Syllabus-2023-2024

(SOS)(BSc_PCM)

Title of the Course	Hindi[T]
Course Code	AEC0101

Part A

Year	1st	**Semester**	1st	**Credits**	L	T	P	C
					2	0	0	2
Course Type	Theory only							
Course Category	Foundation core							
Pre-Requisite/s	varn gyan , shabd gyan			**Co-Requisite/s**	lipi , samajdari			
Course Outcomes & Bloom's Level	**CO1-** भारतीय ज्ञान परम्परा सेवि द्यार्थि यर्थि ों को अवगत कराना**(BL1-Remember)** **CO2-** सांस्कृतिक ,एवं राष्ट्रिय एकता।।**(BL3-Apply)** **CO3-** भाषा अध्ययन एवं अध्यापन का उद्देश्य विद्यार्थियों के सर्वांगीण विकास में सहायक है। छात्र जीविकोपार्जन के लक्ष्यों का सहज संधान कर सके । जीविकोपार्जन के लक्ष्यों का सहज संधान कर सके । **(BL2-Understand)** **CO4-** पाठ्यक्रम में व्याकरण ,सामान्य तथा पारम्परिक साहित्य , लेखन परम्परा का बोध करना एवं समग्र व्यक्तित्व का विकास करना है। **(BL3-Apply)**							
Coures Elements	Skill Development ✓ Entrepreneurship ✕ Employability ✕ Professional Ethics ✕ Gender ✕ Human Values ✓ Environment ✕		**SDG (Goals)**					

Part B

Modules	Contents	Pedagogy	Hours
1	स्वतंत्रता पुकारती {कविता} वाक्य संरचना और अशुद्धियाँ {३ संकलित } जयशंकर प्रसाद वाक्य संरचना और अशुद्धियाँ {३ संकलित } जयशंकर प्रसाद वाक्य संरचना और अशुद्धियाँ {३ संकलित } जयशंकर प्रसाद पुष्प की अभिलाषा२ {कविता}	Audio/Video clips, group discussion, lecture with PPTs, quiz	5
2	१ नमक का दरोगा} { कहानी} ---प्रेमचंद २ एक थे राजा भोज { निबंध } --त्रिभुवननाथ शुक्ल ३ पर्यायवाची , विलोम , एकार्थी ,अनेकार्थी एवं शब्दयुग्म शब्द {संकलित }	Audio/Video clips, group discussion, lecture with ppt, quiz	4
3	} { निबंध } ---स्वा1मी विवेकानंद २ लोकतंत्र एक धर्म है{ निबंध --डॉ सर्वपल्ली राधा कृष्णन ३ नहीं रूकती है नदी --हीरालाल बाछोतिया ४ पल्लवन १ भगवान् बुद्ध	Audio/Video clips, group discussion, lecture with ppt, classroom presentations	5
4	अफसर{ निबंध -शरद जोशी २ हमारी सांस्कृतिक एकता संग्रह में -भारत एक है{ निबंध -रामधारी सिंह दिनकर ३ संक्षेपण {संकलित }	Audio/Video clips, group discussion, lecture with ppt, classroom presentations	4
5	नैतिक मूल्य परिचय एवं वर्गीकरण{ आलेख } --डॉ शशि राय २ आचरण की सभ्यता --सरदार पूर्ण सिंह ३ अंतर्ज्ञान और नैतिक जीवन{लेख --डॉ सर्वपल्ली राधाकृ ४ अप्प दीपोभव {लेख } -स्वामी श्रद्धानन्द	Audio/Video clips, group discussion, lecture with ppt	5

Part D(Marks Distribution)

Theory					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**
100	40	40	12	60	
Practical					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**

Part E

Books	hindi bhasha aur naitik mulay
Articles	
References Books	hindi bhasha aur naitik mulay
MOOC Courses	
Videos	

Course Articulation Matrix

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	-	-	2	-	-	-	-	2	-	-	-	-	-	-
CO2	-	2	-	-	-	2	-	1	-	-	-	-	-	-	-
CO3	2	-	-	1	-	-	-	-	-	2	-	-	-	-	-
CO4	2	-	-	-	-	2	-	-	1	-	-	-	-	-	-
CO5	1	-	-	-	1	-	-	2	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Syllabus-2023-2024

