BHAGAT PHOOL SINGH MAHILA, VISHWAVIDYALAYA KHANPUR KALAN, SONEPAT, HARYANA

DEPARTMENT OF ECONOMICS

ORDINANCE, SCHEME OF EXAMINATION AND COURSE CURRICULUM

M.A. ECONOMICS

(w.e.f July 2020-21)

DEPARTMENT OF ECONOMICS
B.P.S. MAHILA VISHWAVIDYALAYA
KHANPUR KALAN, SONEPAT, HARYANA

Department of Economics
B.P.S. Mahila Vishwavidyalaya, Khanpur Kalan

ACADEMIC ORDINANCE FOR DURATION, ADMISSION, FEE, TEACHING METHODOLOGY, CREDIT WEIGHTAGE, EXAMINATION, EVALUATION & GRADING, PROMOTION, ATTENDANCE, AND GENERAL.

MA ECONOMICS

(w.e.f July 2020-21)

1. **DEFINITIONS:**

   1.1. *Programme stands for:* M.A. Economics
   1.2. **Credit:** Credit is the weightage assigned to a paper in terms of contact hours.
   1.3 *Grade:* Grade stands for a letter grade assigned to a student on the basis of evaluation on the 10 point scale.
   1.4 *Grade Point:* Grade point stands for the numerical equivalent of the letter grade.

2. **DURATION:**
   2.1. The duration of the programme leading to the M.A. Economics programme shall be of three academic years.
   2.2. The minimum duration of the programme shall be **2 year (4 semesters)** for M.A. Economics and maximum should not exceed 4 years.
   2.3. A candidate, who fails to pass M.A. Economics examination within a period of 5 years of her admission to the programme, shall be required to repeat the paper *de movo.*

3. **ADMISSIONS:**
   3.1. *Eligibility:* A person who possesses the following qualifications shall be eligible to join the **M.A. Economics** Programme:
   Graduation with at least 45% marks in aggregate from a recognised university in addition to the criterion approved by the admission committee of the Bhagat Phool Singh Mahila Vishwavidyalaya (B.P.S.M.V). There shall be a relaxation of 5% marks in case of Minimum pass marks required in case of Scheduled Caste (SC) and Scheduled Tribe (ST) candidates/persons with disability.
   3.2. No candidate who is in employment (whole-time, part-time, or honorary service) shall be eligible to take admission in the programme without taking leave from her institution/ office etc., from the date of admission to the termination of her examination. She has to submit an affidavit in this regard. If someone found in violation of these rules, her admission in the course shall stand cancelled.
   3.3 *Procedure:* Admission shall be done on the basis of the Merit or any other criteria decided by university from time to time.

4. **FEE**: The programme fee to be paid by the candidate shall be as such as prescribed by the university/colleges from time to time.

5. **TEACHING METHODOLOGY**: The methods of teaching shall include classroom instructions, assignments, Study tours, seminars, workshops, Field work, Lab work, presentations, Group discussions, exposure visits, mentoring etc. The medium of instruction shall be English/ Hindi.

6. **CREDIT WEIGHTAGE**: Each paper has a certain number of credits which reflect its weightage. One credit per lecture (including tutorial/practical) per week per semester will generally be adopted

7. **EXAMINATION:**

7.1. At the end of the each semester, there shall be an examination where each candidate shall be examined in the paper studied by them in that semester. Each semester examination shall be designated as first semester examination, second semester examination and third semester examination and so on.

7.2. The examination in each semester will be held according to the syllabi approved by the Board of Studies. The Board of examination shall be appointed for each paper and shall be recommended by the Post Graduate Board of Studies (PGBOS).

7.3. The examination shall consist of theory papers, term papers, research report and viva-voce. Theory papers are to be set by the internal / external examiners appointed by the Vice Chancellor from a panel of examiners submitted by the chairman of the Department duly approved by the PGBOS of the concerned department.

7.4. For viva–voce shall be conducted jointly b**y** the external and internal examiners. The internal examiner (including those of the same University dept.) may be appointed by the Chairperson of the concerned department with the intimation to the Controller of Examinations in the following preferential order: i) From outside: ii) From BPSMV, Khanpur Kalan.

7.5 The examination for all odd semesters will normally be held in November/ December and for all even semesters in April/ May on such date as provided by the University. The concerned teacher/ paper coordinator should ensure that 100% syllabus in covered besides a teaching of at least 15 weeks in each subject before the semester examination.

7.6. Every paper is coordinated by a member of the teaching staff of the department which is offering the paper in a given semester. This faculty member is called the paper coordinator. She has the full responsibility for conducting the paper, coordinating the work of the other members of the faculty involved in the paper, holding the sessional test and assignments. For any difficulty, the students are expected to approach the paper coordinator for advice and clarification. All the responsibilities from teaching to the award of final grade will be of the paper-coordinator.

7.7 Every student has to appear in the sessional tests/internal examination. If a student does not appear in a sessional test, she shall be awarded zero marks in the test. The marks obtained in sessional/practical/theory/field work/lab work/research report/general proficiency are to be submitted to the examination /Branch. In case any student(s) fails to appear in internal examination/ sessional tests or the internal test for such student shall be arranged by the

concerned chairperson /principal before the commencement of semester examinations with a fine of Rs. 500/-.

7.8 For holding the Sessional Tests during even and odd semester the schedule of sessional exam shall be laid down by teacher(s) concerned in consultation with the Chairperson of the Department as the case may be and shall be made known to the students at the commencement of each semester.

7.9 For Sessional Test, the syllabus for Examination will be about 50 per cent to the entire syllabi in a particular term.

7.10 After finalization of the marks the same shall be displayed on the department notice board for duration of two days for information of students. Students who have specific grievances against the marks awarded to her, may discuss the same with the concerned paper co-ordinator who after consideration of grievances of all the students shall finalize the marks to be awarded for the paper.

8. RE-APPEAR EXAMINATION:

The candidate may take re-appear examination as per the followings guidelines.

Reappear	1st	2nd and all previous reappears	4th
Along with	3rd	4th	immediate semester

9. EVALUATION AND GRADING:

9.1 The assessment will be 20% internal and 80% external.

9.2 The Minimum Passing Marks/ Grade for any semester examination shall be:

9.2.1 40 % marks in the aggregate (internal and external examination) by securing at least 40 % in external examination;

9.2.2 In case a student fails to acquire 40 % present in the aggregate of internal and external, she will be awarded re-appear in the theory (external) paper of that subject.

9.2.3 There will be no re-appear in the internal assessment. The marks obtained in the internal assessment of a subject shall be carry forwarded, if a student gets re-appear in the external examination

9.2.4 40 % in each term paper/ research report/viva-voce examination.

9.3 The weightage for internal evaluation is as follow

9.3.1) class test/sessional test/   10% i.e. 10 marks out of 100

9.3.2 Assignments/ quiz/ seminars/group discussion   5% i.e. 5 marks out of 100

9.3.3 Attendance: 5% i.e. 5 marks out of 100

Less than 75 %	00 marks
75% and above and less than 80%	02 marks
80% and above and less than 85%	03 marks
85% and above	05 marks

9.5 Ad hoc Grace:

If there is any discrepancy /out of syllabus/printing error/untoward incident during the examination, the matter be referred to a standing committee of
I. Controller of examination.
II. HOD of the concerned Department.
III. One faculty member concerning the subject.
The committee may recommend re-conduct of the paper or uniform grace marks to all that should not exceed 10% marks of that particular paper.

9.6 Moderation of Marks:
a) Internal Examinations: If there are more than one teacher associated in any internal assessment, one of the member be made co-coordinator by concerned HOD and he along with the others can moderate the marks to maintain uniformity so that no student get undue advantage or disadvantage. It can be done by fixing criteria beforehand.
b) External Examination: If there is unusual variation (very high or very low) in the awards ,The COE may refer the matter to a moderation committee consisting of
   I. Controller of examination.
   II. HOD of the concerned Department.
   III. One faculty member concerning the subject.
As per recommendation of the committee the result may be revised.

9.7 Grading : The academic performance of a student shall be graded on a scale prescribed by the Examination Branch of the University .The department shall only prescribe the pass grade which is 40% in case of both internal and External evaluations. The academic performance of a student shall be graded on a ten–point scale.

The award of grades based upon marks obtained out of 100 shall be made as Follows:

Academic Performance	Letter Grades	Grade Points
Outstanding	O+	10
Excellent	A+	09
Very Good	A	08
Good	B+	07
Above Average	B	06
Average	C	05
Fail	D	04
Fail	F	00
Absent	Ab	00

Note:Pass Grade: Grade C and all Grades above C;
 Fail Grade: Grade D and F

The grades shall be awarded on the basis of absolute marks obtained by the
Candidates as per the procedure given below:

Marks		Grade		Marks
90	$\leq$	O+	$\leq$	100
80	$\leq$	A+	$\leq$	89
70	$\leq$	A+	$\leq$	79
60	$\leq$	B+	$\leq$	69
50	$\leq$	B+	$\leq$	59
40	$\leq$	C	$\leq$	49
30	$\leq$	D	$\leq$	39
0	$\leq$	F	$\leq$	29

AbAb

9.8.5 Calculation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA)

The Grade Point Average is calculated as follows:-

$$GPA = \frac{\sum (\text{Number of credits x Grade Points})}{\sum (\text{Number of Credits Registered})}$$

For the purpose of calculation of GPA for SGPA and CGPA only those programmes (including projects) will be taken into account in which the student has been awarded one of the pass grades. Here S stands for the sum of

(i) $SGPA = \frac{\sum C_i P_i}{\sum C_i}$

Where

C_i = Number of credits earned in the ith programme of a semester for which SGPA is to be calculated.

p_i = Grade point earned in i^{th} programme

I = 1, 2, 3 …………………… n, represent the number of programmes in which a student is registered in the concerned semester.

(ii) $CGPA = \frac{\sum C_i P_i}{\sum C_i}$

Where

C_j = Number of credits earned in the jth programme upto the semester for which CGPA is to be calculated.

P_j = Grade point earned in the jth programme. Any grade lower than the pass grade in a programme shall not be taken into account.

j = 1, 2, 3 ……………….n, represent the number of programmes in which student was registered and obtained a grade not lower than 'C' up to the semester for which CGPA is to be calculated.

Note: Pass Grade is Grade C and higher grades
Grades D and E are fail grades

10 DIVISION: The successful candidates shall be classified in three divisions as under:

(i) Those who obtained 60% or more of the aggregate number of marks in all subject in all semesters mention total semesters of that course taken together shall be placed in first division.

