 st	Semester	II

Course Summary

This course is to enhance the soft skills of the students. It also focuses on Business communication. It will help the students to develop professional skills and how to be effective communicator at workplace.

Course Objectives

- Student will able to understand how the science of human behavior is used to select, develop, and manage employees and organization.
- They will also learn how organizations create a supportive work environment to enhance the productivity of an industry.
- They will also able to learn group dynamics, organizational culture and principle for effective organization.

Learning Outcomes

- The students will be able to understand basic concepts of industrial psychology.
- The students will learn about the organizational best practices and strategies.
- They will also learn how organizations culture and practices creates a conducive environment to enhance the productivity of an industry.

Unit 1: Introduction to Industrial Psychology

Definitions, History & Nature & Scope of Industrial Psychology, Role of Industrial Psychology, Organizational Development.

Unit 2: Motivation and Work Behavior

Motivation & work behavior. (Theory X and Y, McClelland's, Need Theory, Herzberg's Two Factor Theory, Cultural Differences in Motivation, Groups & work teams, Group Behavior, Group formation & development.

Unit 3: Organization Culture and Leadership

Functions of organizational culture, Organizational Socialization, Assessing Cultural Values and Fit, Cross Cultural issues, Influence of Organizational Culture on Employees, Leadership vs Management, Leadership Theories, Emerging issues in Leadership.

Unit 4: Performance and Stress Management

Planning and Monitoring, Best Practices in Performance management, Training and Evaluation, Method of Performance appraisal, Work Stress and Mental Health, Time, and Conflict Management.

(Lectures 8)

(Lectures 8)

(Lectures 8)

(Lectures 8)

Text Books

1. Spector, P.E. (2016). Industrial and Organizational Psychology: Research and Practice. New Delhi:Wiley

Reference Books

- 1. Blum & Naylor (1982) Industrial Psychology. Its Theoretical & Social Foundations CBS Publication.
- 2. Aamodt, M.G. (2007) Industrial/Organizational Psychology: An Applied Approach (5th edition) Wadsworth/ Thompson: Belmont, C.A.
- 3. Aswathappa K. (2008). Human Resource Management (fifth edition) New Delhi: Tata McGraw Hill.
- 4. Robbins, S.P. &Sanghi, S. (2009). Organizational behavior (11th ed.). New Delhi: Pearson Education.
- 5. Schultz, D. and Schultz, S. E. (2006). Psychology and work today. 8th ed. N.D.: Pearson Education

Subject Code	Code	Subject Title		Environmental Science & Sustainablity							
LTP	300	Credit	3	Subject Category	VAC II	Year	1 st	Semester	Ш		

Course Objectives

To Impart basic knowledge about the environment and its allied problems and to develop an attitude of concern for the environment. Further the course structure will create the awareness about environmental problems among students and motivate the students to participate in environment protection and environment improvement programs. The course aims to develop skills to help the concerned individuals in identifying and solving environmental problems. To inculcate a sense for development activities which are in harmony with nature and meets the sustainable development goals – SDGs of United Nations.

Learning Outcomes

- Demonstrate depleting nature of Environmental Resources and Ecosystem concepts.
- Able to identify the structure and functioning of natural ecosystems & establish man-wildlife harmonious relationship.
- Adapt to 3R (Reuse, Recovery, Recycle). Identify the causes and control measures related to pollutions.
- Illustrate and analyze various Case Studies related to Environmental issues and Environmental Legislation. Create a sense of responsibility towards sustainability.

Unit 1: Basics of Environment and Natural Resources

Definition and Concept of Environment, Multidisciplinary nature of environmental studies. Scope and importance of environmental studies, Need for public awareness, Environmental concerns, and people. Introduction and classification of natural resources. Energy Resources, Water Resources, Land Resources, Forest Resources, Food Resources, Mineral Resources, Case studies related to over exploitation of resources and their impacts. Role of an individual in conservation of natural resources, Sustainable lifestyles.

Unit 2: Ecosystems & Biodiversity Conservation

Definition and concept of ecology, Structure and Function of an Ecosystem, Energy Flow in Ecosystems, Ecological succession, and ecological pyramids. Characteristic features of grassland, pond, desert, and forest ecosystems. Ecosystem services and conservation. Introduction and types of biodiversity, Value and significance of biodiversity, Biodiversity at global, national, and local levels, Threats to Biodiversity: Poaching and man-wildlife conflicts, IUCN Red Data Book and endangered & endemic species of India. Biodiversity conservation strategies

Unit 3: Environmental Pollutions

Introduction and Definition. Causes, consequences and control measures of: Air pollution, Water pollution, Noise pollution, nuclear pollution, Soil pollution, Solid waste management, Disasters and its mitigation strategies, Global warming, Climate change, Acid rain, Ozone depletion and Smog. Pollution case studies. Role of an individual in pollution prevention.

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

(Lectures 08)

(Lectures 08)

(Lectures 08)

Unit 4: Sustainability and Environment Issues

(Lectures 08)

Sustainable Development: Concept and importance, Sustainable Development Goals – SDG's. Environmental Impact Assessment (EIA), Resettlement and rehabilitation problems, Environmental audit, Eco-labeling, and eco-friendly business. Environmental legislation in India, Population explosion and its impact on environment and human health, Value education and environmental ethics.

Field work

(Lectures 04)

- Visit to a local area to document environmental asset: river/forest/grassland/hill/mountain
- Visit to a local polluted Site-Urban/Rural/Industrial/Agricultural
- Study of common flora and fauna.
- Study of a common ecosystem-pond, river, hill slopes, etc.

Text Books

- 1. Bharucha Erach, 2004. Textbook for Environmental Studies, University Grants Commission, New Delhi.
- 2. Kaushik A & Kaushik C P. 2007. Perspectives in Environmental Studies, New Age International Publ.
- 3. S. Deswal & A. Deswal 2015. A Basic Course in Environmental Studies. Dhanpat Rai & Co.

Reference Books

- 1. Miller T.G. Jr. 2002. Environmental Science, Wadsworth Publishing Co. (TB).
- 2. De A.K., 1996. Environmental Chemistry, Wiley Eastern Ltd.
- 3. Sharma, P.D. 2005. Ecology and environment, Rastogi Publication.

Subject Code	ECON206	Subject Title	Microeconomics II							
LTP	310	Credit	4	Subject Category	UC	Year	2 nd	Semester	III	

Course Objectives

- To introduce the concept of oligopoly markets.
- To introduce the theory of factor markets.
- To introduce basics of game theory.

Learning Outcomes

- The students will learn models of oligopoly.
- The students will learn personal and functional distributions of income.
- The students will learn the concepts of dominant strategy equilibrium, nash equilibrium.

