

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore Shri Vaishnav School of Management

Choice Based Credit System (CBCS) in Light of NEP-2020 BBA+MBA - V SEMESTER (2021-2024)

				TEAC	CHINO	G & EVALU	ATIO	N SC	HE	ME	
			ТН	EORY		PRACTIC	CAL				
COURSE CODE	CATEGORY	COURSE NAME	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Accocement*	L	Т	Р	CREDITS
BBAI501	CC	Human Values and Professional Ethics	60	20	20	-	•	3	-	-	3

BBAI501 HUMAN VALUES AND PROFESSIONAL ETHICS

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical: C - Credit; CC- Core Course ***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 Objective

The objective of the course is to disseminate the theory and practice of moral code of conduct and familiarize the students with the concepts of "right" and "good" in individual, social and professional context

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of 5 questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

- 1. Help the learners to determine what action or life is best to do or live.
- 2. Right conduct and good life.
- 3. To equip students with understanding of the ethical philosophies, principles, models that directly and indirectly affect business.

COURSE CONTENT

Unit I: Human Value

- 1. Definition, Need for Human Values, Sources of Values
- 2. Essence of Values
- 3. Classification of Values (Temporal Values, Universal Values)
- 4. Values Across Culture

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BBAI501	CC	Human Values and Professional Ethics	60	20	20	-	-	3	-	-	3

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Unit II: Morality

- 1. Morality its meaning and definition
- 2. Values Vs Ethics Vs Morality
- 3. Concept of Impression Management
- 4. Impression Management Strategies (Intimidation, Ingratiation, Self-promotion, Supplication, Exemplification)

Unit III: Leadership in Indian Ethical Perspective.

- 1. Leadership, Pre-requisites of Leadership
- 2. Approaches to Leadership, Leadership Styles
- 3. Ethical Leadership
- 4. Values in Leadership

Unit IV: Business Ethics

- 1. Business Ethics its meaning and definition
- 2. Relevance of Ethics in Business organizations.
- 3. Theories of Ethics (Teleological, Deontological)
- 4. Code of Ethics

Unit V: Globalization and Ethics

- 1. Globalization and Business Changes
- 2. Values for Global Managers
- 3. Corporate Social Responsibility
- 4. Benefits of Managing Ethics in Work Place.

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Suggested Readings

- 1. Kaur, T. (2004). *Values and Ethics in Management*. Galgotia Publishing Company: New Delhi
- 2. Kaushal, S.L. (2006). *Business Ethics. Concepts, Crisis and Solutions.* Deep & Deep Publications Pvt. Ltd.: New Delhi
- 3. Beteille, Andre (1991). Society and Politics in India. AthlonePress: New Jersey.
- 4. Chakraborty, S. K. (1999). Values and Ethics for Organizations. Oxford University Press
- 5. Fernando, A.C. (2009). *Business Ethics An Indian Perspective*. India: Pearson Education: India
- 6. Fleddermann, C. D. (2012). *Engineering Ethics*. New Jersey: Pearson Education / Prentice Hall.
- 7. Boatright, J.R. (2012). *Ethics and the Conduct of Business*. Pearson. Education: New Delhi.
- 8. Crane, A.and Matten, D. (2015). *Business Ethics*. Oxford University Press Inc:New York.
- Murthy, C.S.V. (2016). Business *Ethics Text and Cases*. Himalaya Publishing House Pvt. Ltd:Mumbai
- Naagrajan, R.R (2016). *Professional Ethics and Human Values*. New Age International Publications: New Delhi.

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				Т	EACHIN	G & EVA	LUATIO	ON SCH	EME		
SUBJECT CODE	Category	SUBJECT NAME]	THEORY		PRACT	TICAL	Th	т	Р	ST
			END SEM	MST	Q/A	END SEM	Q/A	IN	1	r	CREDITS
BSMA403	DC	Analytical Geometry of three dimensions	60	20	20	-	-	4	0	-	4

Course Objective

To introduce the students with the Fundamentals of the Analytical Geometry of three dimensions.

Course Outcomes

This course will enable the students to:

- 1. Understand and solve problems of the straight lines.
- 2. Discuss about the concepts of the planes, Straight lines.
- 3. Solve the problems on the spheres and their tangent planes.
- 4. Justify the concepts of the right circular cones.

Course Content

UNIT – I

Rectangular Cartesian co-ordinates: Distance between two points. Division of a line segment in a given ratio. Direction cosines and direction ratios of a straight line. Projection of a line segment on another line. Angle between two straight lines.

