



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Social Sciences, Humanities and Arts
Choice Based Credit System (CBCS) in Light of NEP-2020
Humanities (Common Course)
Semester I (Batch 2021-24)

COURSE CODE	CATE-GORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
HU101	AECC	Foundation English I	60	20	20	0	50	3	0	2	4

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;

*Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Educational Objectives (CEOs): The students will

- **CEO 1** Understand the different nuances of communication.
- **CEO2** understand the features of listening skill.
- **CEO3** Comprehend the factors that influence use of grammar and vocabulary in speech and writing
- **CEO4** study the essential aspects of effective written communication through Business letters and email writing for professional success.
- **CEO5** Identify other common methods of professional communication

Course Outcomes (COs): The students will be able to

- **CO1** develop a comprehensive understanding of the theoretical and practical aspects of communication.
- **CO2** explain the difference between listening and hearing and understand the value of listening.
- **CO3** Apply grammatical rules in speech and writing.
- **CO4** Use proper formats of written business communication.
- **CO5** Use appropriate organization and order of words, sentences and paragraphs in technical writing.

Paper I
HU101
Foundation English I

COURSE CONTENTS

UNIT I

Communication: Nature, Meaning, Definition, Process, Functions and importance, Characteristics of Business Communication, Verbal and Non-Verbal Communication, Barriers to Communication.



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UNIT II

Listening: Process, Types, Difference between Hearing and Listening, Benefits of Effective Listening, Barriers to Effective Listening, Overcoming Listening Barriers, and How to Become an Effective Listener

UNIT III

Basic Language Skills: Grammar and usage- Parts of Speech, Tenses, Subject and Verb Agreement, Prepositions, Articles, Types of Sentences, Direct - Indirect, Active - Passive voice, Phrases & Clauses.

UNIT IV

Business Correspondence: Business Letters, Parts & Layouts of Business Letter, Job application and Resume, Application Calling/ Sending Quotations/ Orders/ Complaints. E-mail writing, Email etiquettes

UNIT V

Précis Writing and Noting: The Purpose of Notes, Methods of Notetaking, General Principles of Good Notes. Drafting: Notices, Agenda and Minutes. Advertisement: Importance, Types, Various Media of Advertising, Slogan Writing.

Practicals

- Self Introduction
- Reading Skills and Listening Skills
- Linguistics and Phonetics
- Role plays
- Oral Presentation – Preparation & Delivery using audio – visual aids with stress on body language and voice modulations.
- Social etiquettes



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Suggested Readings:

- Adair, John (2003). **Effective Communication**. London: Pan Macmillan Ltd.
- A.J. Thomson and A.V. Martinet (1991). **A Practical English Grammar** (4th ed). New York: Oxford IBH Pub
- Ashraf Rizvi. (2005). **Effective Technical Communication**. New Delhi: Tata Mc Graw Hill
- Kratz, Abby Robinson (1995). **Effective Listening Skills**. Toronto: ON: Irwin Professional Publishing.

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BAHNECO101	CC	Micro Economics I	60	20	20	0	0	3	0	0	3

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

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Course Educational Objectives:

CEO1: To provide the knowledge about the basic terms of economics.

CEO2: To enable the decision making pertaining to the basic problems of the economy.

CEO3: To make the students understand the concept of consumer behaviour.

CEO4: To elaborate demand and supply.

CEO5: To make the students understand stages of production along with the costs.

Course Outcomes:

Students will be able to:

CO1: Define basic concepts related to economics.

CO2: Explain the problems of an economy.

CO3: Discuss various theories of consumer behavior.

CO4: Recognize the concepts and the constituents of demand and supply.

CO5: Relate with different stages of production and the returns to scale.

CO6: Recognize and estimate various costs pertaining to the production.

Syllabus

UNIT I: Introduction

Basic Concepts: Goods, Consumer and Capital, Utility, Value, Price, Wealth, Stock & Flow; Scope of Microeconomics; the Economic Problem: Scarcity and Choice; Opportunity Cost, Production Possibility Curve (PPC).

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UNIT II: Theory of Consumer Behavior

Cardinal Utility, Law of Diminishing Marginal Utility, The law of Equi-Marginal Utility, Ordinal Utility: Indifference Curves Analysis; Consumer Equilibrium; Marginal Rate of Substitution (MRS).

UNIT III: Demand & Supply

Concept of Demand and Law of Demand, Determinants of Demand, Shift in Demand vs. Movements along a Demand Curve; Price, Income and Cross Elasticity of Demand; Law of Supply, Determinants of Supply.

UNIT IV: Theory of Production

Production Function, Law of Variable Proportions: Three Stages of Law, Concept of Returns to Scale: Increasing, Diminishing and Constant; Isoquants: Marginal Rate of Technical Substitution; Economies and Diseconomies of Scale.

UNIT V: Cost Analysis

Concept of Cost: Accounting Costs and Economic Costs, Sunk Costs, Opportunity Cost, Short Run Analysis, Total Fixed and Variable Costs, AVC, AFC, Marginal Costs (MC).

