466

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR
(Established by State Legislature Act 17 of 1995)
'A+' Grade, NAAC Accredited State Govt. University

Acad./AC-III/BOS&R-17/2024/ 7953

Dated: 10/12/2024

To

The Controller of Examinations
GJUS&T, Hisar.

Sub: Approval of scheme of examination and syllabi of the following programme(s) being run in University Teaching Department w.e.f. academic session mentioned against each:

1. Integrated B.Sc. (Hons./Hons. with Research) – M.Sc. Economics (1st and 2nd semester) under NEP-2020 w.e.f. academic session 2024-25.

2. Integrated B.Sc. (Hons./Hons. with Research) – M.Sc. Economics (3rd and 4th semester) under NEP-2020 w.e.f. academic session 2023-24 and 2024-25.

3. List of pools of various subjects offered by the Department of Economics for UG/ 5 year Integrated programmes w.e.f. academic session 2024-25.

Sir,

I am directed to inform you that the Vice-Chancellor, on the recommendations of Dean, Faculty of Humanities and Social Sciences on dated 02.12.2024, is pleased to approve the scheme of examinations and syllabi of Integrated B.Sc. (Hons./Hons. with Research) – M.Sc. Economics (1st and 2nd semester) under NEP-2020 w.e.f. academic session 2024-25, scheme of examination and syllabi of Integrated B.Sc. (Hons./Hons. with Research) – M.Sc. Economics (3rd and 4th semester) under NEP-2020 w.e.f. academic session 2023-24 and 2024-25 and scheme of examination and syllabi of List of pools of various subjects offered by the Department of Economics for UG/ 5 year Integrated programmes w.e.f. academic session 2024-25 being run in University Teaching Department(s), under Section 11(5) of the University Act, 1995 in anticipation of approval of the Academic Council.

A copy of the scheme of examinations and syllabi of above said programme is enclosed herewith. You are therefore, requested to take further necessary action, accordingly.

DA: As above

Yours faithfully

Assistant Registrar (Academic)
for Registrar

Endst. No. Acad./AC-III/BOS&R-17/2024/ 7954-7957

Dated: 10/12/2024

A copy of above is forwarded to the following for information and necessary action:-

1. Dean, Faculty of Humanities and Social Sciences, GJUST, Hisar.

2. Chairperson, Department of Economics, GJUST, Hisar. He is requested to arrange to upload the above said scheme of examination and syllabi of above said programme on the website of the University.

3. OSD to Vice-Chancellor (for kind information of the Vice-Chancellor), GJUST, Hisar.

4. Secretary to Registrar (for kind information of the Registrar), GJUST, Hisar.

Dr. Lalit sharma for Further na.

Assistant Registrar (Academic)

Guru Jambheshwar University of Science and Technology
Hisar-125001, Haryana
('A+' NAAC Accredited State Govt. University)
Scheme of Examination for Integrated Five Years Programme
Programme: Integrated B.Sc. (Hons/Hons with Research)-M.Sc. Economics
UG Four Years Programme (Single Major from First Semester) + PG One Year Programme
According to National Education Policy 2020

w.e.f. 2024-25 Onwards

FIRST YEAR (SEMESTER-I)						
Type of Course	Course Code	Paper Nomenclature	Credits	Internal Marks	External Marks	Total Marks
Discipline Specific Course	24ECO0101T	Introductory Microeconomics	4	30	70	100
	24ECO0102T	Introductory Macroeconomics	4	30	70	100
Minor Course/ Vocational Course	To be opted from the pool of University MIN		4	30	70	100
Multidisciplinary Course	To be opted from the pool of University MDC		3	25	50	75
Ability Enhancement Course	24AEC0102T	From Hindi Department	2	15	35	50
Skill Enhancement Course	To be opted from the pool of University SEC		3*	25	50	75
Value Added Course	To be opted from the pool of University VAC		2	15	35	50
Total			22			550

Note: * The outside examiner will take the practical exam.

Chairperson
Department of Economic
G.J.U.S&T, Hisar

Guru Jambheshwar University of Science and Technology
Hisar-125001, Haryana
('A+' NAAC Accredited State Govt. University)
Scheme of Examination for Integrated Five Years Programme
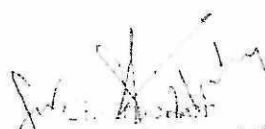### Programme: Integrated B.Sc. (Hons/Hons with Research)-M.Sc. Economics
UG Four Years Programme (Single Major from First Semester) + PG One Year Programme
According to National Education Policy 2020
w.e.f. 2024-25 Onwards

FIRST YEAR (SEMESTER-II)

Type of Course	Course Code	Nomenclature of Paper	Credits	Internal Marks	External Marks	Total Marks
Discipline Specific Course	24ECO0201T	Intermediate Microeconomics	4	30	70	100
	24ECO0202T	Intermediate Macroeconomics	4	30	70	100
Minor Course/ Vocational Course	To be opted from the pool of University MIN		4	30	70	100
Multidisciplinary Course	To be opted from the pool of University MDC		3	25	50	75
Ability Enhancement Course	24AEC0101T	From English Department	2	15	35	50
Skill Enhancement Course	To be opted from the pool of University SEC		3*	25	50	75
Value Added Course	24VAC0101T	From Dept. of Environmental Science and Engineering	2	15	35	50
Total			22			550

Note: * The outside examiner will take the practical exam.

Dept. of Economics
G.J.U.S&T. Hisar

2

Guru Jambheshwar University of Science and Technology
Hisar-125001, Haryana
('A+' NAAC Accredited State Govt. University)
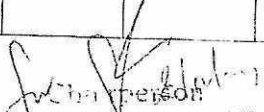### Scheme of Examination for Integrated Five Years Programme
Programme: Integrated B.Sc. (Hons/Hons with Research)-M.Sc. Economics
UG Four Years Programme (Single Major from First Semester) + PG One Year Programme
According to National Education Policy-2020, Subject: Economics
w.e.f. 2024-25 Onwards

FIRST YEAR (SEMESTER-I)

Department Courses offered for the pools (MIN, MDC, SEC, & VAC)

Type of Course	Course Code	Paper Nomenclature	Credits	Internal Marks	External Marks	Total Marks
Minor Course/ Vocational Course	24MIN0104T	Introductory Mathematics for Economics	4	30	70	100
Multidisciplinary Course	24MDC0112T	Descriptive Statistics	3	25	50	75
Skill Enhancement Course	24SEC0111P	Basics of Excel Lab	3*	25	50	75
Value Added Course	24VAC0116T	Understanding Union Budget	2	15	35	50

FIRST YEAR (SEMESTER-II)
Department Courses offered for the pools (MIN, MDC, SEC, & VAC)

Type of Course	Course Code	Nomenclature of Paper	Credits	Internal Marks	External Marks	Total Marks
Minor Course/ Vocational Course	24MIN0204T	Intermediate Mathematics for Economics	4	30	70	100
Multidisciplinary Course	24MDC0212T	Statistical Methods	3	25	50	75
Skill Enhancement Course	24SEC0211P	Data Visualization using Excel Lab	3*	25	50	75
Value Added Course	24VAC0116T	Understanding Union Budget	2	15	35	50