(ii) Those who obtain less than 60% but not less than 50% of the aggregate number of marks in all subjects in all semesters taken together shall be placed in the second division.

(iii) Those who obtain below 50% and not less than 40% of the aggregate number of marks in all subjects in all semesters taken together shall be placed in the third Division.

11. PROMOTION:

11.1. A candidate will be promoted to 3rd only if she will pass 50 per cent of papers of First year (1st&2nd).

11.2. The Vice-Chancellor may, however, in very exceptional cases and where she is satisfied that there are unavoidable circumstances e.g. serious illness, serious calamity like death of father or mother etc., allow a candidate who having been eligible could not appear in a semester examination, to study for the subsequent semester, provided that an intimation to this effect, accompanied by a documentary proof thereof, is received in the office of the Controller of Examinations through the Head, Department of Economics.

12. ATTENDANCE:

12.1 No candidate shall be considered to have pursued a regular paper of the study unless she has attended not less than 75% of the lectures in each papers, term paper, tutorials, research reports etc. This requirement shall be fulfilled separately for each paper of study. A deficiency up to 10% may be condoned in each paper by the Chairperson of the department. In some special cases the Hon'ble Vice-Chancellor may condone the further deficiency in attendance up to 15%.

12.2 If a student is absent (without genuine reasons) from the Department for more than 10 consecutive lectures (Days) in any paper, her name will be struck of from the department rolls with information to the R& S Branch. A fine of Rs. 500/- will in impose in the first instance and Rs. 1000/- in the second time in each semester.

12.3 In case the student name is struck of due to nonpayment of fee and is re-admitted later, her attendance shall not be counted for that period.

13. SCHOLARSHIP: A candidate while appearing in the re-appear examination shall not be eligible for a scholarship, a prize or a medal.

15. RE-APPEAR/IMPROVEMENT CASE:

(i) A student who has qualified for the award of M.A. Economics from this university may be allowed to re-appear as an ex-student in at the most any subject(s) in which she appeared earlier, with a view to improve her previous performance. The candidate shall be awarded only two consecutive chances along with the re-appear students in the subject(s) concern immediately after her passing for her degree.

 (ii) The Candidate will have to deposit fee and form for each examination separately.

(iii) The higher score in the subject(s) in which she re-appears for improvement will be taken into account towards the final result and the marks already obtained by the candidate in the subjects in whom she has not opted to improve her result shall be carried forward. The candidate shall be awarded a new DMC clearly mentioning **'Improvement case'** subject(s) with improved marks, only and the new grand total.

(iv) In case the candidate does not improve her result, it shall be declared as **'Previous Result Stands'**.

16. GENERAL GUIDELINES:

16.1 Admission, teaching schedule, preparatory holidays, examination, winter, summer vacation, shall be followed as specified in academic calendar of the University.

16.2A student is deemed to have completed the requirements for the degree and is eligible for the award of degree if:

16.2.1She has satisfied all the academic requirements as per the regulations;

16.2.2 She has paid all fees due from her;

16.2.3There is no case of indiscipline pending against her.

16.2.4Satisfied the minimum academic and residence requirements;

16.2.5Satisfactorily completed the requirements for the short duration across-curricular paper, industry internship and NCC/NSS as may be prescribed by the Academic Council;

16.2.6A student who has completed the entire post-graduation requirement listed above shall be eligible for award of degree/ certificate. However, under extremely exceptional circumstances, where gross violation of the post-graduation requirements is detected at any later stage, the Academic Council may recommend to withdraw the degree/PG diploma already awarded.

16.3 The gap of one/two semesters missed by the student(s), as the case may be, will count towards the total duration of the programme permissible under the regulations.

16.4 Absence of registered students from classes during a semester shall be discouraged. However, for bonafide reasons such as illness, maternity a student may be granted leave of absence as per provision of leave rules for students framed by the Academic Council.

16.5 All academic problems of the students other than those affecting   the University rules and regulations framed from time to time may be looked into by a committee constituted by the Dean Academic Affairs.

16.6 Where this document is silent about any rule, the University Ordinance from time to time will be applicable.

M.A Economics (2 year Course)
SCHEME OF EXAMINATION (w.e.f July 2020-21)

Semester I (Core Papers)		Semester II (Core Papers)		Marks		Credits per Course
Paper Code	Nomenclature	Paper Code	Nomenclature	External	Internal	
MEC-2101	Micro Economics-I	MEC-2102	Micro Economics-II	80	20	4
MEC-2103	Macro Economics-I	MEC-2104	Macro Economics-II	80	20	4
MEC-2105	Public Finance	MEC-2106	International Economics-I	80	20	4
MEC-2107	Development Economics-I	MEC-2108	Development Economics -II	80	20	4
MEC-2109	Mathematics for Economic Analysis	MEC-2110	Statistics for Economic Analysis	80	20	4

Note: Qualifying Condition is 40 % of marks in external examination and in aggregates.

M.A 2nd Year

Semester III (Core Papers)		Semester IV (Core Papers)		Marks		Credits per Course
Paper Code	Nomenclature	Paper Code	Nomenclature	External	Internal	
MEC-2201	International Economics- II	MEC-2202	Indian Economy	80	20	4
MEC-2203	Environmental Economics	MEC-2204	Agricultural Economics	80	20	4
Elective Paper- Students can choose any two from given Discipline Specific Electives (DSE):						
MEC-2205	Econometrics-I	MEC- 2206	Econometrics-II	80	20	4
MEC-2207	Research Methodology	MEC-2208	Dissertation#	100	00	4
MEC-2209	Computer Applications in Economic Analysis	MEC-2210	Haryana Economy	80	20	4
MEC-2211	Money and Banking	MEC-2212	Financial Institutions and Market	80	20	4
MEC-2213	Industrial Economics	MEC- 2214	Gender Economics	80	20	4
MEC-2215	Mathematical Economics	MEC- 2216	Advanced Statistics	80	20	4
*	Open Elective	Students can choose any one from paper offered by University as generic elective				

Note: Qualifying Condition is 40 % of marks in external examination and in aggregates.

1. *** Note: Students will be allowed to choose Discipline Specific Electives in combinations as mentioned in scheme of their 3rd and 4th semester.**
2. **# Only teachers having MPhil/PhD degree are eligible for supervising dissertation.**

MICRO ECONOMICS-1

Time: 3 Hrs.   **Max. Marks: 100**
Course Code: MEC-2101   **External: 80**
     Internal: 20

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Course Objective- The purpose of this course on Microeconomics is to enable students to develop an understanding of basic concepts of microeconomics as consumption and production behaviour of economic agents.

Course Outcome: The course provides training to the students of economics about the basic elements of consumer behaviour, production and cost theories and gives a solid grasp of microeconomic analysis.

Unit-I

Introduction: Nature and Scope of Positive versus Normative Analysis; Methodology of Economics: Deductive Method, Inductive Method; Microeconomics and Macroeconomics; Static and Dynamic Analysis; Partial and General Equilibrium, Demand Function, Law of Demand, Elasticity of Demand.

Unit -II

Theories of Consumer Behaviour: Cardinal and Ordinal Analysis; Indifference Curve Approach; Marginal Rate of Substitution, Consumer Equilibrium; Price, Income and Substitution Effect-Hicks and Slutsky Approach, Revealed Preference Theory; Consumer Surplus (Marshall and Hicks Approach)

Unit-III

Laws of Production: Short run and Long run: Law of Variable Proportions and Returns to Scale, Isoquant, Economies and Diseconomies of Scale, Technical Progress and Production Function, Producer's Equilibrium. Least-cost combination; Concept and Theories of Cost, Short and Long Run Cost Curves.

Unit-IV

Price and Output Determination: Equilibrium of Firm and Industry under Perfect Competition and Monopoly, Discriminating Monopoly, Bilateral Monopoly, Monopoly Power, and Monopolistic Competition**:** Short Run and Long Run Equilibrium.

Suggested Reading:
1. Dwivedi D. N. 2016. Microeconomics: Theory and Application. 3rd Edition
2. Koutsoyiannis A. 1979 Modern Micro-Economics. McMillan Press London.
3. Kreps, David M. 1990. A Course in Microeconomic Theory. Princeton University Press, Princeton.
4. Layard, P.R.G. & Walters A.W. 1978. Microeconomic Theory. McGraw Hill. New York.
5. Pindyck Robert S. & Daniel R. F. 2017. Microeconomics.8th Edition, Pearson.
6. Sen, A. 1999. Microeconomics: Theory and Applications. Oxford University Press. New Delhi.
7. Varian, H. 2009. Microeconomic Analysis. 3rd Edition. W.W. Norton. New York.
8. Verma, K. N. 2017. Microeconomic Theory. Vishal Publication.

MACRO ECONOMICS-1

Time: 3 Hrs.   **Max. Marks: 100**
Course Code: MEC-2103   **External: 80**
                                                                               Internal: 20

Course Objective: The paper is designed to make a Post-graduate student aware of the basic theoretical framework underlying the field of Macroeconomics. It deals with the functioning of the economy as a whole, including how the economy's total output of goods and services and employment of resources is determined and what causes these totals to fluctuate.

Course Outcome: This course enables students to understand the macroeconomic relevance of various concepts. It also allows them to calculate the national income through different methods, evaluate important macroeconomic policies and their implications.

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Unit-I

National Income: Concept and Measurement, Social Accounting, Input-Output Accounting, Flow of Funds Accounting, Circular Flow of Income; Output and Employment Determination in Classical Theory; Say's Law; Principle of Effective Demand, Keynesian Theory of Employment and Output determination, .

Unit-II

Consumption function: Meaning and Determinants; Keynesian Psychological Law of Consumption, Absolute Income Hypothesis, Relative Income Hypothesis, Permanent Income Hypothesis, Life Cycle Hypothesis.

Unit-III

Investment: Types of Investment, Investment Function, Determinants of Investment; Theories of Investment, Marginal Efficiency of Capital; Investment Multiplier theory; Accelerator Theory of Investment; Jorgenson's Theory of Investment, Super Multiplier.

Unit-IV

Rate of interest and General Equilibrium: General Equilibrium in Two Sector System- Goods Market and Money Market (IS–LM curve); General Equilibrium: Interaction of IS-LM Function, Changes in General Equilibrium; Effectiveness of Monetary and Fiscal Policies, Mundell and Fleming Model under Fixed and Flexible Exchange Rate.

