M. A. ECONOMICS

SYLLABUS - 2018

SCHOOL OF EXCELLENCE
with
CHOICE BASED CREDIT SYSTEM (CBCS)

SSCHOOL OF MANAGEMENT STUDIES
St. JOSEPH'S COLLEGE (Autonomous)
Special Heritage Status Awarded by UGC
Accredited at 'A' Grade (3rd cycle) by NAAC
College with Potential for Excellence Conferred by UGC
DBT-STAR & DST-FIST Sponsored College
TIRUCHIRAPPALLI - 620 002, INDIA

SCHOOLS OF EXCELLENCE WITH CHOICE BASED CREDIT SYSTEM (CBCS)

POSTGRADUATE COURSES

St. Joseph's College (Autonomous), a pioneer in higher education in India, strives to work towards the academic excellence. In this regard, it has initiated the implementation of five "Schools of Excellence" from the academic year 2014-15, to standup to the challenges of the 21st century.

Each School integrates related disciplines under one roof. The school system allows the enhanced academic mobility and enriched employability of the students. At the same time this system preserves the identity, autonomy and uniqueness of every department and reinforces their efforts to be student centric in curriculum designing and skill imparting. These five schools will work concertedly to achieve and accomplish the following objectives.

- Optimal utilization of resources both human and material for the academic flexibility leading to excellence.
- Students experience or enjoy their choice of courses and credits for their horizontal mobility.
- The existing curricular structure as specified by TANSCHE and other higher educational institutions facilitate the Credit-Transfer Across the Disciplines (CTAD) - a uniqueness of the choice-based credit system.
- Human excellence in specialized areas
- Thrust in internship and / or projects as a lead towards research and
- The multi-discipline nature of the newly evolved structure (School System) caters to the needs of stake-holders, especially the employers.

What is Credit system?

Weightage to a course is given in relation to the hours assigned for the course. Generally, one hour per week has one credit. For viability and conformity to the guidelines credits are awarded irrespective of the teaching hours. The following Table shows the correlation between credits and hours. However, there could be some flexibility because of practical, field visits, tutorials and nature of project work.

For PG courses, a student must earn a minimum of 110 credits as mentioned in the table below. The total number of minimum courses offered by a department are given in the course pattern.

POSTGRADUATE COURSE PATTERN (June 2018 onwards)

Part	Semester	Specification	No. of Courses	Hours	Credits	Total Credits
1	I-IV	**Core Courses** Theory Practical	 12-14 3-6	84	68	81
	II	**Self-Paced Learning**	1	-	2	
	III	**Interdisciplinary Core**	1	6	5	
	IV	**Comprehensive Examination** **Project Work**	1 1	- 6	2 4	
2	I-III	**Core Electives**	3	12	12	12
3	II	**IDC (Soft Skills)**	1	4	4	**12**
	III	**IDC (WS)** **IDC (BS)**	1 1	4 4	4 4	
4	I	**Extra Credit Courses-1 (MOOC)**	1	-	(2)	(4)
	III	**Extra Credit Courses-2 (MOOC)**	1	-	(2)	
5	IV	Outreach Programme (SHEPHERD)	1	-	5	**5**
		TOTAL		**120**		**110 (+4 extra credits)**

Note: IDC: Inter-Departmental Courses, BS: Between School, WS: Within School

However, there could be some flexibility because of practical, field visits, tutorials and nature of project work. For PG courses, a student must earn a minimum of 110 credits. The total number of courses offered by a department is given above.

Course Pattern

The Post-Graduate degree course consists of five vital components. They are core course, core electives, IDCs, Extra credit courses, and the Outreach Programme.

Core Courses

A core course is the course offered by the parent department related to the major subjects, components like theories, practicals, Inter disciplinary core, self paced learning, comprehensive examination, Project work, field visits, library record and etc.

Inter-disciplinary Core

Inter-disciplinary Core should be shared by the various Departments of every School. This course should be opted by all the students belonging to the particular school. Each department of the respective school should allocate themselves the schedule and the units of the course.

Core Elective

The core elective course is also offered by the parent department. The objective is to provide choice and flexibility within the department. There are three core electives. They are offered in different semesters according to the choice of the school.

Extra Credit Courses

In order to facilitate the students gaining extra credits, the extra credit courses are given. According to the guidelines of UGC, the students are encouraged to avail this option of enriching by enrolling themselves in the Massive Open Online Courses (MOOC) provided by various portals such as SWAYAM, NPTEL etc.

Inter-Departmental Courses (IDC)

IDC is an interdepartmental course offered by a department / School for the students belonging to other departments / school. The objective is to provide mobility and flexibility outside the parent department / School. This is introduced to make every course multi-disciplinary in nature. It is to be chosen from a list of courses offered by various departments.

There are three IDCs. Among three, one is the Soft-Skill course offered by the JASS in the II Semester for the students of all the Departments. The other one is offered "With-in the school" (WS) and the third one is offered "Between the school" (BS). The IDCs are of application oriented and inter disciplinary in nature.

Subject Code Fixation

The following code system (9 characters) is adopted for Post Graduate courses:

Year of Revision	PG Code of the Dept	Semester	Specification of Part	Running number in the part
↓	↓	↓	↓	↓
18	P##	*x*	*x*	*xx*
18	**PEC**	**1**	**1**	**01**

For Example :

I MA - Economics, first semester '**Advanced Micro Economics-I**'
The code of the paper is **18PEC1101**.
Thus, the subject code is fixed for other subjects.

Specification of the Part

I - Core Courses: (Theory, Practical, Self paced Learning, Inter-disciplinary Core, Core, Comprehensive Examination, Project work)
II - Core Electives
III - Inter Departmental Courses (WS, Soft Skill & BS)
IV - Extra credit courses
V - Outreach Programme (Shepherd)

EXAMINATION

Continuous Internal Assessment (CIA):

PG - Distribution of CIA Marks	
Passing Minimum: 50 Marks	
Library Referencing	5
3 Components	35
Mid-Semester Test	30
End-Semester Test	30
CIA	**100**

Mid-Semster & End-Semester Tests

Centralised – Conducted by the office of Controller of Examinations

1. Mid-Semester Test & End-Semester Test: (2 Hours each); will have Objective + Descriptive elements; with the existing question pattern PART-A; PART-B; and PART-C
2. CIA Component III for UG & PG will be of 15 marks and compulsorily objective multiple choice question type.
3. The CIA Component III must be conducted by the department / faculty concerned at a suitable computer centres.
4. The 10 marks of PART-A of Mid-Semester and End-Semester Tests will comprise only: OBJECTIVE MULTIPLE CHOICE QUESTIONS; TRUE / FALSE; and FILL-IN BLANKS.
5. The number of hours for the 5 marks allotted for Library Referencing/ work would be 30 hours per semester. The marks scored out of 5 will be given to all the courses (Courses) of the Semester.
6. English Composition once a fortnight will form one of the components for UG General English

SEMESTER EXAMINATION

Testing with Objective and Descriptive questions

Part-A: Objective MCQs only (30 Marks)

Answers are to be marked on OMR score-sheet. The OMR score-sheets will be supplied along with the Main Answer Book. 40 minutes after the start of the examination the OMR score-sheets will be collected

Part-B & C: Descriptive (70 Marks)

Part-B: 5 x 5 = 25 marks; inbuilt choice;

Part-C: 3 x 15 = 45 marks; 3 out of 5 questions, open choice.

The Accounts Paper of Commerce will have

Part-A: Objective = 25 marks

Part-B: 25 x 3 = 75 marks

Duration of Examination must be rational; proportional to teaching hours 90 minute-examination / 50 Marks for courses of 2/3 hours/week (all Part IV UG Courses) 3-hours examination for courses of 4-6 hours/week.

GRADING SYSTEM

1. Grading

Once the marks of the CIA and the end-semester examination for each of the courses are available, they will be added. The marks thus obtained, will then be graded as per the scheme provided in the following Table-1.

From the second semester onwards, the total performance within a semester and the continuous performance starting from the first semester are indicated by Semester **Grade Point Average (GPA)** and **Cumulative Grade Point Average (CGPA)** respectively. These two are calculated by the following formulae:

GPA = $\frac{\sum_{i=1}^{n} C_i G_i}{\sum_{i=1}^{n} C_i}$ **WAM** (Weighted Averag Marks) = $\frac{\sum_{i=1}^{n} C_i M_i}{\sum_{i=1}^{n} C_i}$

where,

'C_i' is the Credit earned for the Course-*i,*
'G_i' is the Grade Point obtained by the student for the Course '*i*',
'M' is the marks obtained for the course '*i*', and
'*n*' is the number of Courses **Passed** in that semester.

CGPA: Average GPA of all the Courses starting from the first semester to the current semester.

2. Classification of Final Results

i) The classification of final results shall be based on the CGPA, as indicated in the following Table-2.

ii) For the purpose of Classification of Final Results, the candidates who earn the CGPA 9.00 and above shall be declared to have qualified for the Degree as 'Outstanding'. Similarly, the candidates who earn the CGPA between 8.00 and 8.99, 7.00 and 7.99, 6.00 and 6.99, and 5.00 and 5.99 shall be declared to have qualified for their Degree in the respective programmes as 'Excellent', 'Very Good', 'Good', and 'Above Average' respectively.

iii) Absence from an examination shall not be taken as an attempt.

Table-1: Grading of the Courses

Marks Range	Grade Point	Corresponding Grade
90 and above	10	O
80 and above but below 90	9	A+
70 and above but below 80	8	A
60 and above but below 70	7	B+
50 and above but below 60	6	B
Below 50	NA	RA

Table-2: Final Result

CGPA	Classification of Final Results	Corresponding Grade
9.00 and above	O	Outstanding
8.00 to 8.99	A+	Excellent
7.00 to 7.99	A	Very Good
6.00 to 6.99	B+	Good
5.00 to 5.99	B	Above Average
Below 5.00	RA	Re-appearance

Credit based weighted Mark System is to be adopted for individual semesters and cumulative semesters in the column 'Marks Secured' (for 100).
A Pass in Outreach Programme (SHEPHERD) will continue to be mandatory although the marks will not count for the calculation of the CGPA.

Declaration of Result:

Mr./Ms. _____ has successfully completed the Post Graduate in _____ programme. The candidate's Cumulative Grade Point Average (CGPA) is _____ and the class secured _____ by completing the minimum of 110 credits.

The candidate has also acquired _____ (if any) extra credits offered by the parent department courses.

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Course Pattern - 2018 Set

Sem.	Code	Course	Hr	Cr
I	18PEC1101	Advanced Micro Economics – I	7	5
	18PEC1102	Analysis of Indian Economy	6	5
	18PEC1103	Public Economics	6	4
	18PEC1104	Statistical Tools for Economics	7	5
	18PEC1201	Core Elective -I:Computer Application in Economics	4	4
	18PEC1401	Extra Credit Course-I (MOOC)	-	(2)
		Total for Semester I	**30**	**23**
II	18PEC2105	Advanced Micro Economics – II	6	5
	18PEC2106	Mathematical Tools for Economics	6	5
	18PEC2107	Macro Economic Process	5	5
	18PEC2108	Environmental Economics	5	4
	18PEC2109	Self- paced Learning –Tourism Management	-	2
	18PEC2202	Core elective-II**:** Labour Economics (or)	4	4
	18PCO2202	Export and Import Management (or)		
	18PHR2202	Managerial Effectiveness		
	18PSS2301	IDC -I: Soft Skills	4	4
		Total for Semester II	**30**	**29**
III	18PEC3110	Economics of Growth and Development	6	5
	18PEC3111	Monetary Economics	6	5
	18SMS3101	Inter-disciplinary Core: Human Resource Management	6	5
	18PEC3203	Core Elective-III: Introduction to Econometrics	4	4
	18PEC3301	IDC (WS): Indian Economy (or)	4	4
	18PCO3203	Portfolio Management (or)		
	18PHR3203	Compensation Management		
	18PEC3302	IDC (BS): Managerial Economics	4	4
	18PEC3402	Extra Credit Course-II (MOOC)	-	(2)
		Total for Semester III	**30**	**27**
IV	18PEC4112	International Economics	7	5
	18PEC4113	Research Methodology	6	4
	18PEC4114	Industrial Economics	6	4
	18PEC4115	Optimization Techniques in Economics	7	5
	18PEC4116	Comprehensive Examination	-	2
	18PEC4117	Project Work	4	4
	18PEC4118	Internship Training	-	2
		Total for Semester IV	**30**	**26**
	18PCW4501	Outreach Programme (SHEPHERD)	-	**5**
		Total Hours & Credits for all semesters (I-IV)	**120**	**110 +(4)**

Programme Outcomes (POs):

1. Graduates are prepared to be creators of new knowledge leading to innovation and **entrepreneurship employable** in various sectors such as private, government, and research organizations.
2. Graduates are trained to evolve new technologies in their own discipline.
3. Graduates are groomed to engage in lifelong learning process by exploring their knowledge independently.
4. Graduates are framed to design and conduct experiments /demos/create models to analyze and interpret data.
5. Graduates ought to have the ability of effectively communicating the findings of Biological sciences incorporating with existing knowledge.

Programme Specific Outcomes (PSOs):

1. To appreciate the importance of the subject Economics.
2. To study the various terms and concepts in Economics.
3. To study various principles and theories in Economics.
4. To evaluate the programmes and policies of both Central and State the Governments.
5. To study various current economic issues and problems to identify solution.
6. To study the quantitative techniques and its applications in Economics.
7. To study research methodology in Economics to undertake research.
8. To study the global economic issues like Globalization, Privatization and Liberalization.