Chairperson
Department of Economics
G.J.U S&T, Hisar

3

Guru Jambheshwar University of Science and Technology
Hisar-125001, Haryana
('A+' NAAC Accredited State Govt. University)
Scheme of Examination for Integrated Five Years Programme
Programme: Integrated B.Sc. (Hons/Hons with Research)-M.Sc. Economics
UG Four Years Programme (Single Major from First Semester) + PG One Year Programme
According to National Education Policy-2020
w.e.f. 2023-24 &2024-25 Onwards

Semester-III						
Type of Course	Course Code	Paper Nomenclature	Credits	Internal Marks	External Marks	Total Marks
Discipline Specific Course	24ECO0301T	Microeconomics Analysis	04	70	30	100
	24ECO0302T	Macroeconomics Analysis	04	70	30	100
Minor/ Vocational Course	To be opted from the pool of University MIN		04	70	30	100
Multidisciplinary Course	To be opted from the pool of University MDC		03	50	25	75
Ability Enhancement Course	To be opted from the pool of University AEC		02	35	15	50
Skill Enhancement Course	To be opted from the pool of University SEC		03	50	25	75
			03	50	25	75
Value Added Course	To be opted from the pool of University VAC		02	35	15	50
Total			22			550

Chairperson
Department of Economic
G.J.U.S&T, Hisar

4

Guru Jambheshwar University of Science and Technology

Hisar-125001, Haryana

('A+' NAAC Accredited State Govt. University)

Scheme of Examination for Integrated Five Years Programme

Programme: Integrated B.Sc. (Hons/Hons with Research)-M.Sc. Economics

UG Four Years Programme (Single Major from First Semester) + PG One Year Programme

According to National Education Policy-2020

w.e.f. 2023-24 &2024-25 Onwards

Semester-IV						
Type of Course	Course Code	Paper Nomenclature	Credits	Internal Marks	External Marks	Total Marks
Discipline Specific Course	24ECO0401T	Mathematics of Equilibrium Analysis	04	70	30	100
	24ECO0402T	Econometrics-I	04	70	30	100
	24ECO0403T (i)	Labour Economics or (OR)	04	70	30	100
	24ECO0403 T(ii)	Development Economics	04	70	30	100
	24ECO0404T(i)	Agriculture Economics or (OR)	04	70	30	100
	24ECO0404T(ii)	Industrial Economics	04	70	30	100
Minor / Vocational Course	To be opted from the pool of University MIN		04	70	30	100
Ability Enhancement Course	To be opted from the pool of University AEC		02	35	15	50
Value Added Course	To be opted from the pool of University VAC		02	35	15	50
Total			24			600

Department of Economic
G.J.U.S&T, Hisar

5

Guru Jambheshwar University of Science and Technology
Hisar-125001, Haryana
('A+' NAAC Accredited State Govt. University)
Scheme of Examination for Integrated Five Years Programme
Programme: Integrated B.Sc. (Hons/Hons with Research)-M.Sc. Economics
UG Four Years Programme (Single Major from First Semester) + PG One Year Programme
According to National Education Policy-2020, Subject: Economics
w.e.f. 2024-25 Onwards

Department Courses offered for the pools (MIN, MDC, SEC, & VAC)						
Semester-III						
Type of Course	Course Code	Paper Nomenclature	Credits	Internal Marks	External Marks	Total Marks
Minor/ Vocational Course	24MIC0304T	Mathematical Methods for Economics	04	70	30	100
Multidisciplinary Course	24MDC0312T	Advanced Statistics for Economics	03	50	25	75
Skill Enhancement Course	24SEC0311P(i)	Basics of Python	03	50	25	75
	24SEC0311P(ii)	Basics of STATA	03	50	25	75
Value Added Course	24VAC0316T	Indian Polity and Economy	02	35	15	50
Semester-IV						
Type of Course	Course Code	Paper Nomenclature	Credits	Internal Marks	External Marks	Total Marks
Minor / Vocational Course	24VOC0404P ~~24MIC0604T~~ 24VOC0404T	Indian Statistical System	2, ~~04~~ 2 (2T+2P)	15 ~~70~~ 85	35 ~~30~~ 35	50 ~~100~~ 50
Value Added Course	24VAC0316T	Indian Polity and Economy	02	35	15	50

Chairperson
Department of Economics
G.J.U.S&T, Hisar

6

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

DEPARTMENT OF ECONOMICS

Scheme and Instructions for Integrated B. Sc. (Hons./Hons. with Research in Economics)- M.Sc. Economics Programme W.e.f. academic year 2024-2025 onward

The Integrated B.Sc. (Hons./Hons. with Research in Economics) - M.Sc. Economics is an integrated undergraduate and post graduate course designed is accordance with the provisions of the NEP 2020 program. The course curriculum is structured to reflect the University's belief that multi-disciplinary thinking is the key to develop comprehensive understanding.

The course Integrated B.Sc. (Hons./ Hons. with Research in economics) - M.Sc. Economics under the NEP-2020 offers multiple entry and exist options for the students perusing in the course. The award of certificate, diploma and degree to the students pursuing B.Sc. (Hons. /Hons. with Research in Economics) - M.Sc. Economics will be as mentioned below:

Year	Type of Certificate/Diploma/Degree	Qualification title/nomenclature and programme duration
1st Year	Undergraduate Certificate	Undergraduate Certificate in Economics
2nd Year	Undergraduate Diploma	Undergraduate Diploma in Economics in
3rd Year	Bachelor's degree	Bachelor of Science in Economics.
4th Year	Bachelor's degree (Honours/Honours with Research)	Bachelor of Science (Hons./ Honours with Research in Economics)
5th Year	Master's degree	Master of Science in Economics.

Note: In case of any confusion or conflict with the rules and regulation of the university, the rules and regulation of the university shall prevail and decision of the Vice Chancellor will be final.

The Integrated B.Sc. (Hons./ Hons. with Research in Economics)- M.Sc. Economics programme is divided into ten semesters (two semesters in first year, two semesters in the second year, two semesters in the third year, two semester in fourth year and two semester in fifth year). Every semester ordinarily shall be of 21 weeks of duration inclusive of teaching and examination. The Integrated B.Sc. (Hons./ Hons. with Research in Economics)- M.Sc. Economics Programme shall consist of total 232 credits and each paper shall consist of 04 (five) credits. The 04 credits shall be equivalent to 100 marks which shall be classified into the ratio of 70% external and 30% internal. The division of marks is as under:

Internal Assessment (Internal)
Distribution of weightage of 30 marks of Internal Assessment will be as per university Ordinance:
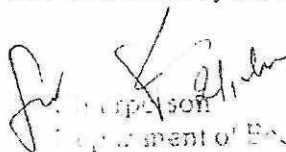Minor Tests: 20 marks
Attendance & Co-curricular Activities (To be announced by the teacher)   10 marks
External Marks   70 marks

Max. Marks 100 marks
Passing Marks 40 marks

The Internal Assessment awarded to a student in any particular course will be based on performance of the students in two minor tests, Attendance and Co-curricular Activities (Assessment, Vivo-Voce, Presentation, Live assignment, Subject Quiz, Group Discussion, Case Study, etc.)