Unit 1: Price and Output Determination

Oligopoly-Price and output determination – Non Collusive: Cournot, Kinked demand curve and price rigidity, Collusive: Price leadership Model; Cartels.

Unit 2: Theory of Factor Pricing

Factors of production, Functional vs. personal distribution, Functional theory of income distribution, Concepts of factor productivity, Marginal productivity theories, competative firm's equilibrium conditions regarding factor employment, Demand curve for a factor- single & with all facors variable, Competitive Industry's demand curve for a factor. Supply of factors, Determination of factor prices under perfect competition, Pricing of factors in imperfectly competitive markets-Monopsony.

Unit 3: Game Theory

Game Theory and Competitive Strategy – the normal form; dominant and dominated strategies; mixed strategies; Prisoner Dillema; Nash equilibrium extensive form game with perfect information, game theory in oligoply market.

Unit 4: Welfare Economics

Conditions of Pareto Optimality; Pareto efficiency versus Pareto optimality, Market failure and its causes; Markets with Imperfect competition; consumption and production externalities; public goods.

Text book [TB]:

- 1. Economics: Principles and Applications, N. Gregory Mankiw, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited.
- 2. Moden Microeconomics: Theory and Aaplications, H.L. Ahuja, Sultan Chand and Co., New Delhi, 2006.
- 3. Microeconomic Analysis, H. W. Varian, W. Norton, New York, 2000.

(10 Lectures)

(10 Lectures)

(10 Lectures)

(15 Lectures)

Reference books [RB]:

- 1. Microeconomics: Theory and Applications, A. Sen, Oxford University Press, New Delhi, 1999.
- 2. Principles of Economics, Karl E. Case and Ray C. Fair, 8th edition, Pearson Education, Inc., 2007.
- 3. Fundamentals of Microeconomics, C. Snyder and W. Nicholson, Cengage (India), 2010.

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

Subject	ECON20	Subject	Macroeconomics II							
Code	7	Title								
LTP	310	Credit	4	Subject Category	UC	Year	2 nd	Semester	III	

Course Objectives

- To introduce the basic concepts and theories of multipliers, general price level and interest rates.
- To introduce the mechanisms of exchange rate dynamics.
- To provide the basic concepst of various models of trade cycles.

Learning Outcomes

- The students will be able to have a broader idea of the functionings of the macro economy.
- The students will understand how prices are determined in the aggregate economy.
- The students will learn how the open economy determines exchange rates.

Unit 1: Keynesian Multiplier

Concepts of multiplier-Diagrammatic representation of multiplier-leakages in the multiplier process, Relation between multiplier, MPC and MPS, Comparative static and dynamic process, multiplier in UDC's. Acceleration principle and concept of super multiplier, Monetary and Fiscal Policies.

Unit 2: Determination of General Price level

Classical and Keynesian theory of money and prices. Quantity theory of money-Fisher cash balance approach, Cambridge cash balance approach, and inflation: Effects of inflation, Theories of inflation: cost push and demand pull inflation, Stagflation, Unemployment and Phillips curve analysis.

Unit 3: Trade Cycles

Definition of Trade Cycle, Casues of Trade Cycles, Theories of Trade Cycles (Pure Monetary Theory, Monetary Over-Investment Theory, Keynes Theory, Hicks and Samuelson), New trade cycle theories, Policy intervention to control trade cycle, Dynamic effects of trade cycles on business.

Unit 4: Balance of Payments and Exchange Rate

Balance of trade and payments – BOP on current account and capital account, distinction between current and capital account, determination of BOP, disequilibrium in BOP, determination of exchange rate and its affecting factors.

Text books

- 1. Economics, Paul Samuelson and Nordhaus, 18th Edition, Tata Hill Publishing Company.
- 2. Macroeconomics: Analysis, E. Shapiro, Galgotia Publication, New Delhi, 1996.
- 3. Principles of Macro Economics, N. Gregory Mankiw, University of Minnesota Libraries, 2016.

(10 Lectures)

(10 Lectures)

(15 Lectures)

(10 Lectures)

Reference books

- 1. Principles of Economics, R.G. Lipsey and K.A. Christal, 9th Edition, Oxford University Presss.
- 2. Macroeconomics: Theory and Policy, W. A. Branson, 3rd ed. Harper and Harper and Row, New York, 1989.
- 3. Principles of Macroeconomics, J. E. Stiglitz and Carl E. Walsh, W.W. Norton and Company, New York, 2002.

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

Subject	ECON24	Subject	Basic Statistics						
Code	6	Title							
LTP	202	Credit	3	Subject Category	SEC III	Year	2 nd	Semester	III

Course Objectives

- To introduce the basic concepts and terminologies of statistics to students.
- To introduce basic excel data handling texhniques to students.

Learning Outcomes

- The students would be able to organize data on excel.
- Students will learn descriptive statistical measures to analyze data.
- The students would be able to make graphical representation of data.

Unit 1: Population & Sample

Descriptive statistics, inferential statistics; population, census, parameter, sample, survey, sample statistic; theoretical basis of sampling; probability & non probability sampling methods; sampling bias, sampling and non-sampling errors.

Unit 2: Measures of Central Tendency & Dispersion

Measures of central tendency – mean, median, mode, A.M., G.M., H.M; measures of dispersion - range, inter-quartile range, quartile deviation, mean deviation, variance, standard deviation, Skewness and Kurtosis.

Unit 3: Organizing & Representing Data

Presentation, classification and graphical representation of statistical data – types of data, types of variables, frequency tables, one-way, two-way data tabulation and interpretation, histogram, pie chart, line graph, box- plots; correlation and covariance meaning; calcuting correlation coefficients – Spearman & Pearson partial correlation, pairwise correlation.

Unit 4: Index Numbers

Construction of index numbers; Laspeyres, Pasche's and Fisher's index numbers; consumer price index; Time reversal, factor reversal and circular tests.

Lab

- **a.** Excel modules on generating simple random samples, systemic samples, stratified samples, and cluster samples
- **b.** Excel modules to calculate mean, median, mode, range, quartiles, variance, standard deviation, skewness kurtosis of grouped and ungrouped data
- **c.** Excel modules on organizing, classificiation, and graphical representation of data; tabulating one way and two-way tables, histogram, pie chart, line graph, box- plots; finding correlation and covariance of data.
- **d.** Excel modules to calculate index numbers.

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

(15 Lectures)

(15 Lectures)

(8 Lectures)

(7 Lectures)

Text books

- 1. Fundamentals of Statistics, S.C. Gupta, S. Chand & Sons New Delhi, 2013.
- 2. Theory and Problems of Statistics, Murry R Spiegel, Schaum's outline series, McGraw Hill, 1992.
- 3. Applied Statistics for Economists, P.H. Karmal and M. Polasek, 4th edition, Pitman, Australia.
- 4. Gupta, S.C. 2021. Statistical Methods. Sultan Chand & Sons S.P. Gupta.