Suggested Reading:

1. Ackley, G. 1978. Macroeconomics: Theory and Policy. Macmillan. New York.
2. Blanchard, J.2017. Macroeconomics (6 Edition). Pearson Publication.
3. Branson, W.H. 1989. Macroeconomic Theory and Policy. (3rd Edition). Harper and Row. New York.
4. Dorn Busch, R. & Stanley F. 1997. Macroeconomics, McGraw Hill. Inc. New York.
5. Froyen R. 2014. Macroeconomics theories and policies (10 Edition). Pearson Publication.
6. Shapiro, E. 1996. Macroeconomic Analysis. Galgotia Publication. New Delhi.
7. Bo & Geoffrey R. 1994. International Economics, Macmillan Press Ltd.
8. Peterson, W.C. 1978. Income Employment and Economic Growth. Norton. New York.
9. Sheffrin, Steven M. 1996. Rational Expectations. 2nd edition. Cambridge University Press.

PUBLIC FINANCE

Course Code-MEC-2105

Time: 3Hrs.   **Max.Marks:100**
                                                                          External: 80
                                                                          Internal: 20

Course Objective: Public Finance is the study of government policy from the points of view of economic efficiency and equity. The paper deals with the nature of government intervention and its implications for allocation, distribution and stabilization. Inherently, this study involves a formal analysis of government taxation and expenditures.

Course Outcome: The goal is to develop students' analytical and consulting skills in the area of Public Finance. In this course students will learn about various roles of government such as allocation, distribution and stabilization process. It also provides insights about various concepts of budget and related documents. Students will also learn about various sources of revenue and expenditure of government.

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

UNIT-I

Public Economics - Concept, Scope, Provisions of Public Goods, Theory of Maximum Social Advantage, Private, Public Goods & Externalities, Merit Goods, Asymmetric information & Market Failure, Optimum Provision of Public Goods, Lindahl-Wicksell Mechanism, Major Fiscal Functions of government.

UNIT-II

Budget – Meaning and Components, Preparation, Presentation and Execution of the Budget, Types of Budgets, Zero Base Budgeting, Performance Budgeting, Revenue & Capital Budget, Balanced Budget, Surplus Budget and Deficit Budget, Various Concepts of Budgetary Deficits.

UNIT-III

Public Revenue & Taxation- Source of Public Revenue; Tax and Non-Tax Revenue, Types of Taxation; Ad valorem Tax, Specific Tax, Progressive & Proportional Tax, Direct & Indirect Tax, Incidence and Shifting of Taxation, Approaches to Tax Equity- Benefit Principle, Ability to Pay, Tax Reforms (GST).

UNIT - IV

Public Expenditure & Public Debt- Classification & Effects of Public Expenditure; Wagnar's Law of Increasing State Activities, Peacock-Wiseman Hypothesis, Public Debt; Sources of Public Debt, Burden of Public Debt.

Indian Public Finance-Centre State Financial Relations, Revenue of Union, State & Local Bodies, Latest Finance Commission, NITI Aayog.

Suggested Readings:
1. Bhatia, H.L. 2018. 29th ed. Public Finance. Vikas Publishing House Private Ltd.
2. Cullis J. & Jones P. 1998. Public Finance and Public Choice. University Press.
3. Govt. of India, Ministry of Finance. 11th, 12th, 13th, 14th Finance Commission Report.
4. Govt. of India, Ministry of Finance. Sarkaria Commission Report on Centre State Financial Relations.
5. Hindriks J. & Myles G. 2013. Intermediate Public Economics. MIT Press.
6. Lekhi, R.K. & Singh J. 2016. Public Finance. Kalyani Publication. Ludhiana.
7. Musgrave R. & Musgrave P. B. 2009. Public Finance in Theory and Practice, Tata McGraw Hill.
8. Stiglitz J. 2009. Economics of the Public Sector. W. W. Norton.

DEVELOPMENT ECONOMICS-I

Course Code: MEC-2107   **Max.Marks:100**
Time: 3 Hrs   **External: 80**
                                                             Internal: 20

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Course Objectives: The main objectives of this course on Development Economics are to enable student with theory of Economic Growth and Development. The course covers the evolution of process of economic development and its measurement and various models and theories related to the concept of development.

Course Outcome: Knowledge of this course equip students with understanding of concept of economic development, its measurement and problem associated with the development process of various developing countries.

Unit I

Concepts and Issues in Economic Growth- Economic Growth; Measurement of Growth; Growth and Development, Factors Affecting Growth-Capital, Labour, and Technology, Measuring Development-Income Measures, Capability Approach, Goulet's Core Values of Development, Basic Need Approach, PQLI, HDI, Historical Growth Experiences.

Unit II

Classical Theory of Growth and Development- Poverty and Inequality- Measurement and Impact of Policy Options. Theory of Economics Growth and Development -Adam Smith, Ricardo, Karl Marx, Schumpeter, Stages of Economic Growth by Rostrow, Lewis Myrdal, Harris and Todaro.

Unit III

Basic Growth Models- Growth Models of Harrod and Domar, Neoclassical Growth Model: Steady State, Transitional Dynamics; Solow and Meade, Economic Convergence, Speed of Convergence, Cambridge Models of Growth- Kaldor, John Robinson.

Unit IV

Obstacles to Growth: Dualism, Regional Inequalities, Models of Regional Growth Rate Differences-Prebisch Seers and Kaldor, Theory of Dependence and Unequal Exchange, Human Capital: Education and Health in Economic Development.

Suggested Readings:
1. Thirlwall, A.P. 2011. Growth and Development. Seven Edition. Palgrave Macmillan. New York.
2. Tadoro, Michael & Smith C. 2017. Economics Development. Seventh Edition. Oxford University Press. New Delhi.
3. Meire, G.M & Rauch 2000. Leading Issues in Economic Development. Oxford University Press. New York.
4. Ghatak, S. 2003. Introduction to Development Economics. Indian Reprint 2007 Routledge. London. New York.
5. Rist, G. 2002. The History of Development Academic Foundation. New Delhi
6. Debraj. 2004. Development Economics. Seventh Edition. Oxford University Press. New Delhi.
7. Taneja M.L. and Myer R.M. 2017. Economics of Development and Planning. Vishal Publications.

MATHEMATICS FOR ECONOMIC ANALYSIS

Course Code: MEC-2109
Time: 3 Hrs.   **Max. Marks: 100**
                                                                          External: 80
                                                                          Internal: 20

Note: There will be 9 questions in all. The 9th question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Course Objective: - The objective of this course is to acquaint the students with the basic tools of Mathematics which is helpful in study of economic theory as Microeconomics and Macroeconomics.

Course Outcome:- This Course will enable the students to learn the basic mathematical tools as derivative, integration, matrix etc which will enhance the economic understanding of various economic concepts as marginal utility, marginal cost, marginal productivity of factor production, solution of system of equations.

Unit-I
Matrix: Matrices: Meaning, Types, Transpose; Operation on Addition and Multiplication; Determinates: Definition, Properties, Minor, Cofactor, Adjoint, Inverse, Cramer Rule and Matrix Method with their Economic Application.**;** Input-Output Analysis- Features, Structure, Types; Viability Condition of the Input- Output Model and its Application in Two Sector and Three Sector Model.

Unit-II
Functions and Equation System: Number and Variables, Continuous and Discontinuous Variables, Constant and Parameter, Set Theory- Sets, Sets Operations, Finite and Infinite Sets, Functions and Graphs in Economic Theory: Limit and Continuity of a Function, Equation- Simple, Quadratic and Simultaneous with Economic Applications.

Unit-III
Differential: Simple-Definition, Techniques of Differential; Derivates of Power Function; Logarithmic Function and Exponential with their Economic Applications; Partial Derivates and its Economic Applications; Homogeneous Function with Properties; Maxima and Minima: Basic Concepts; One and Two Variables Maxima and Minima; Constraint Maxima and Minima with Economic Applications.

Unit-IV
Integration and Series : Basic Concepts; Methods of Integration- Substitution, by Parts and Partial Fraction Method with Economic Applications; Arithmetic and Geometric Series- Meaning, Sum of nth Term, Three Number in A.P & G.P, Arithmetic Mean and its Economic Applications.

Suggested Readings:
1. Allen, R.G.D 2005. Mathematical Analysis for Economist (1st Edition). Macmillan & Co. Ltd.
2. Arrow K.J. & Intrilligator M. 1982 Handbook of Mathematical Economics. Volumes I, II and III. North Holland. Amsterdam.
3. Chiang Alpha, C 1984. Fundamental Method of Mathematics Economics. Mcgraw hill Education. Europe.
4. Chung, J.W. 1993. Utility and Production: Theory and Applications Basil Blackwell. London
5. Henderson J.M. and Quandt R.E. 1980. Microeconomic Theory: A Mathematical Approach. 3rd Edition. McGraw Hill. New Delhi.
6. Sydsaeter K. and Hammond P. 2002. Mathematics for Economic Analysis. Pearson Education.
7. Yamane, T. 1972. Mathematical Analysis: An Elementary Survey. 2nd Edition. Prentice Hall India Learning Private Limited.

MICRO ECONOMICS-II

Time: 3 Hrs.   **Max. Marks: 100**
Course Code: MEC-2102   **External: 80**
                              Internal: 20

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Course Objective- The approach of this paper is to study various concepts of Microeconomics like Oligopoly, Factor Pricing and General Equilibrium Analysis.

Course Outcome: This course make students learn about the basic elements of market structure. Further students will gain knowledge about the structure and characteristics of Oligopoly, factor pricing and General Equilibrium analysis.

Unit-I

Oligopoly: Meaning and Feature of Oligopoly Non-Collusive Models: Cournot, Bertrand, Stackelberg, Kinked Demand Model; Collusive Models: Cartels Joint Profit Maximization, Market Sharing Cartels; Non-Price Competition, Sharing of Market by Agreement on Quotas and Price Leadership Cartels.

Unit-II

Managerial Theories of Firm: Baumol's Sales Maximization Model (Simple, Static without Advertisement Model), Marris Model of Managerial Enterprise; Williamson's Model of Managerial Discretion. Pricing Theories of Firms**:** Average/ Full Cost Pricing Theory, Bain's Limit Pricing Model. Cyert and March model.

Unit-III

Factor Pricing: Factor Pricing under Perfectly Competitive Market, Factor Pricing Under Imperfect Markets ;Monopolistic Power in Product Market, Monopsonistic Power in Factor Market, Bilateral Monopoly in Factor Market. Elasticity of Input Substitution and Shares of Factors of Production, Euler Theorem (Product Exhaustion Theorem).