The students who fail in internal assessment as well as in aggregate will have the option to improve their score in the internal assessment giving a special chance to such students. However, no student will be allowed to improve his/her score of internal assessment, if he/she has already scored 40% marks in aggregate as well in external examination. A student who could not secure 40% marks in external will have to reappear in the external examination of the respective paper as per university rules.

Instructions to the examiners and students for the Major Test of 70 marks:
The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus. In addition, eight more questions will be set comprising two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to the compulsory Question No. 1. All questions shall carry equal marks. The maximum time allotted for the major test is 03 (three) hours.

Integrated B.Sc. (Hons./ Hons. with Research)- M.Sc. Economics programme is a five year full time programme. The course structure of the programme is given us under:

(Chairperson)
Department of Economic
G.J.U.S&T, Hisar

8

Semester-I

Introductory Microeconomics

DSCA1

Course Code: 24ECO0101T

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70

(Total Credits: 4)
(Theory)
Time Allowed: 3 Hours

Unit-I

Introduction to microeconomics, Demand and Supply functions, Market equilibrium and price determination, real and nominal prices, changes in market equilibrium, Elasticity of demand and supply and their applications.

Unit-II

Theory of consumer behaviour- I: The cardinal theory, the indifference theory, the consumer's surplus, some application of indifference.

Unit-III

Theory of consumer behaviour-II: The revealed preference theory, cost of living indices, recent developments in the theory of market demand.

Unit-IV

Choice under uncertainty: - Concept of certainty, risk and uncertainty, measurement of risk, attitude towards risk, reducing risk and uncertainty, insurance and gambling.

Suggested Readings

1. Bernheim, B., Whinston, M. (2009). Microeconomics. Tata McGraw-Hill.
2. Mankiw, N. (2007). Economics: Principles and applications, 4th ed. Cengage Learning.
3. A.Koutsoyiannis, Microeconomics, 2nd Edition.
4. Bernheim, B., Whinston, M. (2009). Microeconomics. Tata McGraw- Hill.
5. Snyder, C., Nicholson, W. (2010). Fundamentals of microeconomics. Cengage Learning.
6. Varian. II. (2010). Intermediate microeconomics: A modern approach, 8th ed. W. W. Norton.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more question will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Chairperson
Department of Economic
G.J.U.S&T, Hisar

10

Introductory Macroeconomics
DSCA2
Course Code: 24ECO0102T

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70
Time Allowed: 3 Hours

(Total Credits: 4)
(Theory)

Unit-I

Introductions to Macro Economics. Measuring the Value of Economic Activity: Variants of National Income and Product, Estimation of National Income and Product, National Accounts for a Two-Sector Economy, National Accounts for a Three-Sector Economy, National Accounts for a Four-Sector Economy, Price Indices and Real Economic Magnitudes.

Unit-II

Aggregate Supply and Demand: The Aggregate Supply Curve in short run (SRAS) and Long Run, The Aggregate Supply Curve and the Price Adjustment Mechanism, The Aggregate Demand Curve, Aggregate Demand Policy under Alternative Supply Assumptions.

Unit-III

Inflation: Tracking Inflation, Inflation and cost of living, Inflation and Indexation, Cost and causes of hyperinflation, the cost of anticipated and unanticipated Inflation, Monetary and Fiscal Counter inflationary Policies.
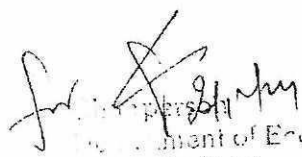
Unit-IV

The Anatomy of Unemployment: The types and causes of unemployment, Full Employment, The Costs of Unemployment, Unemployment and Okun's Law, Evolution of the Natural Rate, Determinants of the Natural Rate of Unemployment.

Suggested Readings

1. Abel, A., Bernanke. B. (2016). Macroeconomics, 9th ed. Pearson Education.
2. Blanchard, O. (2018). Macroeconomics, 7th ed. Pearson Education.
3. Dornbusch, R., Fischer, S., Startz, R. (2018). Macroeconomics, 12th ed. McGraw-Hill.
4. Jones, C. (2016). Macroeconomics, 4th ed. W. W. Norton.
5. Mankiw, N. (2016). Macroeconomics, 9th ed. Worth Publishers

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more question will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

ment of Economic
U.S. T. libar

11

Introductory Mathematics for Economics
MIC1
Course Code: 24MIN0104T

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70
Time Allowed: 3 Hours

(Total Credits: 4)
(Theory)

Objective: The objective of this paper is to develop an understanding of the subject of economics through the fundamentals of mathematics.

Unit-I

Elements of logic and proof – converse and contrapositive, necessary and sufficient conditions – proof by contradiction – mathematical induction.

Unit-II

Set theory: Concepts of sets subset and bounded set, ordered pairs, set operations, convex set, identification of convex set in budget line statement, production possibility frontier, indifference and isoquant curves, Cartesian product, – relations functions – the actual numbers, natural numbers, integers, rational and irrational numbers – absolute value and intervals – inequalities.

Unit-III

Functions- idea of polynomial, exponential, logarithmic, and trigonometric functions; Solution of linear and quadratic equations; limit and continuity of functions (single variable), understanding of difference equations, homogeneous functions.

Unit-IV

Understanding of Graphs by function's equation and their uses in Economics.

Suggested Reading List:

1. Knut Sydsaeter and Peter J. Hammond (Latest Edition), Mathematics for Economic Analysis. Pearson Educational Asia: Delhi (reprint of 1st 1995 edition).
2. Alpha C. Chiang (Latest Edition), Fundamental Methods of Mathematical Economics. McGraw Hill (3rd edition).
3. Michael Hoy, John Livernois, Chris McKenna, Ray Rees and Thanasis Stengos,(Latest Edition) Mathematics for Economics, The MIT Press, Cambridege Massachusetts, England.
4. Taro Yamane (Latest Edition or Last Edition), Mathematics for Economists an Elementary Survey. Prentice-Hall of India Pvt. Limited, New Delhi.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more question will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Chairperson
Department of Economic
G.J.U.S&T, Hisar

12

Descriptive Statistics

MDC-1

Course Code: 24MDC0112T

Maximum Marks: 75
Internal Assessment: 25
External Assessment: 50
Time Allowed: 2.5 Hours

(Total Credits: 3)
(Theory)

Objective: The objective of this paper is to train the students to use the techniques of statistical analysis, which are commonly applied to understand and analyze economic problems. The paper also deals with simple tools and techniques, which will help a student in data collection, presentation, analysis and drawing inferences.

Unit-I

Measures of Central Tendency and Partition Values: Meaning of average - types of average: arithmetic mean, median, mode, geometric mean, harmonic mean- quartiles (individual series, discrete series and continuous series - deciles (for individual series, discrete series and continuous series) - percentiles (individual series, discrete series and continuous series.

Unit-II

Measures of Dispersion: Meaning of dispersion - types of dispersion: range, quartile deviation, mean deviation, standard deviation and variance (along with absolute measure, the relative measure or coefficient of each type of dispersion) - coefficient of variation - combined standard deviation - Lorenz curve (application in income distribution).
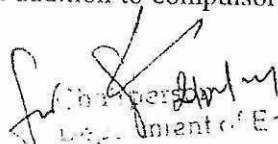
Unit-III

Skewness and Kurtosis: Skewness - meaning of skewness and symmetry in a distribution - symmetrical distribution - asymmetrical or skewed distribution - negatively skewed and positively skewed, measures of skewness: absolute measure - Karl Pearson's coefficient of skewness - Bowley's coefficient of skewness - definition, types and measures of kurtosis - Karl Pearson's coefficient of kurtosis.