- 1. Mathematical Statistics, John E. Freund, Prentice Hall, 1992.
- 2. An Introduction to Mathematical Statistics and its Applications, Richard J. Larsen and Morris L. Marx, Prentice Hall, 2011.
- 3. Basic Statistics, A.M. Gun, M.K. Gupta, B. Dasgupta, World Press Private Limited Nagar.
- 4. Kumar, Dinesh U. 2017. *Business Analytics: The Science of Data-Driven Decision Making*. India: Wiley India.

Subject Code	HLAN24 7	Subject Title		Computer Applications in Social Science
LTP	202	Credit	3	Subject CategoryIDC IIIYear2ndSemesterIII

Course Objectives

- To enable students to have an understanding of how computers work and make academic work more efficient.
- Learn basic word processing skills.
- To learn principles of using Excel and SPSS and how to work on it.

Learning Outcomes

- The student will be able to apply mathematical and scientific reasoning to a variety of computational problem of economic analysis.
- The student will be able to demonstrate a basic understanding of computer software, how to assess hardware, solve problems using computer software, doing business online, and the inner workings of the Internet.
- The student will be able to describe the features and functions of the major categories of applications software (word processing, database, spreadsheet, presentation).
- The student will be able to create and format text in various communication forms, to create presentation, application of excels in business and how to work with databases.

Unit 1: MS word

Introduction to Word Processing: Editing, viewing documents in different layouts, page margins, indent, bulleting and numbering, bold face, italics, underline, fonts and fonts size, borders and shading, find and replace, page breaks and page numbers, headers and footers, Printing: What To Do Before Printing? Introduction To 'Page Setup', 'Print Preview' And 'Print, Dialog Box'

Unit 2: MS-Excel: Excel basic

Introduction about Microsoft Excel at the basic level: overview, tools, creates a spreadsheet, format, spreadsheet, calculations, create charts and printing; Solve problems with Excel: Solve some economics problem on spreadsheet: Introduction about the modelling process on spreadsheet and using Excel tools to solve the problems, basic statistics in excel.

Unit 3: MS-Power Point

Presentation with PowerPoint: PowerPoint components, What's Slide Master? What's Title Master? Creating a presentation with full components: text, picture, drawing, WordArt, equation, organization chart, chart, table, sound, video clips, Customizing and applying effects for a slide: template design, background color, animation, effects, built-in animation effects, navigation buttons, etc. Printing and exporting a slide

(10 Lectures)

(8 Lectures)

(8 Lectures)

Text books

- 1. Fundamentals of Computers, V. Rajaraman, 3rd Edition, Prentice Hall (Ind.) New Delhi. 2005
- 2. Computer Fundamentals, Sinha V, BPB Publications, New York. 2003
- 3. Fundamentals of Computers, Rajaraman PHI Publication, New Delhi, 2003.

- 1. Absolute Beginner's Guide to Computer Basics, Michael Miller.
- 2. Easy Computer Basics, Michael Miller. 5th Edition, 2007
- 3. Computer Course Kit by Vikas Gupta.
- 4. Microsoft Office Access 2007 on demand by Steve Johnson.

Subject Code	HLAN246	Subject Title			Hu	man Va	lues & E	thics	
LTP	200	Credit	2	Subject Category	AEC III	Year	2 nd	Semester	III

Course Objectives

- To inculcate the skills of ethical decision making and then to apply these skills to the real and current challenges of the Engineering profession.
- The main objective of the course is to enable the students to understand the need and importance of value-education and education for Human Rights.
- It also aims to develop their inter personal and leadership skills and empower them to develop into evolved human beings.

Learning Outcomes

- Students will become more sensitive to their surroundings including both people and nature, with commitment towards what they believe in (human values).
- Be able to understand how universal values can be uncovered by different means, including scientific investigation, historical research, or public debate and deliberation (what some philosophers call a dialectic method).
- They will become more aware of their self and their relationships and have better reflective and discerning ability.
- Be able to understand and discuss the idea of moral relativism and the challenges it poses to universal values.

Unit 1: Introduction

Nature of Value-Crisis in the contemporary Indian society, Meaning, Nature & Types of Values; Sources of Value Formation, Foundational Human Values – Integrity, Freedom, Creativity, Morals, Love and Wisdom, Case Studies Case Studies on the above aspects

Unit 2: Societal Values & Material Values

Definition of Society, Units of Society, and Social Consciousness. Concepts & Principles of Interdependence, Conceptualizing 'Good Society' and 'Social Goods' and Corporate Social Responsibility, Role of Material Values in promoting Human Well-being. Role of Science and Technology; Problems of Material Development, Case Studies Case Studies on the above aspects

Unit 3: Psychological & Spiritual Values

Humanistic Psychology; Concept of Intelligence, Emotional Intelligence & Mental health; Cognitive Dissonance & Ego Defense, Maslow's Hierarchy of Human Need; Characteristics of 'Self-Actualizing' persons; Understanding Common Religion & Concept of Dharma and Spirituality; Case Studies Case Studies on the above aspects

(Lectures 6)

(Lectures 6)

(Lectures 6)

Unit 4: Psychological & Moral Values

(Lectures 6)

Bases for moral Judgments: Customary Morality, Religious Morality, Reflective Morality. Concept of Professional values: Competence, Confidence, Devotion to Duty, Efficiency, Accountability, Respect for learning / Learned, Willingness to Learn, Open and Balanced mind; Team spirit; Willingness for Discussion, Aims, Effort, Avoidance of Procrastination and Slothfulness, Alertness, IEEE; Case Studies Case Studies on the above aspects

Text book

1. Human Values - Prof. A.N. Tripathi New Age International, 2009

Reference Book

1. Human Values and Professional Ethics - Jayshree, Suresh and B.S. Raghwan , S. Chand Publication, 2011-12

Subject Code	ECON208	Subject Title				India	n Economy		
LTP	310	Credit	4	Subject Category	UC	Year	2 nd	Semester	IV

Course Objectives

- To enable students to have an understanding of the various issues/components of the Indian economy.
- To explore a set of inter related issues relating to the growth and development of the Indian Economy.
- To enable students to develop a knowledge of the broad frame work of the economy of the country.

Learning Outcomes

- The students will have a good understanding of the structure, achievements, and issues of Indian economy.
- The student will be able to understand the role of all sectors in Indian economy.
- The student will be able to analyze the effects of various policies / programmes on economic condition •

Unit 1: Overview of Indian Economy

Basic features and problems of Indian before Independence; Planning in India: Features, Objectives and assessment of Indian planning; Economic Reforms and Liberalization;

Unit 2: Sectoral Composition of Indian Economy

Importance and Role of Agriculture in Indian Economy Green Revolution and its Challenges and possibilities of Indian agriculture. Industrialization and Economic Development; Issues and Prospects of MSMEs; Service Sector Growth-Pattern: Services Led Growth in India.