Unit-IV

General Equilibrium Analysis, Pareto Optimality Criterion and Efficiency Conditions, Market Failure: the Case of Externality and Public Goods; Social Welfare Function: Bergson's Social Welfare Function; New Welfare Economics: Kaldor Compensation Criterion; Theory of Second Best and Arrow's Impossibility Theorem.

Suggested Reading:
1. Dwivedi D. N. 2016. Microeconomics: Theory and Application 3rd Edition.
2. Koutsoyiannis A. 1979. Modern Micro-Economics. McMillan Press London.
3. Kreps, David M. 1990. A Course in Microeconomic Theory. Princeton University Press. Princeton.
4. Layard, P.R.G. & Walters A.W. 1978. Microeconomic Theory. McGraw Hill. New York.
5. Pindyck Robert S. and Daniel R. F. 2017. Microeconomics. 8th Edition, Pearson.
6. Sen, A. 1999. Microeconomics: Theory and Applications. Oxford University Press. New Delhi.
7. Varian, H. 2009. Microeconomic Analysis. 3rd Edition. W.W. Norton. New York.
8. Verma, K. N. 2017. Microeconomic Theory. Vishal Publication.

MACRO ECONOMICS-II

Course Code: MEC-2104
Time: 3 Hrs.   **Max. Marks: 100**
                                                                              External: 80
                                                                              Internal: 20

Course Objective: This paper deals with the functioning of the economy as a whole, including how the economy's total output of goods and services and employment of resources is determined and what causes these totals to fluctuate.

Course Outcome: This course will enable students to combine their knowledge of the working of the macro economy with long run economic phenomena which includes process of money multiplier and economic fluctuations. It will also enable students to understand business cycles and the concomitant role of policies.

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Unit-I
Demand and supply of money: Classical and Cambridge Approach to Demand for Money: Quantity Theory of Money; Keynesian and Post Keynesian Approaches: Baumol, Tobin and Friedman; Determinants of Money supply, High-Powered Money, Money Multiplier.

Unit-II
Inflation: Demand Side and Supply side Theories of Inflation; Economic Effects of Inflation; The effect of Inflation on the Distribution of Income, Wealth, output, Employment and Growth Rate.

Unit-III
Inflation and Unemployment: Phillips Curve Analysis in Short run and Long run, Stagflation; Trade off and Non Trade off. Adaptive Expectations and Rational Expectations Hypothesis and its Critique, Keynesianism versus Monetarism.

Unit-IV
Trade Cycles: Meaning, Characteristics and Phases; Models of Samuelson, Hicks, Kaldor and Goodwin; Macro Distribution Theory: Ricardian; Marx; Kalecki and Kaldor.

Suggested Reading:
1. Ackley, G. 1978. Macroeconomics: Theory and Policy. Macmillan. New York.
2. Blanchard, J.2017. Macroeconomics. (6 Edition). Pearson Publication.
3. Branson, W.H. 1989. Macroeconomic Theory and Policy, (3rd Edition). Harper and Row. New York.
4. Dorn Busch, R. and Stanley F. 1997. Macroeconomics. McGraw Hill. Inc. New York.
5. Froyen R. 2014. Macroeconomics theories and policies (10 Edition). Pearson Publication.
6. Shapiro, E. 1996. Macroeconomic Analysis. Galgotia Publication. New Delhi.
7. Bo & Geoffrey R. 1994. International Economics. Macmillan Press Ltd.
8. Peterson, W.C. 1978. Income Employment and Economic Growth. Norton. New York.
9. Sheffrin, Steven M. 1996. Rational Expectations, 2ndedition. Cambridge University Press.

INTERNATIONAL ECONOMICS-I

Course Code: MEC-2106
Time: 3 Hrs.
Max. Marks: 100
External: 80
Internal: 20

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Course Objective: The main objective of the course is to make students equipped with knowledge of theory that is associated with international trade and economics. Various concepts of international economics is covered here like terms of trade and gains from trade as well as various trade barriers.

Course Outcome: After completion of this course students will be able to understand and analyse the various dimensions associated with international trade theory.

Unit-I

Theories of International Trade- Scope and Need for International Economics, Inter-regional and International Trade, Theory of Absolute Advantage, Comparative Advantage & Opportunity Costs, Mills Theory of Reciprocal Demand, Heckscher-Ohlin Theory of Trade, Empirical Testing of Heckscher-Ohlin, Factor Price Equalization Theorem,

Unit-II

Factor Intensity Reversals- New Theories of International Trade, Kravis Theory of Availability; Linder Theory of the Volume of Trade and Demand Pattern. Rybczynski Theorems Technical Progress and International Trade, Measurement and Distribution, Factor Determining Gain from Trade; Static and Dynamic Gains from Trade; Trade as an Engine of Growth.

Unit-III

Terms of Trade- Types and Determination of Terms of Trade; Factors Affecting Terms of Trade; Terms of Trade and Economic Development; Secular Deterioration of terms of Trade its Policy Implication for Less Developed Countries. Meaning and Types of Tariffs, Effects of Tariff Under Partial and General Equilibrium, Effects of Tariff on Income Distribution, Tariff and Non-Tariff Barriers; Quotas: Meaning and Effects of Quotas, Dumping: Types and objectives.

Unit-IV

Economic Growth and International Trade- Effect of Growth on Small Countries and Large Countries, Import Substitution Vs Export Push, Trade Liberalization-Need and Objective, Trade Liberalization Experience of Developing Countries with Special References to India, Trade and Environment: Pollution Haven Hypothesis.

Suggested Readings:

1.   Salvatore, D L 2016. Theory and Problems of International Economics. Prentice Hall. Upper Saddle River, New York.
2.   Salvatore D L. 2016. International Economics. (12 edition) Wiley Publications.
3.   Soderston B O. 1999. International Economics. Macmillan Press Ltd. London.
4.   Paul, R Krugman & Maurice 2011. (9th Ed) International Economics, Theory and Policy Obstfeld–Wesley Series in Economics.
5.   Krugman, P.R. Obstfeld, and Melitz 2012. International Economics. Pearson Addition Wesley-Boston
6.   Ellsworth P. T. & Clark J. 1971.The International Economy. Collier Macmillan Ltd. London
7.   Kindlberger, C. P. 1991. International Economics. R. D. Irwin, Homewood. 8th Edition.

Annual Reports
    a) World Bank: Global Financial Development
    b) IMF: World Economic Outlook

DEVELOPMENT ECONOMICS-II

Course Code: MEC-2108   **Max. Marks: 100**
 Time: 3 Hrs   **External: 80**
                                                                  Internal: 20

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Course Objectives: The main objectives of this course on development economics are to enable students with knowledge of various approaches to underdevelopment. The course also covers various dimensions of development policy like role of state and trade theory for economic development.

Course Outcome: Knowledge of this course equips students with an understanding of various approaches of economic development. Students can be able to suggest various policies of development planning and can elaborate various dimensions of problem of underdevelopment.

Unit-I

Approaches to Development-Characteristics of Underdevelopment and Structural Change, Approaches to Tackle Underdevelopment- Balanced and Unbalanced Growth, Critical Minimum Efforts Theory, Low Level Equilibrium Trap, Kuznets theory of structural changes.

Unit-II

Sectoral Aspects of Development- Role of Agriculture in Economics Development; Barriers to Agricultural Development, Transformation of Traditional Agriculture, Interdependence of Agriculture and Industry, Development and Environment: The Basic Issues, Traditional Economic Models of the Environment, Policy Options for Developing and Developed Countries, International Agencies and Environment.

Unit-III

Development Policy Making and the Role of the State-The Market Mechanism and Market Failures, The Role of State, Corruption, Nature and Rationale for Development Planning, The Planning Process- Some Basic Models, Plans Failures, Development and Political Economy, Fiscal Policy for Development.

Unit-IV

Trade Theory and Development Experience- International Trade as an Engine of Growth; Gains from Trade, Free Trade Theory in the Context of Developing Countries Experience, The Prebisch Doctrine, Trade Policy Debate; Export Promotion, Import Substitution and Economic Integration, Trade liberalization and Economic Growth, World Bank and Development.

Suggested Readings:
1. Thirlwall, A.P. 2011. Growth and Development, 7th Edition. Palgrave Macmillan. New York.
2. Tadoro, Michael & Smith C. 2017. Economics Development. 7th Edition. Oxford University Press, New Delhi.
3. Meire, G.M & Rauch 2000. Leading Issues in Economic Development. Oxford University Press, and New York.
4. Ghatak, S. 2003. Introduction to Development Economics. Indian Reprint 2007 Routledge. London and New York.
5. Rist, G. 2002. The History of Development Academic Foundation. New Delhi
6. Debraj. 2004. Development Economics. Seventh Edition. Oxford University Press. New Delhi.
7. Taneja M.L. and Myer R.M 2017. Economics of Development and Planning. Vishal

STATISTICS FOR ECONOMIC ANALYSIS

Code: MEC-2110   **Max. Marks: 100**
Time: 3 Hrs.   **External: 80**
                                                                                Internal: 20

Course Objective: The objective of this paper is to train the students to use the techniques of statistical analysis which helps them to understand and analyze economic problems. The paper also deals with simple tools and techniques, which will help a student in central tendency, dispersion, correlation, regression and index numbers.

Course Outcome: The students will learn about the various types of data, measures of central tendency, measures of dispersion and issues related to sampling and population. An important learning outcome of the course will be the capacity to analyze statistics in everyday life to distinguish systematic differences among populations from those that result from random sampling.

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question

Unit-I
Basic Statistics: Measure of Central Tendency- Mean Simple and Weighted, Geometric Mean, Harmonic Mean; Median; Mode, Measure of Dispersion- Range, Interquartile Range, Quartile Deviation, Mean Deviation, Standard Deviation, Coefficient of Variation, Lorenz Curve, Kurtosis Moments and Skewness.

Unit-II
Correlation and Regression: Correlation, Types, Utility, Degree and its Techniques as Karl Pearson Coefficient of Correlation in Individual and Bivariate Series, Spearman Rank Correlation, Concurrent Deviation Method, Coefficient of Determination, Regression, Types, Utility, Regression Lines, Regression Equations in Individuals and Bivariate Series, Regression Coefficients, Difference Between Correlation and Regression, Properties of Regression Coefficient.

Unit-III
Probability-Basic Concepts, Addition and Multiplication, Bayes Theorem Theoretical Probability Distribution: Binomial, Poisson and Normal Distribution

Unit-IV
Sampling: Sample vs. Census, Types of Sampling Techniques with Merit, Demerit and Suitability, Data- Types, Source, Techniques of Primary Data Collection with Merit , Demerit and Suitability, Difference between Primary and Secondary Data.

