



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

BE Ist SEMESTER

BE 11 PHYSICS

TOTAL -60 HOURS

OBJECTIVE:

The students are to be learn the below mentioned:

- Electrostatic in vacuum
- Electrostatic in linear dielectric medium
- Magnenostator in linear magnetic medium
- Faraday's law
- Electromagnetic waves

Module 1: Wave nature of particles and the Schrodinger equation (12 HOURS)

Introduction to Quantum mechanics, Wave nature of Particles, operators, Time-dependent and time independent Schrodinger equation for wave function, Application: Particle in a one dimensional Box, Born interpretation, Free-particle wave function and wave-packets, v_g and v_p relation Uncertainty principle. Module

2: Wave optics ((12 HOURS)

Huygens' principle, superposition of waves and interference of light by wave front splitting and amplitude splitting; Young's double slit experiment, Newton's rings, Michelson interferometer, MachZehnder interferometer. Farunhofer diffraction from a single slit and a circular aperture, the Rayleigh criterion for limit of resolution and its application to vision; Diffraction gratings and their resolving power. Module

3: Introduction to solids ((12 HOURS)

Free electron theory of metals, Fermi level of Intrinsic and extrinsic, density of states, Bloch's theorem for particles in a periodic potential, Kronig-Penney model(no derivation) and origin of energy bands. V-I characteristics of PN junction, Zener diode, Solar Cell, Hall Effec .

Module 4: Lasers ((12 HOURS)

Einstein's theory of matter radiation interaction and A and B coefficients; amplification of light by population inversion, different types of lasers: gas lasers (He-Ne, CO₂), solid-state lasers(ruby, Neodymium), Properties of laser beams: mono-chromaticity, coherence, directionality and brightness, laser speckles, applications of lasers in science, engineering and medicine. Introduction to Optical fiber, acceptance angle and cone, Numerical aperture, V number, attenuation. Module

5: Electrostatics in vacuum (12 HOURS)

Calculation of electric field and electrostatic potential for a charge distribution; Electric



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displacement, Basic Introduction to Dielectrics, Gradient, Divergence and curl, Stokes' theorem, Gauss Theorem, Continuity equation for current densities; Maxwell's equation in vacuum and non-conducting medium; Poynting vector.

List of Experiment

1. To determine the dispersive power of prism.
2. To determine the λ of sodium light with the help of newton's Ring.
3. Resolving Power of Telescope.
4. YDSE (Young's double slit Experiment).
5. To determine the frequency of AC mains supply.
6. V-I Characteristics of P-N junction diode.
7. To determine the λ of diode loses by single slit diffraction.
8. To determine the plank's constant with the help of photocell.
9. Hall's effect experiment.
10. Calibration of ammeter by using reference zener diode. w.e.f. July 2018
11. To study the effect of temperature on reverse saturation current in P-N junction diode and to determine the energy band gap.
12. To determine the λ of sodium by using plane diffraction grating.
13. To determine the prominent lines of mercury source by plane diffraction grating.
14. To determine the numerical aperture of an optical fiber.
15. To determine λ of given laser by plane diffraction grating.

OUTCOME:

- Experimental exposure to electromagnetic induction and electromagnetic breaking.
- LC circuit and LCR circuit
- Resonance phenomenon in LCR circuit
- Magnetic field from Helmholtz coil
- Measurement of Lorentz force in a vacuum tube

Suggested Reference Books

1. A. Ghatak, Optics.
2. O. Svelto, Principles of Lasers.
3. David Griffiths, Introduction to Electrodynamics.
4. D.J. Griffiths, Quantum Mechanics.
5. Halliday & Resnick, Physics.



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BE 1st SEMESTER BE 12 MATHEMATICS-I

TOTAL -60 HOURS

OBJECTIVE:

- The objective of their course is to familiarize the prospective engineers with techniques in calculus, multivariate analyzer and linear algebra. it aim to equip the students with standard concepts and tools at an intermediate to advance level that will serve them well towards taking more advanced level of mathematics and applications that they would find useful in their disciplines.

Module 1: Calculus:

Evolutes and involutes; Evaluation of definite and improper integrals; Beta and Gamma functions and their properties; Applications of definite integrals to evaluate surface areas and volumes of revolutions. (12 HOURS)

Module 2: Calculus:

Rolle's Theorem, Mean value theorems, Taylor's and Maclaurin theorems with remainders; indeterminate forms and L'Hospital's rule; Maxima and minima. (12 HOURS)

Module 3: Sequences and series:

Convergence of sequence and series, tests for convergence; Power series, Taylor's series, series for exponential, trigonometric and logarithm functions; Fourier series: Half range sine and cosine series, Parseval's theorem. (12 HOURS)

Module 4: Multivariable Calculus (Differentiation):

Limit, continuity and partial derivatives, directional derivatives, total derivative; Tangent plane and normal line; Maxima, minima and saddle points; Method of Lagrange multipliers; Gradient, curl and divergence. (12 HOURS)

Module 5: Matrices

Inverse and rank of a matrix,rank-nullity theorem; System of linear equations; Symmetric, skewsymmetric and orthogonal matrices; Determinants; Eigenvalues and eigenvectors; Diagonalization of matrices; Cayley-Hamilton Theorem, and Orthogonal transformation.

(12 HOURS)

OUTCOME:

The student will learn

- To apply differential and integral calculus to notions of curvature and to improper integrals, apart from some other applications they will have a basic understanding of beta and gamma functions.
- The fallout of Rolle's Theorem that is fundamental to application of analysis to engineering problems.
- The tool of power series and Fourier series for learning advanced Engineering Mathematics.



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- To deal with functions of several variables those are essential in most branches of engineering.
- The essential tool of matrices and linear algebra in comprehensive manner.

BOOKS:

1. G.B. Thomas and R.L. Finney, Calculus and Analytic geometry, 9th Edition, Pearson, Reprint, 2002.
2. Erwin kreyszig, Advanced Engineering Mathematics, 9th Edition, John Wiley & Sons, 2006.
3. Veerarajan T., Engineering Mathematics for first year, Tata McGraw-Hill, New Delhi, 2008.
4. Ramana B.V., Higher Engineering Mathematics, Tata McGraw Hill New Delhi, 11th Reprint, 2010.
5. D. Poole, Linear Algebra: A Modern Introduction, 2nd Edition, Brooks/Cole, 2005.
6. N.P. Bali and Manish Goyal, A text book of Engineering Mathematics, Laxmi Publications, Reprint, 2008.
7. B.S. Grewal, Higher Engineering Mathematics, Khanna Publishers, 36th Edition, 2010.



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BE Ist SEMESTER

BE 13 BASIC ELECTRICAL & ELECTRONICS ENGINEERING

TOTAL -60 HOURS

OBJECTIVE

- To understand and analysis basic electrical and magnetic circuits
- To study the working principle of electrical machine and power converters
- To introduce the components of low voltage electrical installations.

MODULE I

Electrical circuit analysis- Voltage and current sources, dependent and independent sources, source conversion, DC circuits analysis using mesh & nodal method, Thevenin's & superposition theorem, star-delta transformation. phase AC circuits under sinusoidal steady state, active, reactive and apparent power, physical meaning of reactive power, power factor, 3-phase balanced and unbalanced supply, star and delta connections. **(12 HOURS)**

Module II

Transformers- Review of laws of electromagnetism, mmf, flux, and their relation, analysis of magnetic circuits. Single-phase transformer, basic concepts and construction features, voltage, current and impedance transformation, equivalent circuits, phasor diagram, voltage regulation, losses and efficiency, OC and SC test. **(12 HOURS)**

Module III

Rotating Electric machines- Constructional details of DC machine, induction machine and synchronous machine, Working principle of 3-Phase induction motor, Emf equation of 3-Phase induction motor, Concept of slip in 3-Phase induction motor, Explanation of Torque-slip characteristics of 3-Phase induction motor, Classification of self excited DC motor and generator.

(12 HOURS)

Module IV

Digital Electronics-Number systems used in digital electronics, decimal, binary, octal, hexadecimal, their complements, operation and conversion, floating point and signed numbers, Demorgan's theorem, AND, OR, NOT, NOR, NAND, EX-NOR, EX-OR gates and their representation, truth table, half and full adder circuits, R-S flip flop, J-K flip flop. **(12 HOURS)**

Module V

ELECTRONIC COMPONENTS AND CIRCUITS- Introduction to Semiconductors, Diodes, V-I characteristics, Bipolar junction transistors (BJT) and their working, introduction to CC, CB & CE transistor configurations, different configurations and modes of operation of BJT, DC biasing of BJT.

(12 HOURS)



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OUT COME:

- Get an exposure to common electrical component and their ratings
- Make electrical connections by wire of appropriate ratings.
- Understand the usages of common electrical measuring instruments.
- Understand the basic characteristics of transformer and electrical machines.
- Get an exposure to the working of power electronic converters.

BOOKS:

1. Vincent Del Toro, Electrical Engineering Fundamentals, PHI Learning, II Edition
2. S.Ghosh, Fundamentals of Electrical and Electronics Engineering, PHI, II Edition.
3. Millman, Halkias & Parikh, Integrated Electronics, Mc Graw Hill, II Edition
4. Nagrath & Kothari, Basic Electrical Engineering, III Edition TMH.
5. J.S. Katre, Basic Electronics Engg, Max Pub. Pune.
6. Hughes, Electrical and Electronic Technology, Pearson Education IX Edition



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BE Ist SEMESTER

BE 14 ENGINEERING GRAPHICS

TOTAL -60 HOURS

OBJECTIVE:

- All phase of manufacturing or construction requires the conversion of new ideas and design concept into the basic line language of graphics.

Module I

Scales: Representative factor, plain scales, diagonal scales, scale of chords.

Conic sections: Construction of ellipse, parabola, hyperbola by different methods; Normal and Tangent.

Special Curves: Cycloid, Epi-cycloid, Hypo-cycloid, Involutives, Archimedean and logarithmic spirals.

(10 HOURS)

Module II

Projection: Types of projection, orthographic projection, first and third angle projection, **Projection of points and lines**, Line inclined to one plane, inclined with both the plane, True Length and True Inclination, Traces of straight lines. (10 HOURS)

Module III

Projection of planes and solids: Projection of Planes like circle and polygons in different positions; Projection of polyhedrons like prisms, pyramids and solids of revolutions like cylinder, cones in different positions. (10 HOURS)

Module IV

Section of Solids: Section of right solids by normal and inclined planes; Intersection of cylinders.

Development of Surfaces: Parallel line and radial - line method for right solids. (10 HOURS)

Module V

Isometric Projections: Isometric scale, Isometric axes, Isometric Projection from orthographic drawing. (10 HOURS)

Module VI

Computer Aided Drafting (CAD): Introduction, benefit, software's basic commands of drafting entities like line, circle, polygon, polyhedron, cylinders; transformations and editing commands like move, rotate, mirror, array; solution of projection problems on CAD. (10 HOURS)



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OUTCOME:

The student becomes aware of below:

- Introduction to Engineering drawing covering
- Orthographic projections
- Section of solids
- Isometric projection
- Computer aided drafting

BOOKS:

1. Visvesvaraya Tech. University; A Premier on Computer Aided Engg drawing; VTU Belgaum
2. Bhatt N.D.; Engineering Drawing, Charotar
3. Venugopal K.; Engineering Graphics; New Age
4. John KC; Engg. Graphics for Degree; PHI.
5. Gill P.S.; Engineering Drawing; kataria
6. Jeyopooan T.; Engineering drawing & Graphics Using AutoCAD; Vikas
7. Agrawal and Agrawal; Engineering Drawing; TMH
8. Shah MB and Rana BC; Engg.drawing; Pearson Education
9. Luzadder WJ and Duff JM; Fundamental of Engg Drawing; PHI
10. Jolhe DA; Engg. Drawing an Introduction; TMH
11. 11 Narayana K.L.; Engineering Drawing; Scitech



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BE Ist SEMESTER

BE 15 BASIC CIVIL ENGINEERING & ENGINEERING MECHANICS

TOTAL -60 HOURS

OBJECTIVE:

- Resolve the forces.
- Find the resultant of given force system
- Find the reaction of beam
- Find the centre of gravity of composite solid.
- Find M.A.,V.R., Efficiency and establish law of machine

Module I Building Materials & Construction

Stones, bricks, cement, lime, timber-types, properties, test & uses, laboratory tests concrete and mortar
Materials: Workability, Strength properties of Concrete, Nominal proportion of Concrete preparation of concrete, compaction, curing. Elements of Building Construction, Foundations conventional spread footings, RCC footings, brick masonry walls, plastering and pointing, floors, roofs, Doors, windows, lintels, stair cases types and their suitability. (12 HOURS)

Module II Surveying & Positioning:

Introduction to surveying Instruments – levels, theodolites, plane tables and related devices. Electronic surveying instruments etc. Measurement of distances – conventional and EDM methods, measurement of directions by different methods, measurement of elevations by different methods. Reciprocal leveling. (12 HOURS)

Module –III Mapping & Sensing:

Mapping details and contouring, Profile Cross sectioning and measurement of areas, volumes, application of measurements in quantity computations, Survey stations, Introduction of remote sensing and its applications. (12 HOURS)

Module IV Forces and Equilibrium:

Graphical and Analytical Treatment of Concurrent and non- concurrent Co- planner forces, free Diagram, Force Diagram and Bow's notations, Application of Equilibrium Concepts: Analysis of plane Trusses: Method of joints, Method of Sections. Frictional force in equilibrium problems.

(12 HOURS)

Module – V Centre of Gravity and moment of Inertia:

Centroid and Centre of Gravity, Moment Inertia of Area and Mass, Radius of Gyration, Introduction to product of Inertia and Principle Axes. Support Reactions, Shear force and bending moment Diagram for Cantilever & simply supported beam with concentrated, distributed load and Couple. (12 HOURS)



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OUTCOME:

The students understand the below mention:

- Verification of law of triangle law of forces and Lami's theorem.
- Verification of law of parallelogram law of forces.
- Determination of moment of inertia of flywheel.
- Determination of coefficient of friction between two given materials.
- Determination of forces in the member of jib crane

BOOKS:

1. S. Ramamrutam & R.Narayanan; Basic Civil Engineering, Dhanpat Rai Pub.
2. Prasad I.B., Applied Mechanics, Khanna Publication.
3. Punmia, B.C., Surveying, Standard book depot.
4. Shesha Prakash and Mogaveer; Elements of Civil Engg & Engg. Mechanics; PHI
5. S.P, Timoshenko, Mechanics of structure, East West press Pvt.Ltd.
6. Surveying by Duggal – Tata McGraw Hill New Delhi.
7. Building Construction by S.C. Rangwala- Charotar publications House, Anand.
8. Building Construction by Grucharan Singh- Standard Book House, New Delhi
9. Global Positioning System Principles and application- Gopi, TMH
10. R.C. Hibbler – Engineering Mechanics: Statics & Dynamics.
11. A. Boresi & Schmidt- Engineering Mechines- statics dynamics, Thomson' Books
12. R.K. Rajput, Engineering Mechanics S.Chand & Co.



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BE Ist SEMESTER BE 16 INTRODUCTION TO YOGA

TOTAL -60 HOURS

OBJECTIVE:

The students to be made aware of yoga, concept of kriya yoga, bandha and mudras, yoga vashitha, nadi and kanda.

MODULE-1

- Meaning of yoga, Definition, Aim and Objective of yoga.
- Concept of ideal Hut and ideal place and its relevance in modern times.
- Do's and Don't for a yoga practitioner.
- Goal of Hatha yoga and relevance of hatha yoga in contemporary times. (12 HOURS)

MODULE -2

- Concept of kriya yoga.
- Concept of Asanas (Definition, various classification, number of Asanas).
- Concept of pranayama (Definition and types).
- Concept of shhat karma (Dhoti, Neti, Vasti, Kapalbhathi, Tratak, Noli, and Agnisaar). (12 HOURS)

MODULE -3

- Concept, definition of bandha and mudras.
- Concept, definition, benefits and techniques of pratyahar (Patanjalean and Hathyogic).
- Concept of Dharna and dhyana (Patanjali and non Patanjali Concept). (12 HOURS)

MODULE -4

- Highlights of yoga vashitha.
- Yamas, Niyamas, Asanas, Pranayam, Pratyahar, Dharna And Samadhi According to vashitha sanhita.
- Concept of vayu-prana 5 principal pranas function, location, 5 Uppranas sub ordinate function, location.
- Concept of Nadi and Kanda their location and range, its importance in yoga. (12 HOURS)

MODULE -5

- Raja yoga.
- Gyan Yoga.
- Karma Yoga.
- Bhakti Yoga.
- Mantra Yoga.
- Importance of Haths yoga in daily life and social life. (12 HOURS)



PRACTICAL

ASANA

1. Halasana
2. Pashichmoutanasana
3. Ardha Matsyendra Asana
4. Akarnadhanurasana
5. Uttan Kurmasana
6. Trikorasana
7. Matsyendrasana
8. Kukkutasana
9. Naukasana
10. Garulasana
11. karnaperasana
12. Padangusthaasana
13. Vatayanasana
14. Guptasana
15. Ugrasana
16. Vipreetkarni
17. Tadaasana
18. Sarwngasana
19. Varkshasana

PRANAYAMA

1. Anulom – vilom
2. Sitkari
3. Ujjayi
4. Shitali
5. Bhastrika

MUDRA

1. Yoga Mudra
2. Brahm Mudra

BHANDHA

1. Jalandhar Bhandha
2. Udiyan Bhandha

MEDITATION

1. 10-15 minutes

OUTCOME:

The students having learned types of asana, pranayama ,mudra, bhandha and Meditation.



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GROOMING TOMORROW'S LEADERS

**OFFERING NCC A -GENERAL -GENERIC ELECTIVE CREDIT
COURSE IN UNIVERSITIES UNDER CHOICE BASED CREDIT
SYSTEM TO ALIGN WITH NEW EDUCATION POLICY 2020**

CONTENTS

1. Section I : NCC Credit Course Design
2. Section II : NCC Credit Course Rules & Regulations aligned to UGC.



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SECTION I: NCC CREDIT COURSE DESIGN DOCUMENT

UNDER CHOICE BASED CREDIT SYSTEM AS GENERAL ELECTIVE FOR SENIOR DIVISION / SENIOR WING

1. **Preamble.** The National Cadet Corps (NCC) is governed by NCC Act 1948 and attendant NCC Rules. It functions under the Ministry of Defence and is headed by DGNCC. It is organised into 17 State Directorates each headed by an Additional/Deputy Director General. The aims of NCC are:-

(a) To develop character, camaraderie, discipline, secular outlook, the spirit of adventure, sportsman spirit and ideals of selfless service amongst cadets by working in teams, honing qualities such as self-discipline, self-confidence, self-reliance and dignity of labour in the cadets.

(b) To create a pool of organized, trained and motivated youth with leadership qualities in all walks of life, who will serve the Nation regard less of which career they choose.

(c) To provide a conducive environment to motivate young Indians to choose the Armed Forces as a career.

2. **Purpose.** Currently NCC training is imparted as extra-curricular activity to volunteer students from recognized schools and colleges who enroll as cadets. NCC as a Credit Course is designed with an intent to transform NCC training into a curricular activity from an extra-curricular thereby providing academic credits to students undergoing NCC training along with other attended advantages to the cadets in the college/ university.