Suggested Readings:
1. A.L. Nagar and R.K. Das (2006), Basic Statistics, Second Edition Oxford University Press, New Delhi.
2. S.P. Gupta (2000), Statistical Methods, Sultan Chand and Sons, New Delhi.

Note: The course contents of the courses having 03 credits will be distributed among 3 units and maximum marks will be assigned 75 (50 external: 25 internal). The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set seven questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 2.5 marks each. In addition to that six more question will be set, two questions from each unit. The students shall be required to attempt four questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks i.e. 12.5 marks.

Department of Economic   13

Basics of Excel Lab
SEC-1
Course Code: 24SEC0111P

Maximum Marks: 75
Internal Assessment: 25
External Assessment: 50
Time Allowed: 2 Hours

(Total Credits: 3)
(Practical)

UNIT-I

Getting acquainted with excel: About Excel, Creating and working with Workbooks, using ranges and ranged data entry, editing rows and columns, Cell formatting, moving between Worksheets, Using Excel Help.

UNIT-II

Formulas: Creating formulas, Basic formulas, Relative References and Absolute References, Naming Ranges, Creating Names from Headings, moving to a Named Range, Using Named Ranges in Formulas, Managing Named Ranges, Conditional Formatting and Sorting data, Finding Cells with Conditional Formatting.
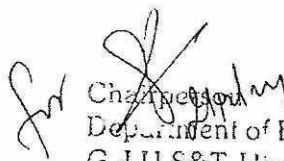
UNIT-III

Workbooks and worksheets: Sharing Workbooks, Highlighting Changes, Reviewing Changes, Using Comments, Compare and Merge Workbooks, Auditing Worksheets, Tracing Precedent and Dependent Cells, Tracing Errors, Error Checking, Using the Watch Window, Cell Validation, Using Outlines, Applying and Removing Outlines.

Suggested Readings:

1. Succeeding in Business with Microsoft® Excel 2013: A Problem-Solving Approach by Debra gross, Frank Akaiwa and Karleen Nordquist, Cengage learning publication.

2. Excel® 2016 Formulas and Functions by Paul Mc Fedries, Mr Excel Librarty

Note: The practical exam will be taken by outside examiner.

Chairperson
Department of Economic
G.J.U.S&T, Hisar

Understanding Union Budget
VAC1
Course Code: 24VAC0116T

Maximum Marks: 50
Internal Assessment: 15
External Assessment: 35
Time Allowed: 2 Hours

(Total Credits: 2)
(Theory)

Unit -I

Introduction of Process, Procedure of Enactment and Components of Government of India Budget: Revenue receipts- Tax Revenue and Non-Tax Revenue, Capital Receipts, Revenue Expenditure and Capital Expenditure.

Unit -II

Budget Deficit: Revenue Deficit, Fiscal Deficit, Primary Deficit etc. Public Debt and Liabilities. Finance Commission of India: Formation, Role and Recommendations. Major Recommendation of Latest Finance Commission, Key Takeaways of Recent Union Budget.

Suggested Readings:

1. Buiter, W.H. (1990): Principles of Budget and Fiscal Policy, MIT Press.
2. David N. Hyman (2007): Public Finance: A Contemporary Application of Theory to Policy, Thomson Asia Pvt. Ltd., Singapore.
3. Davie, B.F. and Duncombe, B.F. (1970): Public Finance, Holt. Rineha and Winstreet, NY.
4. Hyman, David N. (1983): Public Finance: A Contemporary Application of Theory to Policy, The Dryden Press.
5. Jha, Raghbendra (1987): Modern Theory of Public Finance, Wiley Eastern, Delhi.
6. Musgrave, R.A. (1959): The Theory of Public Finance, Tata McGraw Hill, ND. Additional Reading List Bhargava, P.K. (1982): Centre State Resource Transfers in India, Academic Press, Gurgaon.
7. Borkar, V.V. (1971): Income Tax Reform in India, Popular Prakashan, Bombay.
8. Chelliah, R.J. (ed.) (1997): Towards Sustainable Growth, OUP, ND.
9. Report summary, FRBM review committee, PRS India, 2017
10. Rao, M. Govinda. "Central transfers to states in India: rewarding performance while ensuring equity." Final report submitted to NITI Aayog (2017)

Note: The course contents of the courses having 02 credits will be distributed among 2 units and maximum marks will be assigned 50 (35 external: 15 internal). The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more question will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit in consisting of 10 marks each in addition to compulsory question No. 1.

ment of Economic
J.U.S&T, Hisar

Semester-II

Intermediate Microeconomics
DSCA3
Course Code: 24ECO0201T

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70

(Total Credits: 4)
(Theory)
Time Allowed: 3 Hours

Unit-I

Theory of production, the production function for single product, laws of production, the law of variable proportions, laws of returns to scale, the economics of scale, technical progress and production function.

Unit-II

Choice of optimal combination of factors of production: - Single decision of the firm, choice of optimal expansion path, the production function of multi product firm.

Unit-III

Theory of cost: cost function under traditional and modern cost theory, derivation of cost function from production function.
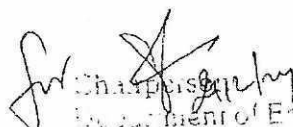
Unit-IV

Theory of revenue and equilibrium: Revenues- Average and marginal revenue, relation between AR and MR curves, AR, MR and elasticity, interactions of cost and revenue- condition of equilibrium of firm.

Suggested Readings

1. Bernheim, B., Whinston, M. (2009). Microeconomics. Tata McGraw-Hill.

2. Mankiw, N. (2007). Economics: Principles and applications, 4th ed. Cengage Learning.

3. A.Koutsoyiannis, Microeconomics, 2nd Edition.

4. Bernheim, B., Whinston, M. (2009). Microeconomics. Tata McGraw- Hill.

5. Snyder, C., Nicholson, W. (2010). Fundamentals of microeconomics. Cengage Learning.

6. Varian, H. (2010). Intermediate microeconomics: A modern approach, 8th ed. W. W. Norton.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more question will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Chairperson
Department of Economic
G.J.U.S.& T., Hisar

17

Intermediate Macroeconomics
DSCA4
Course Code: 24ECO0202T

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70

(Total Credits: 4)
(Theory)
Time Allowed: 3 Hours

Unit-I

Consumption Function: Empirical Evidence on the Consumption Function, The Relative Income Hypothesis, The Permanent Income Hypothesis, The Life-Cycle Hypothesis.

Unit-II

Investment Function: Determinants of Business fixed investment; residential investment and inventory investment, The Marginal-Efficiency-of-Capital Approach, The Simple Accelerator, The Capital-Stock Adjustment Principle

Unit-III

The Money Supply: Measures of the Money Supply, the Loanable Funds Market, Changes in Interest Rate and Money Supply

Unit-IV

The Demand for Money, deriving the demand for money, Determining Interest rate, The Nominal and Real Interest Rates.