Semester I **Hours/Week: 7**
18PEC1101 **Credits : 5**

ADVANCED MICRO ECONOMICS-I

Course Outcomes:

1. To equip the students' with basic concepts of advanced micro economics.
2. To impart knowledge on consumer and producer behavior to reach equilibrium.
3. To enhance the students' analytical skill on cost concepts.
4. To increase the analytical skill of students on market concepts.
5. To study the theory of production and costs.
6. To understand the money of market structure.
7. To create awareness of using mathematical techniques in economic theories.
8. To make the students' understand the efficacy of game theory and its uses in economics.

Unit-I: INTRODUCTION AND BASIC CONCEPTS (18 hr)

Basic Economic Problem - Choice and scarcity – Deductive and Inductive Methods of Analysis - Positive and Normative Economics – Economic models – Types and Characteristics of Equilibrium and Disequilibrium

Unit-II: DEMAND ANALYSIS (18 hr)

Elasticities - Price, Cross, Income of Demand – Theoretical aspects and Empirical estimator – Elasticity of Supply - Theories of Demand - Utility, Indifference Curves - Price, income and substitution effects - Slutsky Theorem - Revealed Preference Theory of Samuelson – Revision of Demand Theory of Hicks – Consumer Surplus – Developments in Demand Analysis – Modern Utility Analysis - Markovitz, Petersburg, Savage – Income Hypotheses.

Unit-III: THEORY OF PRODUCTION AND COSTS (18 hr)

Production Function – Short and Long Periods – Law of Variable Proportions and Laws of Returns to Scale – Iso-Quants - Least Cost Combination of Inputs – Economies of Scale - Multi-Product Firm – Elasticity of Substitution – Technical Progress and Production Function: Cobb- Douglas and CES - Modern Theories of Costs - Derivation of Cost Functions from Production Functions

Unit-IV: PRICE AND OUTPUT DETERMINATION (OOC Based Learning): (18 hr)

Marginal Analysis: Price and Output Determination in Perfect Competition – Short-Run and Long-Run - Equilibrium of the Firm and Industry - Price and Output Determination – Supply Curve – Monopoly: Short-run and Long-run Equilibrium – Price Discrimination – Monopolistic Competition; General and Chamberlin Approaches to Equilibrium – Oligopoly: Collusive and Non-Collusive of Cournot Solution- Kinked Demand Curve - Price Leadership – Cartels

Unit-V LINEAR PROGRAMMING AND GAME THEORY:(Theoretical aspects only): (18 hr)

Introduction to Linear Programming –concepts of LPP- the Simplex Method - Primal and Dual Solutions - Game Theory: Rules, Two-Persons Zero Sum Game – Pay-off Matrices

Textbooks for Study:

1. Koutsoyiannis. (1979) A Modern Micro Economics, Macmillan Press, London.
2. Ahuja H.L. (1996) - Principles of Micro Economics, A New look at Economic Theory, S.Chand, New Delhi.

References:

1. Da Costa., G.C., (1980) Production, Prices and Distribution. New Delhi: Tata McGraw Hill.
2. Hirshlefe, J and A. Glazer., (1997) Price Theory and Applications. Prentice Hall of India, New Delhi.
3. Kennedy, Maria John M., (1999) Advanced Micro Economic Theory. (Second Edition) Himalaya, Publishing House, New Delhi.
4. Stigler, G., (1996) Theory of Price. (Fourth Edition) PrenticeHall of India, New Delhi.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester I	Code 18PEC1101				Title of the Paper ADVANCED MICRO ECONOMICS-I								Hours 7	Credits 5
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)							Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	
CO1	3	4	4	4	4	4	4	4	5	5	2	3	5	3.92
CO2	4	3	2	4	3	4	3	4	4	2	2	3	3	3.15
CO3	3	2	4	3	4	4	4	4	4	4	2	2	4	3.38
CO4	2	3	4	2	3	3	3	3	5	3	3	2	4	3.08
CO5	4	2	3	4	3	4	4	4	5	2	2	2	3	3.23
CO6	2	3	2	3	4	4	4	4	4	4	3	2	2	3.15
CO7	4	4	4	4	4	3	4	3	3	4	2	1	4	3.38
CO8	3	4	3	4	4	4	3	4	5	5	2	3	3	3.62
Overall Mean Score for COs														3.37

Result: The Score for this Course is ____ (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester I **Hours/Week: 6**
18PEC1102 **Credits : 5**

ANALYSIS OF INDIAN ECONOMY

Course Outcomes:

1. To study the significance of Natural Resources in Indian Economy
2. To understand the various vital problems affecting Indian Economy
3. To analyze policy measures with a special note on rural development.
4. To know the role and significance of Information Technology in the modern India.
5. To analyze the economic reforms of India.
6. To know the WTO scenario in the Indian context.
7. To know the significance of NITI AAYOG.
8. To assess the capital flows by trade in India

Unit-I: STRUCTURE OF INDIAN ECONOMY

Natural Resources: land, water, and forest - Demographic features; size, sex composition and growth rates of population; Infrastructure - Transport, Communication and Energy; National Income: Trend, growth rate and sectoral contribution (18 hr)

Unit-II: AGRICULTURAL SECTOR-I

Institutional structure – contract farming Technological change in agriculture-Green Revolution and post green revolution issues: Pricing of agricultural inputs and output; terms of trade between agriculture and industry - Agricultural finance policy; Agricultural Marketing and Warehousing; Food security - policies for sustainable agriculture –organic farming and precision farming and Integrated farming (18 hr)

Unit-III: INDUSTRIAL SECTOR

Industrial Policy Resolution- of 1948, 1956, 1977,1991,2014 and 2015and recent industrial policies; Public sector and its performance - industrial sickness: cause and remedies: Evaluation of Privatization and Disinvestment; MSME–Rural industrialization –industrial estate – SEZ- Make in India.- Digitization. (18 hr)

Unit-IV: TERTIARY SECTOR AND EXTERNAL SECTOR

Role and Significance of Information Technology, Banking and Insurance - Composition of India's Foreign trade Imports and Exports - Direction and trends in foreign trade – Import substitution and export promotion - Balance

of payments in India - Foreign capital and MNCs in India - State Trading Corporation (18 hr)

Unit-V: PLANNINGAND ECONOMIC REFORMS (OOC Based Learning)

Planning in India, Objectives; Strategies; Broad Achievements and Failures; Current Five Year Plan - objectives, allocation and targets; NITI AAYOG- New economic reforms - Liberalization, Privatization and Globalisation; rationale behind economic reforms; An evaluation of Post – WTO Scenario with special reference to capital and financial flows and trade sector. (18 hr)

Textbook for Study:

1. Dutt and K.P.M. Sundaram - Indian Economy, Sultan Chand & Sons, New Delhi, 2016

References:

1. Kindleberger,C.P. (1977), Economic Development, 3e,McGraw Hill, New York.
2. Meier, G.M. (1995), Leading Issues in Economic Development,6e, Oxford University Press, New Delhi.
3. Jhingan, M.L., (2010) The Economics of Development and Planning, Vikas Publishing House PVT Ltd., New Delhi.
4. Mishra,S.K. and V.K.Puri, (2010) Economics of Development and Planning, Himalaya Publishing House, New Delhi.
5. Dhingra, I.C., (2012) The Indian Economy: Environment and Policy, 16th ed., Sultan Chand & Sons, New Delhi.
6. Dhar, P .K. (2002) Indian Economy - its growing dimensions, Kalyani Publishers, New Delhi.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester I	Code 18PEC1102					Title of the Paper ANALYSIS OF INDIAN ECONOMY								Hours 6	Credits 5
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	4	4	3	4	4	4	4	5	2	4	4	5	2		3.77
CO2	3	3	4	3	4	3	5	4	3	4	4	5	1		3.54
CO3	4	3	5	3	4	3	4	3	2	3	5	5	2		3.54
CO4	3	3	4	3	3	3	4	2	1	3	2	4	2		2.85
CO5	4	4	4	4	3	4	5	3	3	3	3	4	3		3.62
CO6	3	4	4	3	3	4	4	3	2	2	4	4	2		3.23
CO7	3	3	2	3	2	3	4	3	1	2	3	4	1		2.62
CO8	3	2	1	3	1	3	3	3	2	3	3	4	1		2.46
														Overall Mean Score for COs	3.20

Result: The Score for this Course is 3.2 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester I **Hours/Week: 6**
18PEC1103 **Credits : 4**

PUBLIC ECONOMICS

Course Outcomes:

1. Understand the role and functions of the government in a modern economy
2. Understand the issues related to market failure and government intervention
3. Provide an understanding of concepts and theories of public economics
4. Analyse the interrelationship between Centre, State and Local Governments.
5. To study the recent trends in public expenditure, taxation and budgetary policy.
6. Understand the fiscal reforms in India

Unit-I: ROLE OF GOVERNMENT IN ORGANISED SOCIETY (OOC Based Learning)

Changing Perspective-Government in a Mixed economy: public and private sector, cooperative or competition- private goods, public goods and merit goods; Market failure-imperfections, decreasing costs, externalities, Uncertainty and non-existence of futures markets; Informational asymmetry – Theory of second best. Private and public mechanism for allocating resources; Problems in allocation of Resources; Problems of preference revelation and aggregation of preferences; Voting Systems; Arrows impossibility theorem. (18 hr)

Unit-II: PUBLIC REVENUE & PUBLIC EXPENDITURE

Concepts: Public Revenue- individual taxes; Benefit theory and Ability to pay approaches; Theory of optimal taxation; Excess burden of taxes; Tradeoff between equity and efficiency. Theory of incidence; Alternative concepts of incidence-Allocative and equity aspects - Public Expenditure- Wagner's law of increasing state activities; Wiseman-Peacock- hypothesis; Pure theory of public expenditure; Structure and growth of public expenditure; Social Cost-benefit Analysis. (18 hr)

Unit-III: PUBLIC DEBT, BUDGET AND FISCAL POLICY

Classical view of public debt; Compensatory aspect of debt policy; Burden of public debt; Sources of public debt; Public borrowings and price level; Crowding out of private investment and activity; principles of debt management and repayment- Fiscal policy: objectives of fiscal policy-

Interdependence of fiscal and monetary policies; concepts of Budget-Budgetary deficits and its implications; Fiscal policy for stabilization - automatic vs. discretionary stabilization; (18 hr)

Unit-IV: FISCAL FEDERALISM

Principles of multi-unit finance; Fiscal federalism in India; Vertical and horizontal imbalance; Assignment of functions and sources of revenue; Constitutional provisions; Recent Finance Commission; Devolution of resources and grants; Theory of grants; Resources transfer from Union to States and Local bodies - Criteria for transfer of Resources; Centre-state financial relations in India; (18 hr)

Unit-V: INDIAN PUBLIC FINANCE

Indian tax system; Revenue of the Union, States and Local bodies; Major taxes in India: base of taxes, direct and indirect taxes, Reforms in direct and indirect taxes, taxes on services - GST; Non-tax revenue of Centre, State and Local bodies; Trends in Public expenditure and public debt; Fiscal crisis and fiscal sector reforms in India (18 hr)

Textbook for Study

1. Singh S.K. (2014). Public Finance Theory and Practice, S.Chand & Co. Ltd, New Delhi.

Books for Reference

1. Jha. R. (1998). Modern Public Economics Rout ledge, London.
2. Musgrave. R A and P.B. Musgrave (1976). Public Finance in Theory and Practice, McGraw Hill, Kogakusha, Tokyo.
3. Spulber, N (1998) Redefining the State, Cambridge University Press, Cambridge.
4. Buchanan, J.M. (1968) The Demand and Supply of Public Goods, Rand McNally, Chicago.
5. Peacock. A. and D.J. Robertson (Editors) (1963), Public Expenditure: Appraisal and Control
6. Gulati, I.S. (1979). Centre State Financial Relations: An Assessment of the Role of Finance Commission, M.S. University of Baroda, Baroda.
7. Reports of Various Finance Commissions.
8. Tyagi. B.P. (2012) Public Finance, Jai Prakash Nath, Meerat.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester I	Code 18PEC1103					Title of the Paper PUBLIC ECONOMICS								Hours 6	Credits 4
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	3	3	4	3	4	4	2	3	3	3	4	2	3		3.15
CO2	2	4	5	3	3	5	3	2	4	4	3	2	5		3.46
CO3	3	5	3	2	5	3	4	3	3	4	1	3	4		3.31
CO4	3	3	2	3	3	5	4	4	2	3	3	3	3		3.15
CO5	5	4	3	2	3	3	4	5	3	5	3	5	4		3.77
CO6	3	3	2	3	1	2	5	4	5	3	2	3	3		3.00
														Overall Mean Score for COs	3.31

Result: The Score for this Course is 3.3 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Totalof Values}}{\text{TotalNo.of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester I **Hours/Week: 7**
18PEC1104 **Credits : 5**

STATISTICAL TOOLS FOR ECONOMICS

Course Outcomes:

1. To understand the basics of statistics
2. To know the theoretical background of correlation and regression and its application in Economics.
3. To know the importance of time series analysis in research.
4. To understand the various properties of statistical distributions.
5. To help students develop hypothesis for their research work.
6. To facilitate a research bent of mind in statistical tools.
7. To inculcate the practice of applying various statistical tools.
8. To apply statistical tools in research

Unit-I: MEASURES OF CENTRAL TENDENCY AND DISPERSION (OOC Based Learning)