(SOS)(BSc_PCM)

Title of the Course	Fundamental of Chemistry -I
Course Code	BSCH0101[T]

Part A

Year	1st	**Semester**	1st	**Credits**	L	T	P	C
					3	0	1	4
Course Type	Embedded theory and lab							
Course Category	Discipline Core							
Pre-Requisite/s	Knowledge of periodic table and atomic structure			**Co-Requisite/s**				
Course Outcomes & Bloom's Level	**CO1-** To remember basic knowledge of Atomic Structure, Chemical bonding**(BL1-Remember)** **CO2-** To understand Properties of Inorganic Compounds**(BL2-Understand)** **CO3-** To Apply the compounds in the application**(BL3-Apply)** **CO4-** To Analyse the Structure and Properties of Inorganic Compounds**(BL4-Analyze)** **CO5-** To Evaluate the results analyzed**(BL5-Evaluate)**							
Coures Elements	Skill Development ✓ Entrepreneurship ✕ Employability ✓ Professional Ethics ✕ Gender ✕ Human Values ✕ Environment ✕		**SDG (Goals)**	SDG4(Quality education)				

Part B

Modules	Contents	Pedagogy	Hours
Module 1	Dual Nature of matter idea of de Broglic matter waves, Heisenberg uncertainty principle, atomic orbitals, Schrodinger wave equation, significance of Y and Y', quantum numbers, radial and angular wave functions and probability distribution curves, shapes of s, p and d orbitals. Aufbau and Pauli exclusion principles, Hund's multiplicity rule, Electronic configuration of the elements, effective nuclear charge. B. Periodic Properties Atomic and ionic radii, ionization energy, electron affinity and electro negativity-definition, methods of determination or evaluation, Trends in periodic table and applications in predicting and explaining the chemical behavior	Stoy telling activity Experienced examples, Quizzes Summarizing, PPT's Leaving Questions	8
Module 2	UNIT – II: Chemical Bonding – part I (A) Covalent Bond-valence bond theory and its limitations. Directional characteristics of covalent bond, various types of hybridization and shapes of simple inorganic molecules and ions. Valence shell electron pair repulsion (VSEPR) theory to NH3,H3O SF4, CIF3 and H2O MO theory, homo nuclear and hetero nuclear (CO and NO)4 diatomic molecules, multicenter bonding in electron deficient molecules, bond strength and bond energy.		8
Module 3	UNIT – III: Chemical Bonding – part II (A) Ionic Solids-Ionic structures, radius ratio effect and coordination number, limitation of radius ratio rule, lattice defects, semiconductors, lattice energy and Born-Haber cycle, solvation energy and solubility of ionic solids, polarizing power and polarisability of ions. Fajan's rule. Metallic bond-free electron, balance bond and band theories. (B) Weak Interactions-Hydrogen bonding, van der waals forces 1. Chemistry of nobles gases	Demonstrations, Videos, PPT's Quizes, Group discussions	8
Module 4	S-Block Elements Comparative study Li and Mg. diagonal relationship, salient features of hydrides, solvation and complexation tendencies including their function in bio systems an introduction to alkyls and aryls. p-Block Elements part – I Comparative study Be and Al (including diagonal relationship) of groups 13-17 elements. Compounds like hydrides. Oxides, oxyacids and halides of groups 13-16	Interactive videos PPT's Experienced examples, Quizzes', Seminar	8
Module 5	p-Block Elements Part – II Hydrides of boron-diborane and higher boranes, borazine, boroydrides, Fullerenes, fluorocarbons, silicates (structural principle),	Interactive videos , PPT's Experienced examples, Quizzes',	8

	tetra-sulphur tetra-nitride, basic properties of halogens, interhalogens and Polyhalides.		

