Shri VaishnavVidyapeethVishwavidyalaya, Indore

B.A. Honors Economics

BATCH2018-2021

SUBJECT CODE	Category	SUBJECT NAME	TEACHING &EVALUATION SCHEME								
			THEORY			PRACTICAL					
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	Th	T	P	CREDITS
HU201	SOC. SC., ARTS& HUM	**Foundation English II**	60	20	20	0	20	3	0	2	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical;   **C** - Credit;
*__Teacher's Assessment__ shall be based upon 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:**

- Participate in seminars, group discussions, paper presentation and general personal interactions at the professional level.
- Have adequate mastery over communicative english, reading and writing skills, secondarily listening and speaking skills.

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

- Improve their language skills, oral communication skills, group discussion skills, personal skills and confidence level.
- express his /her ideas and thoughts in speech or writing,
- Bridge the language gap vital to their success.
- Communicate effectively.

COURSE CONTENTS

UNIT I

Communication: Objectives of Communication, Formal and Informal Channels of Communication, Advantages and Disadvantages, Extrapersonal communication, Interpersonal communication, Intrapersonal communication, Principles of communication.

UNIT II

Developing Reading Skills: Reading Comprehension, Process, Active & Passive reading, Reading speed Strategies, Benefits of effective reading, SQ3R Reading technique.

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UNIT III

Vocabulary Building: Using Dictionaries and Thesaurus, Synonyms, Antonyms, Homophones, One Word Substitution, Affixation: Prefixes & Suffixes, Derivation from root words, Jargon, Scientific Jargon, Word Formation.

UNIT IV

Developing Writing Skills: Planning, Drafting and Editing, Developing Logical Paragraphs, Report Writing: Importance of Report, Characteristics of Good Report, Types of Report, Various Structures of a Report.

UNIT V

Professional Skills: Negotiation Skills, Telephonic Skills, Interview Skills: Team building Skills and Time management

Practical:

- Listening
- Linguistics and Phonetics
- Telephonic Conversation
- Mock Interviews
- Group discussions
- Extempore
- Debate
- Role Plays

Suggested Readings
- Ashraf Rizvi.(200**5).***Effective Technical Communication*. New Delhi:Tata Mc Graw Hill
- Prasad, H. M.(2001*) How to Prepare for Group Discussion and Interview*. New Delhi: Tata McGraw-Hill.
- Pease, Allan. (1998).*Body Language*. Delhi: Sudha Publications.
- Morgan, Dana (1998).*10 Minute Guide to Job Interviews*. New York: Macmillan.

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

B.A. Economics

Batch: 2019-22

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDITS	THEORY END SEM University Exam	THEORY Two Term Exam	THEORY Teachers Assessment*	PRACTICAL END SEM University Exam	PRACTICAL Teachers Assessment*
BA 205	Compulsory	Microeconomics–II	5	-	-	5	60	20	20	-	-

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical;   **C** - Credit; ***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

.**Course Objectives:**
1. Understand and analyse the behaviour of individuals, firms and markets;

2. Introduces students to models of how individuals and firms interact within markets, when markets fail, and how government policy may improve outcomes for society.

Course Outcomes :
1. To get knowledge about how economic development is practiced in diverse nation..

2. It also explain the incomes earned by the factors of production.

3. To apply the concept and policy experiences to other developing countries.

COURSE CONTENTS

UNIT I : Concepts of Revenue
Concept of Revenue- Total Revenue, Average Revenue, Marginal Revenue, Relationship between AR and MR Curves. Three Types of Revenue (AR, MR and TR) and Price Elasticity.

UNIT II: Market Structures:
> Price and Output under Perfect Competition, Monopoly, Monopolistic Competition and under Oligopoly. Price Discrimination- Degrees of Price Discrimination, Kinked Demand Curve Theory of Oligopoly

UNIT III: Market Failure
> Sources of Market Failure- Imperfect Competition, Monopoly and market Failure-Externalities and Market Failure, Public Goods and Market Failure, Imperfect Information-Distribution of Goods Economic Efficiency.