Measures of central tendency; Mean, Median, Mode, Geometric mean and Harmonic mean, Weighted Average - Measures of Dispersion: Mean Deviation, Quartile Deviation and Standard Deviation and relative measures of dispersion. (18 hr)

Unit-II: CORRELATION AND REGRESSION

Meaning, assumptions and limitations of simple correlation and regression analysis - Pearson's product moment and Spearman's rank correlation co-efficient - Concept of the least squares and the lines of regression-Concepts of R^2 and adjusted R^2 (20 hr)

Unit-III: ANALYSIS OF TIME SERIES

Uses - Components – Measurement of Trend - Methods of moving average - Semi average - Method of least squares. (18 hr)

Unit-IV: PROBABILITY

Various types of events - classical and empirical definitions of probability - addition and multiplication theorems, conditional probability and concept of interdependence – Bayes theorem and its applications. Properties of Binomial, Poisson and Normal distribution- fitting of distributions. (18 hr)

Unit-V: INFERENTIAL STATISTICS

Properties of good estimator, formulation and testing of statistical hypothesis - Null and Alternative hypothesis, Goodness of fit, confidence intervals and

level of significance, Hypothesis testing based on Z, t, χ^2 (chi-square) and F-test- Type I and Type II errors- Introduction to non parametric test. (18 hr)

Textbook for Study

1. Gupta, S P., Statistical Methods (2010): S. Chand & Sons Ltd, New Delhi.

Reference

1. Gupta, S C., (1993) Fundamentals of Applied Statistics New Delhi: S. Chand & Sons Ltd.
2. Spiegel., M R., (1922) Theory and Problems of Statistics London: McGraw Hill Book Co.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester I	Code 18PEC1104					Title of the Paper STATISTICAL TOOLS FOR ECONOMICS								Hours 7	Credits 5
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	3	3	4	3	2	4	4	3	5	5	2	2	4		3.38
CO2	3	2	3	2	3	4	4	3	4	4	4	3	5		3.38
CO3	4	3	3	2	1	4	4	5	3	3	4	4	5		3.46
CO4	3	4	3	2	4	3	4	3	4	5	3	3	4		3.46
CO5	2	3	2	1	3	3	4	5	3	3	3	3	3		2.92
CO6	3	4	3	2	4	4	4	5	4	3	3	4	4		3.62
CO7	4	3	4	3	2	3	4	4	5	5	4	3	5		3.77
CO8	3	4	4	3	4	3	3	3	5	5	4	4	5		3.85
													Overall Mean Score for COs		3.48

Result: The Score for this Course is 3.48 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester I **Hours/Week: 4**
18PEC1201 **Credits : 4**

Core Elective-I
COMPUTER APPLICATION IN ECONOMICS

Course Outcomes:

1. To enable the students to understand the fundamentals of computer.
2. To acquire knowledge of MS Word, MS Excel, MS PowerPoint.
3. To impart skills in proper procedures to create documents.
4. To know and understand the importance of recent Operating System.
5. To understand the impact of internet in recent scenario.
6. To know the importance of social networks in this current era.

Unit-I: FUNDAMENTALS OF COMPUTER (15 hr)

1.1 Basic concepts and components of a Computer – CPU, I/O Devices, Bit and Byte, Boot, Data Storage and Retrieval, Hard Disk.

1.2 Types of Computer and their applications, Computer Networking and Resource Sharing, Hardware, Software and Firmware.

1.3 Operating Systems, DISK OPERATING SYSTEM, WINDOWS as an Operating System.

UNIT-II: MS WORD (15 hr)

2.1 Introduction: Overview, Basic terminology, Toolbars, Scrolling;

2.2 Managing Word Documents: Creating new documents, Using Templates and Wizards, Saving documents, Opening saved documents, Page setup options, different viewings of documents,Viewing multiple documents, Arrange All options, Printing a document;

2.3 Working with Text: Typing text, Selecting text, Moving, copying and pasting text, Changing font style, Creating bulleted and numbered lists, inserting text box, Indenting text, Alignment;

2.4 Creating Tables: Using the Menu option, Using the Toolbar option, Adding information, Moving around and selecting within a table, Formatting tables;

2.5 Special Features: Adding Clipart, Borders and Shading, Spelling and Grammar checks, Language tool, Word count, AutoSummarize, AutoCorrect, Find, Replace and Go To options

Unit-III: MS POWER POINT (15 hr)

3.1. Introduction: Overview, Basic terminology, Application window layout, View buttons;

3.2. Creating a Slide Show: Opening and closing presentations, Working with a blank presentation, Adding new slides, Slide layout designs, Manipulating slides, Customizing the background, Changing bullets and font styles, Presenting the Slide Show;

3.3. Working with Master Slides: Definition, Types, Changing the layout and design;

3.4. Animations and Transitions: Animating text and images, Slide transitions;

3.5. Graphics: Adding ClipArt, Adding media, Adding WordArt;

3.6. Managing Presentations: Saving presentations, customizing presentation, Printing presentations

Unit-IV: MS EXCEL (15 hr)

4.1. Introduction: Overview, Screen Layout, Row and column headings, Cell Referencing; Changing margins, Changing page orientation

4.2. Working with the Data: Selecting a cell, Entering and editing data, Clearing cell contents, Moving the data;

4.3. Managing Excel Workbooks and Worksheets: Creating a new, Opening, Saving and closing.

4.4. Formulas and Functions: Constants and formulas, Functions, Using the Fill Handle to copy formulas & functions, AutoSum button, Using the Paste Function Tool;

4.5. Formatting Data: Formatting toolbar, Changing numeric data, Alignment, Placing borders around cells, Changing column and row widths, Merge cells;

4.6. Charts: Creating a chart, Moving the chart, Changing size of chart

Unit-V: INTERNET (15 hr)

5.1. Introduction: Overview of the Internet, How the Internet works, Internet addresses and domains, Internet services, The World Wide Web;

5.2. Internet in Education: Why use the Internet in education, Technology adaption in Schools, Evaluating Web sites; Global Resources for Teaching and Learning

5.3. Communications: Text and mail communication using computers; E-mail; Chat; Voice mail; Document transfer and delivery;

5.4. File Searching: Finding things in the Internet, Other search tools, Search strategies;

5.5. Internet in business: use for business and commercial activities like e-business and e-commerce; Electronic stock market and exchanges;

Textbooks for Study

1. Joyce Cox, Curtis Frye etc, (2007), "Step by 2007 Microsoft Office System", Prentice Hall of India Private Ltd., New Delhi.

References

1. Rajaraman, V. (1996). Fundamentals of Computers, Prentice Hall of India, New Delhi.
2. Sanders, D H. (1988). Computer Today, 3rd Edition McGraw Hill, New York.
3. Sinha, P K. (1992). Computer Fundamentals, BPB Publications, New Delhi.
4. Rajaraman, V. (1996). Fundamentals of Computers, Prentice Hall of India, New Delhi.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester I	Code 18PEC1201	Title of the Paper Core Elective-I: COMPUTER APPLICATION IN ECONOMICS											Hours 7	Credits 5
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)							Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	
CO1	5	3	2	4	3	4	2	2	3	4	3	3	3	3.15
CO2	3	3	2	4	4	3	4	3	4	3	4	4	4	3.46
CO3	3	4	2	4	4	3	4	2	3	4	3	3	4	3.31
CO4	4	1	4	3	2	3	2	4	4	3	4	3	5	3.23
CO5	3	3	3	3	3	4	3	4	4	4	3	5	3	3.46
CO6	4	3	3	4	3	3	4	3	5	4	3	5	4	3.69
Overall Mean Score for COs														3.38

Result: The Score for this Course is 3.38 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\textbf{Mean Score of COs} = \frac{\text{Totalof Values}}{\text{Total No. of POs \& PSOs}} \qquad \textbf{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester II **Hours/Week: 6**
18PEC2105 **Credits : 5**

ADVANCED MICRO ECONOMICS-II

Course Outcomes:

1. To impart students' skills on theory of firm.
2. To equip the students' with the importance of theory of distribution.
3. To enhance the students' knowledge on welfare economics.
4. To impart the students' knowledge on partial equilibrium.
5. To equip the students' awareness with regard to general equilibrium and its superiority over partial equilibrium.
6. To make the students' know details on economics of uncertainty and information.
7. To understand the difference between partial equilibrium and general equilibrium.
8. To study the new market models.

Unit-I: ALTERNATIVE THEORIES OF THE FIRM

Baumol's Sales Revenue Maximization Model; Williamson's Model of Managerial Discretion, Marries model of managerial enterprise; Full cost pricing, Average cost pricing rules; Bain's limit pricing theory and its recent developments (Sylos - Calini's model, Franco Modigliani's model, Jagdish Bagawathi model) Behavioristic model of the firms. (20 hr)

Unit-II: THEORIES OF DISTRIBUTION

Marginal productivity theory; Euler's product Exhaustion theorem; Elasticity of Technical substitution, Theories of Distribution in Perfect and Imperfect Factor Markets: Determination of Rent, wages, Interest and Profits. Ricardian, Marxian, Kalecki, and Kaldor's theories of distribution. (20 hr)

Unit-III: WELFARE ECONOMICS

Pigouvian Welfare Economics; Cardinalist, Kaldor and Pareto Optimality criteria, Social Welfare Function, Compensation principle; Inability to obtain optimum welfare - Imperfections, market failure, Arrow's theory of social choice. (20 hr)

Unit-IV: GENERAL EQUILIBRIUM (OOC Based Learning)

Walrasians' Partial and general Equilibrium – 2X2X2 Relationship between relative commodity and factor prices (Stopler - Samuelson Theorem) Relationship between output mix and real factor prices, effect of changes in

factor supply in closed Economy (Rybozynski theorem) Factor supply in open Economy (outsourcing) in production and consumption. (25 hr)

Unit-V: ECONOMICS OF UNCERTAINTY

Individual Behaviour towards risk, expected utility and certainty- Risk and Risk Aversion - competitive firms under uncertainty - Factor demand under price uncertainty- Economics of Information - Search for New Market models. (20 hr)

Textbooks for Study:

1. Koutsoyiannis. (1979) A Modern Micro Economics, Macmillan Press, London.
2. Ahuja H.L. (1996) - *Principles of Micro Economics, A New look at Economic Theory*, S.Chand, New Delhi.

References:

1. Borch, H K. (1968) The Economics of Uncertainty, Princeton University Press.
2. Da Costa, G.C. (1980) Production, Prices and Distribution , Tata McGraw-Hill, New Delhi.
3. Hirshleifer, J. and A. Glazer (1997) Price Theory and Applications Prentice Hall of India New Delhi.
4. Kennedy, Maria John M. (1999) Advanced Micro Economic Theory: Himalayas Publishing House, New Delhi.
5. Stigler, G.. (1996) Theory of Price, Prentice Hall, New Delhi.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester II	Code 18PEC2105				Title of the Paper ADVANCED MICRO ECONOMICS-II								Hours 6	Credits 5
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)							Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	
CO1	4	2	4	2	4	4	3	4	3	2	4	3	4	3.31
CO2	2	2	3	3	4	3	4	5	4	5	3	4	3	3.46
CO3	4	3	3	4	4	4	5	4	5	4	4	5	5	4.15
CO4	4	3	3	4	4	5	3	3	2	3	5	4	3	3.54
CO5	3	2	3	3	4	2	4	2	3	3	4	5	4	3.23
CO6	2	4	3	2	3	3	5	4	4	3	3	2	2	3.08
CO7	2	1	3	3	2	4	4	3	3	5	2	4	1	2.85
CO8	4	3	4	4	3	5	3	1	5	4	3	3	5	3.62
Overall Mean Score for COs														3.40

Result: The Score for this Course is 3.4 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester II **Hours/Week: 6**
18PEC2106 **Credits : 5**

MATHEMATICAL TOOLS FOR ECONOMICS

Course Outcomes:

1. To understand the meaning and importance of mathematical tools
2. To help students to acquire the knowledge of applying mathematical tools to simple problems in Economics.
3. To learn the concept of differentiation and its application in Economics.
4. To know the concept of integration and its application in Economics.
5. To learn the basic operations and properties of matrices.
6. To help students to develop the aptitude for research.
7. To apply mathematical tools in core Economics papers.
8. To acquire mathematical knowledge in real life situations.