UNIT – II

Equation of a Plane: General form. Intercept and Normal form. Angle between two planes. Signed distance of a point from a plane. Bisectors of angles between two intersecting planes.

UNIT – III

Equations of Straight line: General and symmetric form. Distance of a point from a line. Coplanarity of two straight lines. Shortest distance between two skew-lines.

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				Г	EACHIN	G & EVA	LUATIO	ON SCH	EME		
SUBJECT CODE	Category	SUBJECT NAME]	THEORY		PRACT	TICAL	Th	т	р	ST
			END SEM	MST	Q/A	END SEM	Q/A	Th	Т	Р	CREDITS
BSMA403	DC	Analytical Geometry of three dimensions	60	20	20	_	_	4	0	_	4

UNIT – IV

Sphere and its tangent plane.

UNIT – V

Right circular cone.

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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SUBJECT CODE	Category	SUBJECT NAME	ſ	THEORY		PRACT	TICAL	111	т	D	SL
			END SEM	MST	Q/A	END SEM	Q/A	Th	Т	Р	CREDITS
BSMA405	DC	Modern Algebra	60	20	20	-	-	4	0	-	4

Course Objective

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

Course Outcomes

This course will enable the students to:

- 1. Understand and solve problems of the classical set theory.
- 2. Learn about the fundamental concepts of groups, subgroups.
- 3. Apply the techniques of the ring and field theory.
- 4. Demonstrate real vector spaces, subspaces, basis, dimension and their properties.
- 5. Apply the concepts of the algebra of matrices.

Course Content

UNIT – I

Basic concept: Sets, Sub-sets, Equality of sets, Operations on sets: Union, intersection and complement. Verification of the laws of Algebra of sets and De Morgan's Laws. Cartesian product of two sets. Mappings, One-One and onto mappings. Composition of Mappings–concept only, Identity and Inverse mappings. Binary Operations in a set. Identity element. Inverse element.

UNIT – II

Introduction of Group Theory: Definition and examples taken from various branches (examples from number system, roots of unity, 2 x 2 real matrices, non-singular real matrices of a fixed order). Elementary properties using definition of Group. Definition

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			END SEM	MST	Q/A	END SEM	Q/A	Th	Т	Р	CREDITS
BSMA405	DC	Modern Algebra	60	20	20	-	-	4	0	-	4

and examples of sub-group – Statement of necessary and sufficient condition – its applications.

UNIT – III

Definitions and examples of (i) Ring, (ii) Field, (iii) Sub-ring, (iv) Subfield.

UNIT – IV

Concept of Vector space over a Field: Examples, Concepts of Linear combinations, Linear dependence and independence of a finite set of vectors, Sup-space. Concepts of generators and basis of a finite-dimensional vector space. Problems on formation of basis of a vector space (No proof required).

UNIT – V

Real Quadratic Form involving not more than three variables – Problems only. Characteristic equation of a square matrix of order not more than three –determination of Eigen Values and Eigen Vectors – Problems only. Statement and illustration of Cayley-Hamilton Theorem.

Texts:

- 1. Modern Algebra Surjeet Singh & Zameruddin.
- 2. First Course in Abstract Algebra Fraleigh.
- 3. Topics in Algebra Hernstein.
- 4. Test book of algebra Leadership Project Committee (University of Bombay).
- 5. Elements of Abstract Algebra Sharma, Gokhroo, saini (Jaipur PublishingHouse, S.M.S. Highway, Jaipur 3).
- 6. Abstract Algebra N. P. Chaudhuri (Tata Mc.Graw Hill).
- 7. Linear Algebra Hadley



Shri Vaishnav Vidyapeeth Vishwavidyalaya Indore Shri Vaishnav Institute of Computer Applications

Name of Program: B.Sc. (Computer Science)

			Tea	aching	g &]	Evalua	ation	Sc	he	me	
			Т	heory		Pract	ical				
Subject Code	Category	Subject Name	End Sem University Exam	Two Term Exam	Teacher Assessment	End Sem University Exam	Teacher Assessment	L	т	Р	CREDITS
BSCS404	Compulsory	Database Management System	60	20	20	0	0	3	0	0	3

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

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

Course Education Objectives (CEOs):

- To provide a sound introduction to the discipline of database management as a subject in its own right, rather than a compendium of techniques and product specific tools.
- To give a good formal foundation on the relational model of data.
- To present SQL and procedural interfaces to SQL comprehensively.
- To give an introduction to systematic database design approaches covering conceptual design, logical design and an overview of physical design.
- To introduce the concepts of transactions and transaction processing.

