

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)

			TEACHING &EVALUATION SCHEME									
COURSE CATE- CODE GORY		THEORY			PRACT							
	SELECTED 1	COURSE NAME	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	L	Т	P	CREDITS	
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;

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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Board of Studies
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Chairperson Faculty of Studies Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Controller of Examination Shri Vaishnav Vidyapeeth

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore Joint Registrar Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore rses (S

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



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)

			TEACHING &EVALUATION SCHEME									
COURSE CATE- CODE GORY	CATE			THEORY			PRACTICAL					
		COUNCE MARK	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	L	т	P	CREDITS	
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;

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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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)

			TEACHING & EVALUATION SCHEME									
COURSE CATE- CODE GORY		THEORY			PRACT							
		COURSE NAME	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	L	т	P	CREDITS	
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;

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



Shri Vaishnav Institute of Science

Department of Physics

Choice Based Credit System (CBCS)

B.Sc. Phys. Hons. I Sem

		Subject Name	Teaching and Evaluation Scheme										
	Cntegory		-	Practical					10				
Subject Code			End Sem Uni- versity Exnm	Two Term Exam	Tene hers As- sess- ment	End Sem Uni- versi- ty Exam	Ten cher s As- sens men t*	Th	т	Р	CREDITS		
BSPH102	DC	General Properties of Matter	60	20	20	30	20	4	0	0	4		

Course Objectives	 To develop the comprehensive understanding of laws of physics related to General Properties of Matter and ability to apply them for laying the foundation for research and development. To work ethically as member as well as leader in a diverse team.
Course Outcomes	 Student will be able to understand and solve the problems related to General Properties of Matter. Student will be able to determine physical parameter experimentally with optimal usage of resources and complete the assignments in time.

Abbi	reviation	Teacher Assessment (Theory) shall be based on following components: Quiz / Assignment/ Project
Th	Theory	/ Participation in class (Given that no component shall be exceed 10 Marks).
Т	Tutorial	Teacher Assessment (Practical) shall be based on following components: Viva / File / Participation
P	Practical	in Lab work (Given that no component shall be exceed 50% of Marks).

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Department of Physics

Choice Based Credit System (CBCS)

BSPH102: General Properties of Matter

UNIT I: System of many particles

System of particles and equation of motion, Centre of mass for a system of particles, motion of the center of mass, law of conservation of linear momentum for a system of one, two, n particles, law of conservation of angular momentum for a single particle, system of n particles and examples, recoil velocity on firing a bullet from a gun, motion of a boat or propulsion of an Aeroplane, jet propulsion, motion of rocket. Kepler's law of planetary motion.

UNIT II: Rotational Dynamics

Motion of rigid body, rotatory motion, equations of rotationary motion of a particle under a constant angular acceleration, angular momentum and concept of moment of inertia in rotational motion, Newton's law of rotational motion, Moment of inertia and its examples, radius of gyration, rotational kinetic energy, relation between Torque and moment of inertia, Theorem of parallel axis, theorem of perpendicular axis.

UNIT III: Elasticity

Elasticity, Effect of temperature and impurities on elasticity of a substance; small deformation, Stress and Strain; Hook's law, elasticity constants for an isotropic solid, Young's modulus, Bulk Modulus, Modulus of rigidity, Poisson's ratio, Relationship between the various elastic moduli. Bending of beam and bending moment, Cantilever, transverse oscillations of a cantilever, torsion of cylinder.

UNIT IV: Oscillations

SHM: Simple Harmonic Oscillations, Differential equation of SHM and its solution. Kinetic energy, Potential energy, total energy and their time-average values. Damped oscillation. Forced oscillations: Transient and steady states; Resonance, sharpness of resonance; power dissipation and Quality Factor, motion of simple pendulum, motion of compound pendulum, motion of mass connected with spring, motion of torsional pendulum.

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Department of Physics

Choice Based Credit System (CBCS)

BSPII102: General Properties of Matter

UNIT V: Fluid Mechanics

Ideal and Viscous fluid, Stream line and Turbulent flow, Reynolds's number, Rotational and irrotatinal flow, Equation of continuity, Bernoulli's theorem and its application, Stokes law, viscous flow of fluids, Effect of pressure and temperature on the coefficient of viscosity, Poiseulle's formula, Intermolecular forces-cohesive and adhesive forces, Surface tension, Surface energy, Effect of temperature and impurities on the surface tension, Angle of contact; expression for pressure on a curved surface,

References

- D. Kleppner and R. Kolenkow, An Introduction to Mechanics, 2nd Edition, Cambridge University Press, 2014.
- 2. D. S. Mathur, Elements of Properties of Matter, S. Chand & Co., 1962.
- 3. C. Kittel, W. D. Knight and M. A. Ruderman, Mechanics, Berkeley Physics Course, Vol. 1, 2nd Edition, McGraw-Hill Book Company, 1973.
- 4. Halliday and Resnick, Fundamentals of Physics, 10th Edition, John Wiley & Sons, 2014.
- H. D. young, R. A. Freedman, R. Bhathal and A. L. ford, Sears and Zemansky's University Physics with Modern Physics, 1st Australian SI Edition, Pearson Education Inc, 2011.