3. **Introduction to NCC Credit Course Design.** Institutional Training is the mainstay of NCC training and it is conducted at colleges and universities by Associate NCC Officers and Armed Forces personnel. The application of knowledge gained through institutional training is further honed or developed to a higher degree in NCC Camps. The Institutional Training syllabus comprises Common Subjects and Specialised Subjects

(military component). NCC Credit Course is designed to offer Institutional Training of Senior Wing /Division is over six semesters (three years), comprising 300330 periods (excluding Camp), of which 120150 periods are meant for theory with 1008 credits and 180 periods for practical with 6 credits. Each period is counted as hour. The ratio between theory and practical in terms of number of hours of training is 5:6, but in terms of credits is 5:3, since as per CBCS two hours of practical is counted towards one period of training as against one hour for theory. In addition two separate courses have been designed for two Camps normally referred to as Annual Training Camps (ATC).



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Training schedules planned for cadets ensure that the optimum benefits of the NCC organization reach maximum number of cadets. The main emphasis is on practical training which in consonance with theory is made to facilitate active participation of learner, better assimilation of knowledge, and proper development of various skills, strengthening of mind and body which is the bedrock of NCC training.

NCC GENERAL ELECTIVE CREDIT COURSE DESIGN SUMMARY					
Semester	Credits Allocated			Total	Remarks
	Theory	Practical	Camp		
Semester - I	01	01	-	02	
Semester - II	01	01	-	02	
Semester - III	01	01	05	07	Credits merged with 3of rd1 st Sem Camp
Semester - IV	02	01	-	03	
Semester - V	01	01	05	07	Credits merged with 5of 2t
Semester - VI	02	01	-	03	
Total	08	06	10	24	Twenty-Four Credits

INSTITUTIONAL TRG SYLLABUS

COMMON SUBJECTS				
Ser	Subject	Periods (1 hour duration each)		Total
		Lectures/Tutorials	Practicals	
1	NCC General	06	-	06
2	National Integration	04		04
3	Drill	-	45	45
4	Weapon Training	-	25	25
5	Personality Development	25		25
6	Leadership	12	-	12
7	Disaster Management	13		13
8	Social Service & Community Development	08	39	47
9	Health & Hygiene	-	10	10
10	Adventure	01		01
11	Environmental awareness & conservation	03		03
12	Obstacle Training	-	09	09
13	General Awareness	04		04
14	Border & Coastal Areas	06		06
TOTAL HOURS COMMON SUBJECTS(a)		82	128	210



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SP ECIALSED SUBJECTS (ARMY)

Ser	Subject	Periods (1 hour duration each)		Total
		Lectures/Tutorials	Practical	
1	Armed Forces	09	-	09
2	Map Reading	-	24	24
3	Communications	03	03	06
4	Infantry Weapons	03	03	06
5	Field Craft & Battle Craft		22	22
6	Military History	23	-	23
Total Hours		38	52	90

SP ECIALSED SUBJECTS (NAVY)

Ser	Subject	Periods (1 hour duration each)		Total
		Lectures/Tutorials	Practicals	
1	Naval Orientation	12	-	12
2	Naval Communication	02	18	20
3	Navigation	02	03	05
4	Seamanship	15	18	33
5	Fire Fighting and Damage Control	04	03	07
6	Ship and Boat Modelling	03	10	13
Total hours		38	52	90



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SPECIALISED SUBJECTS (AIR FORCE)				
Ser	Subject	Periods (1 hour duration each)		Total
		Lectures/Tutorials	Practicals	
1	General Service Knowledge	08	-	08
2	Air Campaign	06	02	08
3	Principles of flight	06	06	12
4	Airmanship	01	07	08
5	Navigation	05	-	05
6	Aeroengines	06	-	06
7	Basic flight Instruments	03	03	06
8	Aero modelling	03	34	37
Total Hours		38	52	90

INSTITUTIONAL TRAINING: TOTAL HOURS & CREDITS

INSTITUTIONAL TRAINING: TOTAL HOURS & CREDITS				
ITEM	Periods (1 hour duration each)		Total	
	Lectures/Tutorials	Practicals		
TOTAL HOURS COMMON SUBJECTS	82	128	210	
TOTAL HOURS SPECIALISED SUBJECTS (ARMY/NAVY/AIR FORCE)	38	52	90	
TOTAL HOURS INSTITUTIONAL TRAINING	120	180	300	
TOTAL CREDITS INSTITUTIONAL TRAINING	08 CREDITS (15 HOUR THEORY = 1 CREDIT POINT)	6 CREDITS (30 HOURS PRACTICAL TRAINING = 1 CREDIT POINT)		



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NCC CAMP TRAINING SYLLABUS

COMMON SUBJECTS				
S No.	Subjects	Periods		Total
		L/T	P	
1.	Physical Training	-	18	18
2.	Drill	-	32	32
3.	Weapon Training	08	28	36
4.	National Integration and Awareness	08	-	08
5.	Personality Development	08	12	20
6.	Leadership	08	-	08
7.	Disaster Management	08	-	08
8. .	Social Service and Community Development	-	08	08
9.	Health & Hygiene	08	-	08
10.	Obstacle Training	-	04	04
11.	Military History	04	-	04
12.	Communication	04	-	04
13.	Games	-	18	18
14.	Culture	-	18	18
	TOTAL	56	138	194
<u>SPECIALISED SUBJECTS</u>				
1.	Map Reading	-	24	24
2.	Infantry Weapons	04	02	06
3.	Field Craft & Battle Craft	-	16	16
	TOTAL	04	42	46
	GRAND TOTAL	60 (4 credit)	180 (6 credit)	240 (10 credit)



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NCC CAMP TRAINING SYLLABUS (FOR THEORY)

Ser No	SUBJECT	I	II	III	IV	V	VI	TOTAL
1.	Weapon Training	-	-	04	-	04	-	08
2.	National Integration & Awareness	-	-	04	-	04	-	08
3.	Personality Development	-	-	04	-	04	-	08
4.	Leadership	-	-	04	-	04	-	08
5.	Disaster Management	-	-	04	-	04	-	08
6.	Health & Hygiene	-	-	04	-	04	-	08
7.	Military History			02		02		04
8.	Communication			02		02		04
9.	Infantry Weapons	-	-	02	-	02	-	04
	TOTAL	-	-	30	-	30	-	60
	TOTAL Credit	-	-	2	-	2	-	4

NCC CAMP TRAINING SYLLABUS (FOR PRACTICAL)

Ser No	SUBJECT	I	II	III	IV	V	VI	TOTAL
1.	Physical Training	-	-	09	-	09	-	18
2.	Drill	-	-	16	-	16	-	32
3.	Weapon Training	-	-	14	-	14	-	28
4.	Personality Development	-	-	06	-	06	-	12
5.	Social Service and Community Development	-	-	04	-	04	-	08
6.	Obstacle Training	-	-	02	-	02	-	04
7.	Games			09		09		18
8.	Culture			09		09		18
9.	Map Reading	-	-	12	-	12	-	224
10.	Infantry Weapons	-	-	01	-	01	-	02
11.	Field Craft & Battle Craft	-	-	08	-	08	-	16
	TOTAL			90		90		180
	TOTAL CREDIT			03		03		06



INSTITUTIONAL TRAINING: SEMESTER WISE THEORY DETAILED SYLLABUS (ARMY CADETS)

<u>SEMESTER I</u>					
S.No	Subject	Periods	Chapter	Lesson	Hours
1	NCC General	6	NCC-I	Aims, Objectives and Org of NCC	1
			NCC-II	Incentives	2
			NCC-III	Duties of NCC Cadets	1
			NCC-IV	NCC Camps: Types and Conduct	2
2	National Integration and Awareness	4	NI-I	National Integration: Importance and Necessity	1
			NI-II	Factors affecting National Integration	1
			NI-III	Unity in Diversity	1
			NI-IV	Threats to National Security	1
3	Personality Development	2	PD - I	Factors Self-Awareness Empathy Critical and Creative Thinking Decision Making and Problem Solving	2
4	Social Service and Community Development	3	SSCD - I	Basics of Social Service Rural Development Programmes NGO's Contribution of Youth	3
TOTAL HOURS					15
TOTAL CREDITS					1

<u>SEMESTER II</u>					
S.No	Subject	Periods	Chapter	Lesson	Hours
5	Personality Development	5	PD-II	Communication Skills	3
			PD-III	Group Discussion -Coping with Stress and Emotions	2
6	Leadership	5	L-I	<u>Leadership Capsule</u> Traits Indicators Motivation Moral Values Honour Code	3
			L-II	<u>Case Studies</u> Shivaji, Jhansi Ki Rani,	2
7	Social Service and Community Development	5	SS-IV	Protection of Children & Women Safety	1
			SS-V	Road/Rail Travel Safety	1
			SS-VI	New Initiatives	2
			SS-VII	Cyber and Mobile Security Awareness	1
TOTAL HOURS					15
TOTAL CREDITS					1



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

SEMESTER III					
S.No	Subject	hours	Chapter	Lesson	HOURS
8	Personality Development	5	PD-III	Group Discussions - Change your Mindset	2
			PD-V	Public Speaking	3
9	Leadership	4	L-II	Case Studies – APJ Abdul Kalam, Deepa Malik, Maharana Pratap, N Narayan Murthy	4
10	Disaster Management	3	DM-I	<u>Disaster Management Capsule</u> Organisation Types of Disasters Essential Services Assistance Civil Defence Organisation	3
11	Adventure	1	AD-I	Adventure activities	1
12	Border & Coastal Areas	2	BCA-I	History, Geography & Topography of Border/ Coastal Areas	2
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER IV					
S.No	Subject	hours	Chapter	Lesson	HOURS
13	Personality Development	4	PD-III	Group Discussions - Time Management, Social Skills	4
14	Leadership	3	L-II	Case Studies – Ratan Tata, Rabindra Nath Tagore, Role of NCC cadets in 1965 war	3
15	Disaster Management	9	DM-II	Initiative Trg, Organising Skills, Dos and Don'ts Natural Disasters Man Made Disasters	9
		1	DM-III	Fire Services and Fire Fighting	1
16	Environmental Awareness	3	EA-I	Environmental Awareness and Conservation	3
17	General Awareness	4	GA-I	General Awareness	4
18	Armed Forces	6	AF-1	Army, Navy, Air Force and Central Armed Police Forces	6
TOTAL HOURS					30
TOTAL CREDITS					2



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SEMESTER V					
S.No	Subject	hours	Chapter	Lesson	HOURS
19	Personality Development	6	PD-III	Group Discussions - Team Work	2
			PD-V	Public Speaking	4
20	Border & Coastal Areas	2	BCA-II	Security Setup and Border/Coastal management in the area	2
21	Introduction to Infantry Battalion and its Equipments	3	INF-1	Organisation of Infantry Battalion & its weapons	3
22	Military History	4	MH-3	Study of Battles of Indo-Pak Wars 1965 & 1971	4
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER VI					
S.No	Subject	hours	Chapter	Lesson	HOURS
25	Personality Development	3	PD-IV	Career Counselling, SSB Procedure and Interview Skills	3
27	Border & Coastal Areas	2	BCA-III	Security Challenges & Role of cadets in Border management	2
28	Armed Forces	3	AF-2	Modes of Entry into Army, Police and CAPF	3
29	Military History	19	MH-1	Biographies of Renowned Generals	6
			MH-2	War Heroes : Param Veer Chakra Awardees	3
			MH-3	Study of Battles of Kargil	2
			MH-4	War Movies	8
30	Communication	3	C-1	Introduction to Communication & Latest Trends	3
TOTAL HOURS					30
TOTAL CREDITS					2



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

SEMESTER WISE COURSE DESIGN NAVAL CADETS

INSTITUTIONAL TRAINING: SEMESTER WISE DISTRIBUTION OF NCC SYLLABUS FOR THEORY (NAVAL CADETS)

S. NO.	SUBJECT	I	II	III	IV	V	VI	TOTAL
1	NCC General	6	-	-	-	-	-	
2	NIA	4	-	-	-	-	-	
3	PD	2	5	5	4	6	3	
4	Leadership	-	5	4	3	-	-	
5	DM	-	-	3	10	-	-	
6	SSCD	3	5	-	-	-	-	
7	Adventure	-	-	1	-	-	-	
8	Environmental awareness & conservation	-	-	-	3	-	-	
9	General Awareness	-	-	-	4	-	-	
10	Border & Coastal Areas	-	-	2	-	2	2	
11	Naval Orientation	-	-	-	6	3	3	12
12	Naval Communication	-	-	-	-	2	-	2
13	Navigation	-	-	-	-	2	-	2
14	Seamanship	-	-	-	-	-	15	15
15	FFDC				-	-	4	4
16	Ship & Boat Modelling				-	-	3	3
	TOTAL	15	15	15	30	15	30	120
	TOTAL Credit	1	1	1	2	1	2	08

INSTITUTIONAL TRAINING: SEMESTER WISE DISTRIBUTION OF NCC SYLLABUS FOR PRACTICAL(NAVAL CADETS)

Ser	SUBJECT	I	II	III	IV	V	VI	TOTAL
1.	DRILL	12	12	8	7	3	3	45
2.	Naval Communication	3	3	3	3	3	3	18
3	Navigation	-	-	-	-	-	3	3
4	Weapon Training	5	4	4	4	4	4	25
5	Seamanship	3	3	3	3	3	3	18
6	FFDC	-	-	-	-	-	3	3
7	Ship & Boat Modelling	-	2	2	2	2	2	10
8	SSCD	7	5	5	6	5	10	38
9	H&H	-	-	-	5	5	-	10
10	OT	-	-	5	-	5	0	10
11	TOTAL	30	30	30	30	30	30	180
	TOTAL Credit	1	1	1	1	1	1	6



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INSTITUTIONAL TRAINING: SEMESTER WISE THEORY DETAILED

SYLLABUS (NAVAL CADETS)

<u>SEMESTER I</u>					
S.No	Subject	Periods	Chapter	Lesson	Hours
1	NCC General	6	NCC-I	Aims, Objectives and Org of NCC	1
			NCC-II	Incentives	2
			NCC-III	Duties of NCC Cadets	1
			NCC-IV	NCC Camps: Types and Conduct	2
2	National Integration and Awareness	4	NI-I	National Integration: Importance and Necessity	1
			NI-II	Factors affecting National Integration	1
			NI-III	Unity in Diversity	1
			NI-IV	Threats to National Security	1
3	Personality Development	2	PD - I	Factors Self-Awareness Empathy Critical and Creative Thinking Decision Making and Problem Solving	2
4	Social Service and Community Development	3	SSCD - I	Basics of Social Service Rural Development Programmes NGO's Contribution of Youth	3
TOTAL HOURS					15
TOTAL CREDITS					1

<u>SEMESTER II</u>					
S.No	Subject	Periods	Chapter	Lesson	Hours
5	Personality Development	5	PD-II	Communication Skills	3
			PD-III	Group Discussion -Coping with Stress and Emotions	2
6	Leadership	5	L-I	<u>Leadership Capsule</u> Traits Indicators Motivation Moral Values Honour Code	3
			L-II	<u>Case Studies</u> Shivaji, Jhansi Ki Rani,	2
7	Social Service and Community Development	5	SS-IV	Protection of Children & Women Safety	1
			SS-V	Road/Rail Travel Safety	1
			SS-VI	New Initiatives	2
			SS-VII	Cyber and Mobile Security Awareness	1
TOTAL HOURS					15
TOTAL CREDITS					1



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SEMESTER III					
S.No	Subject	hours	Chapter	Lesson	HOURS
8	Personality Development	5	PD-III	Group Discussions - Change your Mindset	2
			PD-V	Public Speaking	3
9	Leadership	4	L-II	Case Studies – APJ Abdul Kalam, Deepa Malik, Maharana Pratap, N Narayan Murthy	4
10	Disaster Management	3	DM-I	Disaster Management Capsule Organisation Types of Disasters Essential Services Assistance Civil Defence Organisation	3
11	Adventure	1	AD-I	Adventure activities	1
12	Border & Coastal Areas	2	BCA-I	History, Geography & Topography of Border/ Coastal Areas	2
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER IV					
S.No	Subject	hours	Chapter	Lesson	HOURS
13	Personality Development	4	PD-III	Group Discussions - Time Management, Social Skills	4
14	Leadership	3	L-II	Case Studies – Ratan Tata, Rabindra Nath Tagore, Role of NCC cadets in 1965 war	3
15	Disaster Management	9	DM-II	Initiative Trg, Organising Skills, Dos and Don'ts Natural Disasters Man Made Disasters	9
		1	DM-III	Fire Services and Fire Fighting	1
16	Environmental Awareness	3	EA-I	Environmental Awareness and Conservation	3
17	General Awareness	4	GA-I	General Awareness	4
18	Naval Orientation	3	AF-1	Armed Forces and Navy Capsule	3
		3	EEZ 1	EEZ Maritime Security & ICG	3
TOTAL HOURS					30
TOTAL CREDITS					2



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SEMESTER V					
S.No	Subject	hours	Chapter	Lesson	HOURS
19	Personality Development	6	PD-III	Group Discussions - Team Work	2
			PD-V	Public Speaking	4
20	Border & Coastal Areas	2	BCA-II	Security Setup and Border/Coastal management in the area	2
21	Naval Orientation	3	NO-3	Modes of Entry – IN, ICG, Merchant Navy	3
22	Naval Communication	1	NC-1	Introduction to Naval Communications	1
		1	NC - 2	Semaphore	1
23	Navigation	1	N1	Navigation of Ship- Basic Requirements	1
		1	N2	Chart Work	1
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER VI					
S.No	Subject	hours	Chapter	Lesson	HOURS
25	Personality Development	3	PD-IV	Career Counselling, SSB Procedure and Interview Skills	3
27	Border & Coastal Areas	2	BCA-III	Security Challenges & Role of cadets in Border management	2
28	Naval Orientation	3	AF-2	Naval Expeditions & Campaigns	3
29	Seamanship	15	MH-1	Introduction to Anchor Work	2
			MH-2	Rigging Capsule	6
			MH-3	Boatwork – Parts of Boat	2
			MH-4	Boat Pulling Instructions	2
			MH-5	Whaler Sailing Instructions	3
30	Fire Fighting Flooding & Damage Control	2	FFDC-1	Fire Fighting	2
		2	FFDC - 2	Damage Control	2
	Ship Modelling	3	SM	Ship Modelling Capsule	3
TOTAL HOURS					30
TOTAL CREDITS					2



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

INSTITUTIONAL TRAINING: SEMESTER WISE THEORY DETAILED SYLLABUS (AIR FORCE CADETS)

<u>SEMESTER I</u>					
S.No	Subject	Periods	Chapter	Lesson	Hours
1	NCC General	6	NCC-I	Aims, Objectives and Org of NCC	1
			NCC-II	Incentives	2
			NCC-III	Duties of NCC Cadets	1
			NCC-IV	NCC Camps: Types and Conduct	2
2	National Integration and Awareness	4	NI-I	National Integration: Importance and Necessity	1
			NI-II	Factors affecting National Integration	1
			NI-III	Unity in Diversity	1
			NI-IV	Threats to National Security	1
3	Personality Development	2	PD - I	Factors Self-Awareness Empathy Critical and Creative Thinking Decision Making and Problem Solving	2
4	Social Service and Community Development	3	SSCD - I	Basics of Social Service Rural Development Programmes NGO's Contribution of Youth	3
TOTAL HOURS					15
TOTAL CREDITS					1

<u>SEMESTER II</u>					
S.No	Subject	Periods	Chapter	Lesson	Hours
5	Personality Development	5	PD-II	Communication Skills	3
			PD-III	Group Discussion -Coping with Stress and Emotions	2
6	Leadership	5	L-I	<u>Leadership Capsule</u> Traits Indicators Motivation Moral Values Honour Code	3
			L-II	<u>Case Studies</u> Shivaji, Jhansi Ki Rani,	2
7	Social Service and Community Development	5	SS-IV	Protection of Children & Women Safety	1
			SS-V	Road/Rail Travel Safety	1
			SS-VI	New Initiatives	2
			SS-VII	Cyber and Mobile Security Awareness	1
TOTAL HOURS					15
TOTAL CREDITS					1