Course Outcomes (COs):

- Design any Desktop application using an entity relationship diagrams (ERD) to express requirements and demonstrates skills to model data requirements and create data models.
- Understanding of database systems theory in order to apply that knowledge to any particular database implementation using Structured Query Language (SQL).
- To learn and understand various Database Architectures and Applications.
- Develop an ability to remove data redundancy by translating created relational model into normalized designs.

UNIT-I

Introduction: An overview of database management system, database system Vs file system, Characteristics of database approach, DBMS architecture, data models, schema and instances, data independence.

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BSCS404	Compulsory	Database Management System	60	20	20	0	0	3	0	0	3

UNIT II

Data Modelling using Entity Relationship Model: Entity, Entity types, entity set, notation for ER diagram, attributes and keys, Concepts of composite, derived and multivalued attributes, Super Key, candidate key, primary key, relationships, relation types, weak entities, enhanced E-R and object modelling, Sub Classes:, Super classes, inheritance, specialization and generalization.

UNIT – III

Introduction to SQL: Overview, Characteristics of SQL. Advantage of SQL, SQL data types and literals.

Types of SQL commands: DDL, DML, DCL. Basic SQL Queries.

Logical operators: BETWEEN, IN, AND, OR and NOT

Null Values: Disallowing Null Values, Comparisons Using Null Values

Integrity constraints: Primary Key, Not NULL, Unique, Check, Referential key Introduction to Nested Queries, Correlated Nested Queries, Set-Comparison Operators, Aggregate Operators: The GROUP BY and HAVING Clauses.

$\mathbf{UNIT} - \mathbf{IV}$

Relational Data Model: Relational model terminology domains, Attributes, Tuples, Relations, characteristics of relations, relational constraints domain constraints, key constraints and constraints on null, relational DB schema. Codd's Rules.

Relational algebra: Basic operations selection and projection, Set Theoretic operations Union, Intersection, set difference and division,

Joins: Inner joins, Outer Joins, Left outer, Right outer, full outer joins. Overview of views and indexes.

UNIT V

ER to relational Mapping: Data base design using ER to relational language.

Data Normalization: Functional dependencies, Armstrong's inference rule, Normal form up to 3^{rd} normal form.

TEXT BOOKS:

- 1. R. Elmarsi and SB Navathe, "Fundamentals of Database Systems", Pearson,6th ed.
- 2. Singh S.K., "Database System Concepts, design and application", Pearson Education
- 3. Ramakrishnan and Gherke, "Database Management Systems", TMH.

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- 1. Abraham Silberschatz, Henry Korth, S. Sudarshan, "Database Systems Concepts", 4th Edition, McGraw Hill, 1997.
- 2. Jim Melton, Alan Simon, "Understanding the new SQL: A complete Guide", MorganKaufmann Publishers, 1993.
- 3. A.K. Majumdar, P. Battacharya, "Data Base Management Systems', TMH, 1996.
- 4. Bipin Desai, "An Introduction to database Systems", Galgotia Publications, 2012.

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Shri Vaishnav Institute of Computer Applications

Name of Program: B.Sc. (Computer Science)

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Subject Code	Category	Subject Name	l S ver xai		Teacher Assessment	_ 2 3	Teacher Assessment	L	Т	Р	CREDITS
BSCL407	Compulsory	DBMS Lab	0	0	0	30	20	0	0	4	2

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Course Outcomes (COs):

- Design any Desktop application using an entity relationship diagrams (ERD) to express requirements and demonstrates skills to model data requirements and create data models.
- Understanding of database systems theory in order to apply that knowledge to any particular database implementation using Structured Query Language (SQL).
- To learn and understand various Database Architectures and Applications.
- Develop an ability to remove data redundancy by translating created relational model into normalized designs.

LIST OF PRACTICALS:

- 1. To study DDL-create and DML-insert commands.
- 2. Create the given table (table will be given in lab hours) and insert the data accordingly.
- 3. Insert, Select Commands, Update and Delete Commands.
- 4. To study various options of LIKE predicate in the created table.
- 5. To perform various data manipulation commands, aggregate functions and sorting concept on all created tables.
- 6. To study single row functions.
- 7. To make use of different clauses viz. where, groupby, having, order by, union, intersection, set difference.
- 8. To use oracle functions viz. aggregate, numeric, converison, string functions.
- 9. Displaying data from Multiple Tables (join).