Unit 3: Growth and Distribution

Poverty and Unemployment in India; Programmes for Eradication of Poverty and Unemployment with Special Reference to the Post – Reform Era. Inequality and Inclusive Growth: The Income/Consumption and other Non-Income Measures

Unit 4: Population and Human Development

Demographic trends and issues; education; health and malnutrition; Inter-state disparities in the pattern of development; Different types of migratory flows and their impact on the economies of their origin and destination; India's position in HDI, Gender Inequality Index, Multi-dimensional poverty index.

Unit 5: Institutions and Its Impact on Indian Economy

Planning Commission, NITI Aayog, RBI, WTO Agreements and India.

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

(8 Lectures)

(8 Lectures)

(8 Lectures)

(8 Lectures)

(13 Lectures)

Text books

- 1. Kapila, Uma (2022-23) Indian Economy Since Independence, 33 Edition, Academic Foundation.
- 2. Kapila, Uma (2019): Indian economy II-Macroeconomic Policies, Sectoral Developments and Performance, Academic Foundation
- 3. The Indian Economy Problem and Prospects, Bimal Jalan, Viking, New Delhi, 1992.
- 4. The Indian Economy- Recent Developments and Future Prospects, E.B. Lucas, and G.F. Papanek, Oxford University Press, New Delhi, 1988.

- 1. The Development Process of Indian Economy, P.R. Brahmananda, and V.R Panchmukhi, (eds.): Himalaya Publishing House, Bombay, 1987.
- 2. The Indian Economy: Major Debate since Independence, T J Byres, (Ed.), Oxford University Press, New Delhi, 1998.
- 3. Economic Survey: Government of India. Various Issues.

Subject Code	ECON209	Subject Title			E	Conomi	cs of Touri	sm	
LTP	310	Credit	4	Subject Category	UC	Year	2 nd	Semester	IV

Course Objectives

- To provide a thorough understanding of the economics of tourism.
- To ascertain the interlinkages of drivers of growth in tourism and economy.
- To enable students about the opportunities and challenges of tourism sector in India—with special reference to Uttarakhand state.

Learning Outcomes

- Students will be able to understand the dynamics of economics of tourism.
- Students will be able to identify the opportunity and challenges of tourism for the growth of Indian economy.
- Students would be able to acknowledge the significance of regional planning for the growth of economics of tourism.

Unit 1: Introduction

Meaning, concept and types of tourism, interlinkages between tourism and economy; economic, social and cultural drivers of tourism growth, opportunities and challenges for development of tourism.

Unit 2: Tourism in the World: An overview

Changing patterns of tourism in the context of globalization, aspects of regional tourism, contours of tourism and sustainable development, selected case studies of developed and emerging tourist destinations.

Unit 3: Dynamics of Tourism in India

Tourism: A catalyst for tertiary sector, policy initiatives for tourism-promotion in India, discourse of ruralurban dualism, migration/urbanization: a threat to natural landscape.

Unit 4: Economics of Tourism in Uttarakhand

Comparative model of tourism in Himachal and Uttarakhand states, analysis of economics of tourism through Char-Dham yatra, state policy initiatives to link tourism with livelihood, empowerment of women and promotion of self-help groups, home-stays; opportunities of reverse migration in Uttarakhand.

Text Books/ Reference Materials:

- 1. Tourism: Concepts, Theory and Practice by M.R. Dileep, 2020.
- 2. Economics of Tourism Destinations, 2nd Edition by Vanhove and Norbert, T and F India.
- 3. The Economics of Tourism by Mike J. Stabler, Andreas Papatheodorou, M. Thea Sinclair, 2010.
- 4. The Economics of Tourism Paperback by Mike J. Stabler, Andreas Papatheodorou and M. Thea Sinclair, 2009.

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

(11 Lectures)

(11 Lectures)

(12 Lectures)

(11 Lectures)

- 5. Tourism Industry on Indian Economy (Uttarakhand) by Dr. A.K. Chattoraj and Dr. Amit Kumar.
- 6. Cultural History of Uttarakhand by D.D. Sharma, D. K. Print World Pvt. Ltd., 2009.
- 7. Know Your State Uttarakhand by Dinesh Singh Negi and Priyanka Ahuja, 2016.
- 8. Cultural Tourism in India (Problems and Prospects) by Pradeep Kumar & Anil Kumar, Aayu Publications, 2022.
- 9. Tourism and Handicrafts of India, J.C. Dua, Kaveri Books, 2013.
- 10. Reports and publications of Ministry of Tourism, Government of India and Uttarakhand.

Subject Code	ECON216	Subject Title			Statist	tics For I	Economic 4	Analysis	
LTP	302	Credit	4	Subject Category	UC	Year	2 nd	Semester	IV

Course Objectives:

- To apprise students with probability and counting techniques.
- To develop the undertanding of inferential statistics using parametric and non parametric hypothesis testing.
- To make students use statistical software to analyze and interpret statistical tests.

Learning Outcomes

- Students learn and apply elementary probability theory in practice.
- Students will be able to perform parametric and non-parametric statistical testing.
- Students will learn statistical software methods to apply statistical methods in economic and social context.

Unit 1: Elementary Probability Theory

Randon experiment; sample space; events; types of events; counting techniques - permuations; combinations; venn diagrams, union and intersection of sets; definition and properties of probability; calculating probability; decision trees; conditional probability and numericals, Baye's theorem and numericals.

Unit 2: Probability Distributions

Definition and types of random variables; mathematical expectations; variance and covariance using expectations; discrete and continutous Probability distributions with density functions– Bernoulli, Binomial, Poisson, Uniform, Normal and Standard Normal distributions; joint distributions of two or more random variables.

Unit 3: Sampling Distributions

Concept and properties of sampling distributions; t-distribution; F-distribution; χ^2 distribution; sampling distribution of sample mean, sample proportion, sample variance; Central Limit Theorem; Chebyshev's Rule.

Unit 4: Parametric and Non-Parametric Tests

Point and Interval Estimation; confidence intervals; one-taled and two-tailes tests; inference based on single samples - z-test, t-test, χ^2 tests; inference based on two samples - t-test, F-test; Non-parametric tests - Sample Wilcoxon Signed Rank test, Kruskal-Wallis test, Friedman test, Mann-Whitney test.

Lab (Use of any statistical software such as EViews, SPSS, R, Python, Stata)

- **1.** To calculate sample space of events and different probability measures
- **2.** To calculate and graphically represent probability distributions of variables from freely available databases
- 3. To calculate and graphically represent sampling distributions from freely available databases
- **4.** To calculate and graphically represent probability distributions of variables from freely available databases.