Part C

Modules	Title	Indicative-ABCA/PBL/ Experiments/Field work/ Internships	Bloom's Level	Hours
Module 4	Anionic Radical Testing	Experiments	BL3-Apply	8
Module 4	Cationic Radical Testting	Experiments	BL3-Apply	8
Module 4	To study the structure of Ionic solids	PBL	BL3-Apply	6
Experiment	To Identify the Acid Radical(Acetate)	Experiments	BL3-Apply	2
Experiment	To Identify the Acid Radical (Sul hide)	Experiments	BL3-Apply	2
Experiment	To Identify the Acid Radical(Carbonate)	Experiments	BL3-Apply	2
Experiment	To Identify the Acid Radical (Oxalate)	Experiments	BL3-Apply	2
Experiment	To Identify the Ammonium Basic Radical	Experiments	BL3-Apply	2

Part D(Marks Distribution)

Theory					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**
100	40	40	12	60	
Practical					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**
100	50	40	20	60	

Part E

Books	M.N.N Tandon Unified Chemistry 2010 O.P Tandon Chemistry Third Edition
Articles	
References Books	J.D.Lee Concise Inorganic Chemistry Fifth Edition J.E. Huheey Inorganic Chemistry Fourth Edition Cotton Wilkinson Advanced Inorganic Chemistry Third Edition
MOOC Courses	https://nptel.ac.in/courses/104103069
Videos	https://nptel.ac.in/courses/104103069

Course Articulation Matrix

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	1	1	-	-	-	-	-	-	-	-	-	3	2	2
CO2	3	3	1	-	-	-	-	-	-	-	-	-	3	2	1
CO3	3	3	1	-	-	-	-	-	-	-	-	-	2	2	1
CO4	3	3	1	-	-	-	-	-	-	-	-	-	1	2	2
CO5	3	2	1	-	-	-	-	-	-	-	-	-	1	1	2
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Syllabus-2023-2024

(SOS)(BSc_PCM)

Title of the Course	Calculus and Differential Equations
Course Code	BSMA0101[T]

Part A

Year	1st	**Semester**	1st	**Credits**	L	T	P	C
					4	0	0	4
Course Type	Theory only							
Course Category	Disciplinary Minor							
Pre-Requisite/s	calculus and differential equations include a strong foundation in algebra, trigonometry, pre-calculus, and analytical geometry. Understanding of functions, limits, and basic calculus concepts like derivatives and integrals is essential for success in these subjects.			**Co-Requisite/s**	calculus and differential equations often include concurrent enrollment in courses covering algebra, trigonometry, and pre-calculus. Additionally, a solid understanding of analytical geometry and basic calculus concepts such as limits, derivatives, and integrals is recommended for effective comprehension and application of these subjects.			
Course Outcomes & Bloom's Level	**CO1-** To get insight of fundamental knowledge of Differential, integration and differential equation. **(BL1-Remember)** **CO2-** To understand various techniques to solve real life problems through examples.**(BL2-Understand)** **CO3-** To apply notation of derivative in identifying increasing/ decreasing function, extreme values, concavity, convexity and also higher order derivatives which arise in all applied sciences.**(BL3-Apply)** **CO4-** To analyze behavior of curve through tracing and solution of ordinary differential equation.**(BL4-Analyze)** **CO5-** To evaluate Area, Quadrature, Rectification and Orthogonal trajectories of curves. **(BL5-Evaluate)**							
Coures Elements	Skill Development ✓ Entrepreneurship ✕ Employability ✓ Professional Ethics ✕ Gender ✕ Human Values ✕ Environment ✕		**SDG (Goals)**	SDG4(Quality education)				

Part B

Modules	Contents	Pedagogy	Hours
1	Successive differentiation, Leibnitz theorem, Maclaurin's and Taylor's series expansions, asymptotes.	Audio/Video clips, group discussion, lecture with ppt, quiz	8
2	Curvature, tests for concavity and convexity, Points of inflexion, Multiple points, Tracing of curves in Cartesian and polar coordinates.	Audio/Video clips, group discussion, lecture with ppt, Review Analysis	8
3	Integration of transcendental functions, Definite integrals, Reduction formulae, Quadrature, Rectification.	Audio/Video clips, group discussion, lecture with ppt, classroom presentations, Analysis	8
4	Linear differential equations and equations reducible to the linear form, Exact differential equations, First order and higher degree equations solvable for x, y and p, Clairaut's equation and singular solutions, Geometrical meaning of a differential equation, Orthogonal trajectories.	Audio/Video clips, group discussion, lecture with ppt, quiz	8
5	Linear differential equation with constant coefficients, Homogeneous linear ordinary differential equations, Linear differential equations of second order, Transformation of equations by changing the dependent variable independent variable, Method of variation of parameters.	Audio/Video clips, group discussion, lecture with ppt, quiz	8