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SEMESTER III					
S.No	Subject	hours	Chapter	Lesson	HOURS
8	Personality Development	5	PD-III	Group Discussions - Change your Mindset	2
			PD-V	Public Speaking	3
9	Leadership	4	L-II	Case Studies – APJ Abdul Kalam, Deepa Malik, Maharana Pratap, N Narayan Murthy	4
10	Disaster Management	3	DM-I	Disaster Management Capsule Organisation Types of Disasters Essential Services Assistance Civil Defence Organisation	3
11	Adventure	1	AD-I	Adventure activities	1
12	Border & Coastal Areas	2	BCA-I	History, Geography & Topography of Border/ Coastal Areas	2
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER IV					
S.No	Subject	hours	Chapter	Lesson	HOURS
13	Personality Development	4	PD-III	Group Discussions - Time Management, Social Skills	4
14	Leadership	3	L-II	Case Studies – Ratan Tata, Rabindra Nath Tagore, Role of NCC cadets in 1965 war	3
15	Disaster Management	9	DM-II	Initiative Trg, Organising Skills, Dos and Don'ts Natural Disasters Man Made Disasters	9
		1	DM-III	Fire Services and Fire Fighting	1
16	Environmental Awareness	3	EA-I	Environmental Awareness and Conservation	3
17	General Awareness	4	GA-I	General Awareness	4
18	General Service Knowledge	6	GSK-1	Armed Forces & IAF Capsule	2
			GSK-2	Modes of Entry in IAF, Civil Aviation	2
			GSK-3	Aircrafts – Types, Capabilities & Role	2
TOTAL HOURS					30
TOTAL CREDITS					2



SIX SEMESTER NCC COURSE SYLLABUS

Training Objectives: Institutional Training

1. Institutional training includes basic military training of the cadets as part of the curriculum with its long-standing effort to mould young volunteers into disciplined and responsible citizens of India. NCC course is aimed to achieve following learning objectives:-

- (a) Develop character, camaraderie, discipline, secular outlook, the spirit of adventure, sportsman spirit and ideals of selfless service amongst cadets by working in teams, honing qualities such as self-discipline, self-confidence, self-reliance and dignity of labour in the cadets.
- (b) To create interest in cadets by including and laying emphasis on those aspects of Institutional Training which attract young cadets into the NCC and provides them an element of thrill and excitement.
- (c) To inculcate defence Services work ethos that is characterized by hard work, sincerity of purpose, honesty, ideal of selfless service, dignity of labour, secular outlook, comradeship, spirit of adventure and sportsmanship.
- (d) To create a pool of organized, trained and motivated youth with leadership qualities in all walks of life, who will serve the Nation regardless of which career they choose.
- (e) To provide conducive environment to motivate young Indians to choose the Armed Forces as a career.

SEMESTER I COURSE MODULE : NATIONAL CADET CORPS I

National Cadet Corps : Course Details			
Course Title: National Cadet Corps I			
Course Code	BNCC01GE03	Credits	1(Thr)+ 1(Pr) = 03
L /T + P	15+30	Course Duration	1 Semester
Semester	I (Odd)	Contact Hours	15(Thr)+30(Pr)=45Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion		
Assessment and Evaluation	As per the University norms i.e, 25% internal assessment and 75% end term exams , or 30% internal assessment and 70% end of term exams etc.		



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Course Content Part (I) Theory

2. **Course Objectives:** Cadets will be able to: -

- (a) Know about the history of NCC, its organization, and incentives of NCC for their career prospects.
- (b) Acquire knowledge of duties and conduct of ncc cadets.
- (c) Understand about different NCC camps and their conducts.
- (d) Understand the concept of national integration and its importance.
- (e) Understand the concept of self-awareness and emotional intelligence.
- (f) Understand the concept of critical & creative thinking.
- (g) Understand the process of decision making & problem solving.
- (h) Understand the concept of team and its functioning.
- (i) Understand the concept and importance of Social service.

3. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -

- (a) Imbibe the conduct of NCC cadets.
- (b) Respect the diversity of different Indian culture.
- (c) Practice togetherness and empathy in all walks of their life.
- (d) Do their own self analysis and will workout to overcome their weakness for better performance in all aspects of life.
- (e) Understand creative thinking & its components.
- (f) Think divergently and will try to break functional fixedness.
- (g) Make a team and will work together for achieving the common goals.
- (h) Do the social services on different occasions.

4. Course Content Part (I) Theory

(a) **Unit 1- NCC General (N) (Contact Hrs. 06).** Introduction of NCC, History, Aims, Objective of NCC & NCC as Organization, Incentives of NCC, Duties of NCC Cadet. NCC Camps: Types & Conduct.

(b) **Unit 2- National Integration & Awareness (NI) (Contact Hrs. 04)** . National Integration: Importance & Necessity, Factors Affecting National Integration, Unity in Diversity & Role of NCC in Nation Building, Threats to National Security.



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(c) **Unit 3- Personality Development (Contact Hrs. 3)**. Intra & Interpersonal skills - Self-Awareness- & Analysis, Empathy, Critical & creative thinking, Decision making and problem solving.

(d) **Unit 4- Social Service and Community Development (Contact Hrs. 02)**. Basics of social service and its need, Types of social service activities, Objectives of rural development programs and its importance, NGO's and their contribution in social welfare, contribution of youth and NCC in Social welfare.

Course Content Part (II) Practical

5. **Course Objectives:** Cadets will be able to: -

- (a) Understand that drill as the foundation for discipline and to command a group for common goal.
- (b) Appreciate grace and dignity in the performance of foot drill.
- (c) Understand the importance of a weapon its detailed safety precautions necessary for prevention of accidents.

Develop awareness about different types of terrain and how it is used in battle craft.

- (d) Develop the concept of various markings on the map and how they are co-related to the ground features.
- (e) Understand the various social issues and their impact on social life.
- (f) Develop the sense of self-less social service for better social & community life.

6. **Expected Learning Outcomes:** After completing this course, the cadets will be able to: -

- (a) Perform foot drill and follow the different word of command.
- (b) Fire a weapon effectively with fair degree of marksmanship.
- (c) Undertake point to point navigation and take part in route marches by day and night.
- (d) Perform the social services on various occasions for better community & social life.

7. **Course Content Part (II) Practical**

(a) **Unit 1. Drill (Contact Hrs. 12)**. Foot Drill- Drill ki Aam Hidayaten, Word ki Command, Savdhan, Vishram, Aram Se, Murdna, Kadvar Sizing, Teen Line Banana, Khuli Line, Nikat Line, Khade Khade Salute Karna Parade Par, Visarjan, Line Tod, Tej Chal, Tham aur Dhire Chal, Tham.

(b) **Unit 2. Weapon Training (WT) (Contact Hrs. 05)**. Introduction & Characteristics of .22 rifle, Handling of .22 rifle.

(c) **Unit 3. Map Reading (MR) (Contact Hrs. 03)**. Definition of Map, Conventional signs, Scale and Grid System, Topographical forms and technical terms, Relief, Contours and gradients, Cardinal points and types of North, Magnetic Variation and Grid Convergence.



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(d) **Unit 4. Field Craft & Battle Craft (FC & BC) (Contact Hrs. 03).** Introduction of Field Craft & Battle craft, Judging Distance, Method of Judging Distance.

(e) **Unit 5. Social Service and Community Development (SSCD)(Contact**

Hrs.07). Cadets will participate in various activities throughout the semester e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc.

SEMESTER II COURSE MODULE : NATIONAL CADET CORPS II

Course Title: National Cadet Corps II			
Course Code	BNCC02GE03	Credits	1(Thr)+ 1(Pr)=02
L /T + P	15+30	Course Duration	1 Semester
Semester	II (Even)	Contact Hours	15(Thr)+30(Pr)=45Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (I) Theory

8. Course Objectives: Cadets will be able to: -

- (a) Understand the thinking & reasoning process.
- (b) Understand the process to cope with Stress & emotions.
- (c) Understand the importance of improving communication skills.
- (d) Identify the leadership traits.
- (e) Admire the qualities of great leaders.
- (f) Know about different legal provisions for children & women safety and protection.
- (g) Understand the various rules & measures to be taken to ensure Road/Rail safety.
- (h) Understand & spread awareness about latest Government initiatives for welfare of citizens and contribute towards Nation building.
- (i) Understand concepts of cyber and mobile security.



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9. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -
- Define thinking, reasoning, critical thinking and creative thinking.
 - To think critically about different life related issues.
 - Think divergently and will try to break functional fixedness.
 - Creatively in their real-life problems.
 - Understand the organizations related to disaster management and their functioning.
 - Appreciate the role of NCC cadets in disaster management.
10. **Course Content Part (I) Theory**
- Unit 1. Personality Development (Contact Hrs.5)**
 - Thinking- Meaning and Concept of thinking, Reasoning, Process of thinking.
 - Critical Thinking- Meaning & concept of critical thinking, Features of critical thinking, Process of critical thinking.
 - Creative thinking- Meaning & concept of creative thinking, Features of creative thinking, Process of creative thinking, levels of Creativity, Characteristics of creative person.
 - Unit 2. Leadership Development (Contact Hrs.5)**
 - Leadership capsule.
 - Important Leadership traits, Indicators of leadership and evaluation.
 - Motivation- Meaning & concept, Types of motivation. Factors affecting motivation.
 - Ethics and Honor codes.
 - Unit 3. Social Service and Community Development (Contact Hrs. 5)**
 - Protection of Children & Women Safety.
 - Road/Rail Safety.
 - New Government Initiatives.
 - Cyber and mobile Security Awareness.

Course Content Part (II) Practical

11. **Course Objectives.** Cadets will be able to: -
- Understand that drill as the foundation for discipline and to command a group for common goal.
 - Appreciate grace and dignity in the performance of foot drill.
 - Understand the importance of a weapon its detailed safety precautions necessary for prevention of accidents.



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- (d) Use terrain effectively for concealment, camouflage, indicate landmarks and give field signals.
12. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -
- (a) Perform foot drill gracefully.
 - (b) Give and follow the different word of command.
 - (c) Fire a weapon effectively with fair degree of marksmanship.
 - (d) Use of bearing and service protractor and locate the places and objects on the ground.
 - (e) Do the social service and feel connected with social problems.
13. **Course Content Part (II) Practical**
- (a) **Unit 1. Drill (Contact Hrs. 12)**
 - (i) Foot Drill Dahine, Baen, Aageaur Piche Kadam Lena.
 - (ii) Tej Chal se Murdna, Tej Chal se Salute Karna, Tej Kadam Taal aur Tham, Tej Kadam Taal se Kadam Badalna.
 - (iii) Teeno Teen se Ek File aur ek file se Teeno Teen Banana
 - (b) **Unit 2.Weapon Training(Contact Hrs. 04)** (i)
 - Range procedure & Theory of group.
 - (ii) Short Range firing.
 - (c) **Unit 3. Map Reading(Contact Hrs. 05)**
 - (i) Protractor Bearing and its conversion methods.
 - (ii) Service protractor and its uses.
 - (iii) Prismatic compass and its uses and GPS.
 - (iv) Navigation by compass and GPS.
 - (d) **Unit 4. Field Craft & Battle Craft (Contact Hrs. 04)**
 - (i) Indications of landmarks and Targets.
 - (ii) Intro, Definitions, Types of Ground, Indication of Landmarks, Methods of iden of targets, difficult targets.
 - (e) **Unit 5.Social Service and Community Development(Contact Hrs. 05)** Cadets will participate in various activities throughout the semester e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc. as per the requirement and similar announced days- National and state level.



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SEMESTER III COURSE MODULE : NATIONAL CADET CORPS III

COURSE TITLE: NATIONAL CADET CORPS III			
Course Code	BNCC03GE02	Credits	1(Thr)+ 1(Pr)=02
L /T + P	15 +30	Course Duration	1 Semester
Semester	III (Odd)	Contact Hours	15(Thr)+30(Pr)=45Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (I) Theory

14. **Course Objectives.** Cadets will be able to: -
- (a) Understand the life history and leadership qualities of great leaders, sportspersons & entrepreneurs.
 - (b) Understand the various aspects of types of mindset.
 - (c) Understand public speaking methods & qualities.
 - (d) Understand the organizations related to disaster management and their functioning.
 - (e) Understand the role of NCC cadets in disaster management.
 - (f) Understand the various types of adventure activities.
 - (g) Understand the History, Geography & Topography of Border/ Coastal Areas.
15. **Expected Learning Outcomes.** After completing this course, the cadets will be able to:
- (a) Admire and get inspired from the accomplishments of leaders from various walks of life.
 - (b) Develop public speaking skills.
 - (c) Understand the importance of positive mindset and optimistic attitude in life.
 - (d) Appreciate the need & requirement for disaster management and his role in disaster management activities.
 - (e) Know the history & geographical peculiarity of our borders & coastal regions.



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16. Course Content Part (I) Theory

- (a) **Unit 1. Personality Development (Contact Hrs.5)** (i) Group Discussions - Change your Mindset (ii) Public Speaking.
- (b) **Unit 2. Leadership Development (Contact Hrs.4)**. Case Studies – APJ Abdul Kalam, Deepa Malik, Maharana Pratap, N Narayan Murthy.
- (c) **Unit 3. Disaster management(Contact Hrs. 3)** (i) Disaster Management Capsule.
 - (ii) Organisation.
 - (iii) Types of Disasters.
 - (iv) Essential Services.
 - (v) Assistance.
 - (vi) Civil Defence Organisation.
- (d) **Adventure (Contact Hrs. 1)**. Adventure activities.
- (e) **Border & Coastal Areas(Contact Hrs. 2)**. History, Geography & Topography of Border/ Coastal Areas.

Course Content Part (II) Practical

17. **Course Objectives**. Cadets will be able to : -
 - (a) Understand that drill as the foundation for discipline and to command a group for common goal
 - (b) Appreciate grace and dignity in the performance of arm drill (c) Understand the concept and importance of social service.
 - (d) Understand the importance of a weapon its detailed safety precautions necessary for prevention of accidents.
 - (e) Actively participate in social service and community development activities.
18. **Expected Learning Outcomes**.After completing this course, the cadets will be able to: -
 - (a) Perform arm drill gracefully.
 - (b) Give and follow the different word of command.
 - (c) Fire a weapon effectively with fair degree of marksmanship.
 - (d) Different positioning for fire and aiming.
 - (e) Use terrain effectively for concealment, camouflage, indicate landmarks and give field signals.
 - (f) Observe surroundings in better way.



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- (g) Develop the qualities of patience and confidence and become better individuals.
- (h) Will develop physical as well as mental fitness.

19. **Course Content Part (II) Practical**

(a) **Unit 1. Drill(Contact Hrs. 08)**

- (i) Arm Drill.
- (ii) Rifle ke saath Savdhan, Vishram aur Aram se.
- (iii) Rifle ke saath Parade Par aur Saj, Rifle ke saath Visarjan, Line Tod.
- (iv) Bhumi Shastra aur Uthao Shastra, Bagal Shastra aur Baju Shastra.

(b) **Unit 2. Weapon Training(Contact Hrs. 04).** Short Range firing.

(c) **Unit 3. Map Reading (Contact Hrs. 04).**

- (i) Setting of Map.
- (ii) Findings North and Own Position.

(d) **Unit 4. Field Craft & Battle Craft (Contact Hrs. 04)**

- (e) (i) Observation.
- (ii) Camouflage.
- (iii) Concealment.

(f) **Unit 5. Social Service and Community Development (Contact Hrs. 05).** Cadets will participate in various activities throughout the semester e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc as per the requirement and similar announced days- National and State level.

(g) **Unit 6. Obstacle Training(Contact Hrs. 05)**

- (i) Obstacle training - Introduction, Safety-measures, Benefits.
- (ii) Obstacle Course- Straight balance, Clear Jump, Gate Vault, Zig- Zag Balance, High Wall.



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SEMESTER IV COURSE MODULE : NATIONAL CADET CORPS IV

Course Title: National Cadet Corps IV			
Course Code	BNCC04GE03	Credits	2(Thr)+ 1(Pr)=03
L /T + P	30+30	Course Duration	1 Semester
Semester	IV (Even)	Contact Hours	30(Thr)+30(Pr)=60Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (I) Theory

20. **Course Objectives.** Cadets will be able to: -
- (a) Develop a sense of time management and social skills.
 - (b) Understand the life history & leadership qualities of personalities who have contributed in Nation Building and Literature.
 - (c) Understand the role of NCC cadets as 2nd line Defence in 1965 War.
 - (d) Develop awareness about various types of Natural and manmade disasters.
 - (e) Know about life saving tips during disasters.
 - (f) acquainted about Fire Services.
 - (g) Understand importance of Environmental Awareness & conservation.
 - (g) Understand importance of General Awareness.
 - (h) Know about Armed Forces.
- (b) **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -
- (i) Effectively Manage time.
 - (ii) Develop the qualities of social skills.
 - (iii) Imbibe leadership qualities.



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- (iv) Do group discussions effectively.
- (v) Be motivated to serve the nation by joining Armed forces.
- (vi) Contribute in environmental awareness and conservation activities.
- (vii) Keep abreast of current affairs & general awareness.
- (viii) Effectively contribute in managing disaster relief tasks.

21. **Course Content Part (I) Theory**

- (a) **Unit 1. Personality Development (Contact Hrs.4).** Group Discussions – Social Skills & Time management.
- (b) **Unit 2. Leadership Development (Contact Hrs.3).** Case Studies – Case Studies – Ratan Tata, Rabindra Nath Tagore, Role of NCC cadets in 1965 war.
- (c) **Unit 3. Disaster management(Contact Hrs. 10)**
 - (i) Initiative Trg, Organising Skills.
 - (ii) Dos and Don'ts.
 - (iii) Natural Disasters.
 - (iv) Man Made Disasters.
 - (v) Fire Services and Fire Fighting.
- (d) **Environmental Awareness (Contact Hrs. 3).** Adventure Environmental Awareness and Conservation.
- (e) **General Awareness (Contact Hrs. 4).** General Awareness.
- (f) **Armed Forces(Contact Hrs. 6).**Army, Navy, Air Force and Central Armed Police Forces.

Course Content Part (II) Practical

22. **Course Objectives.** Cadets will be able to: -

- (a) Understand that drill as the foundation for discipline and to command a group for common goal.
- (b) Understand various signals to convey messages in the army.
- (c) Get acquainted various section formations.
- (d) Understand the basics of personal and public hygiene.
- (e) Get acquainted with the procedure to treat the wounds and fractures during emergencies.

23. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -

- (a) Perform weapon drill gracefully.
- (b) Give and follow the different word of command.



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- (c) Appreciate grace and dignity in the performance of foot drill.
- (d) Apply signals in there day to day functioning.
- (e) Provide first aid during the emergencies.
- (f) Navigate to the given location on ground using compass and GPS.
- (g) Practice healthy practices for the personal sanitation and hygiene.

24. **Course Content Part (II) Practical** (a) **Unit 1. Drill (Contact Hrs. 08)**

- (i) Arm Drill.
- (ii) Salami Shastra.
- (iii) Squad Drill with Arms.

(b) **Unit 2. Weapon Training (Contact Hrs. 04)**. Short Range firing

(c) **Unit 3. Map Reading(Contact Hrs. 04)**

- (i) Map to Ground.
- (ii) Ground to Map.