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

		SUBJECT NAME	TEACHING & EVALUATION SCHEME											
SUBJECT CODE	Category		THEORY P				PRACTICAL		TD.		TS			
			END SEM	MST	Q/A	END SEM	Q/A	Th	Т	P	CREDITS			
BSMA104	DC	Classical Algebra	60	20	20	-	1	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 nth 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



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

applications. Relation between roots and coefficients. Symmetric functions of roots Transformations of equations. Cardan's method of solution of a cubic.

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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 matrices 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



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

SUBJECT CODE				1	EACHIN	G & EVA	LUATIO	ON SCH	EME		
	Category	SUBJECT NAME	7	THEORY	PRACT	Th	т	P	ITS		
			END SEM	MST	Q/A	END SEM	Q/A	111	1	r	CREDITS
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.



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.



UNIT - IV

Solution of system of linear algebraic equations: Matrix equation, Method of triangular matrices, Gaussian elimination with pivoting, Jacobian and Gauss-Siedel iteration

UNIT - V

Numerical solution of the ODE: Euler's method, Runge-Kutta methods, Multi-step method, System of differential equation.

Suggested Readings:

- **1.** Akai Terrence J: Applied Numerical Methods for engineers, John Wiley & Sons, Inc. 1994
- **2.** Schilling Robert J & Harried Sanddra L: Applied Numerical Methods for engineers, Thomson, 2000

Name of Program: BCA + MCA

COURSE CODE		COURSE NAME	L	Т	P			CHING &			SCHEME CTICAL
	CATEGORY					CREDITS	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
BCCA103	COMPULSORY	PC-Software	3	1	0	4	60	20	20	0	0

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

*Teacher Assessment shall be based on following components: Quiz/Assignment/Project/Participation in class (Given that no component shall be exceed 10 Marks)

Course Educational Objectives (CEOs):

- To provide the knowledge of using different software packages including word processor, electronic spreadsheet, presentation s/w
- To develop an understanding of database management system
- To explain how to integrate the data stored in word processor, spreadsheet etc.
- To develop presentation skills using these software.

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Information Section logs & Computer Applications)

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Course Outcomes (COs): Students will be able to

- To create word documents and to format them using various tools available
- To create tables and manipulate them
- To use mail merge, labels
- Creating spreadsheet for storing and managing data using functions
- Format, print spreadsheet
- Create power point presentation for different purposes using objects, animation
- To store and manipulate data stored in databases.
- To export and import data stored from and to, among word processor, spreadsheet, DBMS, presentation s/w

UNIT – I

Word Processor: Introduction, Word Processing, Advantages of word processing, Creating, Saving and editing a document: Selecting, Deleting, Replacing Text, Copying text to another file. Formatting Text and Paragraph: Using the Font Dialog Box, Paragraph Formatting using Bullets and Numbering in Paragraphs, Line spacing, Margins.

UNIT - II

Creating and Formatting Tables: Changing Row height, inserting columns, Merging cells Calculations in a Table, Sorting Text, Toolbar using word art, Mail merge: Definition, a Practical Example of mail merge, creating charts.

Defining Tabs: Tabs Dialog Box, Enhancing a Document: Inserting page Breaks, Adding Border, Using Header and Footers in the Document.

UNIT – III

Spread sheet: Introduction, Definition. Screen parts of worksheet, Entering information: Numbers, Formula, Editing Data in a cell, Using a Range with SUM, Moving and copying data, Inserting and Deleting Row and Columns in the worksheet, Using the format cells Dialog box.

UNIT - IV

Protecting a workbook with Password, Macro: Recording and Running a Macro, Linking workbook files Using Pivot table, Inserting Hyper links, Using chart wizard to create a chart, Naming ranges, classification of Functions.

UNIT - V

Presentation: Introduction, Slide show, Formatting, Creating a Presentation, Inserting clip Arts, Adding Objects, Applying Transitions, Animation effects, formatting and checking text, Modifying Visual elements, Preparing a complete presentation, Case studies.