Suggested Readings

1. Abel, A., Bernanke, B. (2016). Macroeconomics, 9th ed. Pearson Education.
2. Blanchard, O. (2018). Macroeconomics, 7th ed. Pearson Education.
3. Branson, W. (2013). Macroeconomics: Theory and policy, 3rd ed, East West Press
4. Dornbusch, R., Fischer, S., Startz, R. (2018). Macroeconomics, 12th ed. McGraw-Hill.
5. Jones, C. (2016). Macroeconomics, 4th ed. W. W. Norton.
6. Mankiw, N. (2016). Macroeconomics, 9th ed. Worth Publishers

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more question will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Chairperson
Department of Economic
G.J.U.S&T, Hisar

Intermediate Mathematics for Economics
MIC2
Course Code: 24MIN0204T

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70

(Total Credits: 4)
(Theory)
Time Allowed: 3 Hours

Objective: The objective of this paper is to train the students regarding the uses of derivatives for analysis of the subject.

Unit-I

Introduction of derivatives: monotonicity, concavity, and convexity of functions of a single variable; necessary and sufficient conditions for a maximum and minimum, simple use of derivatives.

Unit-II

Partial derivative: definition, rules of partial differentiation, Euler's theorem of homogenous functions; formation, order, and degree of partial differential equations.

Unit-III

Higher order of derivatives: Second order and partial derivatives, the relation between second order derivatives of homogeneous functions; linear partial differential equations of second and higher orders.
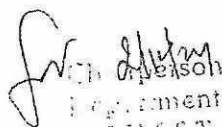
Unit-IV

Economic applications of derivatives: total to marginal magnitudes, optimization of functions, slopes of curves, and their elasticity.

Suggested Reading List:

1. Knut Sydsaeter and Peter J. Hammond (Latest Edition). Mathematics for Economic Analysis. Pearson Educational Asia: Delhi (reprint of 1st 1995 edition).
2. Alpha C. Chiang (Latest Edition), Fundamental Methods of Mathematical Economics. McGraw Hill (3rd edition).
3. Hadley, G. (Latest Edition), Linear Algebra, Addison-Wesley.
4. Michael Hoy, John Livernois, Chris McKenna, Ray Rees and Thanasis Stengos,(Latest Edition) Mathematics for Economics, The MIT Press, Cambridege Massachusetts, England.
5. Taro Yamane (Latest Edition or Last Edition), Mathematics for Economists An Elementary Survey. Prentice-Hall of India Pvt. Limited, New Delhi.
6. Metha B.C. and Madnani. GMK (Latest Edition), Mathematics for Economists, Sultan chand & Sons, New Delhi.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more question will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Chairperson
Department of Economic
C.T.U.S.C.T. Hisar

19

Statistical Methods

MDC2

Course Code: 24MDC0212T

Maximum Marks: 75
Internal Assessment: 25
External Assessment: 50

(Total Credits: 3)
(Theory)
Time Allowed: 2.5 Hours

Objective: The emphasis of this paper is on understanding economic concepts with the help of statistical methods rather than learning statistics itself. Hence in this paper a student will be initiated into various economic concepts, which are amenable to statistical treatment. The paper also deals with simple tools and techniques and drawing inferences about various statistical hypotheses.

Unit-I

Sampling & Correlation: Population and sample, Principal steps in a sample survey; methods of sampling; the role of sampling theory; properties of random samples, sampling procedure of NSSO Karl Person's correlation coefficient; Spearman's rank correlation coefficient

Unit-II

Analysis of Time Series: Definition and components of a time series - mathematical models - additive model and multiplicative model of a time series - seasonal variations - measuring through -a) simple average method- and ratio to trend method - cyclical variations - measuring through residual method - trend and its measurement through a) method of moving averages and method of least squares (annual production, sales, profit. etc.) - fitting a second degree trend (population growth) - growth curves, logistic curve and Gompertz curve - interpolation and extrapolation

Unit-III

Index Numbers: Definition of index number - types of index number - price index - quantity index -value index - simple index number - weighted index number - construction of index number - problems in construction - methods in construction - simple and weighted - Laspeyre's price index (CPI in India)-Paasche's price index - Fisher's ideal index - splicing of index number - deflating (real wages).

Suggested Readings:

1. A.L. Nagar and R.K. Das (2006), Basic Statistics, Second Edition Oxford University Press, New Delhi.
2. S.P. Gupta (2000), Statistical Methods, Sultan Chand and Sons, New Delhi.

Note: The course contents of the courses having 03 credits will be distributed among 3 units and maximum marks will be assigned 75 (50 external: 25 internal). The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set seven questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 2.5 marks each. In addition to that six more question will be set, two questions from each unit. The students shall be required to attempt four questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks i.e. 12.5 marks.

Chairperson
Department of Economic

Data Visualization using Excel Lab
SEC-2
Course Code: 24SEC0211P

Maximum Marks: 75
Internal Assessment: 25
External Assessment: 50

(Total Credits: 3)
(Practical)

Unit-I

Working with data: Consolidating Data, Using what-if analysis, The Hlookup and Vlookup Functions, the IF, AND, and OR Functions, Recording Macros, Running and Deleting Recorded Macros, The Personal Macro Workbook

Unit-II

Charts: Creating Charts, Changing the Chart Type, Changing the Data Range, Switching Column and Row Data, Choosing a Chart Layout, Formatting Chart, Inserting Objects into a Chart, Changing Chart Labels, Changing Axes Display, Applying Chart Analysis Lines

Unit-III

Pivot tables: Creating Pivot Tables and Pivot Charts, Manipulating a Pivot Table, Changing Calculated Value Fields, Sorting and Filtering Pivot Table Data

Suggested Readings:

1. Data Visualization in ExcelA Guide for Beginners, Intermediates, and Wonks by Jonathan Schwabish, Published May 26, 2023 by A K Peters/CRC Press.

2. Succeeding in Business with Microsoft® Excel 2013: A Problem-Solving Approach by Debra gross, Frank Akaiwa and Karleen Nordquist, Cengage learning publication.

3. Excel® 2016 Formulas and Functions by Paul McFedries, MrExcel Librarty

Note: The practical exam will be taken by outside examiner.