Part D(Marks Distribution)

Theory					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**
100	40	60	18	40	22
Practical					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**
	0				

Part E

Books	G. F. Simmons Differential Equations Tata McGraw Hill, 1972.
Articles	
References Books	H. T. H. Piaggio Elementary Treatise on Differential Equations and their Application C.B.S. Publisher & Distributors, Delhi, 1985
MOOC Courses	https://onlinecourses.nptel.ac.in/noc24_ma12/preview https://onlinecourses.nptel.ac.in/noc24_ma37/preview
Videos	https://onlinecourses.nptel.ac.in/noc24_ma12/preview https://onlinecourses.nptel.ac.in/noc24_ma20/preview https://onlinecourses.nptel.ac.in/noc24_ma37/preview https://onlinecourses.nptel.ac.in/noc24_ma37/preview

Course Articulation Matrix

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	-	-	-	2	2	-	1	-	-	-	-	1	-	1
CO2	3	3	1	3	3	2	-	1	-	1	-	-	2	-	2
CO3	3	2	-	1	3	-	-	-	-	-	-	-	1	3	2
CO4	3	2	-	2	-	-	-	-	-	-	-	-	-	3	1
CO5	2	2	-	1	-	-	-	-	-	-	-	-	-	2	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Syllabus-2023-2024

(SOS)(BSc_PCM)

Title of the Course	Mechanics
Course Code	BSPH0101[T]

Part A

Year	1st	**Semester**	1st	**Credits**	L	T	P	C
					3	0	1	4
Course Type	Embedded theory and lab							
Course Category	Disciplinary Major							
Pre-Requisite/s	Knoeledge of Physics upto Class 12			**Co-Requisite/s**	Knoeledge of Physics upto Class 12			
Course Outcomes & Bloom's Level	**CO1-** To remember the basic laws of mechanics**(BL1-Remember)** **CO2-** Understand the basic concepts of Newtonian Mechanics,**(BL2-Understand)** **CO3-** To enable students to apply the Laws of mechanics to various mechanical systems**(BL3-Apply)** **CO4-** To analyze the applications of Laws of mechanics to various mechanical systems. **(BL4-Analyze)** **CO5-** To evaluate the laws of mechanics and its application to various mechanical systems. **(BL5-Evaluate)**							
Coures Elements	Skill Development ✓ Entrepreneurship ✕ Employability ✓ Professional Ethics ✕ Gender ✕ Human Values ✕ Environment ✕		**SDG (Goals)**	SDG4(Quality education)				

Part B

Modules	Contents	Pedagogy	Hours
1	Mathematical Physics Addition, subtraction and product of two vectors; Polar and axial vectors and their examples from physics; Triple and quadruple product (without geometrical applications); Scalar and vector fields; Differentiation of a vector; Repeated integral of a function of more than one variable; Unit tangent vector and unit normal vector; Gradient, Divergence and Curl; Laplacian operator; Idea of line, surface and volume integrals; Gauss', Stokes' and Green's Theorems	Audio/Video clips, group discussion, lecture with ppt, on white board, quiz	8
2	Unit-II Newton's laws and Conservation principle Position, Velocity and Acceleration Vector, Components of velocity and acceleration in different coordinate systems. Newton's Laws of motion and its explanation with problems,and various types of forces in nature (explanation), Conservation of energy and momentum Elastic and inelastic collisions	Audio/Video clips, group discussion, lecture with ppt, on white board, quiz	8
3	Unit-III Rigid Body Dynamics Concept of rigid body, System of particles, Translational and Rotational motion, Moment of Inertia and their Product, Principal moments and axes, Calculation of moment of inertia lamina, disc, solid cylinder and sphere, Motion of Rigid Body, Euler's equation, Centre of mass and reduced Mass. Pseudo Forces (e.g. Centrifugal Force), Coriolis force and its applications	Audio/Video clips, group discussion, lecture with ppt, on white board, quiz	8
4	Unit-IV Central forces and Oscillations Motion under a central force, Derivation of Kepler's laws. Gravitational law and field, Potential due to a spherical body. Gauss & Poisson's equation of Gravitational self-energy. Concept of Simple, Periodic & Harmonic Oscillation with illustrations; Differential equation of harmonic oscillator; Kinetic and potential energy of Harmonic Oscillator; Oscillations of two masses connected by a spring;	Audio/Video clips, group discussion, lecture with ppt, on white board, quiz	8
5	Unit-VRelativistic Mechanics Michelson-Morley experiment and its outcome; Postulates of Special Theory of Relativity; Lorentz Transformations. Simultaneity and order of events; Lorentz contraction; Time dilation; Relativistic transformation of velocity ,frequency and wave number; Relativistic addition of velocities; Variation of mass with velocity	Audio/Video clips, group discussion, lecture with ppt, on white board, quiz	8