UNIT IV: Income Distribution
> Wages: Meaning and Types of Wages. Real and Nominal Wage. Concept of Rent. Ricardian Theory of Rent, Quasi Rent, Loanable Fund Theory and Keynes Liquidity Preference Theory of Interest. Theories of Profit

UNIT V: Welfare Theory
> What is Welfare Economics, Economic and General Welfare, Positive Economics and Welfare Economics, The Pareto Criterion, The Compensation Criteria, The Social Welfare Function, Arrow's Impossibility Theorem

Text Book:
1. Ahuja, H,L. (2016). *Principles of Microeconomics*, S. Chand and Company Limited, New Dehli

Reference Books:
1. Case, Karl E.& Ray C. Fair, *Principles of Economics*, Pearson Education, Inc., 8th edition,2007.
2. Dominick Salvatore. *Microeconomic Theory Schaum's Outline series* Delhi: Tata McGraw Hill.
3. Lipsey, Richard., & Chystal, Alec,. (2011), *Economics*
4. Samuelson, Paul., & Nordhas, William (2010), *Economics*
5. Ahuja, H,L. (2016). *Principles of Microeconomics*
6. Mankiw, G. (2012). *Principles of Economics (6th edition)*
7. Salvatore, D. (2003). *Microeconomics, Schaum's Outline (4th edition)*
8. Pindyck, R., & Rubinfeld, D. (2017) *Microeconomics (8th edition)*

SUBJECT CODE	Category	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		Th	T	P	CREDITS
			END SEM	MST	Q/A	END SEM	Q/A				
BSST203	DC	Probability and Probability Distribution	60	20	20	50	-	3	1	2	6

Course Objective

To introduce the students with the Fundamentals of the Probability and Probability Distribution.

Course Outcomes

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

1. *understand and apply the basics concepts of probability*

2. *know the fundamental principles of the probability distribution*

3. *know the fundamental of mathematical expectation and generating function*

4. *know the general properties of the discrete probability distribution*

5. *know the general properties of the continuous probability distribution*

Course Content:

UNIT – I

Probability: Introduction, random experiments, sample space, events and algebra of events. Definitions of Probability – classical, statistical, and axiomatic. Conditional Probability, laws of addition and multiplication, independent events, theorem of total probability, Bayes'theorem and its applications.

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UNIT – II

Random variables: discrete and continuous random variables, p.m.f., p.d.f. and c.d.f., illustrations and properties of random variables, univariate transformations with illustrations. Two dimensional random variables: discrete and continuous type, joint, marginal and conditional p.m.f, p.d.f., and c.d.f., independence of variables, bivariate transformations with illustrations.

UNIT – III

Mathematical Expectation and Generating Functions: Expectation of single and bivariate random variables and its properties. Moments and Cumulants, moment generating function, cumulant generating function and characteristic function. Uniqueness and inversion theorems (without proof) along with applications. Conditional expectations.

UNIT – IV

Discrete Probability Distributions: Uniform, Binomial, Poisson, Geometric, Negative Binomial and Hyper-geometric distributions along with their characteristic properties and limiting/ approximation cases.

UNIT – V

Continuous probability distributions: Normal, Exponential, Uniform, Beta, Gamma, Cauchy, lognormal and Laplace distributions along with their characteristic properties and limiting/approximation cases.

SUGGESTED READING:

1. Hogg, R.V., Tanis, E.A. and Rao J.M. (2009): Probability and Statistical Inference, Seventh Ed,

    Pearson Education, New Delhi.

2. Miller, Irwin and Miller, Marylees (2006): John E. Freund's Mathematical Statistics with Applications,

    (7th Edn.), Pearson Education, Asia.