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Shri Vaishnav Institute of Computer Applications

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			Т	heory		Pract	ical				
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BSCL407	Compulsory	DBMS Lab	0	0	0	30	20	0	0	4	2

- 10. To apply the concept of Aggregating Data using Group functions.
- 11. To solve queries using the concept of sub query.

TEXT BOOKS:

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- 2. Singh S.K., "Database System Concepts, design and application", Pearson Education
- 3. Ramakrishnan and Gherke, "Database Management Systems", TMH.

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Shri Vaishnav Institute of Science

Department of Physics

Choice Based Credit System (CBCS)

B. Sc. IV Sem

Subject Code	Category	Subject Name	Teaching and Evaluation Scheme								
			Theory			Practical					
			End Sem Univer sity Exam	Two Term Exam	Teac hers Asses smen t	End Sem Unive rsity Exam	Tea cher s Asse ssm ent	Th	т	Р	CREDITS
BSPH402	DC	Electrostatics and Magnetostatics	60	20	20	30	20	3	0	0	3

Course Objectives	 To develop the comprehensive understanding of laws of physics related to Electrostatics and Magnetostatics 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 Electrostatics and Magnetostatics. 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 / Participation in class (Given that no				
Th	Theory	component shall be exceed 10 Marks).				
Т	Tutorial	Teacher Assessment (Practical) shall be based on following components: Viva/ File/ Participation in				
Р	Practical	Lab work (Given that no component shall be exceed 50% of Marks).				

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Department of Physics

Choice Based Credit System (CBCS)

BSPH402: Electrostatics and Magnetostatics

UNIT I: Electrostatics-I

Coulombs law, calculations of electric field E for simple distributions of charge at rest, dipole and quadruple fields. Work done on a charge in an electrostatic field, conservative nature of the electrostatic field, Relation between electric field and electric potential, torque on a dipole in a uniform electric field and its energy, flux of the electric field.

UNIT II: Electrostatics-II

Gauss's law and its application, Capacitors, conducting sphere in a uniform electric field, point charge in front of a grounded infinite conductor. Dielectrics, parallel plate capacitor with a dielectric. dielectric constant. polarization and polarization vector P, relation between displacement vector D, E and P.

UNIT III: Current Electricity

Steady current, current density J, non-steady currents and continuity equation. Kirchoff's laws and analysis of multiloop circuits. growth and decay of current in LR and CR circuits, decay constants. LCR circuits. AC circuits. complex numbers and their applications in solving AC circuits problems. complex impedance and reactance, scries and parallel resonance. Q-factor, Network theorem: Thevenin theorem, Norton theorem, superposition theorem, maximum power transfer theorem.

UNIT IV: Motion of Charged Particles

E as an accelerating field, electron gun, discharge tube, linear accelerator, E as deflecting field, Principle and working of cyclotron, CRO, Sensitivity of CRO, Transverse B field, 180 deflection, Mass spectrograph (Bainbridge Mass spectrograph), Discovery of isotopes, curvatures of tracks for energy determination for nuclear particles, Mutually parallel E & B fields; Positive ray parabolas, Discovery of isotopes, principle of magnetic focusing (lenses).

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> Department of Physics Choice Based Credit System (CBCS) BSPH402: Electrostatics and Magnetostatics

UNIT V: Magnetostatics

Force on a moving charge. Lorentz force equation and definition of B, force on a straight conductor carrying current in a uniform magnetic field, torque on a current loop, magnetic dipole moment, angular momentum and gyromagnetic ratio. Biot and Savart's law. calculation of H for simple geometrical situations such as Solenoid, Anchor ring. Ampere's Law, $\nabla \times B = \mu_0 J$, $\nabla .B = 0$.

References

- 1. Berkley Physics Course. Electricity and Magnetism Ed. E. M. Purcell Mcgraw Hill
- 2. Physics Volume 2, D. Halliday and R. Resnick
- 3. Introduction to Electrodynamics: D. J. Griffiths, 4" Edition, Printice Hall.
- 4. Electricity and Magnetism: S. S. Atwood Dover.
- 5. Electrodynamics: Emi Cossor and Bassin Lorraine. Asahi Shimbunsha Publishing Ltd.

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