Unit-I: ANALYTICAL GEOMETRY (OOC Based Learning)

Straight lines – Two points, slope – point slope and intercept and two intercepts form – quadratic equations and solution – applications – Demand and Supply curves – Determination of equilibrium price and quantity. (20 hr)

Unit-II: DIFFERENTIATION

Concept of function and types of functions: Limit, continuity and derivative- Rules of differentiation interpretation of revenue cost, demand and supply functions, Elasticity and their types, Problems in maxima and minima and optimization of firm. (20 hr)

Unit-III: PARTIAL DIFFERENTIATION

Rules of partial differentiation and interpretation of partial derivatives – Maxima - Minima, constrained optimization in simple economic problems. (20 hr)

Unit-IV: INTEGRATION

Simple rules of integration application in TC and TR, definite integral - Application in consumer's surplus and producer's surplus (marginal cost and marginal revenue). (20 hr)

Unit-V: MATRIX

Matrix: types, simple operations in matrices, matrix inversion and rank of a matrix- Determinants and their basic properties- solution of simultaneous equations through Cramer's rule and Inverse method. (25 hr)

Textbook for Study:

1. Agarwal and Joshi (1983), Mathematics for Economist, The New Academic Publishing Co. Jalandhar.

References:

1. Allen, R. G. D. (1985). Mathematical Economics, Macmillan, London.
2. Chiang, A. C. (1986). Fundamental Methods of Mathematical Economics, McGraw Hill, New Delhi.
3. Weber (1986). Mathematical Analysis – Business and Economic Applications.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester II	Code 18PEC2106					Title of the Paper MATHEMATICAL TOOLS FOR ECONOMICS								Hours 6	Credits 5
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	4	3	4	4	2	5	4	3	5	5	3	3	4		3.77
CO2	5	2	3	5	2	4	4	3	4	4	4	3	5		3.69
CO3	3	3	2	2	1	4	4	4	4	3	3	4	5		3.23
CO4	3	3	2	3	3	4	4	3	4	5	4	5	4		3.62
CO5	4	2	2	2	2	3	4	3	5	3	2	3	3		2.92
CO6	3	4	3	2	3	4	4	3	4	3	3	4	4		3.38
CO7	4	3	3	3	2	3	4	4	5	5	4	3	5		3.69
CO8	3	2	3	2	3	4	5	3	5	5	4	4	5		3.69
													Overall Mean Score for COs		3.50

Result: The Score for this Course is 3.5 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester II **Hours/Week: 5**
18PEC2107 **Credits : 5**

MACRO ECONOMIC PROCESS

Course Outcomes:

1. Introduce the macro economic concepts and variables.
2. Make them understand the idea about aggregates and their significance.
3. Learn the theoretical background of macro economics.
4. Understand the macro economic principles in Indian context.
5. Study various approaches for demand for money.
6. Study the theories of trade cycle.
7. To help the students know and understand various theories.
8. To study the significance and impact of multiplier and accelerator.

Unit-I: NATIONAL INCOME AND ACCOUNTING

Circular Flow of income in Two, Three and Four sector economy – Different forms of National Income Accounting - Social accounting, Input –output accounting, Flow of funds accounting and Balance of Payment Accounting – uses of National Income Analysis. (20 hr)

Unit-II: CONSUMPTION FUNCTION

Keynes Psychological Law of Consumption – implications of the Law, short-run and long-run consumption function - Empirical evidence on Consumption function, Income- consumption relationship - Absolute Income, Relative Income, Permanent Income and Life cycle Hypotheses (20 hr)

Unit-III: INVESTMENT FUNCTION

Marginal Efficiency of Investment and level of investment, Marginal Efficiency of Capital and Investments long- run and short- run- Multiplier - Accelerator. (20 hr)

Unit-IV: APPROACHES TO DEMAND FOR MONEY

Classical approach to demand for money. Quantity theory approach, Fisher's equation. Keynesian liquidity preference approach – Post Keynesian approaches to demand for money – Patinkin's Real Balance Effect approach -Tobin, and Shaw - Friedman and Modern quantity theory. (25 hr)

Unit-V BUSINESS CYCLES:

Theories of Trade cycle Samuelson, Kaldor, Schumpeter and Hicks. (20 hr)

Textbook for Study:

1. Ackley, (1978) Macro Economics Theory and Policy – Macmillan New York.

References:

1. Eden, M. and A. T. Peacock (1967). National Income and Social Accounts Hutchinson University, New York.
2. Keynes, J. M. (1936). The General Theory of Employment Interest and Money: Mac Million, London.
3. Gurley and E.S.Shaw. (1960) Money in a Theory of Finance Brookings Institutions.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester II	Code 18PEC2107				Title of the Paper MACRO ECONOMIC PROCESS								Hours 5	Credits 5
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)							Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	
CO1	4	3	4	3	2	5	4	3	5	5	5	4	4	3.92
CO2	3	2	3	5	2	4	4	3	4	4	4	3	5	3.54
CO3	3	3	2	2	4	4	4	4	4	3	3	4	5	3.46
CO4	3	3	2	3	4	4	4	3	4	5	4	5	4	3.69
CO5	2	2	2	2	3	3	4	5	5	3	2	3	4	3.08
CO6	3	4	3	2	3	4	4	5	4	3	3	4	4	3.54
CO7	4	3	3	3	2	3	4	3	5	5	4	3	5	3.62
CO8	3	2	3	2	3	4	5	4	5	5	4	4	5	3.77
Overall Mean Score for COs														3.58

Result: The Score for this Course is 3.58 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester II **Hours/Week: 5**
18PEC2108 **Credits : 4**

ENVIRONMENTAL ECONOMICS

Course Outcomes:

1. Know the basic concepts of Environmental Economics
2. Understand various theories of Environmental Economics
3. Understand the various environmental pollutions and the policy measures to control pollution.
4. Know the applications of the waste management.
5. Know conservation of biodiversity from this course
6. Know the different issues related to environment

Unit-I: PRINCIPLES OF ECOLOGY

Definition, Role and Significance of Environment- Ecology, eco system, components of eco system, kinds of eco system- functions of eco system, energy flow in eco system and food chain –- Trade off between Economic growth and Environment – Market failure – Externalities and pollution (15 hr)

Unit-II: THEORIES OF ENVIRONMENTAL ECONOMICS

Material Balance Approach - The Cumberland – Isard Daly Input-Output model – The Modified Leontief abatement model- The Ayres- Knees model- Coase theorem- concept of carbon credits - Outline to valuation techniques (15 hr)

Unit-III: CONSERVATION OF NATURAL RESOURCES

Renewable and non–renewable resources - need for conservation of resources – Conservation of forest, water resources, soil resources - energy resources - Conservation of biodiversity – Product Life Extension – Recycling models - methods of conservation (15 hr)

Unit-IV: ENVIRONMENTAL PLANNING AND MANAGEMENT

Problems in maintaining ecological balance, waste management- Protection of biosphere - Application of benefit cost analysis to resource management- Natural resource management - water, land, forest, fisheries and mineral resources- a few case studies- Biotechnology vs. Eco friendly technology. (15 hr)

Unit-V: ENVIRONMENTAL ISSUES, POLICIES AND LEGAL MEASURES (OOC Based Learning):

Industrial Pollution - Global warming, deforestation-Ozone depletion-Trade

related environmental issues-Peoples movement-Environmental law, Air Act, Water Act, Pollution Control- Environment Protection Act –command and control measures (15 hr)

Text book for study:

1. Sankaran (2008). Environmental Economics, Sterling New Delhi.

References:

1. Mohan, I. (1989) "Environmental Pollution and Management", Ashis Publishing House, New Delhi.
2. Pandey and Carney, (1998) Environmental Engineering, Tata Mc Graw Hill, New Delhi.
3. Field, RC, (2000) Environmental Economics, Mc Graw Hill, New York.
4. Karpagam, M (1999) Environmental Economics, Sterling New Delhi.
5. Katar Singh, Anil Shisodia (2009) Environmental Economics –Saga Publications, New Delhi.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester II	Code 18PEC2108					Title of the Paper ENVIRONMENTAL ECONOMICS								Hours 5	Credits 4
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	5	3	4	5	2	5	3	3	5	5	3	3	4	3.85	
CO2	3	2	3	3	2	4	3	3	4	4	4	3	3	3.15	
CO3	3	3	4	5	2	4	3	3	4	3	3	4	3	3.38	
CO4	3	3	2	3	4	4	4	3	4	3	4	3	4	3.38	
CO5	2	2	2	2	3	3	2	3	5	3	2	3	3	2.69	
CO6	4	4	3	2	3	4	4	3	4	3	3	4	4	3.46	
Overall Mean Score for COs														3.32	

Result: The Score for this Course is 3.32 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Totalof Values}}{\text{TotalNo.of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester II **Hours/Week: -**
18PEC2109 **Credits : 2**

Self-paced Learning:
TOURISM MANAGEMENT

Course Outcomes:

1. To know the importance of Tourism Management and its promotion.
2. To understand the various elements of tourism management
3. To understand government's initiatives for tourism development
4. To impart information about recent trends in domestic and international tourism in India
5. To understand the basic concepts and importance of medical tourism.
6. To know the detailed study of Tourism Development Corporation.

Unit-I: BASIC CONCEPTS OF TOURISM

Meaning- Definition- Concepts and Types of Tourism - Tourism and economic development - Importance of tourism - Sustainable Tourism.

Unit-II: TOURISM PRODUCT AND TOURISM MARKETING

Tourism products: Attractions, Availability, Accessibility and Amenities - Tourism Marketing - Various types of tourism marketing in India - Impact of Information Technology in tourism development.

Unit-III: TOURISM SERVICES

Hotels - Motels - Resorts - Boating Clubs - Conducted /Organized Tours - Package Tour - Insurance - Guides - Tour Operators - Tour Promoters - Medical Tourism- Medical Tourism in India.

Unit-IV: TOURISM STATUS

Tourism status in global and national - Impact of tourism development in India - Tourism Development Corporation of India - Programmes in Tourism Development - Infrastructure Development Programme – Integrated Development of Tourism Circuits, Product infrastructure and Destination Development

Unit-V: GROWTH OF TOURISM

Growth of tourism in India - Problems faced by tourism industry – National Tourism Policy of India - Fund allocation for tourism in India - TN Tourism Development Corporation.

Text Book

1. Nirmal Kumar. S, Problems of Tourism in India -Tourism and Economic Development, APH, New Delhi 1996.

Books for Reference

1. Biswanath Ghosh, Tourism and Travel Management, Vikas, New Delhi, 1998.
2. Arun Kumar Shankar, Action Plan and Priorities in tourism development, Kaniskha, New Delhi, 1998.
3. Vinukumar. S and Chandrasekhar. K.S, Sustainable Development and Tourism, 2004.

Semester II **Hours/Week: 4**
18PEC2202 **Credits : 4**

Core Elective-II:
LABOUR ECONOMICS

Course Outcomes:

1. Understand the theoretical as well as empirical issues of agriculture labour.
2. Know about Industrial labour with special reference to India.
3. Recognize issues pertaining to the wage theories, employment policies and so on.
4. Know about how trade union functions and it paves the way for collective bargaining to the globalised economy and social security measures.
5. To understand the need of Trade Unions in Labour Welfare.
6. To study Labour Welfare meaures.

Unit- I: LABOUR ECONOMICS AND LABOUR PROBLEMS

Meaning and concepts of labour - Definition, nature , scope and importance of Labour economics- Nature of labour problems – labour market segmentation - Labour in the unorganized sector- Child Labour – International Labour Organization(ILO) (18 hr)

Unit-II: AGRICULTURAL LABOUR IN INDIA (OOC Based Learning)

meaning and characteristics of agricultural labour in India casual labour and attached labour and bonded labour – The problems of agricultural labour in India – Government measures to improve the conditions of agricultural labour-Employment in agricultural sector – MGNREGP. (18 hr)

Unit-III: INDUSTRIAL LABOUR IN INDIA

Meaning and characteristics of Industrial Labour in India- Employment in organized sector- Labour and labour problems in Service Sector- Meaning and objectives of Trade Unions- trade Union movement in India- Problems and draw backs of the movement in India – Measures to strengthen the Trade Union Movement in India – Industrial disputes: meaning and causes and effects of industrial disputes – prevention of Industrial disputes and the machinery of setting the Industrial Disputes in India – Labour Legislation in India- Indian Labour Laws and practice in relation to international standards. (18 hr)

Unit-IV: WAGES

Wage determination- Wage differentials in India- – productivity and wage relationship- non wage component of labour remuneration- types of wages in India – the need for State Regulation of wages- National Wage Policy in India. (18 hr)

Unit-V: SOCIAL SECURITY MEASURES OF LABOUR IN INDIA

The meaning and the need for social security measures in India- present status of social security in India-social assistance and social insurance- Social Security Legislations in India : Workmen's Compensation Act, 1923, Employees' State Insurance Scheme Act, 1948, Maternity Benefits Act, 1961 and the Provident Fund Act, 1952- Labour Welfare Funds – Unemployment insurance – Second National Commission on Labour (1999) Dr.Arjun Sengupta Committee report. (18 hr)

Text books for study:

1. Sharma, A.K.(2006). *Labour Economics*, Anmol Publications, New Delhi,
2. B. P. Thyagi (2009). Economics of Labour and Social Welfare- Revised Edition, Sage Publication, New Delhi.

References:

1. Dutt, G. (1966). Bargaining power, wages and Employment: An Analysis of Agricultural Labour Markets in India, Sage Publication, New Delhi.
2. Lester, R.A. (1964). Labour Restructuring in India: A Critique of the new Economics of Labour Macmillan , New Delhi.
3. Venkata Rathnam, C.S. (2001). Globalization and Labour Management Relations, Dynamics of change - Sage Publication, New Delhi.
4. Memoria, C.B. (1996). Labour Problems and Social Welfare in India – Kitab Mahal, Allahabad.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester II	Code 18PEC2202					Title of the Paper Core Elective-II: LABOUR ECONOMICS								Hours 4	Credits 4
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	3	3	4	3	2	4	4	4	3	4	4	4	4	3.54	
CO2	3	2	3	3	3	5	5	5	5	3	5	3	3	3.69	
CO3	4	3	3	4	4	3	4	4	3	5	3	4	4	3.69	
CO4	3	4	3	2	4	4	5	3	4	2	4	4	3	3.46	
CO5	2	4	4	3	4	5	3	3	2	4	2	4	2	3.23	
CO6	3	4	3	2	4	3	3	5	3	3	4	3	5	3.46	
Overall Mean Score for COs														3.51	

Result: The Score for this Course is 3.51 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Totalof Values}}{\text{Total No.of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester II **Hours/Week: 4**
18PCO2202 **Credits : 4**

Core Elective (WS) - II: EXPORT AND IMPORT MANAGEMENT

Course Outcomes:

1. Understand the basic concepts of international trade environment
2. Know foreign trade policy in India.
3. Gain exposure export and import procedures and practices.
4. Evolve and understand the needs of the international market.
5. Strategize, plan and execute ideas for export and import.
6. Evaluate the global Business for becoming a successful Export Import Manager.