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1. Ahuja, H. L.(2016). *Principles of Microeconomics*. New Delhi: S.Chand and Company Limited.
2. Case; Karl,E.&Ray,C.(2007).*Principles of Economics*.8th edition. New Delhi:Pearson Education, Inc
3. Dominick Salvatore(2012).*Microeconomic Theory Schaum's Outline series*.New Delhi: Tata McGraw Hill
4. Koutsoyiannis, A.(2018). *Modern Microeconomics*.Palgrave Macmillan
5. Lipsey, Richard &Chystal,Alec.(2011).*Economics*.United Kingdom: Oxford University Press
6. Mankiw,G.(2012). *Principles of Economics*,6th edition.United Kingdom: South Western Educational Publishing
7. Samuelson, Paul & Nordhas, William(2010).*Economics*. New Delhi: McGraw Hill

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Name of the Program: B. Sc. (Statistics)

SUBJECT CODE	Category	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		Th	T	P	CREDITS
			END SEM	MST	Q/A	END SEM	Q/A				
BSST103	DC	Statistical Methods	60	20	20	30	20	3	1	4	6

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Course Objective

To introduce the Students with the fundamentals of the Statistical Methods.

Course Outcomes

After the successful completion of this course students will be able to:

1. Know various methods of data collection.
2. Create and interpret frequency tables.
3. Apply data graphically and its interpretation.
4. Memorize, understand and calculate the measures of central tendency, dispersion, skewness and kurtosis.
5. Understand the basic ideas of correlation and regression.
6. Create and interpret the line of best fit.

Course Content:

UNIT - I


Statistical Methods: Definition and scope of Statistics, concepts of statistical population and sample. Data: quantitative and qualitative, attributes, variables, scales of measurement nominal, ordinal, interval and ratio.

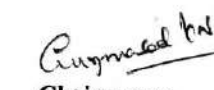
UNIT- II


Presentation: tabular and graphical, including histogram and ogives, consistency and independence of data with special reference to attributes.

UNIT - III

Measures of Central Tendency: mathematical and positional. Measures of Dispersion: range, quartile deviation, mean deviation, standard deviation, coefficient of variation, Moments, absolute moments, factorial moments, Skewness and Kurtosis, Sheppard's corrections.


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BSST103	DC	Statistical Methods	60	20	20	30	20	3	1	4	6

UNIT – IV

Bivariate data: Definition, scatter diagram, simple, partial and multiple correlation (3 variables only), rank correlation. Simple linear regression, principle of least squares and fitting of polynomials and exponential curves.

UNIT – V

Attributes- Notion and terminology, contingency table, class frequencies, and ultimate class frequencies, consistency. Association of attributes, Independence, Measure of association for 2x2 table. Chi-square, Karl Pearson's and Tschuprow's coefficient of association. Contingency tables with ordered categories.

SUGGESTED READING:

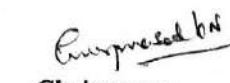
1. Goon A.M., Gupta M.K. and Dasgupta B. (2002): Fundamentals of Statistics, Vol. I & II, 8th Edn. The World Press, Kolkata
2. Miller, Irwin and Miller, Marylees (2006): John E. Freund's Mathematical Statistics with Applications, (7thEdn.), Pearson Education, Asia.
3. Mood, A.M. Graybill, F. A. and Boes, D.C. (2007): Introduction to the Theory of Statistics, 3rd Edn., (Reprint), Tata McGraw-Hill Pub. Co. Ltd.
4. S.C. Gupta and V.K. Kapoor, Fundamentals of Mathematical Statistics, S Chand & Co.
5. E.N. Nadar, Statistics, PHI Learning.
6. P. Mukhopadhyaya, Mathematical Statistics, New Central Book Agency, Calcutta.
7. Jim Frost, Introduction to Statistics: An Intuitive Guide for Analyzing Data and Unlocking Discoveries, Jim Frost MS.


List of Practical


1. Graphical representation of data.
2. Problems based on measures of central tendency.
3. Problems based on measures of dispersion.
4. Problems based on combined mean and variance and coefficient of variation.


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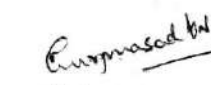
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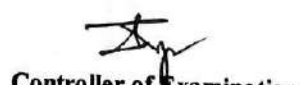
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BSST103	DC	Statistical Methods	60	20	20	30	20	3	1	4	6

5. Problems based on moments, skewness and kurtosis.
6. Fitting of polynomials, exponential curves.
7. Karl Pearson correlation coefficient.
8. Correlation coefficient for a bivariate frequency distribution.
9. Lines of regression, angle between lines and estimated values of variables.
10. Spearman rank correlation with and without ties.
11. Partial and multiple correlations.
12. Planes of regression and variances of residuals for given simple correlations.