Chairperson
Department of Economic
G.J.U.S&T, Hisar

Semester-III

Microeconomics Analysis

DSC-A5

24ECO0301T

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70

Total Credits: 4
Time Allowed: 3 Hours

Unit-I

Perfect Competition: Dynamic Changes and Industry Equilibrium, Optimal Resource Allocation; Monopoly: Firm's equilibrium under Monopoly, Types, conditions and Effects of Price Discrimination; Monopolistic Competition: Product Differentiation and The Demand Curve, Equilibrium of The Firm under New Firms Entering, Price Competition, Price Competition and Free Entry; Oligopoly: Non-Collusive Oligopoly- Cournot's Duopoly Model, Bertrand, Kinked Demand Curve

Unit-II

Managerial Theories of the Firm:Baumol's theory of Sales Revenue Maximisation; Marris's Model of the Managerial Enterprise

Unit-III

Factor Pricing: Factor Pricing in Perfectly and Imperfectly Competitive Markets, Competitive buyer-firm versus monopoly union, Elasticity of Factor Substitution, Technological Progress and Income Distribution.
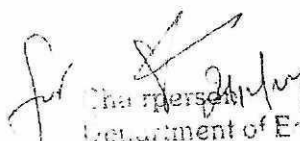
Unit-IV

General Equilibrium Theory: the Walrasian System, Existence, General Equilibrium and the Allocation of Resources,

Welfare Economics: Criteria of Social Welfare, Maximisation of Social Welfare, Welfare Maximisation and Perfect Competition

Suggested Readings

1. Bernheim, B., Whinston, M. (2009). Microeconomics. Tata McGraw-Hill.
2. Jehle, G. and P. Reny (2001): Advanced Microeconomic Theory, Addison Wesley.
3. Mas-Collel, A., M. Whinston and J. Green (1995): Microeconomic Theory, 2nd ed. Oxford University Press
4. Snyder, C., Nicholson, W. (2017). Microeconomic Theory: Basic Principles and Extensions. Cengage Learning.
5. Varian, H. (2010). Microeconomics: A modern approach, 8th ed. W. W. Norton.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Chairperson
Department of Economics
G.J.U.S&T, Hisar

Macroeconomics Analysis
DSC-A6
24ECO0302T

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70

Total Credits: 4
Time Allowed: 3 Hours

Unit-I

The Phillips curve:Deriving the Phillips Curve from the Aggregate Supply Curve; The Short-Run Trade-off between Inflation and Unemployment; The long run Phillips curve; Natural Rate of Unemployment hypothesis; and Rational Expectations and Phillips Curve.

Unit-II

Goods and Money Markets Equilibrium in closed economy: The IS–LM model, Policy effects in goods and money market, IS–LM as a theory of Aggregate Demand.

Unit-III

Extension of IS-LM Model with government sector; labour market and flexible price, relative effectiveness of fiscal and monetary policies.
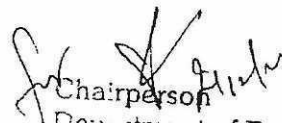
Unit-IV

Open Macro Economy: The Mundell–Fleming Model; Imperfect Capital Mobility; and Perfect Capital Mobility

Suggested Readings

1. Abel, A., Bernanke, B. (2016). Macroeconomics, 9th ed. Pearson Education.
2. Blanchard, O. (2018). Macroeconomics, 7th ed. Pearson Education.
3. Branson, W. (2013). Macroeconomics: Theory and policy, 3rd ed, East West Press
4. Dornbusch, R., Fischer, S., Startz, R. (2018). Macroeconomics, 12th ed. McGraw-Hill.
5. Jones, C. (2016). Macroeconomics, 4th ed. W. W. Norton.
6. Mankiw, N. (2016). Macroeconomics, 9th ed. worth Publishers

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Chairperson
Department of Economic,
G.J.U.S&T, Hisar

Mathematical Methods for Economics
MIC3
24MIC0304T

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70

Total Credits: 4
Time Allowed: 3 Hours

Unit 1

Introduction of integration, tools of dynamics: definite and indefinite integral, Definite integral and area between two curves.

Unit 2

Rules of integration, integration of the function of one variable by parts and substitution, Integration of logarithmic and exponential functions. Relation between marginal and total magnitudes, and, consumer surplus and producer surplus.

Unit 3

Introduction of matrices and vectors, matrix operations (addition, subtraction, multiplication, transpose and inverse), vector operations (multiplication and geometric interpretation, linear dependence, vector space). Finite Markov chains.

Unit 4

Determinants of matrix and its properties, Conditions for no singularity of a matrix, rank of matrix, finding the inverse matrix, Cramer's rule. Application for market and national income and input-output model.

Suggested Readings

1. Knut Sydsaeter and Peter J. Hammond (Latest Edition), Mathematics for Economic Analysis. Pearson Education Asia: Delhi (reprint of 1st 1995 edition).
2. Alpha C. Chiang (Latest Edition), Fundamental Methods of Mathematical Economics. McGraw Hill (3rd edition).
3. Hadley, G. (Latest Edition), Linear Algebra, Addison-Wesley.
4. Michael Hoy, John Livernois, Chris McKenna, Ray Rees and ThanasisStengos, (Latest Edition) Mathematics for Economics, the MIT Press, Cambridege Massachusetts, England.
5. Taro Yamane (Latest Edition or Last Edition), Mathematics for Economists and Elementary Survey. Prentice- Hall of India Pvt. Limited, New Delhi.
6. Metha B.C. and Madnani. GMK (Latest Edition), Mathematics for Economists, Sultan chand& Sons, New Delhi.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Advanced Statistics for Economics
MDC3
24MDC03012T

Maximum Marks: 75
Internal Assessment: 25
External Assessment: 50

Total Credits: 3
Time Allowed: 2.5 Hours

Unit-I

Probability Theory: Definitions of Probability; Conditional Probability; Independent and Dependent Events; Mutually Exclusive Events; Probability Distributions: Binomial; Normal and Poisson Distributions.

Unit-II

Elementary Sampling Theory: Population parameters and sample statistic, Sampling Distributions; Standard Errors, Estimation of Parameters; Unbiased and Efficient Estimates

Statistical Hypotheses; Type-I and Type-II Errors; Level of Significance; Tests Involving Normal Distributions; Two-Tailed and One-Tailed Tests

Unit- III

Student's t Distribution; The Chi-Square Distribution; The F Distribution, Application of 't', chi-square and 'F' distributions.

Note: The course contents of the courses having 03 credits will be distributed among 3 units and maximum marks will be assigned 75 (50 external: 25 internal). The maximum time duration for attempting the paper will be 2.5 hours. The examiner is required to set seven questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 2.5 marks each. In addition to that six more questions will be set, two questions from each unit. The students shall be required to attempt four questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks i.e. 12.5 marks.

Chairperson
Department of Economic
G.J.U.S&T, Hisar

26

Basics of Python
SEC3
24SEC0311P(i)

Maximum Marks: 75
Internal Assessment: 25   **Total Credits: 3**
External Assessment: 50

Unit-I

Why Python for Economists? Basic Python Syntax and Data Types; Functions in Python; Data Handling and Manipulation;
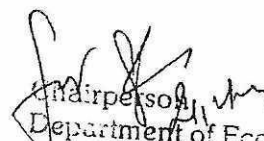
Unit-II

Data Structures for Economic Analysis: Data Aggregation and Group Operations; Summary and Data Manipulation Exercises

Data Wrangling for Economic Datasets: Data Cleaning Techniques- Data Transformation; Strategies for Merging Economic Data; Essential Techniques for Data Restructuring; The Reimagined Data Symphonies; String Manipulation

Unit–III

Handling different data sets where the dependent variable is categorical. Write and present econometric results. A practical assignment to measure the growth of macroeconomic variables of the Indian economy/Haryana Economy.

Note: The practical exam will be taken by an outside examiner.

Chairperson
Department of Economic
G.J.U.S&T, Hisar

Basics of STATA
SEC3
24SEC0311P(ii)

Maximum Marks: 75
Internal Assessment: 25

Total Credits: 3
External Assessment: 50

Unit-I

Introduction of STATA: Opening STATA; Audit Trails; Importing Data; User Written Commands; Menus and Command Window; Data browser and editor; Syntax; and Types of Variables.