Suggested Readings:
1.   Nagar A.L. and Das R.K. 1997. Basic Statistics. Oxford University Press. New Delhi.
2.   Gupta S.P. 2014. 43rd ed. Statistical Methods. Sultan Chand and Sons. New Delhi.
3.   Spiegel,M.R 1992. 3rd ed. Theory and Problems of Statistics. Mcgraw Hill Publication London.
4.   Croxton, F.E , Cowden D.J & Klein S.K. 1973. Applied General Statistics. Prentice Hall. New Delhi
5.   Yates, Frank, Sampling Methods for Censuses and Surveys. Charles. Griffin Co.. London.
6.   Cocharm, W. G., Sampling Techniques. John Willey. New York.
7.   Hansen, Hurditz and Meadow. Sample Survey Methods and Theory. John Willey New York.

INTERNATIONAL ECONOMICS-II

Course Code: MEC-2201
Time: 3 hrs.
Max. Marks: 100
External: 80
Internal: 20

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Course Objective: The main objective of the course is to make students equipped with knowledge of international trade policy. Various concepts of international economic policy are covered here like Balance of Payments, dynamics of foreign exchange rate as well as international organizations.

Course Outcome: After completion of this course students will be able to understand and analyse the various dimensions associated with international trade policy.

Unit-I
Balance of Payment- Meaning and Component, Equilibrium and Disequilibrium in Balance of Payment; Foreign Exchange Market (Spot Rate and Forward Exchange Rate, Speculative Pressures) and Exchange Rate: Meaning, Types and Theories of Foreign Exchange Rates: Mint Par Parity Theory; The Purchasing Power Parity Theory; The Balance of Payment Theory.

Unit-II
BOP Adjustment: BOP Adjustment under Gold Standard, Fixed and Flexible Exchange Rates, Elasticity**,** Monetary and Absorption Approach to Balance of Payment Equilibrium, Internal and External Balance simultaneously under Alternative Exchange Rate Regimes, Expenditure Reducing, Expenditure Switching Policies and Direct Control for Adjustment.

Unit-III
Foreign Trade Multiplier- Meaning and working of Foreign Trade Multiplier; Foreign Repercussion or Backwash Effect, Forms of Economic Integration, Static and Dynamic Effects of a Custom Union and Free Trade Area: SAARC, ASEAN, EU.

Unit-IV
International Monetary and Trade System: IMF Operations and International Liquidity; Functions and Achievements of World Trade Organization, World Bank, Trade Policy and Less Developed Countries, Import Substitution versus Export Promotion, Empirical Studies of Trade policy.

Suggested Readings:
1. Salvatore, D. L. 2016. Theory and Problems of International Economics. Prentice Hall, Upper Saddle River, New York.
2. Salvatore D L. 2016. International Economics. (12 edition). Wiley Publications.
3. Soderston B O. 1999. International Economics. Macmillan Press Ltd. London.
4. Paul, R Krugman & Maurice 2011. (9th Ed) International Economics. Theory and Policy Obstfeld–Wesley Series in Economics.
5. Krugman, P.R. Obstfeld, and Melitz 2018. International Economics. Pearson Addition Wesley-Boston
6. Ellsworth P. T. and Clark J. 1971.The International Economy. Collier Macmillan Ltd. London
7. Kindlberger, C P. 1991. International Economics, R D Irwin, Homewood. 8th Edition.

Annual Reports:
a) World Bank: Global Financial Development
b) IMF: World Economic Outlook

ENVIRONMENTAL ECONOMICS

Code: MEC-2203   **Max. Marks: 100**

Time: 3 Hrs.   **External: 80**

Internal: 20

Course Objective: This course focuses on economic causes of environmental problems and acquaints students with the methods for the valuation of environmental quality, assessment of environmental damages, and environmental impact assessments.

Course Outcome: In this course students will learn about economic causes of environmental problems, how economic principles are applied to environmental questions viewed as externalities and their management through various economic institutions, economic incentives and other instruments and policies.

Instructions for Examiners and Examinees: The examiner is required to set nine questions in all. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory Question No.9 All questions shall carry equal marks

Unit-I

Pareto Optimality and Perfect Competition; External Effects in Production and Consumption; Market Failure in case of Environmental Goods –Incomplete Markets, Externalities, Non-Exclusion; Non –Rivalry; Non Convexity and Asymmetric Information.

Unit-II

Economic Incentives for Environmental Protection; Price Rationing –Pollution Charges, Ambient charges, Subsidies; Liability Rules, Non-Compliance Fees, Deposit Refund System, Performance Bonds; Quantity Rationing-Market Pollution Permits;

Unit-III

Natural Resources: Types, Classification and Scarcity; Economics of Sustainable Development – the Solow/Hartwick Approach to Sustainability; Environmental Accounting; Global Efforts for Environmental Protection.

Unit-IV

Environment Policy Framework in India: Problems of Command and Control Regime; Environmental Legislation and Implementation; Development and Degradation; Poverty, Population and Political Economy; Water Pollution and Existing Pollution Control Mechanism.

Suggested Readings:
1. Chary S.N. and Vyasulu V. 2000. Environmental Management - An Indian Perspective. Macmillan. New Delhi.
2. Cropper, M. 1999. Valuing Environmental Benefits, Edward Elgar.
3. Hanley N., Shogern J.F and White B. 1997. Environmental Economics in Theory and Practice. Macmillan.
4. Hussen A.M. 1999. Principals of Environmental Economics, Routledge London.
5. James, A.J., M. N. Murty and Smita Misra 1999. Economics of Water Pollution–The Indian Experience. Oxford University Press. New Delhi.
6. Jeroen. C.J.M. 1999. Handbook of Environmental and Resource Economics. Edward Elgar Publishing Ltd.,U.K.
7. Kolstad, C. 2010. 2nd ed. Intermediate Environmental Economics. Oxford University Press
8. Pearce D.W. and Turner R. 1991. Economics of Natural Resource Use and Environment. John Hopkins University Press. Baltimore
9. Perman R., Ma Y. McGilvray J. and Common M. 2011. 3rd Ed. Natural Resource and Environmental Economics. Pearson Education
10. Shankar, U. 2001. Environmental Economics. Oxford University press. New Delhi.

ECONOMETRICS-I

Course code: MEC-2205   **Max. Marks: 100**
                                                        External: 80
                                                        Internal: 20

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Course Objective:- The objective of the course is to acquaint the students with the basic tools of econometrics which students can apply while doing statistical analysis and applied research.

Course Outcome: Students will learn to estimate linear models with classical linear regression and make inferences about population parameters. They will also understand the biases created through mis-specification models due to omitted variables.

Unit-I
Econometrics- Nature, Meaning, Scope and Methodology; Types of Econometrics Models: OLS with Assumptions, Estimation and Properties; Estimation of Multiple Regressions with Two Explanatory Variables; General Linear Regression Models with Applications.

Unit-II
Statistical Tests of Significance of the Estimates- Tests of Goodness of Fit with R^2 Adjusted R^2; Sampling Distribution of the Least Square Estimates; Standard Error Test of Least Square Estimates; Confidence Interval of Least Square Estimates; Z test; T test; Test of Overall Significance.

Unit-III
Econometric Problems- Nature, Causes, Consequences, Detection and Remedial Measures for the Problems of Multicollinearity, Heteroscedasticity and Autocorrelation with Applications.

Unit-IV
Test Procedures and Model Selection: Tests of Specification and Mis-Specification; Error of Measurement; Criteria for Model Selection; Time Series Analysis: Stationary and Non Stationary Process; Random Walk Model with Drift and without Drift; Unit Root Stochastic Process; Trend Stationary and Difference Stationary; Stochastic Process; Concept of Integration; Spurious Regression; Unit Root Test.

Suggested Readings:
1. Amemiya, T. 1985. Advanced Econometrics. Harvard University Press. Cambridge Mass.
2. Dougherty, C. 2011. 4th ed. Introduction to Econometrics. Oxford University Press
3. Goldberder, A.S 1998. Introductory Econometrics. Harvard University Press. Cambridge.
4. Gujarati, D. 2002. 4th ed. Basic Econometrics. McGraw Hill.
5. Intrilligator, M.D. 1978. Econometric Methods. Techniques and Applications. Prentice Hall Englewood Cliffs. New Jersey.
6. Johnson, J. 1991. Econometric Methods, McGraw Hill Book Co. London
7. Kmenta, J. 1998. Elements of Econometrics. University of Michigan Press. New York
8. Koutsoyiannis, A.1977. Theory of Econometrics. The Macmillan Press Ltd. London
9. Wooldridge. J. 2014. 5th ed. Introduction to Econometric: A Modern Approach. Cengage Learning.
10. Patterson Kerry.P. 2000. An Introduction to Applied Econometrics. Vol.1. Oxford U.K. Blackwell Publishing.
11. William, G. 2000. 5th ed. Econometrics Analysis. Prentice Hall.
12. Wooldridge, J. 2014. 5th ed. Introduction to Econometric: A Modern Approach. Cengage Learning.

RESEARCH METHODOLOGY

Code: MEC-2207   **Max. Marks: 100**
Time: 3Hrs.   **External: 80**
                                                                                  Internal: 20

Course Objective: This paper is designed to acquaint student with the various research methods useful in doing research in addition to application of various statistical and econometrics tools.

Course Outcome: The research skill of the students will be enhanced in conducting survey and doing research besides the use of various tool and techniques report on data collected or mined by them.

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Unit-I Basic Concepts:
Sample Vs. Census, Types of Sampling Techniques with Merit, Demerit and Suitability, Data-Types, Source, Techniques of Primary Data Collection with Merit , Demerit and Suitability, Difference between Primary and Secondary Data.

Unit-II: Sampling Fundamentals:
Formulation of a Research Problem and Research Design, Sampling Design; Sampling Fundamentals; Research; Survey; Investigation and Experiments; Theory; Model; Concept; Constructs and Variables.

Unit-III: Measurement and Scaling:
 Measurement and Scaling Techniques; Reliability of A Scale, Validation of A Scale; Attitude Scaling; Thurstone's Scale, Likert's Scale, Cumulative Scaling;

Unit-IV: Research Report Writing:
Importance of Review of literature, How to Write Review: Theoretical and Imperial, References: APA, Harvard, Chicago and Oxford, Chapterization

Suggested Readings:
1. Malhotra, Naresh K.: Marketing Research an Applied Orientation. 5th edition, Pearson.
2. Cooper and Schindler: Business Research Methods, 8th edition. Tata McGraw Hill.
3. Boyd & Westfall: Marketing Research. Prentice Hall.
4. Kothari, C. R.: Research Methodology. New Age International Publishers.
5. Shekharan & Uma: Business Research Methods-A Skill- Building Approach. 7th ed., New York, John Willy. 2002.
6. Creswell, John W.: Research Design-Qualitative & Quantitative Methods. New York. John Willy. 2002.