(d) **Unit 4. Field Craft & Battle Craft(Contact Hrs. 04)**

- (i) Fire and Move Capsule.
- (ii) Field signal- with hand, with Weapons, Signal with Whistle.
- (iii) Field signals as means of giving orders.
- (iv) Field signals by day, Field signals by night.
- (v) Section Formation.

(e) **Unit 5. Social Service and Community Development(Contact Hrs. 05)** Cadets will participate in various activities throughout the semester e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc as per the requirement and similar announced days- National and State level.

(f) **Unit 6. Health &Hygiene(Contact Hrs. 05)**

- (i) Hygiene & Sanitation (Hygiene- Personal & Camp Hygiene).
- (ii) First Aid in common medical emergencies.
- (iii) Treatment & Care of Wounds.



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SEMESTER V COURSE MODULE : NATIONAL CADET CORPS V

Course Title: National Cadet Corps V			
Course Code	BNCC05GE02	Credits	1(Thr)+ 1(Pr)=02
L /T + P	15 +30	Course Duration	1 Semester
Semester	V (Odd)	Contact Hours	15(Thr)+30(Pr)=45Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (I) Theory

25. **Course Objectives.** Cadets will be able to: -

- Understand the concept of Team and its functioning.
- Hone Public speaking skills.
- Understand the security set up and management of Border/Coastal areas.
- Acquire knowledge about an Infantry Battalion organisation and its weapons.
- Acquire knowledge about Indo-Pak Wars fought in 1965 & 1971.

Expected Learning Outcomes. After completing this course, the cadets will be able to: -

- Participate in team building exercise and value team work.
- Improve communication skills by public speaking activities.
- Understand the security mechanism and management of Border/Coastal areas.
- Get motivated to join armed forces.

26. **Course Content Part (I) Theory**

(a) **Unit 1. Personality Development (Contact Hrs.6).**

- Group Discussions –Team work.
- Public speaking.



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- (b) **Unit 2. Border & Coastal Areas(Contact Hrs.2).** Security Setup and Border/Coastal management in the area.
- (c) **Unit 3. Introduction to Infantry Battalion and its Equipment(Contact Hrs. 3).** Organisation of Infantry Battalion & its weapons
- (d) **Military History(Contact Hrs. 4).** Study of Battles of Indo-Pak Wars 1965 & 1971.

Course Content Part (II) Practical

27. **Course Objectives.** Cadets will be able to: -

- (a) Understand that drill as the foundation for discipline and to command a group for common goal.
- (b) Appreciate grace and dignity in the performance of ceremonial drill.
- (c) Use the compass and GPS to locate places on the ground and map.

28. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -

- (a) Perform ceremonial drill and follow the different word of command.
- (b) Do the social service on various occasions and get connected with the community.
- (c) Do all the asana and gain the physical& mental fitness.

29. **Course Content Part (II) practical** (a) **Unit 1. Drill(Contact Hrs. 03)**

(i) Ceremonial Drill.

(ii) Guard Mounting.

(b) **Unit 2. Field Craft & Battle Craft(Contact Hrs. 04)**

(i) Fire control orders.

(ii) Types of fire control orders.

(iii) Fire and Movement- when to use fire and movements tactics, Basic considerations, Appreciation of ground cover, Types of cover, Dead ground, Common Mistakes, Map and air photography, Selection of Fire position and fire control.

(c) **Unit 3. Map Reading(Contact Hrs. 04).**Google Maps & applications

(d) **Unit 4. Weapon Training(Contact Hrs. 04).**Short Range firing

(e) **Unit 5. Social Service and Community Development (Contact Hrs. 05)** Cadets will participate in various activities throughout the semester e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc. as per the requirement and similar announced days-National and State level.

(f) **Unit 6. Health & Hygiene(Contact Hrs. 05)**



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- (i) Yoga- Introduction, Definition, Purpose, Benefits.
 - (ii) Asanas-Padamsana, Siddhasana, Gyan Mudra, Surya Namaskar, Shavasana, Vajrasana, Dhanurasana, Chakrasana, Sarvaangasana, Halasana etc.
- (f) **Unit 7. Obstacle Training(Contact Hrs. 05)**
- (i) Obstacle training – Intro, Safety measures, Benefits.
 - (ii) Obstacle Course- Straight balance, Clear Jump, Gate Vault, Zig- Zag Balance, High Wall etc.

SEMESTER VI COURSE MODULE : NATIONAL CADET CORPS VI

<u>Course Title: National Cadet Corps VI</u>			
Course Code	BNCC06GE03	Credits	2(Thr)+ 1(Pr)=03
L /T + P	30 +30	Course Duration	1 Semester
Semester	VI (Even)	Contact Hours	30(Thr)+30(Pr)=45Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (I) Theory

30. **Course Objectives.** Cadets will be able to: -
- (a) Get acquainted about counselling process its need and importance.
 - (b) Know about SSB procedure and different tasks and tests.
 - (c) Know about the conduction during the interview.
 - (d) Understand the security challenges & role of cadets in Border Areas.
 - (e) Know about the modes of entry in Armed forces, CAPF & police.
 - (f) Understand the life history & leadership qualities of great generals.
 - (g) Learn about 1999 Kargil war.



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- (h) Acquire the knowledge about various wars and their heroes.
- (i) Know about various components of communication process.

31. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -

- (a) Get motivated to join Armed forces, police & CAPF.
- (b) Write their CV effective and appealing.
- (c) Face SSB interview effectively in their future.
- (d) Understand individual responsibilities & role in meetings the security challenges on Border/Coastal areas.
- (e) Imbibe the feeling of patriotism.
- (f) Communicate more effectively.

32. **Course Content Part (I) Theory**

(a) **Unit 1. Personality Development (Contact Hrs.3).**

- (i) Career Counselling.
- (ii) SSB Procedure.
- (iii) Interview Skills.

(b) **Unit 2. Border & Coastal Areas(Contact Hrs.2).** Security Challenges & Role of cadets in Border management.

(c) **Unit 3. Armed Forces(Contact Hrs. 3).** Modes of Entry into Army, Police and CAPF.

(d) **Military History(Contact Hrs. 19).**

- (i) Biographies of Renowned Generals.
- (ii) War Heroes : Param Veer Chakra Awardees.
- (iii) Study of Battles of Kargil.
- (iv) War Movies.

(e) **Communication(Contact Hrs. 3).** Introduction to Communication & Latest Trends.

Course Content Part (II) Practical

33. **Course Objectives.** Cadets will be able to: -

- (a) Understand that drill as the foundation for discipline and to command a group for common goal.
- (b) Appreciate grace and dignity in the performance of ceremonial drill.



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- (c) Know about various knots and lashing used in soldiering.
- (d) Acquire awareness about the basic weapon system in use in the Armed Forces.

34. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -

- (a) Perform foot drill and follow the different word of command.
- (b) Aiming range and figure targets.
- (c) Use the different knots and lashing in day-to-day life for different purposes.
- (d) Develop the feeling of altruism.

35. **Course Content Part (II) Practical.**

- (a) **Unit 1. Drill (Contact Hrs. 03).**
 - (i) Ceremonial Drill.
 - (ii) Guard of Honour.
- (b) **Unit 2. Weapon Training(WT) (Contact Hrs. 04).** Short Range firing.
- (c) **Unit 3. Map Reading(MR) (Contact Hrs. 04).** Google maps and Applications.
- (d) **Unit 4. Field Craft & Battle Craft(FCBC) (Contact Hrs. 03).** Knots, Lashing and Stretchers.
- (e) **Unit 5. Social Service and Community Development(SSCD) (Contact Hrs. 05).** Cadets will participate in various activities throughout the semester e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc as per the requirement and similar announced days- National and State level.
- (f) **Unit 6 Introduction of Infantry Weapons & Equipment(INF) (Contact Hrs.03).** Characteristics of 5.56MM INSAS Rifle, Ammunition, Fire Power, Stripping, Assembling & Cleaning Practice.
- (g) **Unit 7. Communication (COM) (Contact Hrs. 03).**
 - (i) Basic Radio Telephony (RT) Procedure.
 - (ii) Introduction, Advantages, Disadvantages, Need for standard procedures.
 - (iii) Types of Radio telephony communication.
 - (iv) Radio telephony procedure, Documentation.



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COURSE MODULE: NATIONAL CADET CORPS CAMP -I

Course Title: National Cadet Corps Camp I			
Course Code	BNCCCAMP03GE05	Credits	2(Thr)+ 3(Pr)=05
L /T + P	30+90	Course Duration	10 Days (24 hours each)
Semester	III (Odd)	Contact Hours	30(Thr)+90(Pr)=120Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, individual and group tasks, team work, field-based assignments, Physical Training, endurance building and skill development practices		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (I) Theory

36. **Course Objectives**. Cadets will be able to: -
- Acquire knowledge about the various aspects of personality development.
 - Understand the concept of leadership traits, moral values and character traits.
 - Develop awareness about the various types of natural disasters.
 - Develop sensitivity to the changing environment and understand the importance of conservation.
 - Understand the importance of hygiene and sanitation and common first aid procedures.
 - Acquire awareness about various types of weapon systems in the Armed Forces.
37. **Expected Learning Outcomes**. After completing this course, the cadets will be able to: -
- Acquire adequate skill sets to overcome their weakness and reshape their personality.
 - Imbibe good moral values and character traits in their daily life.
 - Become useful members of the society and form part of disaster response team, if need arises.
 - Respect and make efforts to conserve natural resources
 - Follow good personal hygiene practices and provide first aid in emergencies.



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- (f) Be motivated to join the armed forces.

38. NCC Camp-I : Course Content Part (I) Theory

- (a) **Unit 1. Personality Development (PD) (Contact Hrs. 04)**. Introduction to Personality Development, Factors influencing/shaping personality, Time Management and Interview Skills.
- (b) **Unit 2. Leadership (LDR) (Contact Hrs. 04)**. Leadership Traits, Moral Values and Character Traits.
- (c) **Unit 3. Disaster Management (DM) (Contact Hrs. 04)**. Assistance during natural disasters, Do's and Don'ts for NCC Cadets performing Disaster Management Duties
- (d) **Unit 4. National Integration and Awareness (NIA)(Contact Hrs. 04)**. Water Conservation and Rain Harvesting, Waste Management and Energy Conservation
- (e) **Unit 5. Health and Hygiene (H&H)(Contact Hrs. 04)**. Hygiene and Sanitation, First Aid in Common Medical Emergencies.
- (f) **Unit 6. Infantry Weapons (IW) (Contact Hrs. 02)**. Characteristics of Company Support Weapons.
- (g) **Unit 7. Weapon Training (WT) (Contact Hrs. 04)**. Characteristics of Point 22 Rifle and its Ammunition, Range Procedure and Safety Precautions.
- (h) **Unit 8. Military History (MH) (Contact Hrs. 04)**. Guest lectures by War Veterans/decorated soldiers/veterans.
- (i) **Unit 9. Communication (COM) (Contact Hrs. 04)**. Basics of communication.

NCC Camp-I : Course Content Part (II) Practical

39. Course Objectives. Cadets will be able to: -

- (a) Understand that drill is the foundation of discipline and command a group for a common goal.
- (b) Understand the importance of a weapon its detailed safety precautions necessary for prevention of accidents.
- (c) Develop awareness about different types of terrain and how it is used in Battle Craft.
- (d) Develop the concept of various markings on the map and how they are co-related to the ground features.
- (e) Acquire awareness about the various types of weapon systems in the Armed Forces.
- (f) Understand the concept and importance of social service.
- (g) Understand the various nuances of Personality Development.



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- (h) Understand the concept and importance of Physical Training in everyone's life.
- (i) Acquire skill sets about various games and understand the importance of team work.
- (j) Develop awareness about different cultures and different modes of its projection in artistic forms.

40. **Expected Learning Outcomes**. After completing this course, the cadets will be able to: -

- (a) Perform foot drill, arms drill, ceremonial drill and will be able to give out different words of command.
- (b) Fire a weapon effectively with fair degree of marksmanship.
- (c) Undertake point to point navigation and take part in route marches by day and night.
- (d) Use terrain effectively for concealment, camouflage, indicate landmarks and give field signals.
- (e) Be motivated to join the armed forces.
- (f) Acquire adequate skill sets to overcome their weakness and enhance their personality.
- (g) Gain adequate physical and mental endurance capabilities.
- (h) Play team games and be able to communicate and coordinate effectively in group events or situations.
- (i) Respect the diversity of Indian culture and develop pride by showcasing their own culture to others.

41. **NCC Camp-I : Course Content Part (II) Practical**

- (a) **Unit 1. Drill (Drill)(Contact Hrs. 16)**. Drill ki Aam Hidayaten aur Words of Command, Savdhan, Vishram, Aram Se aur Mudna, Khuli Line aur Nikat Line mein march, Salute Karna Parade Par, Visarjan aur Line Tod, Tej Chal, Tham aur Dhire Chal, Tham, Dahine, Baen, Aage aur Piche Kadam lena, Tejchaal se Mudna, Tejchaal se Salute karna, Tej kadamtaal aur Tham, Tej Kadamtaal se kadam badhana, Teenon Teen se ek file Banana aur ek file se Teenon Teen Banana, Rifle Ke Saath Saavdhan, Vishram aur Aaram se, Rifle ke saath Parade par aur saaj, Rifle Ke saath visarjan aur line tod, Bhumi Sashtra aur Uthao Sashtra, Bagal Sashtra aur Baaju Shastra.
- (b) **Unit 2. Weapon Training (WT) (Contact Hrs. 14)**. Stripping, Assembling, Cleaning of Point 22 rifle, Sight Setting and Sight Picture of Point 22 Rifle, Loading, Cocking and Unloading, Lying Position, Holding and Aiming of Point 22 rifle, Trigger Control and Firing of Shot, Theory of Group, Short-Range Aiming and Firing, Firing Practice I to VII.
- (c) **Unit 3. Field Craft & Battle Craft (FC/BC) (Contact Hrs. 06)**. Introduction of Field Craft & Battle craft, Judging Distance, Indication of Landmarks and Targets, Observation, Camouflage and Concealment, Field Signals, Section formations.
- (d) **Unit 4. Map Reading (MR) (Contact Hrs. 12)**. Introduction to Map and Conventional signs, Scale and Grid System, Topographical forms and technical terms, Relief, Contours and gradients, Cardinal points and types of North, Types of Bearing and use



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of Service Protector, Prismatic Compass and its use, setting of a map, Finding North and own Position, Map to Ground and Ground to map, Point to Point march, Route March – I, Route March -II.

- (e) **Unit 5. Infantry Weapons (IW) (Contact Hrs. 01).** Characteristics of Battalion Support Weapons.
- (f) **Unit 6. Social Service and Community Development (SSCD) (Contact Hrs. 04).** Basics of Social Service and its need, Rural Development Programme, Civic Responsibilities: Cadets will participate in various activities throughout the camp e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc., Road /Rail Travel Safety
- (g) **Unit 7. Personality Development (PD) (Contact Hrs. 06).** Self-Awareness, Empathy, Critical and Creative Thinking, Decision making and problem Solving, Coping with Stress and Emotions, Time Management.
- (h) **Unit 8. Obstacle Training (OT) (Contact Hrs. 02).** OT Practice – I:- Untimed, Cadets will be familiarized with all the obstacles in the Obstacle Course and briefed about the correct method to do them, OT Practice -II: Timed practice for all the cadets and record to be maintained.
- (i) **Unit 9. Physical Training (PT) (Contact Hrs. 09).** Physical Training will be carried out on each day of the camp, except on last day, in morning hours. Training has to be progressive in degree of difficulty to improve individual stamina and endurance. Training to include warming up, running, exercises to strengthen upper body, lower body and core muscles. Two period each to be devoted to route march by day and night respectively and one period will be earmarked for trekking expedition as part of Adventure Activity.
- (j) **Unit 10. Games Training (G)(Contact Hrs. 09).** Games Training will be carried out on each day of the camp, except on last day, in evening hours. Training has to be progressive in degree of difficulty to improve individual skills, coordination, team work and desire to excel. Training to ensure that each and every boy and girl cadets participate in at least one game activity everyday.
- (k) **Unit 11. Cultural Activity (C)(Contact Hrs. 09).** Cultural Activity will be carried out on each day of the camp, except on last day, in evening hours. Cadets have to divided in Nine Groups consisting of a mix of boy and girl cadets and preferably belonging to the same geographical area. Each group has to present the unique culture, custom, tradition, folk lore, songs, drama, paintings and cuisine during one hour allotted. There will be a prize for the best group to encourage participation and to develop pride in their unique culture. This training activity should ensure that each and every boy and girl cadet participate in at least one game activity every-day.
- (l) **Unit 12. Spare (S)(Contact Hrs. 02).** Two periods in each camp will be earmarked as spare to cover disruptions in training activity due to weather or other administrative reasons.



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COURSE MODULE : NATIONAL CADET CORPS CAMP – II

Course Title: National Cadet Corps Camp II			
Course Code	BNCCCAMP05GE05	Credits	2(Thr)+ 3(Pr)=05
L /T + P	30+90	Course Duration	10 Days (24 hours each)
Semester	V (Odd)	Contact Hours	30(Thr)+90(Pr)=120Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, individual and group tasks, team work, field-based assignments, Physical Training, endurance building and skill development practices		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (II) Theory

42. **Course Objectives.** Cadets will be able to: -

- Acquire the concept self-awareness, emotional intelligence, critical and creative thinking, decision making and problem solving.
- Learn about various indicators of good leadership and get an insight on principle of leadership and motivation.
- Develop awareness about the various types of natural disasters and disaster management organization in our country.
- Familiarize with natural resources, changing environment and understand the importance of conservation and waste management.
- Value the importance of Physical and Mental health and understand how to deal with wounds of various types.
- Acquire awareness about organization and role of an Infantry Battalion in the Armed Forces.

43. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -

- Develop a sense of responsibility, smartness in appearance and improve self-confidence, inculcate importance of empathizing with others, improve their deep-thinking ability and apply ideas and be able to face problems in a constructive manner with solutions.



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- (b) Imbibe good leadership traits and apply them in practical life and appreciate the visible outcome of leadership and motivation.
- (c) Appreciate role of the org during emergency and become useful members of disaster response team, if need arises.
- (d) Learn about the various natural resources, their utilization and practice method of conservation of these resources in daily life.
- (e) Appreciate value of physical and mental health in daily life and spread awareness about treatment and care of wounds in their society.
- (f) Be motivated to join the armed forces.

44. **NCC Camp-II : Course Content Part (I) Theory.**

- (a) **Unit 1. Personality Development (PD) (Contact Hrs. 04).** Self-Awareness, Emotional intelligence, Critical and Creative Thinking, Decision-Making and Problem Solving.
- (b) **Unit 2. Leadership (LDR) (Contact Hrs. 02).** Indicators of Good Leadership, Leadership and Motivation.
- (c) **Unit 3. Disaster Management (DM) (Contact Hrs. 02).** Disaster Management Organization NDMA and NDRF, Types of Disasters.
- (d) **Unit 4. Environmental Awareness and Conservation (EAC) (Contact Hrs. 02).** Natural Resources, Conservation and Management, Water Conservation, Waste Management, Energy Conservation.
- (e) **Unit 5. Health and Hygiene (H&H) (Contact Hrs. 02).** Physical and Mental Health, Treatment and Care of Wounds.
- (f) **Unit 6. Infantry Weapons (IW) (Contact Hrs. 01).** Organization of Infantry Battalion.
- (g) **Unit 7. Weapon Training (WT) (Contact Hrs. 02).** Characteristics of Point 22 Rifle and its Ammunition, Range Procedure and Safety Precautions.
- (h) **Unit 8. Military History (MH) (Contact Hrs. 04).** Guest lectures by War Veterans/decorated soldiers/veterans.
- (i) **Unit 9. Communication (COM) (Contact Hrs. 04).** Latest trends in communication.