(12 Lectures)

(12 Lectures)

(12 Lectures)

(9 Lectures)

Text book [TB]:

- 1. Fundamentals of Statistics, S.C. Gupta, S. Chand & Sons, New Delhi, 2013.
- 2. Mathematical Statistics, John E. Freund, Prentice Hall, 1992.
- 3. Basic Statistics, Gun. Gupta, Dasgupta, World Press Private Limited Nagar, 1966.

Reference books [RB]:

- 1. Theory and problems of Statistics, R Murry Spiegel, Schaum's outline series, McGraw Hill, 1992.
- 2. An Introduction to Mathematical Statistics and its Applications, Richard J. Larsen and Morris L. Marx, Prentice Hall, 2011.
- 3. Kumar, Dinesh U. 2017. *Business Analytics: The Science of Data-Driven Decision Making*. India: Wiley India.

Subject Code	ECON217	Subject Title			Introdu	uction to	Research	Methods	
LTP	310	Credit	4	Subject Category	UC	Year	2 nd	Semester	IV

Course Objectives:

- To make the students to have an exposure to analysis the various types of data and understand how primary data can be collected at household's level.
- To enable the students to have a strong idea on various techniques to analyse the primary and secondary data.
- To increase the understanding of students to undertake the research on various aspect of economic and social issues.

Learning Outcomes

- The students will be able to acquire a strong research background and knowledge of research methodology.
- The students will have an exposure to analyse the various types of data and understand how primary data can be collected at household's level.
- The students will be efficient to write a scientific report and scientific research articles.

Unit 1: Introduction to Research

Meaning of research, Objectives, Motivation, Types and significance of research; Methods vs methodology, Research Process, Criteria of Good Research, Research Problems- Selecting Research problems, Meaning and Nature of Research Design.

Unit 2: Sampling Techniques

Sampling-probability and non-probability sampling; Measurement- construct validity and reliability; Survey research- types of surveys and interviews; Scaling- Thurston, Likert and Guttman scaling

Unit 3: Qualitative and Quantitative Techniques

Collection of Data and Techniques; Qualitative Measures- data, approaches and validity, Design-Experimental and quasi-experimental Quantitative Measures: Correlation and regression analysis.

Unit 4: Analysis and Interpretation of Data

Analysis- data preparation, descriptive statistics, hypothesis testing, multivariate analysis (inferential statistics), interpretation of results.

Unit 5: Report and Research Paper Writing

Structuring a research paper; How to write sections on abstract, introduction, literature review, data and methodology, results and discussion, and conclusion; how to cite articles; Writing: review article; scientific research article; technical reports.

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

(9 Lectures)

(9 Lectures)

(9 Lectures)

(9 Lectures)

(9 Lectures)

Text book:

- 1. Research Methodology: Methods and Techniques, C.R. Kothari, 2nd Edition, New Age International, 2009.
- 2. Introduction to Mathematical Statistics, R.V. Hogg, A. Craig, and McKean. 6th Edition, Prentice Hall, 2004.
- 3. Research Methods: The Concise Knowledge Base, W.T. Trochim, Atomic Dog Publisher, 2004.

- 1. Qualitative data analysis: An expanded sourcebook, M. B. Miles, & M. Huberman, Thousand Oaks, 2nd Edition, CA: Sage Publications, 1994.
- 2. Writing literature reviews: A guide for students of the social and behavioral sciences, J.L. Galvin, 4th edition. Glendale, CA: Pyrczak. 2009.
- 3. A manual for writers of research papers, theses, and dissertations, K.L. Turabian, Chicago, IL: University of Chicago Press, 2007.

Subject Code	ECON306	Subject Title			De	evelopm	ent Econor	nics	
LTP	310	Credit	4	Subject Category	UC	Year	3 rd	Semester	V

Course Objectives:

- To provide the basic concept of economic development and its main indicators.
- To provide the crucial theories of economic development and their viability in a economy.
- To explain the role of economic planning and policies in economic development.

Learning Outcomes

- The students will be able to understand the meaning and the indicators of economic development.
- The students will be able to addresses the development issues for poor countries.
- The students will be able to understand the role of economic planning and policies in development.

Unit 1: Basic Concepts of Economic Development

Concepts of economic growth and development, Determinants and measurement indicators – PQLI and HDI, comparative aspects of developed, developing and underdeveloped economies.

Unit 2: Theories of Economic Development

Classical theory of economic development, Latest advancement in theories of economic growth and development, Keynesian model; Nelson Low level of equilibrium trap, new classical growth models, endogenous growth models, Theories of dualistic development: Nurkse disguised unemployment as saving potential, Fei Ranis Theory of Dual Economy

Unit 3: Poverty and Inequality

Concept and measurement of poverty, Indicators of Poverty, Multidimnensional poverty index, Poverty as a concern in MDG and SDG, Concept and measurement of inequality, Types of inequalities, Connection between economic growth, developement and inequality.

Unit 4: Approaches to Development

Big push theory of industrialization, Lewis theory unlimited supply of labour, Lebenstein critical minimum effort theory, Balanced vs. unbalanced growth theories. The Harrod-Domar model, the Solow-Swan long-run growth model, Demographic transition and development.

(9 Lectures)

(13 Lectures)

(10 Lectures)

Text books

- 1. Economic Development, P. Michael, Todaro, and Stephen C Smith, Pearson Education, (Singapore) Pvt. Ltd., Indian Branch, Delhi, 2004.
- 2. Development Economics, D. Ray, Seventh impression, Oxford University Press, New Delhi, 2009.
- 3. Development as Freedom, Amartya Sen, Oxford University Press, 2000.
- 4. Economics of Development and Planning (Theory and Practice), V.K. Puri and S.K. Misra, Himalaya Publishing House Pvt. Ltd., Mumbai, 2016.
- 5. M.P. Todaro, Economic Development in the Third World, Orient Longman
- 6. Subrata Ghatak, Introduction to Development Economics, Routledge, 4th edition.

- 1. Leading Issues in Economic Development, *M.* Gerald, Meier, and James E. Rauch, Oxford University Press, New York, 2000.
- 2. Growth Economics, A K Sen, (ed.) Penguin Books, 1970
- 3. Understanding Poverty, Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, Oxford Press, 2006.

Subject Code	ECON307	Subject Title				Basic E	conometric	2S	
LTP	302	Credit	4	Subject Category	UC	Year	3 rd	Semester	V

Course Objectives

- To familiarize students with simple and multiple regression analysis using economics data and to make correlational and causal relationship between variables.
- To make studentst specify assumptions, formulate and estimate appropriate models, interpret the results and test their statistical significance.
- To make the students write a good quality undergraduate research paper in economics using the econometric methods taught in this class

Learning Outcomes

- The students will be able to understand regression analysis and its application in different fields of economics.
- The students will be able to distinguish between cause-and-effect relationships between variables.
- Students will be able to gather data, formulate econometric models, analyze and interpret results to fit their research needs.

