Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

SUBJECT CODE	Category	SUBJECT NAME	TEACHING &EVALUATION SCHEME								
			THEORY			PRACTICAL		Th	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
HU101	**1**	**Foundation English I**	60	20	20	0	20	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 be able to:**

- Develop the second language learners' ability to enhance and demonstrate LSRW Skills.
- Enable students to acquire English Language Skills to further their studies at advanced levels.
- prepare students to become more confident and active participants in all aspects of their undergraduate programs

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

- Enhance confidence in their ability to read, comprehend, organize, and retain written information.
- Write grammatically correct sentences for various forms of written communication to express oneself.

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, S-V Agreement, Preposition, Article, Types of Sentence, Direct - Indirect, Active - Passive voice, Phrases & Clauses.

UNIT IV

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

UNIT V

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

Practical:

- Self Introduction
- Reading Skills and Listening Skills
- Linguistics and Phonetics
- Role play
- Oral Presentation – Preparation & Delivery using Audio – Visual Aids with stress on body language and voice modulations.

Suggested Readings

- Ashraf Rizvi.(200**5).***Effective Technical Communication*. New Delhi:Tata Mc Graw Hill
- A.J. Thomson and A.V. Martinet(1991).*A Practical English Grammar*(4th ed). Newyork: Ox- ford IBH Pub.
- Kratz, Abby Robinson (1995). Effective Listening Skills. Toronto: ON: Irwin Professional Publishing.
- Adair, John (2003). Effective Communication. London: Pan Macmillan Ltd.

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Shri Vaishnav Vidyapeeth Vishwavidyalaya,

BA

Batch: 2019-2022

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDITS	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
BA 105	**Compulsory**	**Microeconomics–I**	**5**	**-**	**-**	**5**	**60**	**20**	**20**	**-**	**-**

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; Q/A – Quiz/Assignment/Attendance, MST Mid Semester Test.

Course Objectives:

1. To understand micro trends in different variables.
2. To know systemic facts and latest theoretical developments for empirical analysis.

Course Outcomes:

1. The student should be able to formulate and assess microeconomic policy suggestions;
2. The student should be able to be familiar with microeconomic terminology.

Syllabus:

UNIT I: Introduction

Economic terms and basic concepts- Goods, Utility, Value and Price, Wealth, Stock & Flow. Scope and method of Microeconomics, the economic problem: scarcity and choice, opportunity cost, production possibility cost (PPC).

UNIT II: Theory of Consumer Behaviour

Utility Analysis, Cardinal Utility, law of Diminishing Marginal Utility, The law of equi-marginal utility, Indifference curves analysis, Price Effect, Income Effect & Substitution Effect, 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 & Cross elasticity of demand, Law of Supply, Determinants of Supply, Market Equilibrium.

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, Short Run and Long Run Costs, Total Fixed and Variable Costs- TVC, TFC, AVC, AFC, Marginal Costs (MC), Relationships between Various Costs.

Text Books:

1. Ahuja, H,L. (2016). *Principles of Microeconomics*, S. Chand & Company, New Delhi.
2. Mankiw, G. (2012). *Principles of Economics (6th edition)*

Reference Books:

3. Case, Karl E.& Ray C. Fair, *Principles of Economics*, Pearson Education, Inc., 8th edition,2007.
4. Dominick Salvatore. *Microeconomic Theory Schaum's Outline series* Delhi: Tata McGraw Hill.
5. Lipsey, Richard., & Chystal, Alec,. (2011), *Economics*
6. Samuelson, Paul., & Nordhas, William (2010), *Economics*
7. Salvatore, D. (2003). *Microeconomics, Schaum's Outline (4th edition)*
8. Pindyck, R., & Rubinfeld, D. (2017) *Microeconomics (8th edition)*

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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	50	-	3	1	2	6

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. *understand the various scales of measurements*
2. *understand and apply the basics of the central tendency*
3. *find the variance, Skewness and Kurtosis of the data*
4. *apply the techniques to find correlation and regression*
5. *to find the independence and association in the data*

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.

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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.

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. TheWorldPress,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 theTheory of Statistics, 3rd Edn., (Reprint), Tata McGraw-Hill Pub.Co.Ltd.

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.

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.

13. Planes of regression and variances of residuals for raw data.

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

SUBJECT CODE	Category	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		Th	T	P	CREDITS
			END SEM	MST	Q/A	END SEM	Q/A				
BSMA104	DC	Classical Algebra	60	20	20	-	-	3	1	-	4

Course Objective

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

Course Outcomes

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

1. *understand and apply the basics of the complex numbers.*
2. *find the roots of the polynomial equations.*
3. *apply 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 co-efficients: 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 Descarte'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 *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 cramers rule.

UNIT – IV

Matrices of real numbers: Equality of two matrices, Addition of matrices, Multiplication of matircs by a scalar , Associative properties, Transpose of matrix and its properties: Inverse of non singular 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 – Barnard and Child.
3. Higher Algebra – Kurosh (Mir).
4. Modern Algebra – Surjeet Singh & Zameruddin.
5. First Course in Abstract Algebra – Fraleigh.
6. Topics in Algebra – Hernstein.
7. Test book of algebra – Leadership Project Committee (University of Bombay).
8. Elements of Abstract Algebra – Sharma, Gokhroo, saini (Jaipur Publishing House, S.M.S. Highway, Jaipur - 3).
9. Abstract Algebra – N. P. Chaudhuri (Tata Mc.Graw Hill).
10. Linear Algebra – Hadley
11. Test Book of Matrix – B. S. Vaatsa

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

SUBJECT CODE	Category	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		Th	T	P	CREDITS
			END SEM	MST	Q/A	END SEM	Q/A				
BSMA105	DC	**Analytical geometry of two dimensions.**	60	20	20	-	-	3	1	-	4

Course Objective

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

. Course Outcomes

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

1. *understand and apply the basics of the Transformations of Rectangular Axes.*
2. *know the fundamental principles of the classification & tracing of conics and apply them.*
3. *solve the problems of the pair of straight lines.*
4. *know the general properties of the conics.*
5. *find 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.

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

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, 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.