3. Myer, P.L. (1970): Introductory Probability and Statistical Applications, Oxford &IBH Publishing, New

    Delhi

List of Practical

1. Fitting of binomial distributions for n and $p = q = \frac{1}{2}$.

2. Fitting of binomial distributions for given n and p.

3. Fitting of binomial distributions after computing mean and variance.

4. Fitting of Poisson distributions for given value of lambda.

5. Fitting of Poisson distributions after computing mean.

6. Fitting of negative binomial.

7. Fitting of suitable distribution.

8. Application problems based on binomial distribution.

9. Application problems based on Poisson distribution.

10. Application problems based on negative binomial distribution.

11. Problems based on area property of normal distribution.

12. To find the ordinate for a given area for normal distribution.

13. Application based problems using normal distribution.

14. Fitting of normal distribution when parameters are given.

15. Fitting of normal distribution when parameters are not given.

SUBJECT CODE	Category	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		Th	T	P	CREDITS
			END SEM	MST	Q/A	END SEM	Q/A				
BSMA 204	DC	Vector Algebra	60	20	20	-	-	3	1	-	4

Course Objective

To introduce the students with the Fundamentals of the Vector Algebra

Course Outcomes

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

1. *understand and apply the basics of the various operations in the Vector Algebra.*

2. *demonstrate the basic concepts of the Geometry with Vectors.*

3. *apply the techniques of vector and scalar triple product.*

4. *solve the problem Related to geometry with Cartesian co-ordinates.*

5. *solve the problems of the Volume of tetrahedron, work done, momentum.*

Course Content:

UNIT – I
Addition of vector, Multiplication of vectors, Vectors and scalars, Algebra of vectors, Laws of addition, Relation between two compositions, Vector Equation, Linear combinations, Expression of linear combination, Linearly independent and dependent vectors.

UNIT – II
Collinear and coplanar vectors: Origin of reference, position vectors, Section formula, Application to geometry, Condition for co linearity of three points, Parametric equation of plane, Condition for co planarity of four vectors, Proof of some well known Classical theorems.

UNIT – III
Scalar and vector product of two or three vectors: Scalar product, Orthogonal bases, Application to Cartesian geometry, Distance between points whose rectangular Cartesian co-ordinates, Direction cosine of a line, Angle between two lines, Normal from of vector equation of a plain, Vector product or Cross product, Some properties of vector product, Interpretation of vector product as vector area, Scalar Triple product, Distribution law, Some properties of Scalar triple product, Vector triple product.

UNIT – IV
Simple Application problem to geometry: Equation of planes parallel to given vectors and passing through given points, Coplanerity of two lines, Shortest distance between two lines, Normal form of lines, Shortest distance, Change of Axes, Scalar Triple products, Two Useful Decompositions, Reciprocal System of Vectors, Solution of vector equations

UNIT – V
Tetrahedron & Application problem to Mechanics: Volume of Tetrahedron, Work done and Momentum.

Texts:

1. Vector Analysis – Louis Brand.

2. Vector Analysis – Barry Spain.

3. Vector & Tensor Analysis – Spiegel (Schaum).

4. Elementary Vector Analysis – C. E. Weatherburn (Vol. I & II).

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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				
BSMA 205	DC	**Differential Calculus**	60	20	20	-	-	3	1	-	4

Course Objective

To introduce the students with the Fundamentals of the Differential Calculus.

Course Outcomes

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

1. *understand and apply the basics of the Rational Numbers & Sequences.*

2. *solve the problems of the Limit, Continuity and differentiation.*

3. *apply the techniques to find the various partial differentiations.*

4. *find maxima and minima of a function.*

5. *know the solution of the problems of the function of the several variables.*

Course Content:

UNIT – I

Rational Numbers & Sequence: Geometrical representation. Irrational number, Real number represented as point on a line Linear Continuum. Acquaintance with Basic properties of real number (No deduction or proof is included), Definition of bounds of a sequence and monotone sequence, Limit of a sequence. Statements of limit theorems,Concept of convergence and divergence of monotone sequences - applications of the theorems, in particular, definition of *e*. Statement of Cauchy's general principle of convergence and its application.

UNIT – II
Infinite series of constant terms &. Real-valued functions defined on an interval:

Convergence and Divergence (definitions), Cauchy's principle as applied to infinite series (application only). Series of positive terms**:** Statements of Comparison test, D.Alembert's Ratio test, Cauchy's nth root test and Raabe's test – Applications. Alternating series, Statement of Leibnitz test and its applications, Limit of a function (Cauchy's definition). Algebra of limits. Continuity of a function at a point and in an interval, Acquaintance (no proof) with the important properties of continuous functions on closed intervals, Statement of existence of inverse function of a strictly monotone function and its continuity.