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Name of the Program: B. Sc. (Plain)

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			THEORY			PRACTICAL		Th	T	P	CREDITS
			END SEM	MST	Q/A	END SEM	Q/A				
BSMA104	DC	Classical Algebra	60	20	20	-	-	4	0	-	4

Course Objective

To introduce the students with the Fundamentals of the Classical Algebra.

Course Outcomes

This course will enable the students to:

- 1. Understand and apply the basics concept of complex numbers*
- 2. Analyse the nature of roots of real and complex polynomials and learn various methods of obtaining roots*
- 3. Justify and classify the techniques of the algebra of the determinants*
- 4. Solve the problems of the Matrices.*

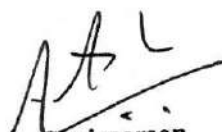
Course Content:


UNIT – I


Complex Numbers: De-Moivers theorem and its application, Exponential function, Cosine and sine function, Logarithms of a complex number, Definition of $a_z (a \neq 0)$, Inverse circular function, hyperbolic function.

UNIT– II

Polynomials: Fundamental Theorem of Classical Algebra (Statement only). Polynomials with real coefficients: The n th degree polynomial equation has exactly n roots. Nature of roots of an equation (Surd or Complex roots occur in pairs). Statement of Descartes's Rule of signs and its applications. Statements of (i) If the polynomial $f(x)$ has opposite signs for two real values of x , e.g., a and b , the equation


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BSMA104	DC	Classical Algebra	60	20	20	-	-	4	0	-	4

$f(x) = 0$ has an odd number of real roots between a and b ; if $f(a)$ and $f(b)$ are of same sign, either no real root or an even number of roots lies between a and b . (ii) Rolle's Theorem and its direct applications. Relation between roots and coefficients. Symmetric functions of roots Transformations of equations. Cardan's method of solution of a cubic.

UNIT – III

Determination up to third order: Properties, co-factor & minors, product of two determinants, Adjoint, Symmetric and Skew-symmetric determinants. Determinants solution of linear equations not more than three variables by Cramer's rule.

UNIT – IV

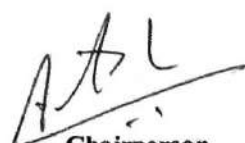
Matrices of real numbers: Equality of two matrices, Addition of matrices, Multiplication of matrices by a scalar, Associative properties, Transpose of matrix and its properties: Inverse of nonsingular square matrix, Symmetric and Skew-symmetric matrices, Scalar matrix, Orthogonal matrix, Elementary operation on matrices.


UNIT – V


Rank of matrix: Determination of rank either by considering minors or sweep out method, Consistency and solution of a system of linear of equations with not more than three variables by matrix method.

Texts:

1. The Theory of Equations (Vol. I) – Burnside and Panton.
2. Higher Algebra – Kurosh (Mir).
3. First Course in Abstract Algebra – Fraleigh.
4. Topics in Algebra – Herstein.
5. Elements of Abstract Algebra – Sharma, Gokhroo, Saini (Jaipur Publishing House, S.M.S. Highway, Jaipur - 3).


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BSMA105	DC	Analytical geometry of two dimensions	60	20	20	-	-	4	0	-	4

Course Objective

To introduce the students with the Fundamentals of the Analytical geometry of two dimension.

Course Outcomes

This course will enable the students to:

1. Understand and apply the basics of the Transformations of Rectangular Axes.
2. Classify the nature of conics.
3. Identify the problems of the pair of straight lines.
4. Illustrate the general properties of the conics.
5. Analyse the Polar Equation of conics.

Course Content

UNIT – I


Transformations of Rectangular Axes: Translation, Rotation and their Combinations, Invariants.


UNIT – II

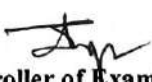
General Equation of second degree in x & y: Reduction to canonical forms: Classification of conics.

UNIT – III

Pairs of Straight Line: Condition that the general equation of second degree in x and y may represent two straight lines, Point of intersection of two intersecting straight lines,


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BSMA105	DC	Analytical geometry of two dimensions	60	20	20	-	-	4	0	-	4

Angle between two lines given by $ax^2 + 2hxy + by^2 = 0$. Equation of bisectors. Equation of two lines joining the origin to the points in which a line meets a conic.

UNIT – IV

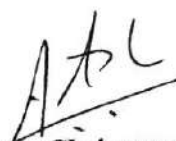
Equation of pair of tangents from an external point, chord of contact, poles & polars in case of general conic: Particular cases for parabola, Ellipse, Circle, Hyperbola.


UNIT – V


Polar Equation of conics: Polar equation of straight line. Polar equation of circle. Polar equation of a conic referred to a focus as a pole. Equation of chord joining two points: Equation of Tangent and normal.

Texts:

1. Co-ordinate Geometry – S. L. Loney.
2. Co-ordinate Geometry of Three Dimensions – Robert J. T. Bell.
3. Elementary Treatise on Conic sections – C. Smith.
4. Solid Analytic Geometry – C. Smith.
5. Higher Geometry – Efimov.


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Vishwavidyalaya, Indore