NCC Camp-II : Course Content Part (II) Practical

45. **Course Objectives.** Cadets will be able to: -

- (a) Inculcate spirit of discipline and follow command as a group for a common goal.
- (b) Fire a weapon with adequate safety precautions necessary for safe firing.
- (c) Understand the lay of the ground and use it skillfully towards own objective.
- (d) Understand and use the map, satellite imagery and GPS effectively.



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- (e) Identify and be well versed with the primary weapon systems used in the Armed Forces.
- (f) Lead a life of selflessness and provide service towards society development and nation building.
- (g) Understand the importance of changing mindset, team work, social skills etiquettes and manners, interview skills and importance of effective communication in daily life.
- (h) Learn the importance of physical fitness and nuances of physical training.
- (i) Inculcate esprit-de-corps through team games.
- (j) Have knowledge about cultural diversity of India and learn ways and means to adopt them.

46. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -

- (a) Practice problem solving, critical thinking in real life situations.
- (b) Practice leadership of small teams and groups under challenging environment.
- (c) Develop a positive attitude, have manners and etiquettes in social life, develop a sense of cooperation for group or team work, participate in an interview with confidence and inculcate verbal and non-verbal communication skills.
- (d) Develop adequate physical and mental endurance capabilities.
- (e) Fire a weapon effectively with fair degree of marksmanship.
- (f) Undertake point to point navigation and take part in endurance marches by day and night.
- (g) Use terrain effectively for concealment, camouflage, indicate landmarks and give field signals.
- (h) Be motivated to join the Armed Forces.
- (i) Play team games and be able to communicate and coordinate effectively in group events or situations.
- (j) Perform foot drill, arms drill, ceremonial drill and will be able to take part in ceremonial parade and events.
- (k) Respect the diversity of Indian culture and develop pride by showcasing their own culture to others.

47. **NCC Camp-II : Course Content Part (II) Practical**

- (a) **Unit 1. Drill (Drill) (Contact Hrs. 16).** Tejchaal se Mudna, Tejchaal se Salute karna, Tej kadambaal aur Tham, Tej Kadambaal se kadam badhana, Teenon Teen se ek file Banana aur ek file se Teenon Teen Banana, Rifle Ke Saath Saavdhan, Aaram se, Rifle ke saath Parade par aur saaj, Rifle Ke saath visarjanaur line tod, Bhumi Sashtra aur Uthao Sashtra, Bagal Sashtra aur Baaju Shashtra, Salami Sashtra, Squad Drill,



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Guard Mounting, Guard of Honour, Platoon / Company Drill, Word of Command and Instructional Practice.

- (b) **Unit 2. Weapon Training (WT) (Contact Hrs. 14).** Stripping, Assembling, Cleaning of Point 22 rifle, Sight Setting and Sight Picture of Point 22 Rifle, Loading, Cocking and Unloading, Lying Position, Holding and Aiming of Point 22 rifle, Trigger Control and Firing of Shot, Theory of Group, Short-Range Aiming and Firing, Musketry Training, Firing Practice I to VII.
- (c) **Unit 3. Field Craft & Battle Craft (FC/BC) (Contact Hrs. 06).** Observation, Camouflage and Concealment, Field Signals, Section formations, Fire Control Orders, Fire and Movement, Knots and Lashings.
- (d) **Unit 4. Map Reading (MR) (Contact Hrs. 12).** Introduction to Map and Conventional signs, Scale and Grid System, Topographical forms and technical terms, Relief, Contours and gradients, Cardinal points and types of North, Types of Bearing and use of Service Protector, Prismatic Compass and its use, setting of a map, Finding North and own Position, Map to Ground and Ground to map, Point to Point march, Endurance March – I (10 KM), Endurance March -II (20 KM).
- (e) **Unit 5. Infantry Weapons (IW) (Contact Hrs. 01).** Characteristics of Infantry Company support weapons and 5.56 MM INSAS Rifle.
- (f) **Unit 6. Social Service and Community Development (SSCD)(Contact Hrs. 04).** Contribution of Youth Towards Social Welfare: Cadets will participate in various activities throughout the camp e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc., Social Evils: Female Feticide, Dowry, Child Abuse, Trafficking and Corruption, Drug Abuse and Drug Trafficking, Protection of Children and POCSO Act 2012.
- (g) **Unit 7. Personality Development (PD)(Contact Hrs. 06).** Change Your Mindset, Team Work and Team Building, Social Skills, Etiquettes and Manners, Interview Skills, Communication Skills–I, Communication Skills -II
- (h) **Unit 8. Obstacle Training (OT)(Contact Hrs. 02).** OT Practice – I: Untimed, Cadets will be familiarized with all the obstacles in the Obstacle Course and briefed about the correct method to do them, OT Practice -II: Timed practice for all the cadets and record to be maintained.
- (i) **Unit 9. Physical Training (PT) (Contact Hrs. 09).** Physical Training will be carried out on each day of the camp, except on last day, in morning hours. Training has to be progressive in degree of difficulty to improve individual stamina and endurance. Training to include warming up, running, exercises to strengthen upper body, lower body and core muscles. Two period each to be devoted to route march by day and night respectively and one period will be earmarked for trekking expedition as part of Adventure Activity.
- (j) **Unit 10. Games Training (G)(Contact Hrs. 09).** Physical Training will be carried out on each day of the camp, except on last day, in evening hours. Training has to be progressive in degree of difficulty to improve individual skills, coordination, team work



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and desire to excel. Training to ensure that each and every boy and girl cadets participate in at least one game activity everyday

- (k) **Unit 11. Cultural Activity (C) (Contact Hrs. 09)**. Cultural Activity will be carried out on each day of the camp, except on last day, in evening hours. Cadets have to be divided in Nine Groups consisting of a mix of boy and girl cadets and preferably belonging to the same geographical area. Each group has to present the unique culture, custom, tradition, folk lore, songs, drama, paintings and cuisine during one hour allotted. There will be a prize for the best group to encourage participation and to develop pride in their unique culture. This training activity should ensure that each and every boy and girl cadets participate in at least one game activity every day (Contact Hrs. 09)
- (l) **Unit 12. Spare (S) (Contact Hrs. 02)**. Two periods in each camp will be earmarked as spare to cover disruptions in training activity due to weather or other administrative reasons.

SECTION II : RULES AND REGULATIONS

GOVERNING NCC CREDIT COURSE UNDER CHOICE BASED CREDIT SYSTEM AS GENERIC ELECTIVE FOR SENIOR DIVISION/WING

RULE 1 :Definitions of Key Terms

1.1 General Definitions

1.1.1 'Choice Based Credit System' (CBCS). The CBCS provides choice for the student to select courses from the prescribed courses (Elective or Soft – Skill courses). It provides a 'Cafeteria' approach in which the students can take courses of their choice, learn at their own pace, study additional courses and acquire more than the minimum required credits, and adopt an inter-disciplinary approach.

1.1.2 'Academic Year'. Two consecutive (one odd + one even) semesters shall constitute one academic year.

1.1.3 'Credit Course'. Course, usually referred to as paper having specific title and code number, is a component of a programme. It consists of a list of topics/concepts/theories/principles/activities/tasks etc. which a student has to learn during the programme of study. Each course has some credits according to the nature and load of content. Each course should define the learning objectives/learning outcomes. A course may be designed to be delivered through lectures/tutorials/laboratory work/field work/out reach activities/project work / vocational training / physical training /viva / seminars /term papers / assignments / presentations / self-study work etc., or a combination of some of these.

1.1.4 'Course Instructor/Teacher'. The course instructor generally will be a teaching faculty who has taken up the responsibility of teaching it and evaluating the performance of the students in that course. NCC course will be imparted by the ANO (Associate NCC Officer) and PI (Permanent Instructor) / Girl Cadet Instructor (GCI)



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staff together according to their area of specialization. Certain specific topics and training activity is imparted by Military Officers and Whole Time Lady (WTLO).

1.1.5'Credit'.A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work per week. Thus, in each semester's NCC course, credits are assigned on the basis of the number of lecture/tutorial/field work/physical training/excursions and other forms of learning required for completing the contents in a 15-18 week schedule. 2 hours of laboratory work/field work is generally considered equivalent to 1 hour of lecture.

- i. 1 credit = 1 hour of instruction per week (1 credit course = 15 contact hours of instruction per semester)
- ii. 4 credit = 4 hour of instruction per week (4 credit course = 60 contact hours of instruction per semester)
- iii. 1 credit = 2 hour of practical per week (1 credit course = 30 contact hours of instruction per semester)
- iv. 4 credit = 8 hour of practical per week (4 credit course = 120 contact hours of instruction per semester)

Number(s) of credit(s) assigned to a particular course are mentioned in the detailed syllabus of the courses.

1.1.6'Credit Point'.It is the product of the grade point and the number of credits for a course.

1.1.7'Letter Grade'.It is an index of the performance of students in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P, and F. A letter grade is assigned to a student on the basis of evaluation of her/his performance in a course on a ten-point scale.

1.1.8'Grade Point'.It is a numerical weight allotted to each letter grade on a 10 -point scale.

Letter Grade	Grade Point
O	9-10
A+	8-9
A	7-8
B+	6-7
B	5-6
C	4-5
P	4
F	0
Ab	0

Note :University may use the above said criteria for providing the grades to the students or may adopt the same criteria which they are practicing for providing the letter grade and grade point for other subjects.



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1.1.9 'Programme'. An educational programme leading to the award of degree, Diploma or Certificate course. NCC course shall be offered only at under graduate level programmes for any stream or type of programme for example – Nonprofessional courses BA, B.SC. B. Com etc. professional courses – B.A., LLB, B.A./B.Sc., B.Ed., BCA, BBA, B. Tech, MBBS etc.

1.1.10 'Credit – Based Semester System (CBSS)'. Under the CBSS, the requirement of awarding a degree or diploma or certificate is prescribed in terms of number of credits to be completed by the students.

1.1.11 'Semester'. Each semester shall consist of 15 to 16 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from July to December and even semester from January to June. The Credit-based semester system provides flexibility in designing curriculum and assessing credits based on the course content and hrs of teaching.

1.1.12 'Semester Grade-Point Average (SGPA)'. Semester Grade Point Average or SGPA, is an average grade point earned by the student at the end of an academic session i.e. semester at college. The formula for calculation of SGPA is the sum of all the credit points awarded for the subjects divided by total credits allotted to that semester. It shall be expressed up to two decimal places.

1.1.13 'Cumulative Grade Point (CGPA)'. It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all the semesters. It shall be expressed up to two decimal places.

1.1.14 'Transcript/ Grade card or certificate'. Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade and / or marks secured) along with SGPA of semester. Overall Grade Certificate will be issued on completion of the course showing semester wise SGPA & CGPA.

1.1.15 'The University/ College/ Institution'. The University/ College/ Institution in present document means the any recognized central/ state/ Deemed university or institution meant for higher education.

1.1.16 'NCC Course'. In the present document 'NCC Course' means the course designed for imparting NCC curriculum in educational institutions as elaborated in this document under Choice Based Credit System as a General Elective Course for Senior Division/ Senior Wing.

1.2 Definitions Specific to NCC

1.2.1 'Institutional Training'. Implies training conducted for NCC cadets as per Training Manuals and Cadet Hand Book issued by DG NCC, Ministry of Defence.



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1.2.2 'Common Subjects'. Implies those subjects specifically taught in NCC curriculum which are common to Army, Navy and Air Force and general training that can be imparted by Associate NCC Officers or Military staff or a suitably qualified person.

1.2.3 'Specialised Subjects'. Implies subjects specifically taught in NCC curriculum by military instructors comprising specialised topics for Army, Navy and Air Force Cadets respectively.

1.2.4 'NCC Camps and Centralised Training Events'. Collective training events conducted usually for 10 days with large number of cadets living under field conditions in selected places away from home. The training camp comprises of focused physical and mental training routines of different types as per syllabus and curriculum. Some training like route marches may happen overnight. Camps include, adventure camps, national integration camps, Republic Day Parade Training Camps, ThalSainik, VayuSainik and NauSainik camps and other outdoor training activities as described in DG NCC Training Manuals.

1.2.5 NCC 'B' and 'C' Certificate Examinations. These are defined in Special National Cadet Corps Order 2020 issued by DG NCC, Ministry of Defence.

1.2.6 'Training Faculty'. Persons suitably trained & responsible for imparting training of different types and nature to students.

1.2.7 'Military Officers'. They are regular commissioned officers of Indian Armed Forces who serve in the NCC and render command, administrative and instructional functions for NCC.

1.2.8 'Whole Time Lady Officers (WTLO)'. They are women officers commissioned directly into the NCC.

1.2.9 'Associate NCC Officer (ANO)'. ANO will be a university/ college/ school faculty who are qualified in the PRCN (Pre-commission Course of NCC) conducted by DGNCC and are commissioned as Associate Officers in NCC as defined in NCC Act 1948 and NCC Rules. They have the eligibility to impart certain component of NCC Course and undertake training of cadets.

1.2.10 'Permanent Instructor (PI)'. PI Staff are Junior Commissioned Officers (JCO) and Non-Commissioned Officers (NCO) on deputation from Armed Forces to NCC as governed by NCC Act 1948. Retired PI Staff may be hired by a college as a substitute for ANO with prior concurrence of DGNCC.

1.2.11 'Girl Cadet Instructors (GCI)'. GCI are lady instructors' equivalent to PI Staff for specifically imparting instructions to women NCC cadets of Senior Wing.

1.2.12 'NCC Organizational Structure'. NCC is an adjunct of Indian Armed Forces that operates under the ambit of the Ministry of Defence through the Defence Secretary with Raksha Mantri as the political head.

1.2.13 'DGNCC'. Directorate General of NCC renders the command and administrative function of NCC. The executive head of NCC is Director General of NCC who is a Lt Gen rank officer from the Army.



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1.2.14 'State NCC Directorate'. State NCC Directorates are directorates subordinate to DG NCC and render command and administrative control to NCC at State level and is headed by an Additional or Deputy Director General

1.2.15 'NCC Group HQ'. NCC Group HQs are subordinate to State Directorates and render command and administrative control to NCC at district or cluster of districts in a state and is headed by a Group Commander.

1.2.16 'NCC Units'. NCC Units are subordinate to Group HQs at the lowest rung of the command and administrative control exercised by military officers and is headed by a Commanding Officer or Officer Commanding. The NCC Units directly engage

with educational institutions and ANOs and are primarily responsible for training of NCC in institutions under their jurisdiction.

1.2.17 'NCC Division/ Wing'. NCC Division/Wing are minor units of senior division/wing of NCC comprising of 160 senior cadets allotted to educational institutions. It can be further subdivided into NCC platoons of 53 to 54 cadets.

1.2.18 'NCC Troop'. NCC Troop are minor units of junior division/wing of NCC comprising of 100 junior cadets allotted to educational institutions. It can be further subdivided into NCC half troops comprising of 50 junior cadets.

RULE 2 : Admission and Other Provisions

2.1 The NCC Course under the CBCS as 'General Elective' shall be of three years (Six Semester) duration which may be completed in maximum duration of four year (8 semesters).

2.2 Students may complete NCC course minimum in Six semesters and maximum in eight semesters. Cadets may complete their 'B' Certificate in four semesters minimum and maximum six semesters. Cadets already having 'B' certificate may complete their 'C' certificate in minimum two semesters and maximum four semesters, and they may join NCC course 5 in first semester of college.

2.3 The intake to the course shall be decided according to the seats allotted to University/ college/ institution by DG NCC according to the availability of required infrastructure, faculty and resources.

2.4 The admission to the NCC Course under the CBCS as a 'General Elective' shall be governed by the provisions as laid down by the NCC Act 1948/ SNCCO 2020/ contemporary SNCCO and Academic council of parallel body of university. These rules and regulations may be modified from time to time (if needed) by the Academic body of the university in consultation with DG NCC or Act/ Ordinances prepared by DG NCC.

2.5 Students will be enrolled as NCC cadet as per existing Acts & Rules.

2.6 At the time of reporting for admission, the candidates are required to present medical & physical fitness documents as well as the admission proof of the university and submit the self-attested copies of aforesaid documents.



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- 2.7** The admission of any candidate is liable to be cancelled without giving any further notice forthwith or at any time during the period of the course, if it is detected that the candidate has/had produced fake/forged certificate (s)/ document(s), indulged in any act of misconduct/indiscipline and has/had concealed any other relevant information at the time of admission.
- 2.8** The admission of the candidate to the course shall be subject to such ordinance, rules and regulations as may be framed from time to time by the university in consultation with DG NCC and NCC act 1948.
- 2.9** DG NCC shall have jurisdiction in case of any dispute relating to the provisional admission in the course.

RULE3 : For Eligibility, Medium of Instrs & Categories

- 3.1 Eligibility Conditions**. Be governed by provisions of NCC Act and Rules and directions from DG NCC from time to time. These are readily available on DG NCC website www.nccindia.nic.in.
- 3.2** Standards for physical Fitness criteria for Male and Female Cadets/students shall be governed by provisions of NCC Act and Rules and policy documents released by DG NCC from time to time.

RULE4 : Medium of Instruction. English or Hindi. However, ANOs and training instructors are free to use vernacular language for helping students who are not fluent in Hindi or English.

RULE 5 : Course and Students. NCC course is unique, due to the nature of its military training content and component hence it is normally offered to students enrolled as NCC cadets only. This NCC Course is primarily designed for students enrolled as NCC cadets under provisions of NCC Act 1948. Institution allotted NCC will have the obligation to offer this course to all students from their institute enrolled as cadets as per vacancy allotted to the institution by DG NCC as also to those cadets enrolled under Open Quota seats.

RULES 6 :NCC Course for 'Cadet' Category

6.1. NCC Course for 'Cadet'

- (a) NCC course for Cadets comprises of total 24 credits (08 for theory, 06 for practical and 10 for camp component) over 6 semesters courses i.e., NCC course I to NCC course VI and NCC Camp I & NCC Camp II.
- (b) Cadets will not only earn the academic credits but also be given 'B', and 'C' Certificates after passing the exam conducted by DG NCC.
- (c) Students would be free to join NCC Course I or subsequent Courses in any semester, not necessarily Semester I or the designated Semester.



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- (d) A student can opt for only one of the six Courses per semester and that too sequentially implying NCC Course II cannot be joined before completing NCC Course I and so on.
- (e) Under this category a fresh student/cadet will compulsorily have to opt for all six NCC Courses in minimum six Semesters. However, 'B' certificate holder may directly join NCC Course Number 5 in any semester. He will have to complete NCC Course Number 5 and NCC Course Number 6 for obtaining 'C' certificate and he will be awarded credit points only for NCC Course Number 5 and NCC Course Number 6.