Unit-I: INTERNATIONAL TRADE ENVIRONMENTS

Introduction of International Trade Environments - What is Globalisation - Issues in Globalisation - GATT agreements - Impact of WTO on export import - Regional Trading (SAFTA/ NAFTA/ BRICS etc.) - Foreign Trade policy in India - Category of export (12 hr)

Unit-II: PROCESSING AND DOCUMENTATION OF EXPORT ORDERS

Choice of enterprise – registration for export/import/export pricing/costing – contacting prospective buyer/seller (importer) - processing of an export order – pre-shipment documentation for import and export (12 hr)

Unit-III: TARIFFS AND TAX ON EXPORT

Guidance to use Customs tariff – income tax applicability on exporting firms/ companies – sales tax applicability on exporting firms/companies – general banking & Day to Day Accounting for exports and imports (12 hr)

Unit-IV: EXPORT AND IMPORT POLICY

Export and Import Policy of India – Objectives – highlights of Central EXIM Policy – Export credit and Guarantee Corporations. (12 hr)

Unit-V: OOC BASED LEARNING

Concept of Free Trade Zones, Export oriented Units, Special Economic Zones – Export Import Manager – Roles – Qualities of EXIM Manager. (12 hr)

Text Book:

1. Ajay Pataki (2015), Export Import Management (Practical Workbook), Educreation Publishing, New Delhi. ISBN: 978 – 93 – 85247 – 39 – 2.

References:

1. Usha Kiran Rai (2010), Export – Import and Logistics Management, PHI Learning Pvt Ltd, New Delhi.
2. Mahajan, M .I Exports - Do it yourself - Snow White Publications, Mumbai.
3. Export - Import Policy: Ministry of Commerce, Government of India.
4. Hand book of Export Import Procedures: Ministry of Commerce, Government of India Vols. I & II.
5. Ram, Paras, Exports: What, Where and How? Anupam Publications, New Delhi.
6. Hirst, P., and Thompson, G., Globalisation in Question: The International Economy and the Possibilities of Governance (Cambridge: Polity Press, 1999, 2nd edn.).

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester II	Code 18PCO2202	Core Elective (WS): EXPORT AND IMPORT MANAGEMENT											Hours 4	Credits 4
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)							Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	
CO1	4	4	5	4	4	4	4	3	4	5	4	4	4	3.92
CO2	5	4	4	4	4	4	3	4	4	4	4	4	4	4.00
CO3	4	4	4	4	4	4	4	4	4	4	4	4	4	4.00
CO4	4	4	4	4	3	3	4	4	4	4	4	4	4	3.84
CO5	4	4	4	4	3	4	4	4	4	4	4	4	4	3.92
CO6	4	4	4	3	4	4	4	4	4	4	4	4	4	3.92
Overall Mean Score for COs														3.93

Result: The Score for this Course is 3.9 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{TotalNo.of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester II **Hours/Week: 4**
18PHR2202 **Credits : 4**

Core Elective (WS) - II: MANAGERIAL EFFECTIVENESS

Course Outcomes:

1. Gained knowledge and understanding about effectiveness and qualities of a successful manager.
2. Able to understand oneself better and plan accordingly for the future.
3. Equipped with the right attitudes and skills towards achieving greater levels of managerial effectiveness.
4. Have developed the seven essential habits of highly effective people and are able to practice in their life to be more effective.
5. Proficient in different types of business correspondence.
6. Have acquired the basic career skills and enhanced employability skill.

Unit-I: PRIVATE VICTORY

Concept: Manager, Effectiveness, Managerial effectiveness.

Managerial Be proactive: Personal vision, Social mirror, Stimulus-Response, Proactive language, Circle of influence. Begin with end in mind: The power of creation, Be a creator, Personal mission statement, Principle centered person, Right brain vs. Left brain. Put first things first: Four generation of time management, Quadrant I, II, III and IV types of personalities. Short term and long term goals, the power of delegation. (12 hr)

Unit-II: PUBLIC VICTORY

Think Win/Win: Six paradigm of human interaction Seek first to understand then to be understood: Empathetic listening – diagnosing – understand and perception.

Synergize: Synergy in class room, business synergy and communication, Force field analysis. (12 hr)

Unit-III: CONTINUOUS RENEWAL

Sharpen the Saw: Four dimensions of renewal, balance in renewal synergy, renewal upward spiral, Case discussions, Role play and Exercises. (12 hr)

Unit-IV: CORRESPONDENCE SKILLS

What is an effective Business letter, the language of a business letter and the lay-out of a business letter. Enquiries and Replies: Hints for drafting an 'Enquiry' and 'Reply'. Claims and Adjustments: Hints for drafting complaints

and making adjustments. Collection letters: How to write an effective collection letter, Collection series – Sending statement of account, Reminders, Inquiry and discussion, Appeal and Urgency, Demand and Warning. Circular letters: Situations that need circular letters. Banking Correspondence, Insurance Correspondence, Import and Export Correspondence. (12 hr)

Unit-V: JOB CAREER SKILLS

Application letters, Interview letters, References, Testimonials, Letters of Appointment, Confirmation, Promotion, Retrenchment and Resignation. How to run a meeting: Meetings and Meeting of minds, making disagreement productive, Instructions for observers, How to be an effective participant, How to be an effective discussion leader and how to write and read minutes. How to write a memo. (12 hr)

Text Books:

1. Korlahalli & Rajendra Pal, Essentials of Business Communication, Sultan Chand & Sons. (Unit 1,2) – Section 2
2. E.H. McGrath S.J. Basic Managerial skills for all, Prentice – Hall of India Private ltd. (Unit 2) – Chapter 2,6
3. Covey R. Stephens, 2000, The Seven Habits of Highly Effective People, London, Simon & Schuster Publications (Unit – 3, 4, 5) Chapter 2, 4, 5, 6, 7.

Reference book:

1. Luthans, Fred, 1995, Organisational Behaviour , New Delhi, Tata Mcgraw Hill Publishers.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester II	Code 18PHR2202				Title of the Paper Elective (WS): MANAGERIAL EFFECTIVENESS								Hours 4	Credits 4
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)							Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	
CO1	5	4	4	5	4	4	5	4	3	5	4	5	3	4.2
CO2	4	5	3	4	3	5	4	4	3	4	3	4	4	3.8
CO3	3	3	4	4	4	3	3	4	3	3	2	3	5	3.4
CO4	4	4	4	2	2	3	3	2	4	3	4	4	5	3.1
CO5	3	4	4	3	3	3	3	3	2	3	3	3	4	3.2
CO6	4	5	3	3	4	3	4	4	4	4	4	4	3	3.8
CO7	3	2	5	4	3	2	3	3	5	4	3	5	3	3.5
CO8	4	3	4	3	5	5	4	4	4	4	5	3	4	4.0
Overall Mean Score for COs														3.6

Result: The Score for this Course is 3.6 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester II **Hours/Week: 4**
18PSS2301 **Credits : 4**

IDC: SOFT SKILLS

Course Outcomes:

1. Students are taught the various nuances of grooming such as, good manners and etiquettes and they are trained to practice them in the class rooms.
2. Students are empowered with public speaking skills via extempore speeches and prepared speeches, presented before the class and assessed by the trainer as well as the companions which eventually helps build self confidence of the students.
3. Students learn the different types of resumes and different types of interview skills and write and print their own resumes and present before the interview panel for their mock interview.
4. Students actively learn the ten parameters of group discussion, perform on the stage with their colleagues, which is videotaped, reviewed and evaluated.
5. As students go through their teenage, self discovery becomes a tool to develop their personality facilitated with scientific psychological personality tests.
6. Students are guided to knowing their SWOT (Strengths, Weaknesses, Opportunities and Threats)and setting their short term and long term goals for their lives.

Module 1: Basics of Communication: Definition of communication, Process of Communication, Barriers of Communication, Non-verbal Communication,

Effective Communication: The Art of Listening, Exercises in Kinesthetics, Production of Speech, Organization of Speech, Modes of delivery, Conversation Techniques, Dialogue, Good manners and Etiquettes, Politeness markers & Listening links.

Module II: Resume Writing: What is Resume? Types of Resume? Chronological, Functional and Mixed Resume, Steps in preparation of Resume, structure and framework for writing resume, Intensive training / personalized training on resume writing. **Interview Skills**: Common interview questions, Attitude, Body Language, The mock interviews, Phone interviews, Behavioral interviews.

Module III: Group Discussion: Group Discussion Basics, GD Topics for Practice, Points for GD Topics, Case-Based and Article based Group Discussions, Points for Case Studies, and Notes on Current Issues for GDS & Practicum with video coverage. **Team Building:** Team Vs Group – Synergy,

Stages of Team Formation, Broken Square-Exercise, Win as much as you win- Exercise, Leadership – Styles, Work ethics.

Module IV: Personal Effectiveness: Self Discovery, Self Esteem, Goal setting, Problem-solving, Conflict and Stress Management

Module V: Numerical Ability: Average, Percentage, Profit and Loss, Problems on ages, Simple Interest, Compound Interest, Area, Volume and Surface Area,Time and Work, Pipes and Cisterns, Time and Distance, Problems on Trains, Boats and Streams, Calendar, Clocks, Permutations and Combinations, Probability.

Module VI: Test of Reasoning: Series Completion, Analogy, Data Sufficiency, Blood Relations, Assertion and Reasoning, Logical Deduction, Direction. **Non-Verbal Reasoning**: Series, Classification

Text Book

1. Melchias, G., Balaiah John., John Love Joy (Eds) 2015. *Winners in the making*. St.Joseph's College, Trichy-2

References

1. Aggarwal, R. S. *Quantitative Aptitude, S.Chand & Sons*
2. Aggarwal, R.S. (2010). *A Modern Approach to Verbal and Non Verbal Reasoning*. S. Chand & Co, Revised Edition.
3. Covey, Stephen. (2004). *7 Habits of Highly effective people,* Free Press.
4. Egan Gerard (1994). *The Skilled Helper* (5th Ed). Pacific Grove, Brooks/ Cole.
5. Khera, Shiv (2003). *You Can Win.* Macmillan Books, Revised Edition.
6. Murphy, Raymond. (1998). *Essential English Grammar*. 2nd ed., Cambridge University Press.
7. Prasad, L. M. (2000). *Organizational Behaviour, S.Chand & Sons.*
8. Schuller, Robert. (2010). *Positive Attitudes*. Jaico Books.
9. Trishna's (2006). *How to do well in GDs & Interviews*, Trishna Knowledge Systems.
10. Yate, Martin. (2005). H*iring the Best: A Manager's Guide to Effective Interviewing and Recruiting*.

Modules	Topics	Examination Pattern	
		CIA	Online
I	Basics of Communication	15	5
II	Resume Writing & Interview Skills	15	5
III	Group Discussion & Team Building	10	5
IV	Personal Effectiveness	10	5
V	Numerical Ability (Common Session)	5	10
VI	Test of Reasoning (Common Session)	5	10
Total		**60**	**40**

Semester III **Hours/Week: 6**
18PEC3110 **Credits : 5**

ECONOMICS OF GROWTH AND DEVELOPMENT

Course Outcomes:

1. To understand the various concepts of Growth and Development with special reference to India.
2. To analyze theoretical and empirical issues in economic growth and development.
3. To familiarize the students with contemporary issues in economic growth and development
4. To understand the role and contribution of modern technology in economic development
5. To know the policy analysis between developing and developed countries.
6. To provide critical thinking on contemporary issues on economic growth and development.
7. To understand the evolution of growth and development in the modern era.
8. To understand the functions of MNCs in the global economy.