Part C

Modules	Title	Indicative-ABCA/PBL/ Experiments/Field work/ Internships	Bloom's Level	Hours
1	To verify Parallel and Perpendicular Axis theorem	Experiments	BL3-Apply	3
2	To find out moment of inertia fly whee	Experiments	BL3-Apply	3
3	To verify the forces in different members of jib crane	Experiments	BL4-Analyze	3
4	To verify parallelograms law using Gravesend Apparatus	Experiments	BL4-Analyze	3

Part D(Marks Distribution)

Theory					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**
100	40	60	18	40	
Practical					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**
100	50	60	30	40	

Part E

Books	University Physics by Sears and Zeemansky
Articles	
References Books	Mechanics by D.S. Mathur
MOOC Courses	
Videos	

Course Articulation Matrix

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	-	-	-	3	3	2	-	1	1	-	-	-	-	-
CO2	2	-	3	-	-	-	-	-	-	-	-	-	-	-	-
CO3	2	3	3	3	3	-	-	-	-	-	-	-	-	-	-
CO4	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-
CO5	1	-	-	3	-	2	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Syllabus-2023-2024

(SOS)(BSc_PCM)

Title of the Course	Properties of Matter
Course Code	BSPH0102[T]

Part A

<table>
<tr><td rowspan="2">Year</td><td rowspan="2">1st</td><td rowspan="2">Semester</td><td rowspan="2">1st</td><td rowspan="2">Credits</td><td>L</td><td>T</td><td>P</td><td>C</td></tr>
<tr><td>3</td><td>0</td><td>0</td><td>3</td></tr>
<tr><td>Course Type</td><td colspan="8">Theory only</td></tr>
<tr><td>Course Category</td><td colspan="8">Disciplinary Major</td></tr>
<tr><td>Pre-Requisite/s</td><td colspan="3">Knowledge of Physics upto Class 12</td><td>Co-Requisite/s</td><td colspan="4">Knowledge of Mathematics upto Class 12</td></tr>
<tr><td>Course Outcomes & Bloom's Level</td><td colspan="8">CO1- To remember the basic laws of Properties of Matter. (BL1-Remember)
CO2- Understand the basic concepts of Properties of Matter (BL2-Understand)
CO3- To enable students to apply the Laws of Properties of Matter (BL3-Apply)
CO4- To analyze the applications of Laws of Properties of Matter(BL4-Analyze)
CO5- To evaluate the laws of Properties of Matter and its application to various mechanical systems.(BL5-Evaluate)</td></tr>
<tr><td>Coures Elements</td><td colspan="3">Skill Development ✓
Entrepreneurship ✕
Employability ✓
Professional Ethics ✕
Gender ✕
Human Values ✕
Environment ✕</td><td>SDG (Goals)</td><td colspan="4">SDG4(Quality education)</td></tr>
</table>