COMPUTER APPLICATIONS IN ECONOMIC ANALYSIS

Course Code: MEC-2209
Time: 3 hrs.   **Max. Marks: 100**
External: 80
Internal: 20

Course Objective: The paper is designed to make students familiar with the basic concepts of computers.

Course Outcome: Students acquires extensive theoretical knowledge about computer hardware and software. Students will learn about applications of statistical tools by using statistical software such as SPSS and Excel on computer.

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Unit 1
Computer Fundamentals; Introduction, Characteristics of Computers, Evolution of Computers(History, Generation) Hardware, Software and Types of Software; Operating System-Definitions & Functions; Computer Languages; Machine, Assemble and High-Level Languages; Computer Transaction: Assemblers, Compilers and Interpreters.

Unit II
Business Data Processing Concepts; Data and Information: Meaning, Types, Data Storage Hierarchy; Database Concepts; Database Management System, Database Structuring Techniques, Advantages and Limitations of Database System.

Unit III
MS office; Power Point: Introduction, Uses, Creation of slides of PowerPoint, MS excel: Introduction, Uses, Various Operations of Excel, Creation of Graphic in Excel, MS word: Introduction and Uses, Internet: Usage and Applications, Externate, LAN, WAN, MAN, and WWW.

Unit-IV
Statistical Processing Technique and Methods: SPSS-Functions and Applications,   Summarizing and Analysis of Data; Descriptive Statistics; Comparison of Means; Correlation and Regression Analysis; Estimation of Growth Rates; Discriminate Analysis, Principal Components, Factor Analysis and Cluster Analysis; Data Analysis Using Software Statecraft.

Suggested Readings:
1.   Dhunna M. and Dixit J.B.2010. Information Technology in Business Management, University Science Press New Delhi (An imprint of Laxmi Publications. New Delhi)
2.   Goyal A. 2013. Computer Fundamentals Programming In C. Publisher Pearson,
3.   Jaiswal S. 1997. Computer Science Question Bank Bible. Galgotia Publishers. New Delhi.
4.   Raja R. 2007. Fundamentals of Computer. Prentice Hall of India. New Delhi.
5.   Sinha, P. K 2016. Computer Fundamentals. 3rd ed., BPB Publications. New Delhi.
6.   Statecraft. 2015. Data Analysis using Statecraft. Predictive analytics Solutions Pvt.

MONEY AND BANKING

Course code: MEC-2211

Max. Marks: 100

Time: 3 Hrs.　　　　　　　　　　　　　　　　　　　　　　　　　　　　**External: 80**

Internal: 20

Course Objective: Money and Banking is the Study of the Monetary Aspects of An Economy and the Working Structure of the Banking Sector for the Economic Development. It Includes The Study of Interest Rates Determination And The Functions Of Central Bank In An Economy.

Course Outcome: The Goal of the Paper is to Develop Student's Analytical and Consulting Skills in the Area of Monetary and Banking Sector. It Will Develop The Insight View of The Students Towards The Tools of Banking Sector For The Stability of The Country.

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question

Unit- I

Principles and Concepts of Money – Money-Meaning, Functions and Classifications, Gresham Law of Money, Role of Money in Capitalistic, Socialistic and Mixed Economy, Monetary Standards-Metallic and Paper System of Note Issue. Value of Money: Quantity Theory of Money- Cash Transaction and cash Balance Approaches, Keynesian Approach.

Unit-II

Central Banking- Function of Central Bank, Quantities and Qualitative Methods of Credit Control-Bank Rates Policy, Open Market Operation, Variable Reserve and Selective Method, Role and Functions of Reserve bank of India.

Unit-III

Commercial Banking- Meaning and Functions of Commercial Banks, Process of Credit Creation. Evolution of Commercial Banking in India after Independence, a Critical Appraisal of the Process of Commercial banking after Nationalization, Recent Reforms of Banking Sectors in India.

Unit- IV

Financing Institutions of India- Concept, Objectives, Functions and Roles of Development Banks (IFCI, IDBI, NABARD, SIDCs and SIDBI), Non-Banking Financial Institutions: Concept, Role and Functions, Regulatory Framework of Financial Institutions in India- Securities and Exchange Board of India (SEBI).

Suggested Readings:
1. Paul, R.R. 2018. Monetary Economies. Kalyani Publication, Ludhiana.
2. Gupta S.B. 2010. Monetary Economies. S. Chand & Company. New Delhi.
3. Shapiro. 2013. Macroeconomics Analysis. Golgotha Publications. New Delhi.
4. Ackley, 1978. Macroeconomics: Theory and Policy. Macmillan Publication Co. New York.
5. Diulio, A.E.1987. Theory and Problems of Money and Banking. International Edition.
6. The Reserve bank of India 1983. The Reserve Bank of India: Functions and Working, Bombay.
7. Kulkarni, G. 2003. Modern Monetary Theory. Macmillan New Delhi.
8. Bhole. L.M. (2000). Indian Finance System. Chugh Publications. Allahabad.
9. Hanson, J.A. and S. Kathuria (2002). India: A Financial Sector for the Twenty First Century. OUP. New Delhi.
10. Khan, M.Y. 2009. Indian Financial System. Tata McGraw Hill. New Delhi.
11. Machiraju, M.R. 2010. Indian Financial System. Vikas Publishing House. New Delhi.
12. Prasad, K.N. 2001. Development of India's Financial System. Sarup and Sons. New Delhi.
13. Johnson, H.J.1993. Financial Institution and Markets. McGraw Hill. New York.
14. Shakhar and Shakhar 21st Ed. Banking Theory and Practice. Vikas Publications.

INDUSTRIAL ECONOMICS

Course Code: MEC 2213
Time: 3 Hrs.   **Max. Marks: 100**
                                                                   External: 80
                                                                   Internal: 20

Course Objective: This course provides knowledge to the students on the basic issues of industrial economics such as problem of industrial productivity, efficiency, capacity utilization, etc.

Course Outcome: Having successfully completed this module student will be able to demonstrate knowledge and understanding of the nature of strategic competition and its implications for policy. Demonstrate knowledge and understanding of a set of analytical techniques which can be applied to a variety of economic (and non-economic) problems.

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Unit – 1
Industrial Economics: Scope, Framework and Problems; Concepts and Organization of a Firm-Ownership, Control and Objective of the Firm; Industrial Efficiency: Concepts and Measurement; Market Structure; Product Differentiation; Economies of Scale.

Unit-II
Theories of Industrial Location: Weber and Sargent Florence, Factors Affecting Location; Product Pricing- Theories and Evidence; Profitability- Concept, Measurement and Theory of Profitability; Market Structure and Innovation; Sales Concentration.

Unit-III
Growth of the Firm: Theory of Growth of the Firm; Motives and Measurement of Diversification, Vertical Integration and Merger; Advertising Strategy- Role of Advertising and Models of Advertising Behaviour.

Unit-IV
Industrial Productivity-Measurement and Total Trends, Role and Performance of Small Scale and Large Scale Industries; Industrial Sickness in India; Role and Performance of Public Sector and Private Sector in India.

Suggested Readings:
1. Ahluwalia. 1985. Industrial Growth in India. Oxford University Press. New Delhi.
2. Barthwal, R.R. 1985, Industrial Economics. Wiley Eastern Ltd. New Delhi.
3. Cheruniliam, F. 1994 Industrial Economics: Indian Perspicuity (3rd Edition). Himalaya Publishing House, Mumbai.
4. Desai, B. 1999 Industrial Economy in India (3rd Edition). Himalaya Publishing House Mumbai.
5. Divine, P.J. & Jones R.M. 1976. An Introduction to Industrial Economics. George Allen
And Unwin Ltd., London.
6. Government of India, Economic Survey (Annual)
7. Hay, D. & Morris D.J. (1976) Industrial Economics: Theory and Evidence. University Press.
New Delhi.
8. Kuchal S.C. 1980 Industrial Economy of India (5th Edition). Chaitanya Publishing House
Allahabad.

MATHEMATICAL ECONOMICS

Course Code: MEC-2215
Time: 3 Hrs.   **Max. Marks: 100**
External: 80
Internal: 20

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Course Objective: - The basic objective of the paper is to acquaint the students the application part of principles of economics as various consumer equilibrium and producer equilibrium analysis theories.

Course Outcome:-The students have learned the application part of micro economics theories as cardinal and ordinal utility analysis, production and cost theories and optimization techniques as LPP, game theory numerically with equilibrium in various market structures**.**

Unit-1
Theory of Consumer Behaviour: Basic Concepts; Maximization of Utility; Demand Function; Slutsky Equation; Linear Expenditure System; Separable and Additive Utility Function; Homogeneous and Homothetic Utility Function; Indirect Utility Function; Duality Theorem; Consumer Surplus.

Unit-II
Theory of Firm: Basic Concepts; Optimizing Behaviour; Demand, Cost Function, Cost Function Optimization; Profit Maximization; Homogeneous Production Function: Cobb Douglus and CES Production Function with their Properties.

Unit-III
Linear Programming Problems: Basic Concepts, Mathematical Formulation, Solution of LPP Methods (Graphic and Simplex); Duality: Importance and Solution; Risk and Uncertainty; Game Theory with Economic Application.

Unit-IV
Market Equilibrium: Output and Price Determination under Perfect Completion, Monopoly, Monophony and Monopolistic Completion: Price Discrimination under Monopoly.

Suggested Reading:
1. Allen,R.G.D 1983. Mathematical Analysis for Economist. Macmillan & co. Ltd.
2. Arrow, K.J. and M.D Intrilligator (Eds.) 1982. Handbook of Mathematical Economics. Volumes I, II and III, North Holland. Amsterdam.
3. Chiang, Alpha.C 1984. Fundamental Method of Mathematics Economics. 3rd Edition
4. Chung, J.W. 1993. Utility and Production: Theory and Applications Basil Blackwell, London.
5. Henderson, J.M.& Quandt R.E. 1980. Microeconomic Theory: A Mathematical Approach. McGraw Hill, New Delhi.
6. Monga, G.S 2000. Mathematics and Statistical for Economist. Vikas Publishing house. New Delhi.
7. Yamane,Taro 1972. Mathematical Analysis: Business and Economics Application. 4th Edition.