UNIT – III
Derivative & Successive derivative:
Derivative its geometrical and physical interpretation. Sign of derivative –Monotonic increasing and decreasing functions. Relation between continuity and derivability.
Differential – application in finding approximation, Leibnitz's Theorem and its, application,Application of the principle of Maxima and Minima for a function of single variable in geometrical, physical and other problems.

UNIT – IV
Applications of Differential Calculus:

Tangents and Normal's,Pedal equation and Pedal of a curve, Rectilinear Asymptotes (Cartesian only), Definition and examples of singular points (viz. Node, Cusp, Isolated point), Statement of Rolle 's Theorem and its geometrical interpretation. Mean Value, Theorems of Lagrange and Cauchy. Statements of Taylors and Maclaurin'sTheorems with Lagrange's and Cauchy's form of remainders. Taylor's and Maclaurin's Infinite series for functions like e^x, sin x, cos x. (1+x)n, log(1+x) [with restrictions wherever necessary].

UNIT – V
Indeterminate Forms & Functions of two and three variables: L'Hospital's Rule:
Statement and problems only**,** their geometrical representations, Limit and Continuity (definitions only) for functions of two variables, Partial Derivatives: Knowledge and use of Chain Rule, Exact differentials (emphasis on solving problems only). Functions of two variables, Successive partial derivatives: Statement of Schwarz's theorem on commutative property of mixed derivatives. Euler's theorem on homogeneous function of two and three variables. Maxima and minima of functions of not more than three variables –Lagrange's Method of undetermined multiplier – Problems only. Implicit function in case of function of two variables (existence assumed) and derivative.

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Texts:

1. Basic Real & Abstract Analysis – Randolph J. P. (Academic Press).

2. A First Course in Real Analysis – M. H. Protter & G. B. Morrey (Springer Verlag, NBHM).

3. A Course of Analysis – Phillips.

4. Problems in Mathematical Analysis – B. P. Demidovich (Mir).

5. Problems in Mathematical Analysis – Berman (Mir).

6. Differential & Integral Calculus (Vol. I & II) – Courant & John.

7. Calculus of One Variable – Maron (CBS Publication).

8. Introduction to Real Analysis – Bartle & Sherbert (John Wiley & Sons.)

9. Mathematical Analysis – Parzynski.

10. Introduction to Real Variable Theory – Saxena & Shah (Prentice Hall Publication).

11. Real Analysis – Ravi Prakash & Siri Wasan (Tata McGraw Hill).

12. Mathematical Analysis – Shantinarayan (S. Chand & Co.).

13. Theory & Applications of Infinite Series – Dr. K. Knopp.

14. Advanced Calculus – David Widder (Prentice Hall).

15. Charles Chapman Pugh: Real mathematical analysis; Springer; New York; 2002

16. Sterling K. Berberian: A First Course in Real Analysis; Springer; New York; 1994

17. Steven G. Krantz: Real Analysis and Foundations; Chapman and Hall/CRC; 2004

18. Stephen Abbott: Understanding Analysis; Springer; New York, 2002

19   T. M. Apostol: Mathematical Analysis, Addison-Wesley Publishing Co. 1957

20   W. Ruddin: Principles of Mathematical Analysis, McGraw-Hill, New York, 1976

21   J. F. Randolhp: Basic Real and Abstract Analysis, Academic Press; New York, 1968

22   Robert G Bartle, Donald R Sherbert: Introduction to real analysis; John Wiley Singapore; 1994

23   Differential & Integral Calculus (Vols. I & II) – Courant & John.

24   Differential & Integral Calculus (Vol. I) – N. Piskunov (CBS Publishers & Distributors)

25   Differential Calculus – Shantinarayan.

26   An elementary treatise on the Differential Calculus – J. Edwards (Radha Publishing House).

27   Advanced Calculus – David V. Widder (Prentice Hall)