Unit-II

Data Manipulation: Describing; Generating Variables; if Commands; Summarising with tab and tabstat; Introduction to Labels; Joining Datasets; Tabout; Recoding and Strings; and Missing Values

Unit-III

Macros; Looping and Programming; Counting, sorting and ordering; Reshaping Datasets; and Graphs.

Note: The practical exam will be taken by an outside examiner.

Chairperson
Department of Economics
G.J.U.S&T, Hisar

Semester-IV

Mathematics of Equilibrium Analysis
DSC-A7
24ECO0401T

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70

Total Credits: 4
Time Allowed: 3 Hours

Unit-I

Solution of simultaneous equations using both the inverse of matrix and Cramer's rule, solution of a homogeneous and nonhomogeneous system of equations; signs of quadratic forms with and without constraints, positive definite, negative definite, positive semi-definite, negative semi-definite. Applications in economics: markov chains, IS-LM model, Leontief input-output model and economic meaning of the Hawkins-Simon Condition.

Unit-II

Use of derivatives: comparative static analysis (Market model, National income model). Comparative statics of general function model: Simultaneous-equation approach and difference equations, use of total derivatives. Limitation of comparative statics.

Unit-III

Optimization problem: Extreme values (Maximum and Minimum, Taylor Expansion and Relative extremum) Economic Applications: Problem of a multiproduct firm, price discrimination, Input decisions of a firm. Finding the stationary value: Lagrange- multiplier. Quasiconcavity and quasiconvexity (Geometric and algebraic definition). Duality and the Envelope theorem.

Unit-IV

Dynamic Analysis: Use of integration to the relationship between marginal and total functions, Interpretation of consumer and producer surplus Investment and capital formation, present value of cash flow. Domar and Solow growth model framework. Samuelson Multiplier-Acceleration framework and solution.

Suggested Readings

1. Knut Sydsaeter and Peter J. Hammond (Latest Edition), Mathematics for Economic Analysis. Pearson Educational Asia: Delhi (reprint of 1st 1995 edition).
2. Alpha C. Chiang (Latest Edition), Fundamental Methods of Mathematical Economics. McGraw Hill (3rd edition).
3. Hadley, G. (Latest Edition), Linear Algebra, Addison-Wesley.
4. Taro Yamane (Latest Edition or Last Edition), Mathematics for Economists An Elementary Survey. Prentice-Hall of India Pvt. Limited, New Delhi.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Chairperson
Department of Economics
G.J.U.S&T, Hisar

30

Econometrics-I
DSC-A8
24ECO0402T

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70

(Total Credits: 4
Time Allowed: 3 Hours

Unit-I

Introduction to Econometrics: Nature and Scope of Econometrics, Aims and methodology of econometrics – historical origin of the term regression and its modern interpretation – stochastic vs deterministic relationship – regression vs causation – regression vs correlation – terminology and notation – the nature and sources of data for econometric analysis.

Unit-II

Simple linear regression model: Two variable case Ordinary least squares estimation of a linear model; properties of estimators; goodness of fit; testing of hypotheses; scaling and units of measurement; confidence intervals; the Gauss-Markov theorem; forecasting and prediction.

Unit-III

Multiple linear regression model: Extension of the single explanatory variable case to a multivariate setting; introducing non-linearities through functions of explanatory variables. Multiple Regression Analysis: The problem of estimation – notation and assumptions – meaning of partial regression coefficients, the multiple coefficients of determination – R^2, adjusted $\underline{R}^2$, interpretation of multiple regression equations.
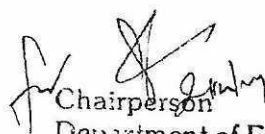
Unit-IV

Violations of classical assumptions: Consequences, detection and remedies; Multicollinearity; heteroscedasticity; serial correlation, Specification Analysis via Omission of a relevant variable; inclusion of irrelevant variable; specification tests.

Suggested Readings

1. Dougherty, C. (2011). *Introduction to econometrics, 4th ed.* Oxford University Press.
2. Gujarati, D. (2014). *Econometrics by example, 2nd ed.* Palgrave Macmillan.
3. Gujarati, D., Porter, D. (2010). *Essentials of econometrics, 4th ed.* McGraw- Hill.
4. Kmenta, J. (2008). *Elements of econometrics.* Khosla Publishing House.
5. Maddala, G., Lahiri, K. (2009). *Introduction to econometrics, 4th ed.* Wiley.
6. Wooldridge, J. (2014). *Introduction to econometrics: A modern approach, 5th ed.*

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Chairperson
Department of Economic
G.J.U.S&T, Hisar

31

Labour Economics
DSC-A9
24ECO0403T (i)

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70

Total Credits: 4
Time Allowed: 3 Hours

Unit 1

Labour – Its Characteristics; Role of Labour in Economic Development, Mobility and productivity of labour. Supply of Labour: Static Labour-Leisure Choice, Effects of Social Programs and Income Taxes, The Life-Cycle Model, Investments in Human Capital, Collective Models of Household Labour Supply, Occupational Choice;

Unit 2

Demand of Labour: Static Cost, Profit and Labour Demand Functions, Elasticity of Derived Demand: the Hicks-Marshall Rules, Adjustment Costs and Dynamic Labour Demand; Equilibrium in Labour Market: Compensating Differences, Efficiency Wages, Segmented Labour Markets, Migration.

Unit 3

Classical, Neo-classical and Bargaining Theories of Wage Determination; Concepts of Minimum Wage, Living Wage and Fair Wage in Theory and Practice; Discrimination in Labour Markets; Productivity and Wage Relationship; Analysis of Rigidity in Labour Markets; National Wage Policy; Wages and Wage Boards in India; Bonus System and Profit Sharing.

Unit 4

Theories of Origin and Growth of Labour Movement - Growth, Pattern and Structure of Labour Unions in India, Achievements and Failures of Labour Unions; Industrial Relations -Industrial Disputes and industrial Peace; Causes of industrial Disputes and their Settlement and Prevention Mechanism.

Suggested Readings

1. Campbell R. McConnell, Stanley L. Bruc. and David A. Macpherson's "Contemporary Labour Economics", Student Edition
2. George J. Borjas, "Labour Economics" McGraw-Hill,
3. Pierre Cahuc and Andre Zylberberg, "Labour Economics", the MIT Press.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Chairperson
Department of Economics
G.J.U.S&T, Hisar

32

Development Economics
DSC-A9
24ECO0403T (ii)

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70

Total Credits: 4
Time Allowed: 3 Hours

Unit 1

Economic Development: Meaning and measurement, Features of underdeveloped economies, developing economies, determinants of economic development, Economic and noneconomic factors of development, Obstacles in growth and development, Arguments on Growth Vs Development, Sen's View, Role of state in economic development, Indicators of Development.

Unit 2

Social and Institutional Aspects of Development: Absolute and Relative, causes of poverty, trends in poverty, economic inequality, Kuznet inverted 'U' curve, Population problem and growth pattern - Theory of demographic transition; demographic dividend.