Unit-I: CONCEPTS OF ECONOMIC GROWTH AND DEVELOPMENT (OOC Based Learning)

Concepts and Definitions of Economic growth and Development – Characteristics Features of Underdeveloped Countries - Factors affecting Economic growth – Measurement of Economic Development-HDI-PQLI. (20 hr)

UNIT-II: GROWTH MODELS

Classical Economists: Harrod –Domar model- Neo-classical growth models – Solow and Meade- Cambridge Economist: Joan Robinson's and Kaldor growth model. (20 hr)

Unit-III: THEORIES OF DEVELOPMENT

Classical theory of development – contributions of Adam Smith, Ricardo, Malthus and James Mill- Karl Marx and development of capitalistic economy – theory of social change, surplus value and profit; Immutable laws of capitalist development; Crisis in Capitalism – Schumpeter's Theory of Innovation – New Classicals – Joseph Stiglitz (20 hr)

Unit-IV: TECHNOLOGICAL CHANGE & ECONOMIC DEVELOPMENT

Role of Technology in Economic Development – Contribution of Technology to Growth- Choice of Techniques: Labour Intensive and Capital Intensive- Human Capital Formation. (25 hr)

Unit-V: TRADE AND ECONOMIC DEVELOPMENT

Prebisch, Singer and Myrdal thesis-MNCs – Role of Foreign Capital and Foreign Aid in Economic Development – Leontief Dynamic Input-Output Model. (20 hr)

Text book for study

1. M. L. Jhingan (2009). Economics of Planning and Development, Revised Edition- S.chand, New Delhi.

References:

1. Adelman, I. (1961) Theories of Economic Growth and Development, Stanford University Press.
2. Kindleberger, C.P. (1977) Economic Development, McGraw Hill, New York.
3. Sen, A.K. (1990) Growth Economics, Harmondsworth.
4. Taylor, L. (1979) Macro Models for Developing Countries McGraw Hill, New York.
5. Myrdal, G. (1957) Economic Theory and Underdeveloped Regions, Duckworth London.
6. Schumpeter, J A. (1949)T he Theory of Economic Development, Harvard University Press Mass, Cambridge.
7. Grossman, G and E. Helpman. (1991) Innovation and Growth in the Global Economy, MIT Press Mass, Cambridge.
8. Kuznets, Simon. (1971) Economic Growth of Nations, Total Output and Production Structure Harvard University Press Mass, Cambridge.
9. Brahamananda, P R. and C N. Vakil. (1956) Planning for an Expanding Economy Vora and Co, Bombay.
10. Gupta, S B. (1988) Monetary Economics: Institutions, Theory and Policy, S. Chand and Co New Delhi.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester III	Code 18PEC3110					Title of the Paper ECONOMICS OF GROWTH AND DEVELOPMENT								Hours 6	Credits 5
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	4	4	4	3	3	4	4	4	4	4	4	4	5		3.92
CO2	3	2	3	4	3	5	3	3	3	5	5	5	4		3.69
CO3	4	3	3	2	4	4	2	4	5	4	3	3	5		3.54
CO4	3	4	3	2	3	3	4	5	4	3	4	4	3		3.46
CO5	2	3	2	3	2	5	5	3	3	5	2	4	3		3.23
CO6	3	4	3	2	4	3	3	4	2	4	4	4	4		3.38
CO7	4	3	4	3	4	2	4	3	5	3	4	3	3		3.46
CO8	3	4	4	3	4	3	3	4	4	2	4	2	3		3.31
													Overall Mean Score for COs		3.50

Result: The Score for this Course is ____ (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester III **Hours/Week: 6**
18PEC3111 **Credits : 5**

MONETARY ECONOMICS

Course Outcomes:

1. Understand the latest developments in Monetary Economics
2. Know recent trends in banking theories and practice
3. Understand the importance of Monetary Policy and its working
4. Compare the banking system of India with other systems.
5. Study the functions of RBI
6. Study about inflation in India
7. Study the impact of demonetization in India
8. To know the performance of nationalised banks in India.

Unit-I : THEORY OF MONEY AND PRICES

Quantity theories - Keynesian theory of money and prices - Gurley and Shaw's thesis on liquidity of money - RadCliffe- sayers thesis -Tobin and Shaw's theory -Patinkin's monetary theory , Phillips Curve. (20 hr)

Unit-II: MILTON FRIEDMAN'S QUANTITY THEORY

Friedman's Quantity theory - Demand Function- Keynesian Theory and Friedman's quantity Theory: A comparison- Critical Evaluation. (20 hr)

Unit-III: MODERN BANKING THEORY

James Tobin's Theory – a new theory of credit – control.- Shaw's Theory – Effectiveness of Monetary Policy - Henry Simon's Theory –Contribution to banking Theory. (20 hr)

Unit-IV: BANKING SYSTEM IN INDIA

Central Banking- Meaning-Functions-Currency Issue – Principles- Credit control- Commercial Banking- Indigenous Banking – Modern Banking – New generations private sector Banks – Nationalization - Performance of Nationalized Banks in India-Money and Capital markets in India- Non-performing assets (NPA)- Recent trends in banking system in India. (20 hr)

Unit-V: MONETARY POLICY (OOC Based Learning)

Objectives of Monetary Policy-Role of Monetary Policy in a developing economy. RBI and Monetary Policy-Problems of monetary policy in India-Inflation in India – Demonetization in India. (25 hr)

Text book for study:

1. Gupta, S B. (2005) Monetary Economics, S.Chand & company, New Delhi,

References:

1. Halm, G N. (1990). *Monetary Theory*. Asia Publishing House, New Delhi.
2. Harris, C.L. (1961). *Money and Banking*. Allyn and Bacon, London.
3. Seth, M. L. (2008). Monetary Economics. Lakshmi Narayana Agarwal, Agra.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester III	Code 18PEC3111					Title of the Paper MONETARY ECONOMICS								Hours 6	Credits 5
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	5	5	4	3	2	4	4	4	3	3	4	3	4		3.69
CO2	3	4	3	3	3	3	4	3	3	3	4	3	4		3.31
CO3	4	3	3	2	4	5	3	5	4	3	4	2	3		3.46
CO4	3	4	3	2	4	4	4	4	4	3	3	4	2		3.38
CO5	3	4	4	4	3	3	2	3	2	4	4	4	3		3.31
CO6	3	4	3	2	4	2	3	3	5	4	3	4	4		3.38
CO7	4	3	4	3	2	2	4	4	3	2	4	4	4		3.31
CO8	3	4	4	3	4	4	5	2	4	2	1	4	5		3.46
														Overall Mean Score for COs	3.41

Result: The Score for this Course is 3.41 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester III **Hours/Week: 6**
18SMS3101 **Credits : 5**

Inter-disciplinary Core:
HUMAN RESOURCE MANAGEMENT

Course Outcomes:

1. Being competent with knowledge and skill of human resource management.
2. Groomed with proficiency in the latest techniques related planning and development of human resources in an industry.
3. Nurtured with the recent strategic HRM practices entitled to succeed competitive examinations.
4. Potential enough to carry research activities in the areas of human resource management as per the need of the hour.
5. Sensitized in the changing scenario of HR practices and being competent to start new ventures (Entrepreneurs)
6. Proficient in carrying research activities as per the dynamics of human resource climate of the industry.
7. Equipped with enhanced practical knowledge and skill in the specialization of human resource through industrial interface (in plant training and frequent industrial visits)
8. Efficient to train subordinate by sharing the equipped and enriched knowledge in various fields of HR.

Unit-1:

INTRODUCTION TO HUMAN RESOURCE MANAGEMENT

HRM – Meaning, Nature, Objectives, Scope and Functions. Line and Staff views of HRM, HRM as a profession, Future role of HRM, Department structure of HRM. HR Metrics, HRM in Small and Medium Scale Enterprises (SMEs) (10 hr)

Unit-2:

HUMAN RESOURCE PLANNING AND RECRUITMENT

HR planning - Job Analysis – Job Specification and Job description. Induction Programme. Recruitment – Sources, characteristics and types. Selection process. Types of tests and interviews. Promotion and Transfers, Demotions and Separations. (15 hr)

Unit-3:

STRATEGIC HRM AND PERFORMANCE APPRAISAL (OOC Based Learning)

Role of HRM in Corporate Goal Setting, Levels and Models of Strategic

HRM, Applications of Strategic HRM. Performance Appraisal – Purpose, Methods, Factors, Problems. Distinguish between Performance Appraisal and Potential Appraisal. Performance Management Systems. (15 hr)

Unit-4:

TRAININGAND DEVELOPMENT

Training – Need, Importance, Steps, Methods. Training needs assessment. Management Development Programme – Significance and methods. Stages of Career Planning and Development, Career counseling.

Unit-5:

COMPENSATION ADMINISTRATION

Compensation plan – Incentives - individual and group. Benefits – Bonus and Fringe. Developing a sound compensation plan, wage policy, Executive compensation – Factors and issues. HRM in Virtual Organisations. (10 hr)

Text book for study:

1. Pravin Durai, (2010), Human Resource Management (2nd Ed), Pearson Education Books, New Delhi.

Reference Books:

1. VSP Rao (2002), Human Resource Management: Text & Cases, Excel Books, New Delhi.
2. Edwin Flippo (1984), Personnel Management, Tata McGraw Hill, New Delhi.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester III	Code 18SMS3101					Title of the Paper HUMAN RESOURCE MANAGEMENT								Hours 6	5
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	4	3	4	2	4	4	5	2	3	4	3	3	4	3.46	
CO2	4	5	5	4	4	5	5	3	4	5	4	4	4	4.30	
CO3	4	4	5	4	5	5	5	3	5	5	5	4	5	4.53	
CO4	5	4	4	4	5	5	5	3	5	5	4	5	5	4.53	
CO5	4	5	5	5	4	4	5	3	5	5	4	4	5	4.46	
CO6	5	4	4	4	4	5	4	2	4	5	5	4	4	4.15	
CO7	5	4	4	4	4	5	5	3	4	5	5	4	5	4.38	
CO8	4	4	5	4	4	5	5	3	4	4	5	4	5	4.30	
										Overall Mean Score for COs				4.26	

Result: The Score for this Course is 4.26 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Totalof Values}}{\text{TotalNo.of POs\& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester III **Hours/Week: 4**
18PEC3203 **Credits : 4**

Core Elective:
INTRODUCTION TO ECONOMETRICS

Course Outcomes:

1. It enhances the students' knowledge to quantify the socioeconomic problems
2. It induces the quantitative techniques skills
3. It helps the students to understand the relationship between the variable and nature of relationship.
4. The student will learn the forecasting techniques.
5. This course enriches the students with problem solving skills.
6. The main accent is done on economic interpretations and application of considered econometric models.

Unit-I: Nature and Scope of Econometrics

Econometrics-Meaning-Definition – Scope – Objectives – Methodology of Econometrics-Specification- Mathematical Economics and Econometrics-Econometric models – Methodology of Econometric - Types of Econometrics- Role of Computer in Econometrics

Unit-II: Simple Regression Analysis and Estimation Parameters

Statistical Inference in the Linear Regression Model: Confidence Intervals for the Estimated Parameters and the Testing of Hypotheses, Coefficient of Determination, Prediction with the Simple Regression model.

Unit-III: Multiple Regression Analysis and Estimation of Parameters

Linear Multiple regression analysis: Estimation of parameters, goodness of fit - adjusted R^2, partial regression coefficients, testing of hypotheses – individual and joint significance: t and F-tests.

Unit-IV: Problems of OLS Method

Problems in OLS Methods: Analysis of Residuals -Heteroscedasticity and Autocorrelation and Problem of Multicollineraity- theirConsequences, Detection and Remedies – Specification error.

Unit-V: Dummy Variable

Introducing dummy (independent) variables- nature of dummy variables, variables with two categories and more than two categories, dummy variable trap.

Textbook for Study

1. Domodar N. Gujarati, Dawn Porter and Sangeetha Gunasekar , Basic Econometrics, Fifth Edition, McGraw Hill/Irwin, 2017.

References

1. Greene, William H. *Econometric Analysis*. 6th Edition, Prentice Hall. 2008.
2. Johnston J. and Dinardo, J. *Econometric Methods*. 4th Ed. McGraw-Hill 1997. Greene
3. Ramanathan, Ramu, *Introductory Econometrics withApplications*, 5th edition, 2002, Thomson Asia Pte Ltd., Singapore.
4. Stock, James H., and Mark W. Watson (2006): Introduction to Econometrics, Second Edition, (Addison-Wesley Series in Economics).
5. Wooldridge, J., *Introductory Econometrics: A Modern Approach*, 2015, Nelson Education.
6. Earl K. Bowen & Martin K. Starr, Basic Statistics for Business and Economics, McGraw Hill International Student Edition
7. Maddala, G. S., Introduction to Econometrics. Wiley Publishers (Indian edition)
8. Christopher Dougherty, Introduction to Econometrics, Oxford University Press, 3rd edition, Indian edition, 2007.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester III	Code 18PEC3203			Title of the Paper INTRODUCTION TO ECONOMETRICS								Hours 4	Credits 4
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)							Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	
CO1	5	5	4	4	4	5	5	5	5	4	4	4	4	4.46
CO2	4	3	3	4	3	4	3	4	3	4	3	4	4	3.54
CO3	4	3	3	4	4	4	3	3	4	5	4	5	3	3.77
CO4	3	4	3	3	4	4	2	4	3	3	3	3	3	3.23
CO5	2	3	3	4	3	4	3	2	4	3	3	4	3	3.15
CO6	3	4	3	3	4	4	3	3	5	3	3	3	4	3.46
Overall Mean Score for COs														3.60

Result: The Score for this Course is 3.6 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester III **Hours/Week: 4**
18PEC3301 **Credits : 4**

IDC (WS):
INDIAN ECONOMY

Course Outcomes:

1. Acquire the basic knowledge about the structure of Indian Economy
2. Know the key problems in the Economic Development in India
3. Know the efforts taken for the Economic Development of India
4. Know the different policies related to Economic Development
5. Acquire the knowledge for resolving the economic problems of India
6. Get the knowledge of analyzing the Macro Economic policies

Unit-I:

STRUCTURE OF INDIAN ECONOMY (OOC Based Learning)

Back ground of the Indian economy - Basic features of Indian Economy: - Natural Resources- Land, Water, Forest: Demography-size, growth, and sex composition of the population - National Income- GDP,GNP, NDP Public Expenditure and Public Revenue. (12 hr)

Unit-II:

PROBLEMS IN INDIAN ECONOMY

Poverty and inequality: Nature, causes and measures to eradicate Poverty - Unemployment: nature causes and Employment policy – MGNREGP - Population pressure: Causes, Effect and Measures to control. (12 hr)

Unit-III:

INFLATION AND REGIONAL DISPARITIES

Inflation: - Types and causes - Food inflation - External debt: Causes measures: Regional Disparities: Nature and Causes. (12 hr)

Unit-IV:

PLANNING IN INDIA

Planning in India: objectives and strategies- The Role of planning commission in India - 12th Five Year Plan- Objectives, allocation and targets- NITI AAYOG. (12 hr)

Unit-V:

MACRO ECONOMIC POLICY

Macro Economic Policy-Fiscal Policy, Monetary Policy, Industrial Policy and Agricultural Policy, Trade Policy. (12 hr)

Text book for study:

1. Dutt and K.P.M. Sundaram (2012) - Indian Economy, Sultan Chand & Sons, New Delhi.

References:

1. Ishwar.C. Dingra (2012) - The Indian Economy, Twenty First Edition, Sultan Chand and Sons, New Delhi.
2. G.M Meier, (1995) Leading Issues in Economic Development, 6th Edition,Oxford University Press, New Delhi.