Part B

Modules	Contents	Pedagogy	Hours
1	Unit-I Elasticity Elasticity, Effect of Temperature and Impurities, Hooks law and Stress strain curve, Young Modulus, Bulk Modulus, and Modulus of rigidity, Poisson's ratio, relation among various Elastic moduli, Determination of Young Modulus	Audio/Video clips, group discussion, lecture with ppt, on white board, quiz	8
2	Unit II Rigidity and bending Torsion of Cylindrical rod and Torsional rigidity, Torsion pendulum, Determination of Modulus of Rigidity by Torsional oscillations, Bending of beams, Cantilever loaded at free end, Cantilever supported at end loaded in the middle, determination of Y by bending od beam	Audio/Video clips, group discussion, lecture with ppt, on white board, quiz	8
3	Unit III Surface tension Surface Tension: Surface Tension, Angle of Contact, Capillary Rise Method; Energy required to raise a liquid in the capillary tube; Factors affecting surface tension; Jaeger's method for Determination of surface tension; Applications of Surface Tension.	Audio/Video clips, group discussion, lecture with ppt, on white board, quiz	8
4	Unit-IV Viscosity Concept of Viscous Forces and Viscosity; Steady and Turbulent Flow, Reynolds's number; Equation of Continuity; Bernoulli's Principle; Application of Bernoulli's equation - (i) Speed of Efflux (ii) Venturi meter (iii) Aspirator Pump(iv) Change of plane of motion of a spinning ball.	Audio/Video clips, group discussion, lecture with ppt, on white board, quiz	8
5	Unit-V Ultrasonic and Acoustics Ultrasonic waves, production of ultrasonic waves, Detection and application of ultrasonic, Acoustics- Reverberation time and its measurement- Sabine's formulaAbsorption coefficient and its determination- Factors affecting architectural acoustics and their remedy, Sound absorbing materials.	Audio/Video clips, group discussion, lecture with ppt, on white board, quiz	8

Part D(Marks Distribution)

Theory					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**
100	40	60	18	40	
Practical					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**

Part E

Books	University Physics by Sears and Zeemansky
Articles	
References Books	General Properties of matter by D S Mathur
MOOC Courses	
Videos	

Course Articulation Matrix

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	-	-	-	3	3	2	-	1	1	-	-	-	-	-
CO2	2	-	3	-	-	-	-	-	-	-	-	-	-	-	-
CO3	2	3	3	3	3	-	-	-	-	-	-	-	-	-	-
CO4	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-
CO5	1	-	-	3	-	2	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Syllabus-2023-2024

(SOS)(BSc_PCM)

Title of the Course	NCC
Course Code	NCC0101

Part A

Year	1st	**Semester**	1st	**Credits**	L	T	P	C
					2	0	2	4
Course Type	Theory only							
Course Category	Generic Elective							
Pre-Requisite/s	Should be acquainted with the basics knowledge of General Awareness about Leadership Quality, Personality Development, Defense system etc			**Co-Requisite/s**				
Course Outcomes & Bloom's Level	**CO1-** Develop the qualities of social skills.**()** **CO2-** Imbibe leadership qualities. **()** **CO3-** Be motivated to serve the nation by joining Armed forces. **()** **CO4-** Contribute in environmental awareness and conservation activities**()** **CO5-** Keep abreast of current affairs & general awareness.**()** **CO6-** Effectively contribute in managing disaster relief tasks**()**							
Coures Elements	Skill Development ✓ Entrepreneurship ✕ Employability ✓ Professional Ethics ✕ Gender ✕ Human Values ✓ Environment ✓		**SDG (Goals)**	SDG3(Good health and well-being) SDG4(Quality education) SDG6(Clean water and sanitation) SDG13(Climate action) SDG15(Life on land)				

Part B

Modules	Contents	Pedagogy	Hours
Unit 1. Personality Development	Group Discussions – Social Skills & Time management.	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion	5
Unit 2. Leadership Development	Case Studies – Case Studies – Ratan Tata, Rabindra Nath Tagore, Role of NCC cadets in 1965 war.	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion	5
Unit 3. Disaster management	(i) Initiative Trg, Organising Skills. (ii) Dos and Don'ts. (iii) Natural Disasters. (iv) Man Made Disasters. (v) Fire Services and Fire Fighting.	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion	5
Unit-4.Environmental Awareness	Adventure Environmental Awareness and Conservation, Local and global approaches to conserve nature.	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion	5
Unit 5. General Awareness & Armed Forces	General Awareness, Army, Navy, Air Force and Central Armed Police Forces.	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion	5

Part D(Marks Distribution)

Theory					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**
0	0	0	0	0	0
Practical					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**