NCC GENERAL ELECTIVE CREDIT COURSE DESIGN SUMMARY					
Semester	Credits Allocated			Total	Remarks
	Theory	Practical	Camp		
Semester - I	1	1		2	
Semester - II	1	1		2	
Semester - III	1	1	5	7	Credits of 1 st Camp merged with 3 rd Sem
Semester - IV	2	1		3	
Semester - V	1	1	5	7	Credits of 2 nd Camp merged with 5 th Sem
Semester - VI	2	1		3	
Total	08	6	10	24	Twenty-Four Credits



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RULE 7 :Mobility& Credit Bank

- 7.1 The mobility shall be permissible from the regular mode programme to the regular mode programme of learning only and cannot be replaced by open/distance/online programme.
- 7.2 It shall be the responsibility of the student to assess the feasibility and practicality of vertical mobility (across the Universities), as it doesn't entitle a student to be exempted or relaxed from any of the requisites (sessional, attendance, assignments, End-semester examinations and programme duration etc.) for completing the course.
- 7.3 After completing one semester/ one year cadet/student may pursue NCC course from any other institution/ University/ College having NCC and carry credits in credit bank as per NEP 2020. The NCC students/ Cadets of some other university shall in any case be admitted only at the beginning of the session to the fulfilment of the other requirements of the NCC Course (attendance, Formative assessment, Field-work, practical etc).
- 7.4 A student of NCC course availing inter-university mobility shall continue to be a bonafide student of the university where he/she initially got admission and as per the university/ Institutional rules for the inter-university mobility.
- 7.5 In case of inter-university mobility of NCC cadet for NCC Course is also the subject to availability of NCC for the cadets in that particular university/ institution and it shall be interpreted as inter-battalion migration (means another regimental no. shall be allotted to the cadet).

RULE 8 :Examination & Promotion

- 8.1 The examination of all the NCC courses shall be internal in nature and generally consisting of continuous internal assessment and End of semester Examination. For the preparation of final grade in a particular course, the continuous internal assessment (Formative in nature) and the End Semester Examination (Summative in nature) shall have the weightage as decided for other courses by the university as per the University norms for e.g., 25% internal assessment and 75% End of term exams or 30% internal assessment and 70% End of term exams etc.
- 8.2 For assigning the Grades and credit points to NCC Course Universities/ Institutions are free to use the same criteria which are decided by their academic bodies for providing the grades and credit points to the other courses **RULE 9 :Continuous Internal Assessment**
- 9.1 The Continuous Internal Assessment of the NCC Cadets' and NCC students' learning and performance shall be carried out by the ANOs and PI staff.
- 9.2 Continuous Internal Assessment will be 100% Practical that includes Drill Square test, Map Reading, Weapon Training, Field craft & Battle craft.
- 9.3 CO of nominated NCC Unit will be deemed as Head of the Department and shall be responsible for approving the schedule and pattern of the continuous internal examination.



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- 9.4** ANO of the nominated institute shall maintain all the records related to attendance, teaching and assessment in a systematic manner, including award of final grade.
- 9.5** In case a student fails to appear in any Continuous Internal Assessment, they will be given a chance to reappear in retest and in case he/she fails to obtain 'P' grade he/she will be made to repeat the exam by carrying it forward for semester retest .

RULE 10 :Re-appear in the End Semester Examination for Improvement of Grades

- 10.1.** If a student wishes to improve her/his grade(s) in NCC course(s), she/he can re-appear in the End Semester Examination in the subsequent odd/even semester(s), whenever the examination of the particular course(s) is held, on payment of fees in addition to the prescribed semester fee within the maximum permissible duration for the programme of study of the student/cadet.
- 10.2.** A student may improve her/his points/grade by reappearing in the End Semester Examination of a course as per the provisions of reappearing mentioned above. In such cases points obtained by the student in the Continuous Internal Assessment of the particular course shall be carried forward to the subsequent End Semester Examination of the course. However, in such case, the points/grades obtained on the basis of latest appeared End Semester Examination shall be considered for calculation of final CGPA of the programme.
- 10.3.** The re-appear examination of a course for improvement of grade shall be based on the syllabi of the course in force at the time of initial registration to the course.
- 10.4.** A student who has got the Migration/Transfer Certificate issued from the University shall not be allowed to re-appear in any examination for improvement of grade.

RULE 11 :Repeating Courses

- 11.1** A student having attendance shortage in any course may repeat the course by taking re-admission in that course in subsequent odd/even semester(s), whenever the course is being offered, within the maximum permissible duration of the programme.
- 11.2** If a student repeats a course, she/he has to fulfil all the desired requirements afresh including attendance, Continuous Internal Assessment and the End Semester Examination. In such case the course content shall be based on the syllabi of the course in force at the time of repetition of the course.

RULE 12 : Promotion Rules

- 12.1** A student shall be declared as 'promoted' to the next semester when she/he earns 'P' Grade or above in the last concluded semester examination, maintaining the spirit and pattern of semester system and covering the mandatory components, such as Continuous Internal Assessment and End-Semester Examination in the NCC Courses.
- 12.2** A student shall be 'Provisionally Promoted' to the next semester if she/he secures less than 'P' grade but he /she has to pass all the courses of NCC course within permissible duration.
- 12.3** A cadet shall be eligible to attend the 'B' Certificate exam if he/she passed all the first four semester NCC course and completed one ATC/CATC. Similarly, cadet will be



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eligible to attend 'C' certificate examination if he/she has 'B' certificate and he /she has passed V, VI semester NCC course and attended one CATC/ATC after fourth semester and after having obtained 'B' certificate.

- 12.4** If a cadet/student is repeating a course in an academic session, whatever may be the reason, it shall not be counted in the total number of seats and shall not affect the fresh intake of cadets / student in that academic session.

RULE 13 :Computation of SGPA & CGPA

- 13. Computation of SGPA and CGPA** . University may use their own criteria for giving the SGPA & CGPA which is prepared by the authorised academic body for the other courses.



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I. NON-GRADIAL COURSES

1. NSS/NCC/Physical Education & Yoga Practices 2 (0+2)Theory

Course aims at evoking social consciousness among students through various activities viz., working together, constructive and creative social work, to be skilful in executing democratic leadership, developing skill in programme development to be able for self employment, reducing gap between educated and uneducated, increasing awareness and desire to help sections of society.

Following activities are to be taken up under the NSS course:

- Introduction and basic components of NSS: Orientation
- NSS programmes and activities
- Understanding youth
- Community mobilisation
- Social harmony and national integration
- Volunteerism and shramdan
- Citizenship, constitution and human rights
- Family and society
- Importance and role of youth leadership
- Life competencies
- Youth development programmes
- Health, hygiene and sanitation
- Youth health, lifestyle, HIV AIDS and first aid
- Youth and yoga
- Vocational skill development
- Issues related environment
- Disaster management
- Entrepreneurship development
- Formulation of production oriented project
- Documentation and data reporting
- Resource mobilization
- Additional life skills
- Activities directed by the Central and State Government

All the activities related to the National Service Scheme course is distributed under four different courses viz., National Service Scheme I, National Service Scheme II, National Service Scheme III and National Service Scheme IV each having one credit load. The entire four courses should be offered continuously for two years. A student enrolled in NSS course should put in at least 60 hours of social work in different activities in a semester other than five regular one day camp in a year and one special camp for duration of 7 days at any semester break period in the twoyear. Different activities will include orientation lectures and practical works. Activities directed by the Central and State Government have to be performed by all the volunteers of NSS as per direction.



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SYLLABUS

Semester I

Course Title: National Service Scheme I

Introduction and basic components of NSS:

Orientation: history, objectives, principles, symbol, badge; regular programmes under NSS, organizational structure of NSS, code of conduct for NSS volunteers, points to be considered by NSS volunteers awareness about health

NSS programmes and activities

Concept of regular activities, special camping, day camps, basis of adoption of village/slums, conducting survey, analysing guiding financial patterns of scheme, youth programme/ schemes of GOI, coordination with different agencies and maintenance of diary

Understanding youth

Definition, profile, categories, issues and challenges of youth; and opportunities for youth who is agent of the social change

Community mobilisation

Mapping of community stakeholders, designing the message as per problems and their culture; identifying methods of mobilisation involving youth-adult partnership

Social harmony and national integration

Indian history and culture, role of youth in nation building, conflict resolution and peace-building

Volunteerism and shramdan

Indian tradition of volunteerism, its need, importance, motivation and constraints; shramdan as part of volunteerism

Citizenship, constitution and human rights

Basic features of constitution of India, fundamental rights and duties, human rights, consumer awareness and rights and rights to information **Family and society**

Concept of family, community (PRIs and other community based organisations) and society



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

Semester II

Course Title: National Service Scheme II

Importance and role of youth leadership

Meaning, types and traits of leadership, qualities of good leaders; importance and roles of youth leadership **Life competencies**

Definition and importance of life competencies, problem-solving and decision-making, inter personal communication

Youth development programmes

Development of youth programmes and policy at the national level, state level and voluntary sector; youth-focused and youth-led organisations

Health, hygiene and sanitation

Definition needs and scope of health education; role of food, nutrition, safe drinking water, water born diseases and sanitation (Swachh Bharat Abhiyan) for health; national health programmes and reproductive health.

Youth health, lifestyle, HIV AIDS and first aid

Healthy lifestyles, HIV AIDS, drugs and substance abuse, home nursing and first aid

Youth and yoga

History, philosophy, concept, myths and misconceptions about yoga; yoga traditions and its impacts, yoga as a tool for healthy lifestyle, preventive and curative method



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

Semester III

Course Title: National Service Scheme III

Vocational skill development

To enhance the employment potential and to set up small business enterprises skills of volunteers, a list of 12 to 15 vocational skills will be drawn up based on the local conditions and opportunities. Each volunteer will have the option to select two skill-areas out of this list

Issues related environment

Environmental conservation, enrichment and sustainability, climatic change, natural resource management (rain water harvesting, energy conservation, forestation, waste land development and soil conservations) and waste management

Disaster management

Introduction and classification of disaster, rehabilitation and management after disaster;

role of NSS volunteers in disaster management.

Entrepreneurship development

Definition, meaning and quality of entrepreneur; steps in opening of an enterprise and role of financial and support service institution.

Formulation of production oriented project

Planning, implementation, management and impact assessment of project

Documentation and data reporting

Collection and analysis of data, documentation and dissemination of project reports



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

Semester IV

Course Title: National Service Scheme IV

Youth and crime

Sociological and psychological factors influencing youth crime, cyber crime, peer mentoring in preventing crime and awareness for juvenile justice

Civil/self defence

Civil defence services, aims and objectives of civil defence; needs and training of self defence

Resource mobilisation

Writing a project proposal of self fund units (SFUs) and its establishment

Additional life skills

Positive thinking, self confidence and esteem, setting life goals and working to achieve them, management of stress including time management.



Physical Education Practices

Semester I: Physical Education

1. Teaching of skills of Football – demonstration, practice of the skills, correction, involvement in game situation (For girls teaching of Tennikoit)
2. Teaching of different skills of Football – demonstration, practice of the skills, correction, involvement in game situation (For girls teaching of Tennikoit)
3. Teaching of advance skills of Football – involvement of all the skills in game situation with teaching of rules of the game
4. Teaching of skills of Basketball – demonstration, practice of the skills, correction of skills, involvement in game situation
5. Teaching of skills of Basketball – demonstration, practice of the skills, involvement in game situation
6. Teaching of skills of Basketball – involvement of all the skills in game situation with teaching of rule of the game
7. Teaching of skills of Kabaddi – demonstration, practice of the skills, correction of skills, involvement in game situation
8. Teaching of skills of Kabaddi – demonstration, practice of the skills, correction of skills, involvement in game situation
9. Teaching of advance skills of Kabaddi – involvement of all the skills in game situation with teaching of rule of the game
10. Teaching of skills of Ball Badminton – demonstration, practice of the skills, correction of skills, involvement in game situation
11. Teaching of skills of Ball Badminton – involvement of all the skills in game situation with teaching of rule of the game
12. Teaching of some of Asanas – demonstration, practice, correction and practice
13. Teaching of some more of Asanas – demonstration, practice, correction and practice
14. Teaching of skills of Table Tennis – demonstration, practice of skills, correction and practice and involvement in game situation
15. Teaching of skills of Table Tennis – demonstration, practice of skills, correction and practice and involvement in game situation
16. Teaching of skills of Table Tennis – involvement of all the skills in game situation with teaching of rule of the game
17. Teaching – Meaning, Scope and importance of Physical Education
18. Teaching – Definition, Type of Tournaments
19. Teaching – Physical Fitness and Health Education
20. Construction and laying out of the track and field (*The girls will have Tennikoit and ThrowBall).



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Semester II: Physical Education

Teaching of skills of Hockey – demonstration practice of the skills and

correction.

1. Teaching of skills of Hockey – demonstration practice of the skills and correction. And involvement of skills in games situation
2. Teaching of advance skills of Hockey – demonstration practice of the skills and correction. Involvement of all the skills in games situation with teaching of rules of the game
3. Teaching of skills of Kho-Kho – demonstration practice of the skills and correction.
4. Teaching of skills of Kho-Kho – demonstration practice of the skills and correction. Involvement of the skills in games situation
5. Teaching of advance skills of Kho-Kho – demonstration practice of the skills and correction. Involvement of all the skills in games situation with teaching of rules of the game
6. Teaching of different track events – demonstration practice of the skills and correction.
7. Teaching of different track events – demonstration practice of the skills and correction.
8. Teaching of different track events – demonstration practice of the skills and correction with competition among them.
9. Teaching of different field events – demonstration practice of the skills and correction.
10. Teaching of different field events – demonstration practice of the skills and correction.
11. Teaching of different field events – demonstration practice of the skills and correction.
12. Teaching of different field events – demonstration practice of the skills and correction with competition among them.
13. Teaching of different asanas – demonstration practice and correction.
14. Teaching of different asanas – demonstration practice and correction.
15. Teaching of different asanas – demonstration practice and correction.
16. Teaching of different asanas – demonstration practice and correction.
17. Teaching of weight training – demonstration practice and correction.
18. Teaching of circuit training – demonstration practice and correction.
19. Teaching of calisthenics – demonstration practice and correction.

Note: 1) Compulsory Uniform: Half pants, Tee Shirts, Shoes and socks all white (Girls will have white Tee Shirt and Track pants) **2)** The games mentioned in the practical may be inter changed depending on the season and facilities.



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

BE II nd SEMESTER

BE 21 CHEMISTRY-I

TOTAL -60 HOURS

OBJECTIVE:

The concept developed in their course will aid in qualification of several concepts in chemistry that have been introduced at 10+0 levels in schools. Technology is being increasingly based on the electronic, atomic and molecular level modifications. Quantum theory is more than 100 years old and to understand phenomenon at nanometer levels, one has to be base the description of all chemical processes at molecular levels.

Course Contents:

MODULE -I

Water – Analysis, Treatments and Industrial Applications

Sources, Impurities, Hardness & its units, Determination of hardness by EDTA method, Alkalinity & It's determination and related numerical problems. (9 hours)

MODULE -II

Boiler problem & softening methods

Boiler troubles (Sludge & Scale, Priming & Foaming, Boiler Corrosion, Caustic Embrittlement), Softening methods (Lime-Soda, Zeolite and Ion Exchange Methods) and related numerical problems. (9 hours)

MODULE -III

Lubricants and Lubrication

Introduction, Mechanism of lubrication, Classification of lubricants, significance & determination of Viscosity and Viscosity Index, Flash & Fire Points, Cloud & Pour Points, Aniline Point, Acid Number, Saponification Number, Steam Emulsification Number and related numerical problems. (9 hours)

MODULE -IV

Polymer & polymerization

Introduction, types of polymerisation, Classification, mechanism of polymerisation (Free radical & Ionic polymerization). Thermoplastic & Thermosetting polymers Elementary idea of Biodegradable polymers, preparation, properties & uses of the following polymers- PVC, PMMA, Teflon, Nylon 6, Nylon 6:6, Polyester phenol formaldehyde, Urea- Formaldehyde, Buna N, Buna S, Vulcanization of Rubber. (9 hours)

MODULE -V

Phase equilibrium and Corrosion

Phase diagram of single component system (Water) Phase diagram of binary Eutectic System (Cu-Ag.) Corrosion: Types, Mechanisms & prevention. (9 hours)

MODULE -VI

Spectroscopic techniques and application



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Principle, Instrumentation & Applications, electronics spectroscopy, Vibrational & Rotational Spectroscopy of diatomic molecules. (8 hours)

MODULE –VII

Periodic properties

Effective Nuclear Charge, Variations: S, P, d & f Orbital energies of atoms in periodic table, Electronics Configuration, atomic & Ionic sizes, electron affinity & electro negativity, Ploarizability & Oxidation States.

(7 hours)

COURSE OUTCOME

The concepts developed in this course will aid in quantification of several concepts in chemistry that have been introduced at the 10+2 levels in schools. Technology is being increasingly based on the electronic, atomic and molecular level modifications. Quantum theory is more than 100 years old and to understand phenomena at nanometer levels, one has to base the description of all chemical processes at molecular levels. The course will enable the student to:

Analyse microscopic chemistry in terms of atomic and molecular orbitals and intermolecular forces.

- Rationalise bulk properties and processes using thermodynamic considerations.
- Distinguish the ranges of the electromagnetic spectrum used for exciting different molecular
- energy levels in various spectroscopic techniques Rationalise periodic properties such as ionization potential, electronegativity, oxidation states
- and electronegativity. List major chemical reactions that are used in the synthesis of molecules.

PRACTICAL LIST

1. Water testing

- (i) Determination of Total hardness by Complex metric titration method.
- (ii) Determination of mixed alkalinity a) OH & CO₃ b) CO₃ & HCO₃
- (iii) Chloride ion estimation by Argentometric method.

2. Fuels & Lubricant testing:

- (i) Flash & fire points determination by
 - a) Pensky Martin Apparatus,
 - b) Abel's Apparatus
 - c) Cleveland's open cup Apparatus
 - d) Calorific value by bomb calorimeter.
- (ii) Viscosity and Viscosity index determination by a) Redwood viscometer No.1
 - b) Redwood viscometer No.2
 - (iii) Proximate analysis of coal a) Moisture content b) Ash content c) Volatile matter content d) Carbon residue
 - (iv) Steam emulsification No & Anline point determination
- (v) Cloud and Pour point determination of lubricating oil

3. Alloy Analysis

- (i) Determination of percentage of Fe in an iron alloy by redox titration using N-Phenyl anthranilic acid as internal indicator.
- (ii) Determination of Cu and or Cr in alloy by Iodometric Titration. (iii) Determination of % purity of Ferrous



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Ammonium Sulphate & Copper Sulphate.

Reference Books :

- 1 Chemistry in Engineering and Technology - Vol.1 &2 Kuriacose and Rajaram , McGraw Hill Education
- 2 Fundamental of Molecular Spectroscopy C.N. Banwell , McGraw Hill Education
- 3 Engineering Chemistry – B.K. Sharma, Krishna Prakashan Media (P) Ltd., Meerut.
- 4 Basics of Engineering Chemistry – S.S. Dara & A.K. Singh, S. Chand &Company Ltd., Delhi.
- 5 Applied Chemistry – Theory and Practice, O.P. Viramani, A.K. Narula, New Age International Pvt. Ltd. Publishers, New Delhi.
- 6 Elementary Spectroscopy ,Y .R. Sharma , S. Chand Publishing
- 7 Polymer Science, Vasant R. Gowariker, N. V. Viswanathan, Jayadev Sreedhar, New Age International Pvt. Ltd
- 8 Advanced Inorganic Chemistry, G.R. Chatwal, Goal Publishing house
- 9 Engineering Chemistry (NPTEL Web-book) B.L. Tembe, Kamaluddin and M.S. Krishna



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

BE II nd SEMESTER BE 22 MATHEMATICS-II

TOTAL -60 HOURS

OBJECTIVE:

- The objective of their course is to familiarize the prospective engineers with techniques in multivariable integration ordinary and partial differential equations and complex variables. It aims to equip the students to deal with advance level of mathematics and applications that would be essential for their disciplines.