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Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester III	Code 18PEC3301					Title of the Paper IDC (WS): INDIAN ECONOMY								Hours 4	Credits 4
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	3	3	4	3	2	4	4	3	5	3	3	4	2		3.31
CO2	3	2	3	1	3	5	4	4	4	4	4	3	3		3.31
CO3	4	3	3	2	1	3	4	5	4	3	5	5	5		3.62
CO4	3	4	3	2	4	3	4	5	3	3	4	4	3		3.46
CO5	2	4	2	3	3	3	4	4	3	4	2	5	3		3.23
CO6	3	4	3	2	4	4	3	3	4	2	3	3	4		3.23
Overall Mean Score for COs															3.36

Result: The Score for this Course is 3.36 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\textbf{Mean Score of COs} = \frac{\text{Totalof Values}}{\text{Total No.of POs \& PSOs}} \qquad \textbf{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester III **Hours/Week: 4**
18PCO3203 **Credits : 4**

Core Elective (WS):
PORTFOLIO MANAGEMENT

Course Outcomes:

1. Decipher the meaning of investment and risks associated with it.
2. Identify and appreciate various investment avenues.
3. Understand underlying facts of portfolio construction.
4. Know the influence of Fundamental Analysis.
5. Understand the nuances of technical analysis.
6. Judge and choose suitable investment proposals

Unit-I: INVESTMENT AND PORTFOLIO

Introduction: Investment- Features of Investment Program- Risk of Investment- Spectrum of Investment- Equity Shares- Fixed Income Securities- Mutual Fund Scheme- Deposits- Tax sheltered Savings Scheme- Life Insurance-Real Estate- Precious objects (12 hr)

Unit-II: DIFFERENT TYPES OF RISKS

Sources of Financial Risk: Credit . market, default risk, foreign exchange risk interest rate risk - purchasing power risk etc.; Systematic and non-systematic risk. (12 hr)

Unit-III : FUNDAMENTAL AND TECHNICAL ANALYSIS

Fundamental analysis- Influence of the economy- Economy Vs Industry and Company- Industry analysis- Company analysis- Guidelines for Investment-How to pick up growth Shares-NSE, BSE, Dow Jones Index and OTCEI. Technical analysis of the market- Chart Pattern-Moving Averages- Dow theory- Elliot Wave Theory -Major trends- Principles of technical analysis. (12 hr)

Unit-IV: OPTIONS AND FUTURES

Options: types of options; option trading; quotes, trading, margins and clearing; Warrants and convertibles. Future: Hedgers and speculators; Future contracts; Future markers-clearing house, margins trading Future prices and spot prices; Forward prices vs. Future prices; Future vs. options. (12 hr)

Unit-V: MANAGEMENT OF PORTFOLIOS (OOC BASED LEARNING):

Portfolio Management - Portfolio Budgeting – Sharpe's Traynor and Jessen measure of preferable evaluation - Efficient Set-Portfolio Selection and Diversification -The Shape and the Risk Function (including CAPM Model

and Random Walk theory) - Timings of investment and disinvestment. (12 hr)

Textbook

1. V.K. Bhalla (2005), Investment Management (Security analysis and Portfolio Management) S. Chand & Ccompany Ltd, New Delhi.

References

1. V. Aavadhani(1999)- Investment & Securities markets in India, Himalaya Publishing House, New Delhi. (2001)
2. Donald E Fischer & Ronald J Jordan, Security analysis and Portfolio Management, Prentice Hall of India Pvt limited, New Delhi, (2001).
3. P. Jhabak (2012), Security analysis and portfolio management, Himalaya publication house Pvt. Ltd., New Delhi.
4. L Natarajan (2013-14), Portfolio Management, Margham publications, Chennai.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester III	Code 18PCO3203			Title of the Paper Core Elective (WS): PORTFOLIO MANAGEMENT									Hours 4	Credits 4
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	
CO1	4	4	5	5	4	5	5	4	4	5	4	5	5	4.54
CO2	5	4	5	5	5	4	4	5	4	4	5	3	5	4.46
CO3	4	4	5	4	4	4	5	4	5	4	4	5	5	4.38
CO4	4	5	4	4	5	4	3	5	4	4	5	5	4	4.31
CO5	5	5	5	4	4	5	4	5	5	4	4	4	4	4.46
CO6	5	4	4	5	5	4	4	4	5	4	5	5	4	4.46
													Overall Mean Score for COs	4.43

Result: The Score for this Course is 4.4 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

***Values Scaling*:**

Mean Score of COs = $\frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}}$	**Mean Overall Score for COs** = $\frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$

Semester III **Hours/Week: 4**
18PHR3203 **Credits : 4**

Core Elective (WS):
COMPENSATION MANAGEMENT

Course Outcomes:

1. Gained knowledge on the different types of wages and the importance of equity in wage and salary administration.
2. Have become aware of the issues related to compensation or rewarding human resources in various forms of organizations
3. Familiarized on the computation of wage and salary.
4. Learnt about the different machineries involved in wage fixation in our country.
5. Developed skills in designing, analyzing and restructuring reward management systems, policies and strategies.
6. Learnt the different incentive payment plans introduced by the management researchers.

Unit-1: BASIC CONCEPTS

Compensation – definition and meaning; Wage and Salary- concept, meaning, purpose , factors , components and differences ; types of wages- minimum wage, fair wage, living wage, statutory minimum wage and need based minimum wage; wage and salary administration - principles, objectives, factors and problems; wage fixation- principles and time frame; Authorized deductions and imposition of fines on employees.

Unit-2: THEORIES OF WAGES

Wage Theories - Ricardo's subsistence theory of wages (Iron Law of Wages), Adam Smith's wage fund theory, Surplus value theory of Karl Marx, Residual claimant theory, Profit maximization theory; wages policy- concept, importance, ILO on wage policy, and National wage policy in India.

Unit-3: METHODS OF WAGE FIXATION

Computation of wage and salary - wage and salary structure and calculation; Wage differentials- charactertics, Payment by- time rate, over time, piece rate, performance and employee benefit schemes (Merit pay /skill based pay); payment of wages with productivity / efficiency; dearness allowance- basis for calculation and fringe benefits; executive remuneration and perks; labour cost; wage survey- features .

Unit-4: MACHINERIES OF WAGE FIXATION

Machineries of wage fixation- wage boards, pay commissions, conciliation, adjudication and arbitration; procedure for wage fixation- job evaluation, its process and methods; Team Compensation- Competency Based Compensation, Collective agreements and productivity agreements; Profit sharing and bonus.

Unit-5: INCENTIVE SYSTEMS

Compensation Strategy- Monetary & Non-Monetary Rewards, Intrinsic Rewards and Cafeteria Style Compensation, internal and external equity in reward management; Incentive payment plans- Rowan, Halsey, Taylor, Gantt, Emerson and Scanlon, profit sharing- purpose, merits and demerits. Gain sharing – features; productivity oriented incentive schemes - individual and group bonus schemes; principles to make incentive schemes effective and ESOP schemes.

Text Books

1. Sharma.A.M , (1999), Understanding wage system, Bombay, Himalaya publishers (unit 2,4 and 5: chapter 3,4 and 6)
2. Jain S.P. & Narang. K.L. (1995), Cost Accounting, New Delhi, Sulthan Chand & Sons, (unit 3: chapter 2)
3. Dipak Kumar Bhattacharya, (2009), Compensation, New Delhi, Oxford university Press, (unit 1 and 3: chapter 1 and5).

Books for Reference

1. Prasad. N.K. (1990), Principles & Practice of accounting, New Delhi, Sulthan Chand & Sons.
2. Gupta.A. (2000), Wage & Salary Administration in India, New Delhi, Anmoe Publications Pvt. Ltd.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester III	Code 18PHR3203					Title of the Paper COMPENSATION MANAGEMENT								Hours 4	Credits 4
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	3	3	3	3	3	4	3	3	3	3	3	3	4		3.0
CO2	4	4	4	4	3	4	3	3	4	4	3	4	4		3.6
CO3	5	3	4	4	3	3	3	3	3	3	3	4	3		3.3
CO4	3	3	3	3	3	3	3	3	3	3	3	3	3		3.0
CO5	5	5	4	4	3	4	3	3	4	4	3	4	4		3.8
CO6	5	4	5	4	4	3	3	3	4	3	4	4	4		3.8
													Overall Mean Score for COs		3.4

Result: The Score for this Course is 3.4 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester III **Hours/Week: 4**
18PEC3302 **Credits : 4**

IDC (BS):
MANAGERIAL ECONOMICS

Course Outcomes:

1. Acquire the basic knowledge about General economics to the students.
2. Understand the Managerial skill and its applications to the students.
3. Impart the knowledge of demand theory
4. Understand the production theory to the students.
5. Understand how products are priced.
6. Know the various macroeconomic polices

Unit-I : NATURE AND SCOPE OF MANAGERIAL ECONOMICS

Definition of Economics and Managerial Economics-Nature, Scope and Functions of Managerla1 Economics. - Uses and Limitations of Managerial Economics.

Unit-II: DEMAND ANALYSIS (OOC Based Learning)

Meaning - Law of Demand and its determinants- Meaning, types and degrees of elasticity- Measurement of price elasticity- Meaning - Factors involved in forecasting - Methods of forecasting - survey method, graphical method and experimental method - criteria for good forecasting.

Unit-III :PRODUCTION ANALYSIS

Meaning and the managerial use of a production function.-Law of variable proportions-Iso-quant - properties and the equilibrium alone. Meaning - Total, Average and Marginal cost (simple problems to calculate these values) Meaning - Total, Average and Marginal revenue (simple problems to calculate these values) Meaning - construction of a breakeven chart (anyone with simple practical application of it) - and the margin of safety.

Unit-IV: PRICING TECHNIQUES

Full cost pricing - marginal pricing - target pricing - peak load pricing - going rate pricing – cyclical pricing - customary pricing - skimming pricing - penetrating pricing - product-line pricing - pricing of joint product, new product.

Unit-V: NATIONAL INCOME AND ECONOMIC POLICIES

National Income – Components, methods and difficulty in the calculation of National Income – Inflation – Causes, Types and Effects - Monetary policy – Fiscal policy - Budget

Textbook for Study

1. S. Sankaran - Economic Analysis, Margham Publications, Madras,1991

References

1. P .L.Mehta: Managerial Economics - Analysis, problems and causes. Sultan Chand & Sons, 1992
2. R.L. Varshney and K.L.Maheswari: Managerial Economics. Sultan Chand & Sons, 1987.
3. Joel Dean: Managerial Economics. Prentice Hall of India, 1987.
4. Mote, Paul and Gupta: Managerial Economics Concepts and cases. 1979.
5. Ahuja H.L. (1996) - *Principles of Micro Economics, A New look at Economic Theory*, S.Chand, New Delhi.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester III	Code 18PEC3302					Title of the Paper IDC (BS): MANAGERIAL ECONOMICS								Hours 4	Credits 4
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	3	3	4	3	2	4	4	3	1	3	3	4	3		3.08
CO2	3	2	3	3	3	3	4	4	4	3	4	4	4		3.38
CO3	4	3	3	2	1	5	4	2	4	4	3	4	3		3.23
CO4	3	4	3	2	4	4	4	2	3	4	3	5	4		3.46
CO5	4	3	4	3	2	5	3	3	5	1	5	3	2		3.31
CO6	3	4	4	3	4	3	4	4	4	2	4	3	2		3.38
														Overall Mean Score for COs	3.31

Result: The Score for this Course is 3.3 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Totalof Values}}{\text{TotalNo.of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester IV **Hours/Week: 7**
18PEC4112 **Credits : 5**

INTERNATIONAL ECONOMICS

Course Outcomes:

1. Understand the importance of international trade
2. Analyse various international trade theories
3. Understand the importance and way to regulate international trade
4. Understand the national economy in the global context
5. Know the impact of trade policies both at national and international level
6. Enable the students to understand the EXIM Policy.
7. Study the level of international financial flows.
8. Understand the functions of international institutions in the global economy

Unit-I: IMPORTANCE OF TRADE AND TRADE THEORIES

Importance of the study of international economics; inter-regional and international trade; theories of Absolute cost advantage, Comparative cost advantage and Opportunity cost; Heckscher-Ohlin theorem. (18 hr)

Unit-II: GAINS FROM TRADE (OOC Based Learning)

Gains from trade – their measurement and distribution; trade as an engine of economic growth; concepts of terms of trade and their importance in the theory of trade; Doctrine of reciprocal demand – its importance and limitations in the theory of trade. (18 hr)

Unit-III: FREE TRADE AND PROTECTION

Types of tariffs and quotas; their impact in partial equilibrium analysis; free trade and policy of tariffs in relation to economic growth with special reference to India; concept of optimum tariff –dumping – anti dumping – Anti-Dumping Policy– non tariff barriers. (18 hr)