INDIAN ECONOMY

Course Code: MEC-2202

Time: 3 hrs.
Max. Marks: 100
External: 80
Internal: 20

Course Objective: This paper is designed to make students familiar with the basic concepts of Indian Economy. It deals with the functioning of planning, Human Resource Development in India, features of Indian Economy and India's Foreign Trade.

Course Outcome: Students acquires extensive theoretical knowledge about national income, planning of Indian economy, agriculture, industry and India's Foreign Trade. This paper exposes the students to the realities of the Indian Economy and teaches them to develop critical analysis in an integrated and broader Indian economy framework. It also exposes the students to interdisciplinary skills and written argumentation and prepares them.

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Unit-1
Indian Economy Since Independence: National Income and Per-Capita Income Trends and Sectoral Composition and Changes Therein, Planning in India; Meaning, Types, Achievements and Failures of Five Years Plan, New Economic Policy (Latest); Broad Features, Public Expenditure in India, Human Resource Development in India and Regional Imbalance.

Unit-II
Agriculture and Industrial Development: Land Reforms in India, Green Revolution, Agriculture Prices and PDS, Doubling of Farm Income, Agricultural Marketing, Food Security in India, Industry Trends in Composition and Growth, Service Sector in Indian Economy.

Unit-III
Indian Economic Problems: Labor Force Growth and Occupational Pattern, Poverty and Unemployment in India. Programmes for Eradication of Poverty and Unemployment with Special Reference to the Post Reform-Era, Population and Economic Development in India, Parallel Economy in India; Meaning, Estimates, Impact and Responsible Factors.

Unit: IV
Globalization and Indian Economy: India's Foreign Trade Value, Composition and Direction, Trade Policy of Government of India, Foreign Capital and Aid, MNC's in India ,India's Balance of Payments, WTO and Indian Economy; Recent Bilateral Trade Agreements of India, Foreign Trade Investment and its Role in the Development of Indian Economy, India's Exchange Rate Policy, Foreign Exchange Reserves and Capital Account Convertibility.

Suggested Reading:
1. Aggrawal, A.N. 2014. Indian Economy- Problems of Development & Planning. New Age International Publishers. New Delhi.
2. Bardhan, P.K. 2010. The Political Economy of Development in India. Edition 9th Oxford University Press. New Delhi.
3. Dutt R. & Sunderam K.P.M 2018. Indian Economy. Edition 72th, S Chand &Co. Ltd. New Delhi.
4. Jalan, B. 1996. India's Economic Policy- Preparing for the Twenty First Century. Viking, New Delhi.
5. Kapila, U. 2016. Indian Economy: Policies and Performances. Edition (27th). Academic Foundation, New Delhi.
6. Mishra S.K & Puri V.K. (2016). Indian Economy and its Development Experience. Himalaya Publishing House, New Delhi.

AGRICULTURAL ECONOMICS

Code: MEC-2204   **Max. Marks: 100**
Time: 3 Hrs.   **External: 80**
                                                                                  Internal: 20

Course Objective: This paper acquaints students about the issues in agrarian structure of Indian economy in addition to land systems, peasantry farming, role and pattern of agriculture development.

Course Outcome: Students will learn about the various issues related to agriculture and its development such as agriculture price policy, agriculture markets and infrastructure, agriculture trade and WTO.

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question

Unit-I: Introduction to Agriculture- Definition, Scope and Nature of Agriculture Economics; Role of Agriculture in Economic Development; Agriculture Markets: Aim, Types, and Functions, Interdependence between Agriculture and Industry.

Unit-II: Agricultural Growth in India- Recent Trends in Agricultural Growth in India; Inter-Regional Variations in Growth of Output, Cropping Pattern Shifts; Supply of Inputs Irrigation, Power, Seed and Fertilizers. Role of Public Investment & Capital Formation in Indian Agriculture; Land Reforms: Meaning, Objectives of Land Reforms; Green Revolution Agricultural Markets (Land, Labour and Credit).

Unit-III: Agriculture Finance and theories of development- Agriculture Credit System in India, the Role of Institutional and non-institutional credit in Agricultural Development, Agricultural Development in Five Year Plans; Transformation of Agriculture: Schultz, Mellor and Boserup.

Unit-IV: Agriculture Price Policy- Objectives Need and Instrument of Agriculture Price Policy, Commission of Agricultural Costs and Prices: Fixing MSP and Costs for Various Crops, India's Foreign Trade in Agriculture, WTO and Indian Agriculture, the Impact of WTO on Indian Agriculture, India's Trade in Agricultural Commodities, Export Potentials of Agricultural Commodities, Measures taken by India to Increase Exports of Agricultural Commodities.

Suggested Readings:
1. Black, J.D. 1994. Introduction to the Economics of Agriculture. MacMillan, New York.
2. Cohen, R.L. 1948. Economics of Agriculture. Nishet. London.
3. Dantwala, M.L. et al. 1991. Indian Agricultural Development since Independence. Oxford and IBH. New Delhi.
4. Drummond H. Evan and Goodwin W. John 2006. Agricultural Economics. Pearson Education, New Delhi.
5. Eicher Carl and Lawrence Witt (Eds.) 1964. Agriculture in Economic Development. New York, McGraw Hill Co.
6. Forster, G.W. and Leoger, M.C. 1959. Elements of Agricultural Economics. Prentice Hall.
7. Goodwin, H.G. 1977. Economics of Agriculture. Reston Publishing Co. Halcrow.
8. Heady, E.O 1964. Economics of Agriculture Production and Resources. Prentice Hall of India Pvt. Ltd., New Delhi.
9. Soni, R.N. 2015. 12th ed. Leading Issue in Agriculture Economics. Vishal Publication.
10. Vaidyanathan, A. 1994. Performance of Indian Agriculture since Independence. Oxford University Press.
11. Bilgrami, S.A.R. 1996. Agricultural Economics, Himalaya Publishing House, Delhi.
12. Lekhi, R.K. & Singh, J. 2010. Agricultural Economics. Kalyani Publishers. New Delhi.
13. Ray, Debraj 2004. Development Economics. Seventh Edition. Oxford University Press. New Delhi.

ECONOMETRICS-II

Course Code: MEC-2206
Time: 3 hrs.
Max. Marks: 100
External: 80
Internal: 20

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Course Objective: - The objective of this course is to acquaint the students with the econometrics methods which have proved particularly useful for understanding the interrelationship between various economic disciplines as Mathematics, Statistics and Economic Theory.

Course Outcome: This Course will enable students to learn about applied econometric analysis and develop the skills required for empirical research in economics besides gaining knowledge of specification analysis and selection of regression models.

Unit-I
Auto-Regressive and Distributed Lag Models-Almon Approach to Distributed Lag Models; Koyak's Model; Partial Adjustment Model; Adaptive Expectations; Instrumental Variable Models; Error Correlation Mechanism; Causality Test; Granger Test and Sim's Test.

Unit-II
Simultaneous Equation- Simultaneous Equation Bias and Inconsistency of OLS Estimators; Solution of Simultaneous Equation: ILS (Indirect Least Squares); Two Stage Least Square (2SLS); Limited Information Maximum Likelihood (LIML); Model of Simultaneous-Structural Model: Reduced Form Model and Recursive Model; Identification Problem: Rule of Identification-Order and Rank Conditions.

Unit-III
Dummy Variables Techniques- Use of Dummy Variables: Testing Structural Stability of Regression Model Comparing Two Regression Model; Interaction Effects, and Seasonal Analysis; Piecewise Linear Regression; Regression with Dummy Dependent Variables: LPM (Linear Probability Model); Logit, Probit; Tobit Model.

Unit-IV
Estimation and Interpretation of Function- Production Function-: Introduction to Cobb Douglas, CES, Estimation, Interpretation, and their Problems; Demand and Cost function.

Suggested Readings:
1. Amemiya, T. 1985. Advanced Econometrics, Harvard University Press. Cambridge. Mass.
2. Dougherty, C. 2011. 4th ed. Introduction to Econometrics. Oxford University Press
3. Goldberder, A.S 1998. Introductory Econometrics. Harvard University Press. Cambridge.
4. Gujarati, D. 2002. 4th ed. Basic Econometrics, McGraw Hill.
5. Intrilligator, M.D. 1978. Econometric Methods. Techniques and Applications. Prentice Hall Englewood Cliffs, New Jersey.
6. Johnson, J. 1991. Econometric Methods. Mcgraw Hall Book Co. London .
7. Kmenta, J. 1998. Elements of Econometrics. University of Michigan Press. New York
8. Koutsoyiannis, A. 1977. Theory of Econometrics. The Macmillan Press Ltd. London .
9. PatterrsonKerry.P. 2000. An Introduction to Applied Econometrics. Vol.1. Oxford U.K. Blackwell Publishing.
10. Wiilliam, G. 2000. 5th ed. Econometrics Analysis. Prentice Hall.
11. Wooldridge, J. 2014. 5th ed. Introduction to Econometric: A Modern Approach. Cengage Learning.

DISSERTATION

Course Code: MEC-2208

Max.Marks:100
External: 100

Course Objective: This paper is designed to acquaint student with the writing of dissertation with application various research designs while conducting research.

Course Outcome: The students will be able to write dissertation in a scientific way with enhanced knowledge.

Note: The students of M. A. Economics 4th Semester are required to submit three copies of dissertation (hard- binding) by 31st March of every academic year, with a late fee of 500/-rupee with by 30th April of the every academic year and with a fine of Rs. 1000 till May 31st of the every academic year. Further there will be an on-the spot viva-voce of 100 marks jointly by one external examiner appointed by the university/examination branch from the panel provided by department and one faculty member nominated by the Chairperson of the department before the commencement of final examination.

Note: The dissertation will be submitted on prescribed format and will contain 60-80 pages including references and annexure etc.

HARYANA ECONOMY

Code: MEC-2210   **Max. Marks: 100**
Time: 3 Hrs.   **External: 80**
                                                                                Internal: 20

Course Objective: This paper acquaints students about the issues in Haryana Economy such as agriculture growth and policy in Haryana, development of industries and infrastructure in Haryana across various districts.

Course Outcome: Students will learn about the various issues related to agriculture, industry and infrastructure in Haryana economy.