Part E

Books	R Gupta ; NCC National Cadet Corps A, B & C Certificate Examination Book; Ramesh Publishing House, 2018.
Articles	https://indiancc.mygov.in/
References Books	Singh, Neeraj; A Hand Book of NCC; Kanti Prakashan Publisher Cadet training hand book specialised subjects (2017)
MOOC Courses	
Videos	https://www.youtube.com/watch?v=eBA5t4iepAA

Course Articulation Matrix

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Syllabus-2023-2024

(SOS)(BSc_PCM)

Title of the Course	India in 21st centuary
Course Code	VAC0101[T]

Part A

Year	1st	Semester	1st	Credits	L	T	P	C
					2	00	00	2
Course Type	Theory only							
Course Category	Skill Enhancement Courses							
Pre-Requisite/s	1. *Understanding of Sociological Concepts*: A foundational knowledge of sociological concepts is essential to grasp the composition of Indian society discussed in Unit I. This includes understanding social institutions, cultural environments, and threats to national integration. 2. *Historical Background*: Familiarity with the history of India, particularly the Indian Freedom Movement, is crucial for comprehending Unit II. Knowledge of events such as the Revolt of 1857, the emergence of nationalism, and the various phases of the freedom struggle provides context for understanding the birth of the Indian nation-state. 3. *Awareness of Political Movements*: A basic understanding of political movements in India, particularly those led by figures like Gandhi, is necessary for Unit III. Familiarity with concepts like non-cooperation, civil disobedience, and the Quit India movement aids in analyzing the dynamics of Indian freedom and partition. 4. *Knowledge of Post-Independence Era*: Understanding the phases of nation-building since independence is vital for Unit IV. This includes awareness of the planned progress era, populist policies, and the paradigm shift towards liberalization and globalization. Knowledge of responses from different societal groups and regions enriches the understanding of India's post-independence journey. 5. *Global Awareness*: Unit V delves into global concerns such as environmental issues, globalization, and movements for democracy and sustainability. A broad understanding of global trends and their impact on nations is necessary to engage with this content effectively.		**Co-Requisite/s**	1. *Foundational Understanding of Sociological Concepts*: - Understanding social institutions, cultural environments, and threats to national integration is fundamental. - Familiarity with sociological theories such as functionalism, conflict theory, and symbolic interactionism can provide a deeper comprehension of societal dynamics. 2. *Historical Context of India*: - Knowledge of Indian history, including the colonial period, the struggle for independence, and post-independence developments, offers context for understanding the evolution of Indian society. - Understanding the socio-economic impacts of colonial rule and the transition to independence enhances insight into contemporary social issues. 3. *Understanding of Political Movements in India*: - Knowledge of key figures, ideologies, and strategies of political movements in India, including those led by Gandhi, Nehru, and other prominent leaders, is essential. - Awareness of the socio-political context of colonial India and the role of various stakeholders in the struggle for independence enriches understanding. 4. *Familiarity with Post-Independence Developments*: - Understanding the socio-economic and political changes in post-			

			independence India, including the Nehruvian era, economic reforms, and social movements, is crucial. - Awareness of key policies, such as the Green Revolution, reservation system, and economic liberalization, provides insights into contemporary Indian society. 5. *Global Perspective and Awareness*: - Knowledge of global trends in areas such as technology, economics, environment, and geopolitics enhances understanding of India's position in the global context. - Understanding global issues like climate change, international trade, and human rights movements enables students to analyze their impact on India and vice versa.
Course Outcomes & Bloom's Level	**CO1-** 1. Students are able to define, identify and explain the process of Indian Freedom movement and development of political Institutions.**(BL1-Remember)** **CO2-** 2. Students are able to summarize and extract the time before Independence and after Independence India.**(BL2-Understand)** **CO3-** 3. Students are able to evaluate India society, Its nature and agencies of social change with reference to modernization.**(BL5-Evaluate)** **CO4-** 4. Students are able to write the historical accounts that shaped the very nature and character of 20 and 21 st century India with reference to Nation Building and constitution**(BL6-Create)**		
Coures Elements	Skill Development ✓ Entrepreneurship ✕ Employability ✕ Professional Ethics ✕ Gender ✓ Human Values ✓ Environment ✕	**SDG (Goals)**	SDG3(Good health and well-being) SDG4(Quality education) SDG5(Gender equality) SDG10(Reduced inequalities) SDG12(Responsible consuption and production) SDG13(Climate action)