Unit 1: Types of Economic Data

What is econometrics; structure of economic data – cross-section data; panel data; time series data; difference between correlation and causation.

Unit 2: Simple & Multiple Linear Regression Model

Definition; deriving OLS estimates; units of measurement and functional form; interpreting coefficients; regression through origin; Gauss-Markov theorem; fitting regression line; expected value and variance of OLS estimators; properties of OLS estimates - BLUE.

Unit 3: Regression Model Diagnostics

Sampling distribution of OLS estimators; t-test of estimated coefficients; confidence intervals and P-values; F-test for overall significance; R^2 goodness of fit; adjusted- R^{2} ; omitted variable bias; model misspecification; restricted and unrestricted models; nested and non-nested models; identifying correlation or causation; reporting regression results; logarithmic models; binary & categorical independent variables; interaction terms; quadratic models; computing partial effects; linear probability models.

Unit 4: Issues with Regression Models

Multicollinearity; issues and handling of missing data; outliers and influential observations; measurement errors in dependent and independent variables; RESET test; test for normality; problem of heteroskedasticity – tests for detection and remedies; autocorrelation – tests and remedies.

(18 Lectures)

(12 Lectures)

(5 Lectures)

(10 Lectures)

Labs - (Use of statistical softwares such as EViews, SPSS, R, Python, Stata)

- **1.** Organizing different types of data; naming and labeling variables; making descriptive statistics, and graphs scatter plots, histograms, line graphs.
- 2. Estimate simple & multiple regression models, fit regression lines, and interpret coefficients.
- **3.** Obtain and interpret t-tests, F-tests, R², adjusted- R²; testing model specifications and omitted variable bias; log-models. Interaction models; binary independent variable and quadratic models.
- 4. Detect and solve the above issues with estimated regression models.

Text books

- 1. Wooldridge, J.M. 2022. Introductory Econometrics. India: Cengage Learning India Pvt. Ltd.
- 2. Essentials of Econometrics, Gujarati D. N. and Porter D.C., 4th Edition, McGraw Hill, 2009.
- 3. Introduction to Econometrics, Christopher Dougherty, 3rd Edition, Oxford University Press, 2007.

- 1. Basic Econometrics, Johnston J and Nardo D, 4th Edition, McGraw Hills Co., 1997.
- 2. Econometric Analysis, Green William, 8th Edition, Pearson Education. 2018.

Subject Code	ECON308	Subject Title			Histo	ory of E	conomic Tl	nought	
LTP	310	Credit	4	Subject Category	UC	Year	3 rd	Semester	V

Course Objectives

- To provide the knowledge on economic thought which have emerged over time.
- To Introduce The Critical Comparison Of The Contributions Of The Various Schools Of Economics.
- To provide the relavnce of these thought in current economic persepctives

Learning Outcomes

- The students would able to acquire a comprehension of the evolution of economic ideas tracing to its philosophical roots.
- The students would get the knowledge of a variety of theoretical models and mechanisms and arguments about various schools of thought relating to economic ideas.
- The students would be able to understand the importance of economic thought in current economic situation.

Unit 1: Introduction

The Economic Revolution, Scope and Significance of the Study of History of Economic Thought. Methodology of Economics: Economics as a Scientific Discipline; Techniques of Economic Analysis; Sociology of Economics; Relativist and Absolutism; Deductive and Inductive Methods.

Unit 2: Mercantilism & Physiocracy

Factors Responsible for the Rise of Mercantilism; Views on Trade, Money, Finance and Nation State; Rise of Physiocracy; The concept of Natural Order; Net Product and Circulation of Wealth.

Unit 3: Adam Smith & Malthus

Theories of Value, Distribution and Growth. Ricardian Economics: Value Analysis; Theories of Trade and Distribution; Views on Machinery and Employment; Malthus - Theory of Glut and Glut Controversy.

Unit 4: Marxian Economics

Dialectical Materialism and Laws of Dialectics; Mode of Production and its Fundamentals; Historical Materialism and Pre Capitalistic Economic Formations (Primitive Communism, Slavery and Feudalism); Labour Theory of Value; Development and Decay of Capitalism (commodity production, Accumulation, Surplus value and Organic Composition of Capital).

Text books:

- 1. An Outline of the History of Economic Thought, Screpanti Ernesto and Zamagni Stefano, 1st Edition, Oxford University Press, 2006.
- 2. History of Economic Thorught, H.L. Bhatia, 4th Edition, Vikash Publishng House, 1978.

(12 Lectures)

(12 Lectures)

(12 Lectures)

(12 Lectures)

- 1. Schumpter, J A. (1954): History of Economic Analysis, Oxford University Press.
- 2. Blaug, M. (1983): Economic Theory in Retrospect, Cambridge University Press.
- **3.** Dobb, M. (1975): Theories of Value and Distribution since Adam Smith, Cambridge University Press.
- 4. Helbroner, R. L. (1953): The Worldly Philosophers, Touchstone Books.
- **5.** Hunt. E.K. and M. Lautzenheiser (2011): History of Economic Thought: A Critical Reader, PHI Publication.
- **6.** Roll, E. (1992): History of Economic Thought, Faber and Faber Publication.
- 7. Gide, C and Rist, C (1948): A History of Economic Doctrines, George G Harap & Co.
- 8. Ekelund, R. B. Jr and R. F. Hebert (1990), A History of Economic Theory and Method, McGraw Hill Publication.
- 9. Sweezy, P. (1945): Theory of Capitalist Development, Monthly Review Press.
- 10. Bottomore, T. (1985): Dictionary of Marxist Thought, Basic Black Well.

Subject Code	ECON309	Subject Title				Energy	Economic	8	
LTP	310	Credit	4	Subject Category	UC	Year	3 rd	Semester	V

Course Objectives

- Develop holistic understanding of energy sector problems.
- Demonstrate the use of economics concepts, which are relevant for energy industry.
- Provide a framework related to energy demand, energy supply, and energy regulation

Learning Outcomes

- examine energy economics and its impact on dynamic environment.
- associate the current economic phenomenon with existing theory of energy economics and put their views on contemporary economic issues.
- apply the principle of energy economics in explaining the behaviour of consumers and producers.
- integrate the theoretical and conceptual understanding with energy business.

Unit 1: Introduction to Energy Economics

Introduction to Energy Economics, Energy Basics, Importance of Energy Resources, Types and Classification of Energy, Emergence of Energy Economics - Its nature & scope.