Module 1

Ordinary Differential Equations I :(6 hours) : Differential Equations of First Order and First Degree (Leibnitz linear, Bernoulli's, Exact), Differential Equations of First Order and Higher Degree, Higher order differential equations with constants coefficients, Homogeneous Linear Differential equations, Simultaneous Differential Equations. (12 HOURS)

Module 2

Ordinary differential Equations II:(8 hours) :Second order linear differential equations with variable coefficients, Method of variation of parameters, Power series solutions; Legendre polynomials, Bessel functions of the first kind and their properties. (12 HOURS)

Module 3:

Partial Differential Equations : (8 hours) : Formulation of Partial Differential equations, Linear and Non-Linear Partial Differential Equations, Homogeneous Linear Partial Differential Equations with Constants Coefficients. (12 HOURS)

Module 4

Functions of Complex Variable :(8 hours) : Functions of Complex Variables: Analytic Functions, Harmonic Conjugate, Cauchy-Riemann Equations (without proof), Line Integral, Cauchy-Goursat theorem (without proof), Cauchy Integral formula (without proof), Singular Points, Poles & Residues, Residue Theorem, Application of Residues theorem for Evaluation of Real Integral (Unit Circle).

(12 HOURS)

Module 5

Vector Calculus : (10 hours) : Differentiation of Vectors, Scalar and vector point function, Gradient, Geometrical meaning of gradient, Directional Derivative, Divergence and Curl, Line Integral, Surface Integral and Volume Integral, Gauss Divergence, Stokes and Green theorems. (12 HOURS)

OUTCOME:

The student will learn

- The mathematical tools needed in evaluating multiple integrals and their usages.
- The effective mathematical tools for the solutions of differential equations that model physical



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processes.

- The tools of differentiation and integration of functions of a complex variable that are use various techniques dealing engineering problem.

Textbooks/References:

1. G.B. Thomas and R.L. Finney, Calculus and Analytic geometry, 9th Edition, Pearson, Reprint, 2002.
2. Erwin kreyszig, Advanced Engineering Mathematics, 9th Edition, John Wiley & Sons, 2006.
3. W. E. Boyce and R. C. DiPrima, Elementary Differential Equations and Boundary Value Problems, 9th Edn., Wiley India, 2009.
4. S. L. Ross, Differential Equations, 3rd Ed., Wiley India, 1984.
5. E. A. Coddington, An Introduction to Ordinary Differential Equations, Prentice Hall India, 1995.
6. E. L. Ince, Ordinary Differential Equations, Dover Publications, 1958.
7. J. W. Brown and R. V. Churchill, Complex Variables and Applications, 7th Ed., McGraw Hill, 2004.
8. N.P. Bali and Manish Goyal, A text book of Engineering Mathematics, Laxmi Publications, Reprint, 2008.
9. B.S. Grewal, Higher Engineering Mathematics, Khanna Publishers, 36th Edition, 2010.



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

BE II nd SEMESTER BE 23 PROGRAMMING FOR PROBLEM SOLVING WITH C++

TOTAL -60 HOURS

OBJECTIVE :

- To formulate simple algorithms for erythematic and logical problem
- To translate the algorithms to programs (in c++ language)
- To test and execute the programs and correct syntax and logical error.
- To implement conditional branching, iteration recursion.
- To decompose a problem into functions and synthesize a complete program using divide and Conquer approach.
- To use arrays, pointer and structures to formulate algorithms and program.
- To apply programming to solve matrix addition and multiplication problems and searching and sorting problem.

Module –I

Introduction To 'C' Language

Character set. variables and identifiers, built-in data types. variable definition, arithmetic operators and expressions, constants and literals, simple assignment statement, basic input/output statement, simple 'c' programs. (09 HOURS)

Module –II

Conditional Statements And Loops

Decision making within a program, conditions, relational operators, logical connectives, if statement, if-else statement, loops: while loop, do while, for loop. nested loops, infinite loops, switch statement, structured programming. (09 HOURS)

Module –III Arrays

One dimensional arrays: array manipulation; searching, insertion, deletion of an element from an array; finding the largest/smallest element in an array; two dimensional arrays, addition/multiplication of two matrices, transpose of a square matrix; null terminated strings as array of characters, representation sparse matrices. (09 HOURS)

Module –IV

Functions

Top-down approach of problem solving, modular programming and functions, standard library of c



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functions, prototype of a function: foollal parameter list, return type, function call, block structure, passing arguments to a function: call by reference, call by value, recursive functions, arrays as function arguments. **(09 HOURS)**

Module –V

Structures and Unions

Structure variables, initialization, structure assignment, nested structure, structures and functions, structures and arrays: arrays of structures, structures containing arrays, unions. **(08 HOURS)**

Module –VI

Pointers

Address operators, pointer type declaration, pointer assignment, pointer initialization, pointer arithmetic, functions and pointers, arrays and pointers, pointer arrays. **(08 HOURS)**

Module –VII File Processing

Concept of files, file opening in various modes and closing of a file, reading from a file, writing onto a file. **(08 HOURS)**

OUTCOME:

- To formulate the algorithms for simple problems.
- To translate given algorithms to a working and correct program.
- To be able to correct syntax errors or reported by the compiler.
- To be able to identify and correct logical error encountered at run time.
- To be able to write interactive as well as recursive programs.

Reference

1. Let Us C-Yaswant kanetkar,BPB
2. Programming in ANSI C-E. Balagurusamy, TMH



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

BE II nd SEMESTER BE 24 ENGLISH

TOTAL -60 HOURS

OBJECTIVE:

The student will acquire basic proficiency in English including reading and listening comprehension, writing and speaking skill.

Module I - Languages and skills of communication

Linguistic techniques, Modern usages, Reading comprehension, English phonetic symbols/sings, Oral presentation, Audition Communication, Processes of Communication, Verbal and Non Verbal Communication, Barriers to Communication. (12 HOURS)

Module II - Application of linguistic ability

Writing of definitions of Engineering terms, Objects, Processes and Principles (Listening) Topics of General Interest, Reproduction from business, daily life, travel, health, buying and selling, company structure, systems etc. (12 HOURS)

Module III - Letter Writing:

Applications, Enquiry, Calling quotations, Tenders, Order and Complaint. (12 HOURS)

Module IV

Precise Writing, Noting and drafting, Technical Description of simple engineering objects and processes (writing), Report writing, precise writing, Note writing, Slogan writing comment, Speech advertising. (12 HOURS)

Module V

Writing Technical reports of the type of observation report, Survey report, Report of trouble, Laboratory Report and Project Report on the subjects of engineering. (Speaking) Vocabulary, Presentations, Demonstrations, Conversation– Telephone media, socializing, cultural events, debates, speech. (12 HOURS)

OUTCOME:

The student understands the below mention:

- Language and skills of communication
- Application linguistic ability
- Letter writing precise writing
- Writing technical reports



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- To be able to represent data in arrays, strings and structure and manipulate them through a program.
- To be able to declare pointers of different types and use them in defining self-referential structures.
- To be able to create, read and write to and from simple text files.

Topics to be covered in the Language laboratory sessions

1. Basic Grammar & Vocabulary (Synonyms /Antonyms, Analogies, sentence completion, correctly spelt words, idioms, proverbs, common errors).
2. Phonetic symbols and pronunciation.
3. Listening skills (Including Listening Comprehension)
4. Reading Skills (Including Reading Comprehension)
5. Writing Skills (Including structuring resume and cover letter)
6. Speaking Skills
7. Body Language
8. Oral Presentation: Preparation and delivery using audio – visual aids with stress n body language
And voice modulation (Topic to be selected by the teacher.) Final Assessment Should be based on Assignment, presentation and interview.

BOOKS:

1. Business Correspondence and Report Writing - By Sharma; TMH.
2. Living English Structure – By W.S. Allen; Longmans.
3. English Grammar – Ehrlich, Schaum Series; TMH.
4. Spoken English for India – By R.K. Bansal and IB Harrison Orient Longman.
5. New International Business English – by Joans and Alexander; OUP.
6. Effective Technical Communication – Rizvi; TMH.



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

BE II nd SEMESTER BE 25 ENVIROMENTAL STUDIES

TOTAL -60 HOURS

Module –I Energy-

Sources of Energy : Renewable & Non Renewable, Fossil fuel, Biomass Geothermal, Hydrogen, Solar, Wind, hydal, nuclear sources. (12 HOURS)

Module –II Ecosystem –

Segments of Environment: Atmosphere, hydrosphere, Lithosphere, biosphere. Cycles in Ecosystem – Water, Carbon, Nitrogen. Biodiversity: Threats and conservation, (12 HOURS)

Module –III Air Pollution & Sound Pollution

Air Pollution: Air pollutants, classification, (Primary & secondary Pollutants) Adverse effects of pollutants. Causes of Air pollution chemical, photochemical, Green house effect, ozone layer depletion, acid Rain. Sound Pollution: Causes, controlling measures, measurement of sound pollution (deciblage), Industrial and non – industrial. (12 HOURS)

Module –IV Water Pollution–

Water Pollution: Pollutants in water, adverse effects. Treatment of Domestic & Industrial water effluent.

Soil Pollution – Soil Profile, Pollutants in soil, their adverse effects, controlling measures.

(12 HOURS)

Module –V Society, Ethics & Human values

Impact of waste on society. Solid waste management (Nuclear, Thermal, Plastic, medical, Agriculture, domestic and e-waste). Ethics and moral values, ethical situations, objectives of ethics and its study Preliminary studies regarding Environmental Protection Acts , introduction to value education, self exploration, sanyam & swasthya. (12 HOURS)

BOOKS:

1. Harris, CE, Prichard MS, Rabin’s MJ, “Engineering Ethics”; Cengage Pub.
2. RanaSVS; “Essentials of Ecology and Environment”; PHI Pub.
3. Raynold, GW “Ethics in information Technology”; Cengage.
4. Svakumar; Energy Environment & Ethics in society; TMH
5. AK De “Environmental Chemistry”; New Age Int. Publ.



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6. BK Sharma, “Environmental Chemistry”; Goel Publ. House.
7. Bala Krishnamoorthy; “Environmental management”; PHI
8. Gerard Kiely, “Environmental Engineering”; TMH
9. Miller GT JR; living in the Environment Thomson/cengage
10. Cunningham WP and MA; principles of Environment Sc; TMH
11. Pandey, S.N. & Mishra, S.P. Environment & Ecology, 2011, Ane Books , Pvt. Ltd, New Delhi
12. Joseph, B. Environmental Studies, 2009 Tata Mcgraw Hill, Edu India Ltd. New Delhi.
13. Gour R.R, Sangal, R & Bagaria, G.P. , Excel Books, A-45, Naraina Phase-I
 ,New Delhi.-110028



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

BE II nd SEMESTER BE 26 WORK SHOP/ MANUFACTURING PRACTICE

TOTAL -60 HOURS

OBJECTIVE:

- The student will gain knowledge of the different manufacturing processes which are commonly employed in the industry, to fabricate components using different materials.

Module I

Introduction: Manufacturing Processes and its Classification, Casting, Machining, Plastic deformation and metal forming, Joining Processes, Heat treatment process, Assembly process. Powder Metallurgy, introduction to computers in manufacturing. Black Smithy Shop Use of various smithy tools. Forging operations: Upsetting, Drawing down, Fullering, Swaging, Cutting down, Forge welding, Punching and drafting. Suggested Jobs : Forging of chisel., forging of Screw Driver.

(12 HOURS)

Module II

Carpentry Shop: Timber : Type, Qualities of timber disease, Timber grains, Structure of timber, Timber, Timber seasoning, Timber preservation .Wood Working tools: Wood working machinery, joints & joinery. Various operations of planning using various carpentry planes sawing & marking of various carpentry joints. Suggested Jobs :Name Plate ,Any of the Carpentry joint like mortise or tennon joint. (12 HOURS)

Module III

Fitting Shop: Study and use of Measuring instruments, Engineer steel rule, Surface gauges caliper, Height gauges, feeler gauges, micro meter. Different types of files, File cuts, File grades, Use of surface plate, Surface gauges drilling tapping Fitting operations: Chipping filling, Drilling and tapping.Suggested Jobs :Preparation of job piece by making use of filling, sawing and chipping , drilling and tapping operations. (12 HOURS)

Module IV

Foundry: Pattern Making: Study of Pattern materials, pattern allowances and types of patterns. Core box and core print, .Use and care of tools used for making wooden patterns.

Moulding: Properties of good mould & Core sand, Composition of Green , Dry and Loam sand. Methods used to prepare simple green and bench and pit mould dry sand bench mould using single piece and split patterns. (12 HOURS)

Module V

Welding: Study and use of tools used for Brazing, Soldering, Gas & Arc elding. Preparing Lap &



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Butt joints using gas and arc welding methods, Study of TIG & MIG welding processes. Safety precautions.(12HOURS)

OUTCOME:

- Upon completion of the course, students will be able to fabricate components with their own hands.

BOOKS:

1. Bawa HS; Workshop Practice, TMH
2. Rao PN; Manufacturing Technology- Vol.1& 2, TMH
3. John KC; Mechanical workshop practice; PHI
4. Hazara Choudhary; Workshop Practices -, Vol. I & II.
5. Jain. R.K. Production Technology -



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

BE II nd SEMESTER BE 27 Constitution of India

Basic features and fundamental principles

TOTAL -60 HOURS

The Constitution of India is the supreme law of India. Parliament of India cannot make any law which violates the Fundamental Rights enumerated under the Part III of the Constitution. The Parliament of India has been empowered to amend the Constitution under Article 368, however, it cannot use this power to change the “basic structure” of the constitution, which has been ruled and explained by the Supreme Court of India in its historical judgments. The Constitution of India reflects the idea of “Constitutionalism” – a modern and progressive concept historically developed by the thinkers of “liberalism” – an ideology which has been recognized as one of the most popular political ideology and result of historical struggles against arbitrary use of sovereign power by state. The historic revolutions in France, England, America and particularly European Renaissance and Reformation movement have resulted into progressive legal reforms in the form of “constitutionalism” in many countries. The Constitution of India was made by borrowing models and principles from many countries including United Kingdom and America. **(20 HOURS)**

The Constitution of India is not only a legal document but it also reflects social, political and economic perspectives of the Indian Society. It reflects India’s legacy of “diversity”. It has been said that Indian constitution reflects ideals of its freedom movement; however, few critics have argued that it does not truly incorporate our own ancient legal heritage and cultural values. No law can be “static” and therefore the Constitution of India has also been amended more than one hundred times. These amendments reflect political, social and economic developments since the year 1950. The Indian judiciary and particularly the Supreme Court of India have played an historic role as the guardian of people. It has been protecting not only basic ideals of the Constitution but also strengthened the same through progressive interpretations of the text of the Constitution. The judicial activism of the Supreme Court of India and its historic contributions has been recognized throughout the world and it gradually made it “as one of the strongest court in the world”.

Historic revolutions in france england america and particularly european renaissance and india and its historic contributions has been recognized throughout the world and it gradually made it “as one of the strongest court in the world”. reformation movement have resuleted into progressive legal reform in the form of “constitutionalism” in many countries. the constitution of india was made by borrowing models and principles from many countries including united kingdom and america. **(20 HOURS)**

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social and economic developments since the year 1950. The Indian judiciary and particularly the Supreme Court of India has played an historic role as the guardian of people. It has been protecting not only basic ideals of the Constitution but also strengthened the same through progressive interpretations of the text of the Constitution. The judicial activism of the Supreme Court of Course content **(20 HOURS)**

1. Meaning of the constitution law and constitutionalism
2. Historical perspective of the Constitution of India
3. Salient features and characteristics of the Constitution of India
4. Scheme of the fundamental rights
5. The scheme of the Fundamental Duties and its legal status
6. The Directive Principles of State Policy – Its importance and implementation
7. Federal structure and distribution of legislative and financial powers between the Union and the States
8. Parliamentary Form of Government in India – The constitution powers and status of the President of India
9. Amendment of the Constitutional Powers and Procedure
10. The historical perspectives of the constitutional amendments in India
11. Emergency Provisions : National Emergency, President Rule, Financial Emergency
12. Local Self Government – Constitutional Scheme in India
13. Scheme of the Fundamental Right to Equality
14. Scheme of the Fundamental Right to certain Freedom under Article 19
15. Scope of the Right to Life and Personal Liberty under Article 21.



GROOMING TOMORROW'S LEADERS

**OFFERING NCC A -GENERAL -GENERIC ELECTIVE CREDIT
COURSE IN UNIVERSITIES UNDER CHOICE BASED CREDIT
SYSTEM TO ALIGN WITH NEW EDUCATION POLICY 2020**

CONTENTS

3. Section I : NCC Credit Course Design
4. Section II : NCC Credit Course Rules & Regulations aligned to UGC.

SECTION I: NCC CREDIT COURSE DESIGN DOCUMENT

UNDER CHOICE BASED CREDIT SYSTEM AS GENERAL ELECTIVE FOR SENIOR DIVISION / SENIOR WING

4. **Preamble.** The National Cadet Corps (NCC) is governed by NCC Act 1948 and attendant NCC Rules. It functions under the Ministry of Defence and is headed by DGNCC. It is organised into 17 State Directorates each headed by an Additional/Deputy Director General. The aims of NCC are:-

(a) To develop character, camaraderie, discipline, secular outlook, the spirit of adventure, sportsman spirit and ideals of selfless service amongst cadets by working in teams, honing qualities such as self-discipline, self-confidence, self-reliance and dignity of labour in the cadets.

(b) To create a pool of organized, trained and motivated youth with leadership qualities in all walks of life, who will serve the Nation regard less of which career they choose.

(c) To provide a conducive environment to motivate young Indians to choose the Armed Forces as a career.

5. **Purpose.** Currently NCC training is imparted as extra-curricular activity to volunteer students from recognized schools and colleges who enroll as cadets. NCC as a Credit Course is designed with an intent to transform NCC training into a curricular activity from an extra-curricular thereby providing academic credits to students undergoing NCC training along with other attended advantages to the cadets in the college/ university.

6. **Introduction to NCC Credit Course Design.** Institutional Training is the mainstay of NCC training and it is conducted at colleges and universities by Associate NCC Officers and Armed Forces personnel. The application of knowledge gained through institutional training is further honed or developed to a higher degree in NCC Camps. The Institutional Training syllabus comprises Common Subjects and Specialised Subjects

(military component). NCC Credit Course is designed to offer Institutional Training of Senior Wing /Division is over six semesters (three years), comprising 300330 periods (excluding Camp), of which 120150 periods are meant for theory with 1008 credits and 180 periods for practical with 6 credits. Each period is counted as hour. The ratio between theory and practical in terms of number of hours of training is 5:6, but in terms of credits is 5:3, since as per CBCS two hours of practical is counted towards one period of training as against one hour for theory. In addition two separate courses have been designed for two Camps normally referred to as Annual Training Camps (ATC).

Training schedules planned for cadets ensure that the optimum benefits of the NCC organization reach maximum number of cadets. The main emphasis is on practical training which in consonance with theory is made to facilitate active participation of learner, better assimilation of knowledge, and proper development of various skills, strengthening of mind and body which is the bedrock of NCC training.