Unit-IV: BALANCE OF TRADE AND BALANCE OF PAYMENTS

Concept and components of Balance of trade and Balance of payments; equilibrium and disequilibrium in balance of payments; consequences of disequilibrium in balance of payments; measures to correct deficit in the balance of payments; relative merits, demerits and limitations of devaluation. (18 hr)

Unit-V: INTERNATIONAL INSTITUTIONS IN FOREIGN TRADE

Recent changes in the composition and direction of foreign trade instruments of export promotion and recent export and import Policy of India – Concept and implications of foreign trade multiplier- Functions of IMF, World Bank and GATT/WTO – MNC :Financial Flow, Capital Flow –FDI,FII, Technology Transfer - SAARC (18 hr)

Text book for study

1. K.C.Rana and K.N.Verma (2007) International Economics, Vishal Publishing Co., Delhi.

References

1. Kindlberger, C P. (1973) International Economics R.D.Irwin., Homewood.
2. Aggarwal, M R. (1979) Regional Economic Cooperation in South Asia S. Chand & Co.
3. Bhagwati, J. (1981) International Trade Selected Readings Cambridge University Press Mass.
4. Joshi V. and I.M.D. Little. (1998) India's Economic Reforms 1999-2001 OUP, New Delhi.
5. Jhingan M.L.(2003) International Economics, Viruntha Publisher, New Delhi.
6. Nayyar, D. (1977) India's Exports and Export Policies in the 1960s: Cambridge University press.
7. Patel, S.J. (1995) Indian Economy Towards the 21st Century, University press Ltd, India.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester IV	Code 18PEC4112					Title of the Paper INTERNATIONAL ECONOMICS								Hours 7	Credits 5
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	5	5	4	3	5	5	5	3	4	4	4	3	4		4.15
CO2	4	4	3	4	3	4	4	3	4	3	3	4	5		3.69
CO3	4	3	3	4	4	3	3	4	4	2	2	4	4		3.38
CO4	3	4	3	2	4	3	4	3	3	3	4	4	5		3.46
CO5	2	3	2	4	4	2	3	2	5	4	3	4	3		3.15
CO6	3	4	3	2	4	1	4	3	2	2	4	4	4		3.08
CO7	4	3	4	3	2	4	4	4	3	3	3	3	3		3.31
CO8	3	4	4	3	4	5	4	5	4	4	4	4	2		3.85
													Overall Mean Score for COs		3.51

Result: The Score for this Course is 3.5 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester IV **Hours/Week: 6**
18PEC4113 **Credits : 4**

RESEARCH METHODOLOGY

Course Outcomes:

1. To define research, explain and apply research terms in Economics
2. To describe the research process and the principle activities, skills and ethics associated with the research process
3. To propose a research study and justify the theory as well as the methodological decisions, including sampling and measurement
4. To be able to develop literature review and research methodology based on the selected topic.
5. To know the sample design and to develop the skills for sampling and sampling techniques used to collect survey data
6. To know the significance of Report writing and mechanics of thesis writing

Unit-I: NATURE AND METHODS OF SOCIAL SCIENCE RESEARCH (OOC Based Learning)-

Meaning and definitions of Research - Pure and applied research - Meaning of Social Science Research: Subject matter- Importance and problems in social science research. Case study method- Historical method-Scientific Methods - Objectivity in social science research. (18 hr)

Unit-II: RESEARCH PROBLEM AND HYPOTHESIS

Choice of the research problem - Factors involved in the choice- Research design-Role of review of literature - Hypothesis: Definition - Importance of hypothesis in social science research - Source of hypothesis - Characteristics of a good hypothesis. (18 hr)

Unit-III: SAMPLING TECHNIQUES

Census method - Sampling method. Methods of sampling: Random Sampling - simple and stratified - Judgment method – Quota sampling, multistage sampling method. Sampling and non sampling errors - Methods of reducing both - Sampling size - Sampling design. (18 hr)

Unit-IV: TECHNIQUES OF DATA COLLECTION

Primary and Secondary Data , Merits and demerits of primary data - Methods of collecting Primary data: Schedule method-Observation method - Interview Method - Questionnaire method - Measurement and Scaling techniques-Qualities of a good questionnaire. Secondary data: - Merits and demerits-

Sources of secondary data: Published, unpublished and E-Sources-Field survey logistics –Challenges and solution. (18 hr)

Unit-V: ANALYSIS AND RESEARCH REPORT WRITING

Meaning of analysis and Interpretation - Editing - Coding – Classification of data – Data entry - Statistical and Mathematical tools of analysis – SPSS - Research Report writing: Steps and Layout. (18 hr)

Text book for study

1. C.R.Kothari. (2009): Research Methodology, Vishwa Prakasan, New Delhi

References

1. M.H.Gopal (1970). An Introduction to Research Procedures in Social Sciences: Asia Publishing House- New Delhi.
2. Wilkinson and Bandarkar (1989). Methodology and Techniques of Social Research. Himalaya, New Delhi.
3. P.V.Young (1987). Scientific Social Surveys and Research: Asia Publishing House, New Delhi.
4. B.N.Gosh (1970). Research Methods in Social Science- Sterling, New Delhi.
5. Goode and Hatt (1983). Methods in Social Research, McGraw-Hill, New Delhi.
6. Dhondyal and Wells (2001). A Guide to Research Methodology, New Delhi.
7. C.T.Kurien (1985). A Guide to Research in Economics, Rainbow, New Delhi.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester IV	Code 18PEC4113			Title of the Paper RESEARCH METHODOLOGY								Hours 6	Credits 4
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)							Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	
CO1	4	4	4	3	2	4	2	4	4	3	3	3	2	3.23
CO2	3	2	3	2	3	4	4	5	3	3	3	3	4	3.23
CO3	4	3	3	2	3	3	3	4	2	2	3	4	3	3.00
CO4	3	4	3	2	4	4	4	3	4	3	3	4	4	3.46
CO5	2	4	2	4	5	3	2	2	3	4	4	4	3	3.23
CO6	3	4	3	2	4	4	4	4	3	5	4	3	4	3.62
Overall Mean Score for COs														3.29

Result: The Score for this Course is 3.29 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\text{Mean Score of COs} = \frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}} \qquad \text{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester IV **Hours/Week: 6**
18PEC4114 **Credits : 4**

INDUSTRIAL ECONOMICS

Course Outcomes:

1. Students should achieve an understanding of some of the most important theories concerning the organisation of industries and the behaviour of firms within those industries.
2. Describe the basic models of the behaviour of firms and industrial organization.
3. Identify and compare different market structures (Perfect competition, monopolistic competition, monopoly and oligopoly), as well as, compare their price and output implications.
4. Describe and explain the determinants of the size and structure of firms and the implications of the separation of ownership and control.
5. Discuss how the firms' actions affect consumer welfare and intervention of the government.
6. Discuss the factors that influence the conduct of firms in terms of their advertising, price setting, R&D, and other decisions.

Unit-I: FRAMEWORK AND PROBLEMS OF INDUSTRIAL ECONOMICS

Concept and Organization of a Firm - Ownership, Control and Objectives of the Firm; Passive and active behaviour of firms. (18 hr)

Unit-II: THEORIES OF INDUSTRIAL LOCATION

Theories of Industrial location- Weber and Sargent Florence; Factors affecting location. Industrial Productivity- Concept and measurement – Tools of Industrial productivity - Productivity trends. (18 hr)

Unit-III: MERGERS AND ACQUISITION (OOC Based Learning)

Mergers – Acquisitions under globalization: Types, effects and problems-diversification- Strategic Alliance. (18 hr)

Unit-IV: INDIAN INDUSTRIAL GROWTH

Classification of Industries; large, medium and small scale industries- Role of Public and private sector; MNCs and transfer of technology; Regional industrial growth in India; Industrial economic concentration and remedial measures, Competition Act. (18 hr)

Unit-V: PROJECT APPRAISAL / EVALUATION METHOD & PRINCIPLES

Project identification – Project Selection – Project Formulation – Project Appraisal Net Present Value (NPV) and Internal Rate of Return (IRR) criteria-

balancing private and social returns; PERT and CPM with case studies. (18 hr)

Textbooks for Study

1. Khanna O P. (1999) Industrial Engineering and Management: Dhana Pvt Rai Publications (P) Ltd, New Delhi.
2. S.C.Kutchal (1980) Industrial Economy of India (5th Edition), Chaitanya Publishing House, Allahabad.

References

1. Ahluwalia, I J. (1985). Industrial Growth in India OUP, New Delhi.
2. Barthwal, R R. (1985). Industrial Economics, Wiley Eastern, New Delhi.
3. Cherunilam, F. (1994). Industrial Economics: Indian Perspective: Himalaya Publishing House, Mumbai.
4. Desai, B. (1999). Industrial Economy India, Himalaya Publishing House, Mumbai.
5. Divine, P J. and R M Jones (1976). An Introduction to Industrial Economics: George Allen and Unpin Ltd., London.
6. Hay D J Morris (1979). Industrial Economics; Theory and Evidence, OUP, New Delhi.
7. Singh, A.and A N Sadhu (1988). Industrial Economics, Himalaya Publishing House, Bombay.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester IV	Code 18PEC4114					Title of the Paper INDUSTRIAL ECONOMICS								Hours 6	Credits 4
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)								Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8		
CO1	4	3	4	3	2	4	2	4	4	3	3	3	2	3.15	
CO2	3	2	3	2	3	3	4	5	4	3	3	3	4	3.23	
CO3	2	3	3	2	3	5	3	4	3	2	3	4	3	3.08	
CO4	3	4	3	2	4	3	5	4	3	5	3	4	4	3.62	
CO5	4	3	2	4	5	5	2	2	4	4	4	4	3	3.54	
CO6	4	4	3	2	4	2	4	4	3	5	4	3	4	3.54	
Overall Mean Score for COs														3.36	

Result: The Score for this Course is ____ (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

Values Scaling:

$$\textbf{Mean Score of COs} = \frac{\text{Totalof Values}}{\text{TotalNo.of POs \& PSOs}} \qquad \textbf{Mean Overall Score for COs} = \frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$$

Semester IV **Hours/Week: 7**
18PEC4115 **Credits : 5**

OPTIMISATION TECHNIQUES IN ECONOMICS

Course Outcomes:

1. To Understand the meaning, purpose, and tools of Optimisation techniques in Economics
2. To know the history, stages and limitations of Operations Research
3. To understand various Applications of Operations Research in Economics
4. To Formulate Linear Programming Problem and Solve the problem graphically
5. To Understand the basics of simplex method and Big M Method
6. To Formulate the Transportation Problem and determine basic feasible solution
7. To Formulate and solve the assignment problems
8. To introduce simulation techniques to students and explain the steps of simulation.

Unit-I : NATURE AND SCOPE OF OPERATIONS RESEARCH

Operations Research: Origin, Scope, Techniques, Uses, Limitations of Operations Research (18 hr)

Unit-II: LINEAR PROGRAMMING

Linear programming- Standard LP – Graphical method - Simplex method, Big M method. (On line) (18 hr)

Unit-III : TRANSPORTATION PROBLEM

Transportation problem- North – West Corner rule-Vogel's - Approximation method- Row Minima- Column Minima methods- Least cost method- Initial basic feasible solution only. (18 hr)

Unit-IV: ASSIGNMENT PROBLEM

Assignment problem – Meaning-Hungarian method of solving assignment problems. (18 hr)

Unit-V: SIMULATION TECHNIQUES

Simulation techniques- Simulation in Economic forecasting – Simulation problems. (18 hr)

Text book for study:

1. Mariappan, (1990) Operational Research Methods and Application, Rainbow Printers, New Delhi.

References

1. Swarap, (1984). *Operational Research*, Milestone Publication, New Delhi.
2. Kapoor V.K. (2001). *Operational Research Techniques for Management.* Sultan Chand and Sons, New Delhi.
3. Joseph, (1990). *Business Statistics and Operation Research*, Learn Tec Press, New Delhi.
4. Paneerselvam.P (1994). *Operation Research.* Prentice Hall of India, New Delhi.
5. Sing Parashar and Singh, (1984). *Econometrics and Mathematical Economics*. S. Chand, New Delhi.
6. Damodar Gujarati N. (1995). *Basic Econometrics*. McGraw Hill, International editors, New York.

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes

Semester IV	Code 18PEC4115			Title of the Paper OPTIMISATION TECHNIQUES IN ECONOMICS									Hours 7	Credits 5
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)							Mean Score of COs	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	
CO1	3	3	4	3	2	3	4	3	2	3	4	4	3	3.15
CO2	3	2	3	4	3	4	4	3	3	4	3	4	4	3.38
CO3	4	3	3	2	1	3	4	3	5	3	5	4	3	3.31
CO4	3	4	3	2	4	4	4	3	4	2	4	4	3	3.38
CO5	2	3	2	1	4	5	3	5	2	4	3	4	3	3.15
CO6	3	4	3	2	4	3	4	4	4	5	2	2	3	3.31
CO7	4	3	4	3	2	4	3	4	3	3	1	3	3	3.08
CO8	3	4	4	3	4	2	4	1	4	2	4	4	5	3.38
													Overall Mean Score for COs	3.27

Result: The Score for this Course is 3.27 (High Relationship)

Note:

Mapping	1-20%	21-40%	41-60%	61-80%	81-100%
Scale	1	2	3	4	5
Relation	0.0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0
Quality	Very poor	Poor	Moderate	High	Very High

***Values Scaling*:**

Mean Score of COs = $\frac{\text{Total of Values}}{\text{Total No. of POs \& PSOs}}$

Mean Overall Score for COs = $\frac{\text{Total of Mean Scores}}{\text{Total No. of COs}}$

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