Unit 3

Development Strategies: Vicious circle of poverty; Theory of balanced and unbalanced growth; Rodan's big push; critical minimum effort thesis; import substitution and export promotion; investment allocation criteria, choice of technique.
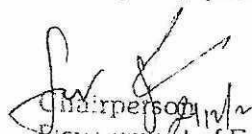
Unit 4

Indian Development Experience: Growth and development experience of India since independence, Human development and quality of life, The population and economic development, occupational distribution of labour force; Poverty and Income distribution in India, Problems of unemployment and Rising prices.

Suggested Readings

1. Ghatak, S. "An Introduction to Development Economics", Allen and Unwin, London.
2. Debraj Ray. "Development Economics", Oxford University Press.
3. Meier, G.M. "Leading Issues in Economic Development". Oxford University Press, New Delhi,
4. Thirlwall, A.P. "Growth and Development", Macmillan, London.
5. Todaro, M.P. "Economic Development in the Third World", Oxford University, London.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Chairperson
Department of Economic
G.J.U.S&T, Hisar

33

Agriculture Economics
DSC A10
24ECO0404T(i)

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70

Total Credits: 4
Time Allowed: 3 Hours

Unit 1

Nature and scope of agricultural economics; economic development with unlimited supplies of labour; Lewis-Fei-Ranis model; Lewis versus the Harris-Todaro view of underemployment in LDCs, wage spillover and unemployment in a wage- gap economy; measurement problems of surplus labour and disguised unemployment; theory of agricultural production, three stages of production function.

Unit 2

Agricultural labour force and productivity: farm size and productivity, supply functions and price responsiveness, contractual arrangements, employment and wages in rural markets; interdependence between agriculture and industry; terms of trade between agriculture and industry.

Unit 3

Rural credit markets and institutions in developing countries; rural infrastructure prospects and strategies for land reforms; some theoretical aspects of agricultural policies; agricultural diversification, food processing, and standardisation.
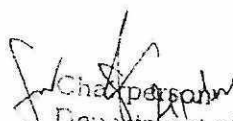
Unit 4

Agricultural development strategies: induced technical and institutional change, green revolution; microeconomics of the rural sector; the new development economics; risk and uncertainty in agriculture, environment and agricultural development; WTO and agriculture.

Suggested Readings
1. A.P. Thirlwall, "Growth and Development", ELBS.
2. D Ray, "Development Economics", OUP.
3. S. Ghatak, "Introduction to Development Economics", Rutledge.
4. KaushikBasu, "Analytical Development Economics-The Less Developed Economy Revisited," OUP.
5. D. Lal, "The Poverty of Development Economics", OUP.
6. G. Meier, "Leading issue in Economic Development", OUP.
7. Meier and Rauch, "Leading Issues in Economic Development", OUP
8. M.P. Todaro and S.C. Smith, "Economic Development", Pearson.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Chairperson
Department of Economics
G.J.U.S&T, Hisar

34

Industrial Economics
DSC A10-2
24ECO0404T(ii)

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70

Total Credits: 4
Time Allowed: 3 Hours

Unit 1

Definition: Nature and scope of Industrial Economics; Concept and organization of firm ownership, objectives of a firm, Theories of Industrial Location; Factors Affecting Location.

Unit 2

Market structure and Market power, Structural Approach: the S-C-P paradigm, Its Welfare implications, Industrial Clusters, and Barriers to entry. Economies of scale.

Unit 3

Market Concentration, Industrial Diversification. Growth and constraints on the Growth of the Firm, Concepts and Measurement of Productivity. Efficiency, and Capacity Utilization.
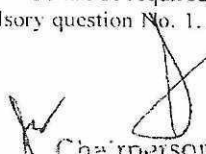
Unit 4

Regional Development and concept of core competency of different regions. Theories of competitiveness

Suggested Readings

1. Barthwal, R.R. "Industrial Economics". Wiley Eastern Ltd.. New Delhi.
2. Divine, P.J. and R.M. Jones *et. al.* "An Introduction to Industrial Economics", George Allen and Unwin Ltd, London.
3. Singh, A. And A.N. Sadhu, "Industrial Economics", Himalaya, Publishing House, Bombay
4. Kuchal, S.C. "Industrial Economy of India". Chaitanya Publishing House Allahabad.
5. Hay, D. And D.J. Morris, "Industrial Economics: theory and Evidence", University Press, New Delhi.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

Chairperson
Department of Economics
G.J.U S&T, Hisar

35

Indian Statistical System

24VOC0404T

Maximum Marks: 100
Practical Marks: 50 (24VOC0404P)
Theory Maximum Marks: 50
Internal Assessment: 15
External Assessment: 35
Time Allowed: 2 Hours

Total Credits: 4
(Theory Credits: 2 + Practical* Credits: 2)

Unit-I

Basic Concepts of National Accounts Aggregates; Gross Domestic Product (GDP) - An overview; Concepts and Definitions of State and District Domestic Product.

Methodology for compiling State Domestic Product; Methodology for compiling District Domestic Product.

Unit-II

Supra-Regional Sectors; Estimates of Workforce and Value Added per Worker.

Estimation of Capital Formation at State level.

Note: The course contents of the courses having 02 credits will be distributed among 2 units and maximum marks will be assigned 50 (35 external: 15 internal). The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more questions will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit in consisting of 10 marks each in addition to compulsory question No. 1.

*: An outside examiner will take the practical exam.

Chairperson
Department of Economics
G.J.U.S&T, Hisar

36

Indian Polity and Economy

24VAC0316T

Maximum Marks: 50
Internal Assessment: 15
External Assessment: 35
Time Allowed: 02 Hours

(Total Credits: 2)

Unit I

Indian conception of well-organised Polity and flourishing Economy as expounded in the foundational texts. The notion of Bharartavarsha as a Chakravarti-Kshetra and important attributes of Chakravartin. King as the protector of Dharma. King as the strength and support of the weak.

Unit II

King as the protector of Varta. King as the protector of the times. Meaning of Varta: Krishi, Gopalana and Vanijya forming the basis of Varta and the core of economic activity in society. The importance of sharing. Grama as the centre of the polity.

Suggested Readings:

Majumdar, R.C. "The Bharata War." In the Bharata War and Puranic Genealogies, edited by D.C. Sircar. University of Calcutta, 1969.p.11.

Sircar, D.C. 'Myth of the Great Bharata War." In The Bharata War and Puranic Genealogies, edited by D.C. Sircar. University of Calcutta, 1969.Ibid., p.23.

Chakrabarti, Dilip K. Nationalism in the Study of Ancient Indian History. New Delhi: Aryan Books International, 2021. pp.25.27

Chattopadhyaya, Braja Dulal. Studying Early India: Archaeology, Texts, and Historical Issues. Delhi: Permanent Blac, 2003.pp. 34-36.8.

Majumdar, R.C. The Age of Imperial Unity. Bombay: Bharatiya Vidya Bhavan, 1960.

Note: The course contents of the courses having 02 credits will be distributed among 2 units and maximum marks will be assigned 50 (35 external: 15 internal). The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more question will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit in consisting of 10 marks each in addition to compulsory question No. 1.

Chairperson
Department of Economic
G.J.U.S&T, Hisar

37