Unit 2: Energy Sources and Classification

Sources of Energy: Renewable and non-renewable energy, Changing pattern of world energy consumption, Energy scenario in India, Energy Policy and Environmental Quality

Unit 3: Role of Energy in Economic Development

Role of Energy in Economic Development, Energy intensity and Elasticity - National and International Comparison, Role of Institutions like ONGC, OPEC, OAPEC, IEA and World Bank.

Unit 4: Energy Planning

Energy Planning and conservation: Meaning and objective, Energy management - Meaning and objective, Energy pricing and taxes.

Unit 5: Energy and Environment

Energy Crisis: causes - Consequences and Remedial Measures, Environmental Crisis: Causes and Consequences, Impact of Energy consumption on production and Environment.

(9 Lectures) and

(9 Lectures)

(9 Lectures)

(9 Lectures)

(9 Lectures)

Text books

1. Bhattacharyya, S. C. (2011). Energy economics: concepts, issues, markets and governance. Springer Science & Business Media.

Reference books

1. Munasinghe, M. & Meier, P. (1993). Energy Policy and Modeling. Cambridge University press

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

Subject Code	ECON316	Subject Title				Summe	r Internshi	р	
LTP	204	Credit	4	Subject Category	SEC	Year	3 rd	Semester	V

Course Objectives

This course is designed for students who want to gain practical experience in applying economic concepts and methods to real-world problems. Students will work as interns in various organizations, such as government agencies, non-governmental organizations, think tanks, or private firms, under the supervision of a faculty member and a mentor from the host organization. Students will also attend weekly seminars to discuss their internship projects, learn from guest speakers, and reflect on their professional development. The course aims to enhance students' skills in economic analysis, communication, teamwork, and ethical reasoning.

Learning outcomes

- Ability to apply economic theories and tools to analyze and solve problems in their internship settings
- Ability to communicate effectively with diverse audiences using oral, written, and graphical modes
- Ability to collaborate with peers, mentors, and supervisors in a professional manner
- Ability to identify and evaluate the ethical implications of their economic decisions and actions

• Ability to demonstrate self-awareness and critical thinking about their own learning and career goals

The assessment of this course will be based on the following criteria:

- Internship performance: Students will receive feedback from their mentors and supervisors on their work quality, productivity, initiative, and professionalism
- Internship report: Students will write a report summarizing their internship activities, outcomes, challenges, and learnings
- Seminar participation: Students will actively participate in the seminars by sharing their experiences, asking questions, providing feedback, and engaging with guest speakers
- Reflection paper: Students will write a paper reflecting on their personal and professional growth during the internship, as well as their future plans and aspirations.

Subject Code	ECON317	Subject Title			In	ternatio	nal Econor	nics	
LTP	310	Credit	4	Subject Category	UC	Year	3 rd	Semester	VI

Course Objectives

- To make the students understand the importance of international theories to maintain trade relations.
- To give an exposure to the students that how countries specialize in certain goods and services for comparative advantage over other countries and how this changes over time.
- To enable the students to have knowledge of balance of payment and balance of trade, international monetary system and rationale of protection.

Learning Outcomes

- The students would be efficient to understand the importance of international theories to maintain trade relations at global level.
- The students will have an exposure to the students that how countries specialize in certain goods and services for comparative advantage over other countries and how this changes over time.
- The students will have knowledge of balance of payment and balance of trade, international monetary system and rationale of protection.

Unit 1: Introduction to International Economics

Concept of international trade, International trade and nation's standard of living, Theories of absolute advantage, comparative advantage and opportunity cost: Hecksher-Ohlin theory of trade, Concepts of terms of trade, International product life cycle theory.

Unit 2: Balance of Payments, Exchange Rates and Investment Flows(12 Lectures)

Concepts of balance of trade and payments, Equilibrium and disequilibrium in balance of payments, Various measures to correct deficit in the balance of payment, Theories of exchange rates, International flow of investment.

Unit 3: IMF and International Economic Institutions

Bretton-wood systems and its breakdown, Special Drawing Rights, IMF, World Bank, WTO, Asian Development Bank, Washington consensus and post-Washington consensus.

Unit 4: Protection and Co-operation in International Trade

Tariff and non-tariff barriers to trade (Quota, voluntary export restraints, export subsidies, dumping and international cartel), Optimum tariff, Forms of economic co-operation, Static and dynamic effects of custom union; trade and economic sanctions.

(12 Lectures)

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(12 Lectures)

(9 Lectures)

Text books

- 1. International Economics, Kindleberger C.P. Krugman Paul R. and Obstfeld Maurice, 8th Edition, Pearson Education, 2007.
- **2.** Globalizing Capital: A History of the International Monetary System, Barry Eichengreen, 2nd Edition, 2008.

- **1.** Paul Krugman, Maurice Obstfeld, and Marc Melitz, International Economics: Theory and Policy, Addison-Wesley (Pearson Education Indian Edition), 9th Edition, 2012.
- **2.** Dominick Salvatore, International Economics: Trade and Finance, John Wiley International Student Edition, 10th edition, 2011.
- **3.** Globalizing Capital: A History of the International Monetary System, Barry Eichengreen, 2nd Edition, MecGrill Publication Delhi, 2008.
- **4.** Bo Sodersten and Geoffrey Reed. International Economics. Palgrave Macmillan. 3rd edition, 1994.

Subject Code	ECON318	Subject Title	Public Finance						
LTP	310	Credit	4	Subject Category	UC	Year	3 rd	Semester	VI

Course Objectives

- To enable the students to analyze the key issues and challenges in implementing government policies.
- To help the students to study the specific costs and benefits of government intervention.
- To enable the students towards India's public finance. ٠

Learning Outcomes

- The students would be able to get the significant idea on public finance and its importance.
- The students would be able to know the government taxation, expenditures pattern, public goods, market failures and externalities.
- The students would be able to acquire the knowledge about government policy and revenue structure ٠ of country.

Unit 1: Public Finance and Public Goods

Meaning scope and subject matter of public finance, Principle of maximum social advantage, Public vs. private finance, Fiscal functions-allocation, distribution and stabilization, Public goods - pure and partial, private goods and merit goods, Free rider problem.

Unit 2: Externalities and Government Policies

Definition and types of externalities, Externalities and efficiency, Internalization of externalities: corrective taxes and subsidies, Lindahl's equilibrium model and the Coase Theorem.

Unit 3: Public Revenue and Expendidure

Tax and non-tax revenue, direct and indirect taxes, effects of tax on production, distribution and economic activities. Benefit theory, Ability to pay theory, Burden of taxation: Neutrality in taxation, shifting and incidence of taxation. Classification of public expenditure, Wagner's Law and Wiesman-Peacock Hypothesis, Priciples of public expenditure, Effect of public expenditure.