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question

Unit-I Haryana Economy: Regional Economics: Concept, Scope and Framework; Regional Economic Problems; Different Approaches to Regional Economic Analysis; Growth and Sectoral Distribution of State Domestic Product (SDP) Declining Sex-Ratio and Its Social and Economic Implications, Regional Disparities in Haryana. Globalization in Haryana Economy; **Unit-II Economic Structure of Haryana Economy**- Role of Agriculture in Haryana, Green Revolution, Strategy, Irrigation Facilities, Agriculture Diversification, Land Reforms in Haryana Agriculture, Rural Credit and Indebtedness, Agriculture Marketing, WTO and Haryana Agriculture.

Unit-III Haryana Industry- Pattern, Performance, Constraints and Challenges, Small Scale Industry, State and Industrial Development, State Finance- Source of Revenue and Expenditure, Budgetary Deficits, Financial Health of State.

Unit-IV Infrastructure and Human Development- Power Sector, Haryana Electricity Regulatory Commission, Pricing Policy and Finance, Rural Electrification, Transport Sector, Urban Infrastructure, Haryana Development Authority, State Human Development Index.

Reading List:

1. Richardson, Harrry W. 1973. Regional Economics, Weidenfeld and Nicolson, London

2. Hoover, Edger M. 1973. An Introduction to Regional Economics. Alfred A Knopf, New York

3. Choudhary, D.R. 2007. Haryana at Cross Roads: Problems and Prospects, National Book Trust. New Delhi, India.

4. Gupta, S. P. 2003. Three Decades of Haryana Economy. S. P. Publication. Shivalik Enclave. Manimajra.

5. Jain, T.R. & Trehan, M. 2014. Sectoral Aspects of Indian Economy. V.K. Publication Private Limited, New Delhi.

FINANCIAL INSTITUTIONS AND MARKETS

Course code: MEC-2212   **Max. Marks: 100**
Time: 3 Hrs.   **External: 80**
         Internal: 20

Course Objective: The Paper, Financial Institutions and Markets, is the Study of the working and constituents of Financial System in the Economy. It deals with the Financial System and Highlight the Money Market, Capital Market and the Insurance Market which Helps to Raise Funds for the Investment which is needed to develop the Economic System.

Course Outcome: The Goal of the Paper is to develop the Analytical Skills of Students in the Area of Financial Institutions and Markets. In this Course students will learn about various functions of the banking and non-banking financial institutions. It also provides insight view about the short-term and long-term investment options through the money market, capital market and insurance market.

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question

UNIT-I
Financial System-Nature and Role of Financial System, Rationale of Studying Financial System, Risk Management in Financial System, Financial Intermediaries, Structure of Financial Development, Interest Rate Structure.

UNIT-II
Money Market-Introduction, Meaning and Main Characteristics of Money Market Segments- Call Money Market, Treasury Bill Market, Commercial Papers Market, Certificate of Deposit Market, Gilt- edged Securities Market, Repo Market, Functions and Importance of Money Market in India; Recent Developments in Indian Money Market.

UNIT-III
Capital Market- Meaning, Objectives, Importance and Functions of Capital Market; Financial Instruments in Primary Capital Market; Characteristics and Functions of Stock Exchange. Hedging with Financial Derivatives-Futures, Options and Interest Swaps, Major Sources of Finance-Financial Instruments: Shares, Debentures/Bonds, Mutual Funds, Merchant Banking.

UNIT-IV
Insurance Market-Meaning, Types and Principles of Life Insurance and General Insurance; Rationale for Opening up of the Insurance to Private Sector, Emerging Scenario in Insurance Sector in India; Main Features of Working of LIC(Life Insurance Corporation), Insurance Regulatory and Development Authority (IRDA).

Suggested Readings:
1. Bhole, L.M. 2017. Financial Institutions and Markets, Tata McGraw Hill, New Delhi.
2. Bhole, L.M. 2000. Indian Financial System, Chugh Publications. Allahabad.
3. Hanson, J.A. and S. Kathuria 2002. India: A Financial Sector for the Twenty First Century. OUP, New Delhi.
4. Khan, M.Y. 2009. Indian Financial System. Tata McGraw Hill, New Delhi.
5. Machiraju, M.R. 2010. Indian Financial Systems. Vikas Publishing House. New Delhi.
6. Prasad, K.N. 2001. Development of India's Financial System. Sarup and Sons. New Delhi.
7. Johnson, H.J. 1993. Financial Institutions and Markets, McGraw Hill, New York.
9. Machiraju, M.R. 1997. International Financial Markets in India. Wheeler Publishing House. Allahabad.
10. Farrell, J.L. 1997. Portfolio Management. McGraw Hill. New York.
11. Smith,P.F. 1978. Money and Financial Intermediation: The Theory and Structure of Financial System. Prentice Hall, Englewood-Cliff. New Jersey.

GENDER ECONOMICS

Course code: MEC-2214
Time: 3 hrs.   **Max. Marks: 100**
External: 80
Internal: 20

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question.

Course Objectives: The main objectives of this course on Economics are to enable students with knowledge of various concepts of gender studies. The course covers interrelations between gender and development and indicators of gender discrimination in India.

Course Outcome: Knowledge of this course equip students with understanding of various concepts of gender studies and students will be able to understand how development is affected by gender element.

Unit-I

Importance and Concept of Gender Studies- Defining Gender Debate on Women and Development (1970s and 1980s), Theories of Exploitation and Oppression: Status of Women in India, Women in Patriarchal and Matriarchal Societies Structures, Economic Basics and Functioning of Patriarchy in Developed Countries and LDC, Particularly India.

Unit-II

Gender And Development- Patriarchy and Development- Engendering Development Theories- Approaches to Women's Development, Indicators of Development – Gender Development Index and Gender Empowerment Measure, Demography of Female Population, Age Structure, Mortality Rate and Sex- Ratio.

Unit-III

Gender Discrimination in India- Gender Discrimination in Labour Force Participation-Occupational Segregation and Wage Differentials with special reference to Gender Education, Skills and Trends across Regions, Factor Affecting Decision Making by Women, Property Rights; Access to and Control over Economic Resources.

Unit-IV

Nature and Impact of Technological Development- Industrialization and Modernization in Women's Work, Women and Globalization, Time use survey and care work, Gender Budgeting and Women, Female Activities, Ecological and Environmental Concern; the two Way Relationship.

Suggested Readings:
1. Sen G. & Canen C. 2013.Development Crises and Alternative Vision. Earthscan Ltd.
2. Lourdes Beneria & Biswanath S. 2001.Gender and Development: Theoretical Empirical. London.
3. Desai, N. & Raj M.K. (Eds) 1987. Women and Society in India. Research Centre for Women's Studies, SNDT University, Bombay.
4. Chakraborti, L. 2009. Invisibility of Women's Work in Budgeting Policies. Labour File, Journal and Practical Approaches, Edward Elgar Publishing.
5. Lahiri, A., Lekha S Chakroborty & Bhattacharya P.N. 2003. Gender Budgeting in India, of Labour and Economic Affairs,
6. Aggarwal B. 1994. A Field of One's Own, Gender and Land Rights in South Asia Cambridge NIPFP. New Delhi University Press. Cambridge.
7. Hirway, I. 2017. Mainstreaming Unpaid Work: Time use survey in developing Policies. Oxford University Press.
8. Boserup, Either 1989. Women's Role in Economic Development. George Allen and Unwin Barkers,
9. Drucilla and E. Kuiper. 2004. Toward A Feminist Philosophy of Economic. Limited, London.

ADVANCED STATISTICS

Code: MEC-2216   **Max. Marks: 100**
Time: 3 Hrs.   **External: 80**
                                                                      Internal: 20

Course Objective: The emphasis of this paper is on understanding economic concepts with the help of statistical methods rather than learning statistics itself. The paper also deals with simple tools and techniques and drawing inferences about various statistical hypotheses.

Course Outcome: At the end of the course, the students will learn about the concept the concept of correlation and regression analysis, various types of probability distributions and Hypothesis testing while doing statistical inference analysis. They will be able to estimate population parameters based on random samples and test hypotheses about these parameters.

Note: There will be 9 questions in all. The first question is compulsory consisting of 8 short answer type questions (30-35 words) of 2 marks each, set from the whole syllabus. The remaining 8 questions shall be from the four units, i.e., 2 questions from each of the four units of 16 marks each. The examinees have to attempt one question from each unit besides the compulsory question

Unit I
Correlation and Regression- Partial and Multiple Correlations; Regression Estimation of Growth rate; Forecasting with OLS; Statistical Estimation Theory.

Unit II
Index Numbers: Meaning, Uses, Role and Importance of Index Numbers; Types of Index Numbers: Price Index, Quantity Index, Value Index, Simple Index Number, Weighted Index Number; Construction of Index Number, Problems in Construction; Methods in Construction of Index Numbers: Simple and Weighted Methods of Construction; Laspeyres Price Index, Paasche's Price Index; Fisher's Ideal index, Time Reversal, Factor Reversal and Circular Test; Base Shifting, Splicing and Deflating of Index Number.

Unit III
Hypothesis Testing- Null hypothesis, Alternative Hypothesis, Simple and Complex Hypothesis, Standard Error: Type-I and type-II; Level of Significance, Critical Region; Large and Small Sample Test: t, F and Z Tests. Hypothesis Testing: ANOVA- One Way and Two Way, Non Parametric Test: Chi- Square

Unit-IV
Time Series- Meaning, Utility, Components and their Decomposition, Methods of Measuring Trend- Free hand Curve Method, Semi Average Method, Moving Average Method, and Least Square Method Measurement of Seasonal Variation- Method of Simple Averages, Method of Moving Averages, Ratio to Moving Average, Ratio to Trend Method, Link Relative Method.

Suggested Readings:
1.   Nagar a.L. and Das A.K. 1997.2nd ed. Basic Statistics. Oxford University Press. New Delhi.
2   Gupta S.P. 2014. 43rd ed. Statistical Methods. Sultan Chand and Sons. New Delhi.
3.   Spiegel,M.R 1992. 3rd ed. Theory and Problems of Statistics.Mcgraw Hill Publication London.
4.   Croxton, F.E., Cowden D.J. & Klein S.K. 1973. Applied General Statistics. Prentice Hall, .
5.   Yates, F. 1960. Sampling Methods for Censuses and Surveys. Charles. Griffin Co. London.
6.   Cocharm, W. G. 2000. Sampling Techniques. John Willey. NewYork.
7.   Hansen, Hurditz and Meadow.1993. Sample Survey Methods and Theory. John Willey New York.
8.   Gupta S. C. and Gupta I. 2018. 2nded. Fundamentals of Statistics. Himalaya Publishing House. New Delhi.