Part B

Modules	Contents	Pedagogy	Hours
1	1. Composition of Indian Society Society. (a) Introduction of Nature of India society and Indian nation state. (b) Major Social Institutions and Organization and threats to national integration (c) Social and Cultural Environment of India Society in 19th ,20th and 21st century.	● Lectures and visual PowerPoint slides ● Students read text and commentary on assigned topics as well as published research articles before the lectures ● Students read cases discussed in the text-books, as well as more detailed articles. ● Students participate in class discussions to crystallize the concepts	5
2	Unit II Indian Freedom Movement-emergence. 5 1) Revolt of 1857 , Rise of nationalism & Birth of Congress 2). Partition of Bengal & swadeshi movement, Home rule movement Round table conferences 3) Revolutionary movements, Gandhian movements (i) Non-Cooperation (ii) Civil Disobedience (iii) Quit India movement	Lectures and visual PowerPoint slides ● Students read text and commentary on assigned topics as well as published research articles before the lectures ● Students read cases discussed in the text-books, as well as more detailed articles. ● Students participate in class discussions to crystallize the concepts	5
3	Unit 3 Indian freedom and Partition 5 1.) Communalism – Rise & spread (11.) Muslim league & its politics , Hindu communalism . 111.) India's partition & independence References	Lectures and visual PowerPoint slides ● Students read text and commentary on assigned topics as well as published research articles before the lectures ● Students read cases discussed in the text-books, as well as more detailed articles. ● Students participate in class discussions to crystallize the concepts	5
4	UNIT IV Nation building Since Independence 5 3 stages of making of the Indian Nation state: - 3 . Era of planned progress. (1951-1971) Period of Populist policies and programmes (1971 to 1992) Period of paradigm shift towards liberalization and globalization (since 1992). Responses of various classes, communities and regions.	Lectures and visual PowerPoint slides ● Students read text and commentary on assigned topics as well as published research articles before the lectures ● Students read cases discussed in the text-books, as well as more detailed articles. ● Students participate in class discussions to crystallize the concepts	5
5	Unit V Nation Building and Global Concern 5 a. Environmental concerns in 21st century b. Question of Globalization and its Impact c. Global Movement for Democracy and sustainability	Lectures and visual PowerPoint slides ● Students read text and commentary on assigned topics as well as published research articles before the lectures ● Students read cases discussed in the text-books, as well as more detailed articles. ● Students participate in class discussions to crystallize the concepts	4

Part D(Marks Distribution)

Theory					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**
100	40	40	12	60	28
Practical					
Total Marks	**Minimum Passing Marks**	**External Evaluation**	**Min. External Evaluation**	**Internal Evaluation**	**Min. Internal Evaluation**
00	00	00		00	

Part E

Books	1. Bose, N.K. 1967, Culture and Society in India. Bombay: Asia Publishing House 2. Dube, S.C. 1990, Indian village.(New Delhi: National Book Trust.) 3. Percival Spear : History of Indian Society , Penguin , 1966. 4. Uberoi, Patrica : Family , kinship and Marriage , New Delhi : oxford University Press , 1995 , PP 50 to 73 , 416 to 451 5. Gandhi , M K : Removal of Untouchability , Navjeevan Publishing House , Ahmadabad , 1954
Articles	
References Books	1. A Nagraj, 1998, Jeevan Vidya ek Parichay, Divya Path Sansthan, Amarkantak.
MOOC Courses	
Videos	1.https://www.youtube.com/watch?v=i8N6YRTJsDk 2. https://youtu.be/MWsT7x3qd3E 3.https://www.youtube.com/watch?v=pQghqJSUAK4&list= 4.https://youtu.be/9BEU8A_JZPU 5.https://youtu.be/pPsKQwaZ4dg

Course Articulation Matrix

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1
CO2	-	-	-	-	-	1	-	-	2	-	-	-	1	1	1
CO3	-	-	-	-	-	2	2	-	-	-	-	-	2	1	1
CO4	-	-	-	-	-	1	-	-	-	-	-	-	2	1	2
CO5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-