DBMS: Introduction, Basic terms of access, objectives, What is database, Creating a new database, Creating a database through table wizard, Creating a new table, Rename columns, Saving the database.



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Suggested Readings:

- 1. Taxali R. K. "PC Software for Windows 98, Made Simple" TMH.
- 2. Saxena Sanjay, "MS Office 2000 "Vikas Publication House PVT LTD.
- 3. Busbby M. and Stultz R.A. "Microsoft Office 2000", BPB.
- 4. Jain S., Geetha M. and Kratika, "Microsoft Office-2007", BPB
- 5. Microsoft Office Complete Reference BPB Publication.

Name of Program: BCA + MCA

							TEAC	CHING 8	EVALU	JATION	SCHEME
		COURSE NAME	L				1	ΓHEORY		PRA	CTICAL
COURSE CODE	CATEGORY			Т	P	CREDITS	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
BCCA104	COMPULSORY	Fundamentals of Computers and IT	3	1	0	4	60	20	20	0	0

*Teacher Assessment shall be based on following components: Quiz/Assignment/Project/Participation in class (Given that no component shall be exceed 10 Marks)

Course Educational Objectives (CEOs):

- To create basic understanding of Computer System
- To provide knowledge of concepts of Operating Systems
- To familiarize the students with the need, goal, function and architecture of various operating system available
- To develop the understanding of trends of IT industry, safe and ethical use of IT

Course Outcomes (COs): students will be able to

- To understand the need, goal and function of the OS
- Understand and use Windows and Linux operating systems commands.
- Organizing and manipulating files and folders.
- Understand and Use different editors of Linux
- Manipulating data using input output redirection
- Writing shell scripts
- To exercise the safe computer practices



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Name of Program: BCA + MCA

							TEAC	CHING 8	EVALU	JATION	SCHEME
		COURSE NAME	L				7	THEORY	7	PRA	CTICAL
COURSE CODE	CATEGORY			Т	P	CREDITS	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
BCCA107	COMPULSORY	Lab-2 (PC- Software Lab- Office Tools)	0	0	4	2	0	0	0	30	20

*Teacher Assessment shall be based on following components: Quiz/Assignment/Project/Participation in class (Given that no component shall be exceed 10 Marks)

Course Educational Objectives (CEOs):

- To provide the knowledge of using different software packages including word processor, electronic spreadsheet, presentation s/w
- To develop an understanding of database management system
- To explain how to integrate the data stored in word processor, spreadsheet etc.
- To develop presentation skills using these software.

Course Outcomes (COs): Students will be able to

- To create simple word documents ant to format them using various tools available
- To create tables and to use various tools
- To use mail merge, labels
- Creating spreadsheet for storing and managing data using functions
- Format, print spreadsheet
- Create power point presentation for different purposes using objects, animation
- To store and manipulate data stored in databases.
- To export and import data among word processor, spreadsheet, DBMS, presentation s/w

List of Experiments:

- **1.** To open and practice of OS Folder related operations, My-Computer, window explorer, Control Panel,
- **2.** To create, save and editing of Text files using word processor.
- **3.** Formatting and printing of document (setting of margins, size, orientation, different breaks etc. Checking of spelling and use of thesaurus)
- **4.** Creating, inserting tables, header, footers, hyperlink, different objects in a document
- **5.** Use of Charts in Word Processor.
- **6.** Creating a mail merged documents, labels
- 7. Creating and manipulating spreadsheets. To create, save and editing of spreadsheets. Use of cell



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- **8.** references, sorting and filtering data in a spreadsheet, using formulae
- **9.** Formatting and printing of spreadsheets (setting of margins, size, orientation, different breaks etc. What if analysis, mail merging
- 10. Creating header, footers, hyperlink, different objects in a spreadsheet
- 11. Creating different types of graphs and printing
- **12.** Creation, editing and formatting presentation slides.
- 13. Create presentation for different purposes using objects, animation
- **14.** Creation and manipulation of database table using SQL.
- **15.** To store and manipulate data stored in databases.
- 16. To export and import data among word processor, spreadsheet, DBMS, presentation s/w

Suggested Readings:

- 1. Kanitkar Yashwant, 'Let us C', BPB New Delhi
- 2. Balaguruswami, 'Ansi C', TMH, Delhi
- 3. Kerninghan & Ritchie "The C programming language", PHI
- 4. Schildt "C:The Complete reference" 4th ed TMH.
- 5. Cooper Mullish "The Spirit of C", Jaico Publishing House, Delhi



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