Unit 4: Indian Public Finance-I

Features of Indian tax system, Tax revenues of the central and state governments, Direct and indirect taxes, Changing tax structure of India, Tax reforms since 1991: Composite Tax System in India – GST.

Unit 5: Indian Public Finance-II

Budget, receipts and expenditures, budgetary deficit, fiscal deficit, revenue deficit and primary deficit, Public debt: problems and issues, Fiscal federalism in India: Transfer of resources from centre to state.

(9 Lectures)

(9 Lectures)

(9 Lectures)

(9 Lectures)

(9 Lectures)

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

Text book

- 1. The Theory of Public Finance, Musgrave RA, 3rd Edition, McGraw Hill, 2006.
- 2. Economics of the Public Sector, Ghosh Ambar and Ghosh Chandana, 7th Edition, PHI, 2007.

- 1. Public Finance in Theory & Practice, Singh SK, 3rd Edition, S Chand & Company, 2010.
- 2. Public Finance, Bhatia HL, 9th Edition, Vikash Publishing House, 2018.

Subject Code	ECON319	Subject Title	Money & Banking						
LTP	310	Credit	4	Subject Category	UC	Year	3 rd	Semester	VI

Course Objective

- To make the students to develop a basic understanding of the financial system: how it operates and why it plays a central role in the economy.
- To enables students to learn structure and role of financial markets and institutions.
- To enable the students to analyze in detail the aims, conduct, influence and limitations of monetary policy.

Learning Outcomes

- The Students would be able to understand the importance of money and banking system in economic development.
- The studuent would be able to examine the nature of money, definitions of the money supply and different approaches to determining how the money supply is created.
- The students would be able to discuss the recent performance of financial markets and government intervention strategies in light of economic theory.

Unit 1: Money Supply and its Function

Barter Economy, Evaluation and Functions of Money, Role of Monehy, Circular Flow of money, Monetary Standard, Measurment of Money, Value of money, Quantity Theory of Money –Cash Transaction and Cash Balance Approach.

Unit 2: Concept of Financial Market and Institutions

Financial Institutions, Markets, Instruments: Role of financial markets and institutions; problem of asymmetric information – adverse selection and moral hazard; financial crises. Money and capital markets: organization, structure and reforms in India.

Unit 3: Interest Rate and Non-banking financial organizations in India

Interest rates in India, Non-financial organizations-Objective, aims, roles and structure; various forms of NFOs and NFIs in India, Role of NFIs in Indian economy.

Unit 4: Structure of Banking System in India

Introduction of CBs and central banks and their role and functions, Balance sheet and portfolio management, Credit creation and its process; Changing role and structure; banking sector reforms.

Unit 5: Central Banking and Monetary Policy

Functions, balance sheet; goals, targets, indicators and instruments of monetary control, Intrument of credit control, Monetary policy of India.

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

(8 Lectures)

(10 Lectures)

(8 Lectures)

(8 Lectures)

(8 Lectures)

Unit 6: Inflation

(3 Lectures)

Inflation: causes, types, consequences, measurement and policies to control inflation.

Text book

- 1. Indian Financial System, Khan MY, 7th Edition, Tata McGraw Hill, 2011.
- 2. Financial Institutions and Markets, Bhole LM and Mahukud J, 5th Edition, Tata McGraw Hill, 2011.

- 1. Financial Markets and Institutions, Mishkin FS and Eakins SG, 6th Edition, Pearson Education, 2009.
- 2. Foundations of Financial Markets and Institutions, Fabozzi FJ, Modigliani F, Jones FJ and Ferri M G, 3rd Edition, Pearson Education, 2009.

Subject Code	ECON326	Subject Title	Agricultural Economics						
LTP	310	Credit	4	Subject Category	UC	Year	3 rd	Semester	VI

Course Objectives

- To understand the nature and scope of agricultural economics.
- To introduce different theories related to agricultural economics.
- To introduce various policies and their impact on Indian agriculture sector.

Learning Outcomes

- Students will get familier with nature and scope of agricultural economics.
- Students will have understanding of economic theories in agricultural sector.
- Student will be able to analyse and explain the various policies and their impact on Indian agriculture sector.

Unit 1: Agriculture and Economic Development

Nature and scope of agriculture economics; Role of agriculture in economic development; Linkage between agriculture and industry; Theories of agriculture development: Ranis-Fai theory.

Unit 2: Agricultural Production, Cost and Prices

Production function analysis- Factor combination and resource substitution; Size of farm and laws of returns; Agricultural Price Policy, issues in agricultre marketing in India.

Unit 3: Indian Government Policy on Agriculture

Regional variations in agriculture production and productivity in India; Agriculture credit; Crop insurance policy; Second green revolution, development of agro- based industries. Risk and uncertainty.

Unit 4: Recent Trends in Indian Agriculture

Recent trends in agricultural growth in India; cropping pattern shifts; Organic farming, resource use efficiency, Bio – technological practices and growth potential, water managment in agriculture in India.

Unit 5: Political Economy of Indian Agriculture

Political Economy of Indian Agriculture, Market interlocking and forced commerce – Methods of surplus extraction – State, community and household, Foreign Capital and Indian agriculture.

(9 Lectures)

(9 Lectures)

(9 Lectures)

(9 Lectures)

(9 Lectures)

Text books

- 1. Economic Liberalization and Indian Agriculture. Institute for Studies in Industrial Development, Bhalla G. S., 3rd Edition, New Delhi, 1994.
- 2. Indian Agricultural Economics: Myths and Reality, Rudra A, 5th Edition, New Delhi, 2004.

- 1. The Economic Structure of Backward Agriculture, Bhaduri A., 6th Edition, Macmillan, Delhi, 2009.
- **2.** Agricultural Economics, Bilgrami S.A.R., 3rd Edition, Himalaya Publishing House, New Delhi, 2007.

Subject Code	ECON327	Subject Title	Undergraduate Project						
LTP	106	Credit	4	Subject Category	UC	Year	3 rd	Semester	VI

Course Description

In the UG Project the students are expected to complete a short case study or a short empirical project on any Economics topic. It is aimed to make the students identify a topic related to an economics problem, and find different ways to present it to the reader. The students need to choose a faculty member under whom they want to complete their research project. The student is expected to perform minor statistical methods to analyze and present their results for the project.

Course Objective

- Students will be able to identify problems in Economics.
- They will be able to write a research project/report.
- Students will be able to present their findings to a large audience.

Learning Outcome

- The students will be able to know the theoretical bases for Literary studies.
- The students will be able to formulate research questions and hypotheses, and operationalize them. They can create a research plan adequate to the research question.
- The students will be able to advanced oral presentation skills on various topics within Economics, and can prepare a presentation in the form of a research report or conference poster.