NCC GENERAL ELECTIVE CREDIT COURSE DESIGN SUMMARY					
Semester	Credits Allocated			Total	Remarks
	Theory	Practical	Camp		
Semester - I	01	01	-	02	
Semester - II	01	01	-	02	
Semester – III	01	01	05	07	Credits merged with 3of rd1stSem Camp
Semester – IV	02	01	-	03	
Semester – V	01	01	05	07	Credits merged with 5of 2t
Semester - VI	02	01	-	03	
Total	08	06	10	24	Twenty-Four Credits

INSTITUTIONAL TRG SYLLABUS

COMMON SUBJECTS				
Ser	Subject	Periods (1 hour duration each)		Total
		Lectures/Tutorials	Practicals	
1	NCC General	06	-	06
2	National Integration	04		04
3	Drill	-	45	45
4	Weapon Training	-	25	25
5	Personality Development	25		25
6	Leadership	12	-	12
7	Disaster Management	13		13
8	Social Service & Community Development	08	39	47
9	Health & Hygiene	-	10	10
10	Adventure	01		01
11	Environmental awareness & conservation	03		03
12	Obstacle Training	-	09	09
13	General Awareness	04		04
14	Border & Coastal Areas	06		06
TOTAL HOURS COMMON SUBJECTS(a)		82	128	210

SP ECIALSED SUBJECTS (ARMY)

Ser	Subject	Periods (1 hour duration each)		Total
		Lectures/Tutorials	Practical	
1	Armed Forces	09	-	09
2	Map Reading	-	24	24
3	Communications	03	03	06
4	Infantry Weapons	03	03	06
5	Field Craft & Battle Craft		22	22
6	Military History	23	-	23
Total Hours		38	52	90

SPECIALISED SUBJECTS (NAVY)

Ser	Subject	Periods (1 hour duration each)		Total
		Lectures/Tutorials	Practicals	
1	Naval Orientation	12	-	12
2	Naval Communication	02	18	20
3	Navigation	02	03	05
4	Seamanship	15	18	33
5	Fire Fighting and Damage Control	04	03	07
6	Ship and Boat Modelling	03	10	13
Total hours		38	52	90

SPECIALISED SUBJECTS (AIR FORCE)

Ser	Subject	Periods (1 hour duration each)		Total
		Lectures/Tutorials	Practicals	
1	General Service Knowledge	08	-	08
2	Air Campaign	06	02	08
3	Principles of flight	06	06	12
4	Airmanship	01	07	08
5	Navigation	05	-	05
6	Aeroengines	06	-	06
7	Basic flight Instruments	03	03	06
8	Aero modelling	03	34	37
Total Hours		38	52	90

INSTITUTIONAL TRAINING: TOTAL HOURS & CREDITS

INSTITUTIONAL TRAINING: TOTAL HOURS & CREDITS			
ITEM	Periods (1 hour duration each)		Total
	Lectures/Tutorials	Practicals	
TOTAL HOURS COMMON SUBJECTS	82	128	210
TOTAL HOURS SPECIALISED SUBJECTS (ARMY/NAVY/AIR FORCE)	38	52	90
TOTAL HOURS INSTITUTIONAL TRAINING	120	180	300
TOTAL CREDITS INSTITUTIONAL TRAINING	08 CREDITS (15 HOUR THEORY = 1 CREDIT POINT)	6 CREDITS (30 HOURS PRACTICAL TRAINING = 1 CREDIT POINT)	

NCC CAMP TRAINING SYLLABUS

COMMON SUBJECTS

S No.	Subjects	Periods		Total
		L/T	P	
1.	Physical Training	-	18	18
2.	Drill	-	32	32
3.	Weapon Training	08	28	36
4.	National Integration and Awareness	08	-	08
5.	Personality Development	08	12	20
6.	Leadership	08	-	08
7.	Disaster Management	08	-	08
8.	Social Service and Community Development	-	08	08
9.	Health & Hygiene	08	-	08
10.	Obstacle Training	-	04	04
11.	Military History	04	-	04
12.	Communication	04	-	04
13.	Games	-	18	18
14.	Culture	-	18	18
	TOTAL	56	138	194
<u>SPECIALISED SUBJECTS</u>				
1.	Map Reading	-	24	24
2.	Infantry Weapons	04	02	06
3.	Field Craft & Battle Craft	-	16	16
	TOTAL	04	42	46
	GRAND TOTAL	60 (4 credit)	180 (6 credit)	240 (10 credit)

NCC CAMP TRAINING SYLLABUS (FOR THEORY)

Ser No	SUBJECT	I	II	III	IV	V	VI	TOTAL
1.	Weapon Training	-	-	04	-	04	-	08

2.	National Integration & Awareness	-	-	04	-	04	-	08
3.	Personality Development	-	-	04	-	04	-	08
4.	Leadership	-	-	04	-	04	-	08
5.	Disaster Management	-	-	04	-	04	-	08
6.	Health & Hygiene	-	-	04	-	04	-	08
7.	Military History			02		02		04
8.	Communication			02		02		04
9.	Infantry Weapons	-	-	02	-	02	-	04
	TOTAL	-	-	30	-	30	-	60
	TOTAL Credit	-	-	2	-	2	-	4

NCC CAMP TRAINING SYLLABUS (FOR PRACTICAL)

Ser No	SUBJECT	I	II	III	IV	V	VI	TOTAL
1.	Physical Training	-	-	09	-	09	-	18
2.	Drill	-	-	16	-	16	-	32
3.	Weapon Training	-	-	14	-	14	-	28
4.	Personality Development	-	-	06	-	06	-	12
5.	Social Service and Community Development	-	-	04	-	04	-	08
6.	Obstacle Training	-	-	02	-	02	-	04
7.	Games			09		09		18
8.	Culture			09		09		18
9.	Map Reading	-	-	12	-	12	-	24
10.	Infantry Weapons	-	-	01	-	01	-	02
11.	Field Craft & Battle Craft	-	-	08	-	08	-	16
	TOTAL			90		90		180
	TOTAL CREDIT			03		03		06

SEMESTER WISE COURSE DESIGN ARMY CADETS

INSTITUTIONAL TRAINING: SEMESTER WISE DISTRIBUTION OF NCC SYLLABUS FOR THEORY (ARMY CADETS)

S. NO.	SUBJECT	I	II	III	IV	V	VI	TOTAL
1.	NCC General	06	-	-	-	-	-	06
2.	National Integration	04	-	-	-	-	-	04
3.	Personality Development	02	05	05	04	06	04	25
4.	Leadership	-	05	04	03	-	-	12
5.	Disaster Management	-	-	03	10	-	-	13
6.	Social Service & Community Development	03	05	-	-	-	-	08
7.	Adventure	-	-	01	-	-	-	01
8.	Environmental Awareness & Conservation	-	-	-	03	-	-	03
9.	General Awareness	-	-	-	04	-	-	04
10.	Border & Coastal Areas	-	-	02	-	02	02	06
11.	Armed Forces	-	-	-	06	-	03	09
12.	Infantry Weapons	-	-	-	-	3	-	3
13.	Communication	-	-	-	-	-	03	03
14.	Military Hospital	-	-	-	-	04	19	23
	TOTAL	15	15	15	30	15	30	120
	TOTAL Credit	1	1	1	2	1	2	08

INSTITUTIONAL TRAINING: SEMESTER WISE DISTRIBUTION OF NCC SYLLABUS FOR PRACTICAL (ARMY CADETS)

S. NO.	SUBJECT	I	II	III	IV	V	VI	TOTAL
1.	Drill	12	12	08	07	03	03	45
2.	Field Craft & Battle Craft	03	04	04	04	04	03	22
3.	Map Reading	03	05	04	04	04	04	24
4.	Weapons Training	05	04	04	04	04	04	25
5.	Communication	-	-	-	-	-	03	03
6.	Infantry Weapons	-	-	-	-	-	03	03
7.	Social Service & Community Development	07	05	05	06	06	10	39
8.	Health & Hygiene	-	-	-	05	05	-	10
9.	Operation Training	-	-	05	-	04	-	09
	TOTAL	30	30	30	30	30	30	180
	TOTAL Credit	01	01	01	01	01	01	06

INSTITUTIONAL TRAINING: SEMESTER WISE THEORY DETAILED SYLLABUS (ARMY CADETS)

SEMESTER I					
S.No	Subject	Periods	Chapter	Lesson	Hours
1	NCC General	6	NCC-I	Aims, Objectives and Org of NCC	1
			NCC-II	Incentives	2
			NCC-III	Duties of NCC Cadets	1
			NCC-IV	NCC Camps: Types and Conduct	2
2	National Integration and Awareness	4	NI-I	National Integration: Importance and Necessity	1
			NI-II	Factors affecting National Integration	1
			NI-III	Unity in Diversity	1
			NI-IV	Threats to National Security	1
3	Personality Development	2	PD - I	Factors Self-Awareness Empathy Critical and Creative Thinking Decision Making and Problem Solving	2
4	Social Service and Community Development	3	SSCD - I	Basics of Social Service Rural Development Programmes NGO's Contribution of Youth	3
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER II					
S.No	Subject	Periods	Chapter	Lesson	Hours
5	Personality Development	5	PD-II	Communication Skills	3
			PD-III	Group Discussion -Coping with Stress and Emotions	2
6	Leadership	5	L-I	<u>Leadership Capsule</u> Traits Indicators Motivation Moral Values Honour Code	3
			L-II	<u>Case Studies</u> Shivaji, Jhansi Ki Rani,	2
7	Social Service and Community Development	5	SS-IV	Protection of Children & Women Safety	1
			SS-V	Road/Rail Travel Safety	1
			SS-VI	New Initiatives	2
			SS-VII	Cyber and Mobile Security Awareness	1
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER III					
S.No	Subject	hours	Chapter	Lesson	HOURS
8	Personality Development	5	PD-III	Group Discussions - Change your Mindset	2
			PD-V	Public Speaking	3
9	Leadership	4	L-II	Case Studies – APJ Abdul Kalam, Deepa Malik, Maharana Pratap, N Narayan Murthy	4
10	Disaster Management	3	DM-I	Disaster Management Capsule Organisation Types of Disasters Essential Services Assistance Civil Defence Organisation	3
11	Adventure	1	AD-I	Adventure activities	1
12	Border & Coastal Areas	2	BCA-I	History, Geography & Topography of Border/ Coastal Areas	2
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER IV					
S.No	Subject	hours	Chapter	Lesson	HOURS
13	Personality Development	4	PD-III	Group Discussions - Time Management, Social Skills	4
14	Leadership	3	L-II	Case Studies – Ratan Tata, Rabindra Nath Tagore, Role of NCC cadets in 1965 war	3
15	Disaster Management	9	DM-II	Initiative Trg, Organising Skills, Dos and Don'ts Natural Disasters Man Made Disasters	9
		1	DM-III	Fire Services and Fire Fighting	1
16	Environmental Awareness	3	EA-I	Environmental Awareness and Conservation	3
17	General Awareness	4	GA-I	General Awareness	4
18	Armed Forces	6	AF-1	Army, Navy, Air Force and Central Armed Police Forces	6
TOTAL HOURS					30
TOTAL CREDITS					2

SEMESTER V					
S.No	Subject	hours	Chapter	Lesson	HOURS
19	Personality Development	6	PD-III	Group Discussions - Team Work	2
			PD-V	Public Speaking	4
20	Border & Coastal Areas	2	BCA-II	Security Setup and Border/Coastal management in the area	2
21	Introduction to Infantry Battalion and its Equipments	3	INF-1	Organisation of Infantry Battalion & its weapons	3
22	Military History	4	MH-3	Study of Battles of Indo-Pak Wars 1965 & 1971	4
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER VI					
S.No	Subject	hours	Chapter	Lesson	HOURS
25	Personality Development	3	PD-IV	Career Counselling, SSB Procedure and Interview Skills	3
27	Border & Coastal Areas	2	BCA-III	Security Challenges & Role of cadets in Border management	2
28	Armed Forces	3	AF-2	Modes of Entry into Army, Police and CAPF	3
29	Military History	19	MH-1	Biographies of Renowned Generals	6
			MH-2	War Heroes : Param Veer Chakra Awardees	3
			MH-3	Study of Battles of Kargil	2
			MH-4	War Movies	8
30	Communication	3	C-1	Introduction to Communication & Latest Trends	3
TOTAL HOURS					30
TOTAL CREDITS					2

SEMESTER WISE COURSE DESIGN NAVAL CADETS

INSTITUTIONAL TRAINING: SEMESTER WISE DISTRIBUTION OF NCC SYLLABUS FOR THEORY (NAVAL CADETS)

S. NO.	SUBJECT	I	II	III	IV	V	VI	TOTAL
1	NCC General	6	-	-	-	-	-	
2	NIA	4	-	-	-	-	-	
3	PD	2	5	5	4	6	3	
4	Leadership	-	5	4	3	-	-	
5	DM	-	-	3	10	-	-	
6	SSCD	3	5	-	-	-	-	
7	Adventure	-	-	1	-	-	-	
8	Environmental awareness & conservation	-	-	-	3	-	-	
9	General Awareness	-	-	-	4	-	-	
10	Border & Coastal Areas	-	-	2	-	2	2	
11	Naval Orientation	-	-	-	6	3	3	12
12	Naval Communication	-	-	-	-	2	-	2
13	Navigation	-	-	-	-	2	-	2
14	Seamanship	-	-	-	-	-	15	15
15	FFDC				-	-	4	4
16	Ship & Boat Modelling				-	-	3	3
	TOTAL	15	15	15	30	15	30	120
	TOTAL Credit	1	1	1	2	1	2	08

INSTITUTIONAL TRAINING: SEMESTER WISE DISTRIBUTION OF NCC SYLLABUS FOR PRACTICAL(NAVAL CADETS)

Ser	SUBJECT	I	II	III	IV	V	VI	TOTAL
1.	DRILL	12	12	8	7	3	3	45
2.	Naval Communication	3	3	3	3	3	3	18
3	Navigation	-	-	-	-	-	3	3
4	Weapon Training	5	4	4	4	4	4	25
5	Seamanship	3	3	3	3	3	3	18
6	FFDC	-	-	-	-	-	3	3
7	Ship & Boat Modelling	-	2	2	2	2	2	10
8	SSCD	7	5	5	6	5	10	38
9	H&H	-	-	-	5	5	-	10
10	OT	-	-	5	-	5	0	10
11	TOTAL	30	30	30	30	30	30	180
	TOTAL Credit	1	1	1	1	1	1	6

INSTITUTIONAL TRAINING: SEMESTER WISE THEORY DETAILED

SYLLABUS (NAVAL CADETS)

<u>SEMESTER I</u>					
S.No	Subject	Periods	Chapter	Lesson	Hours
1	NCC General	6	NCC-I	Aims, Objectives and Org of NCC	1
			NCC-II	Incentives	2
			NCC-III	Duties of NCC Cadets	1
			NCC-IV	NCC Camps: Types and Conduct	2
2	National Integration and Awareness	4	NI-I	National Integration: Importance and Necessity	1
			NI-II	Factors affecting National Integration	1
			NI-III	Unity in Diversity	1
			NI-IV	Threats to National Security	1
3	Personality Development	2	PD - I	Factors Self-Awareness Empathy Critical and Creative Thinking Decision Making and Problem Solving	2
4	Social Service and Community Development	3	SSCD - I	Basics of Social Service Rural Development Programmes NGO's Contribution of Youth	3
TOTAL HOURS					15
TOTAL CREDITS					1

<u>SEMESTER II</u>					
S.No	Subject	Periods	Chapter	Lesson	Hours
5	Personality Development	5	PD-II	Communication Skills	3
			PD-III	Group Discussion -Coping with Stress and Emotions	2
6	Leadership	5	L-I	Leadership Capsule Traits Indicators Motivation Moral Values Honour Code	3
				L-II	Case Studies Shivaji, Jhansi Ki Rani,
7	Social Service and Community Development	5	SS-IV	Protection of Children & Women Safety	1
			SS-V	Road/Rail Travel Safety	1
			SS-VI	New Initiatives	2
			SS-VII	Cyber and Mobile Security Awareness	1
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER III					
S.No	Subject	hours	Chapter	Lesson	HOURS
8	Personality Development	5	PD-III	Group Discussions - Change your Mindset	2
			PD-V	Public Speaking	3
9	Leadership	4	L-II	Case Studies – APJ Abdul Kalam, Deepa Malik, Maharana Pratap, N Narayan Murthy	4
10	Disaster Management	3	DM-I	Disaster Management Capsule Organisation Types of Disasters Essential Services Assistance Civil Defence Organisation	3
11	Adventure	1	AD-I	Adventure activities	1
12	Border & Coastal Areas	2	BCA-I	History, Geography & Topography of Border/ Coastal Areas	2
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER IV					
S.No	Subject	hours	Chapter	Lesson	HOURS
13	Personality Development	4	PD-III	Group Discussions - Time Management, Social Skills	4
14	Leadership	3	L-II	Case Studies – Ratan Tata, Rabindra Nath Tagore, Role of NCC cadets in 1965 war	3
15	Disaster Management	9	DM-II	Initiative Trg, Organising Skills, Dos and Don'ts Natural Disasters Man Made Disasters	9
		1	DM-III	Fire Services and Fire Fighting	1
16	Environmental Awareness	3	EA-I	Environmental Awareness and Conservation	3
17	General Awareness	4	GA-I	General Awareness	4
18	Naval Orientation	3	AF-1	Armed Forces and Navy Capsule	3
		3	EEZ 1	EEZ Maritime Security & ICG	3
TOTAL HOURS					30
TOTAL CREDITS					2

SEMESTER V					
S.No	Subject	hours	Chapter	Lesson	HOURS
19	Personality Development	6	PD-III	Group Discussions - Team Work	2
			PD-V	Public Speaking	4
20	Border & Coastal Areas	2	BCA-II	Security Setup and Border/Coastal management in the area	2
21	Naval Orientation	3	NO-3	Modes of Entry – IN, ICG, Merchant Navy	3
22	Naval Communication	1	NC-1	Introduction to Naval Communications	1
		1	NC - 2	Semaphore	1
23	Navigation	1	N1	Navigation of Ship- Basic Requirements	1
		1	N2	Chart Work	1
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER VI					
S.No	Subject	hours	Chapter	Lesson	HOURS
25	Personality Development	3	PD-IV	Career Counselling, SSB Procedure and Interview Skills	3
27	Border & Coastal Areas	2	BCA-III	Security Challenges & Role of cadets in Border management	2
28	Naval Orientation	3	AF-2	Naval Expeditions & Campaigns	3
29	Seamanship	15	MH-1	Introduction to Anchor Work	2
			MH-2	Rigging Capsule	6
			MH-3	Boatwork – Parts of Boat	2
			MH-4	Boat Pulling Instructions	2
			MH-5	Whaler Sailing Instructions	3
30	Fire Fighting Flooding & Damage Control	2	FFDC-1	Fire Fighting	2
		2	FFDC - 2	Damage Control	2
	Ship Modelling	3	SM	Ship Modelling Capsule	3
TOTAL HOURS					30
TOTAL CREDITS					2

INSTITUTIONAL TRAINING: SEMESTER WISE THEORY DETAILED SYLLABUS (AIR FORCE CADETS)

<u>SEMESTER I</u>					
S.No	Subject	Periods	Chapter	Lesson	Hours
1	NCC General	6	NCC-I	Aims, Objectives and Org of NCC	1
			NCC-II	Incentives	2
			NCC-III	Duties of NCC Cadets	1
			NCC-IV	NCC Camps: Types and Conduct	2
2	National Integration and Awareness	4	NI-I	National Integration: Importance and Necessity	1
			NI-II	Factors affecting National Integration	1
			NI-III	Unity in Diversity	1
			NI-IV	Threats to National Security	1
3	Personality Development	2	PD - I	Factors Self-Awareness Empathy Critical and Creative Thinking Decision Making and Problem Solving	2
4	Social Service and Community Development	3	SSCD - I	Basics of Social Service Rural Development Programmes NGO's Contribution of Youth	3
TOTAL HOURS					15
TOTAL CREDITS					1

<u>SEMESTER II</u>					
S.No	Subject	Periods	Chapter	Lesson	Hours
5	Personality Development	5	PD-II	Communication Skills	3
			PD-III	Group Discussion -Coping with Stress and Emotions	2
6	Leadership	5	L-I	<u>Leadership Capsule</u> Traits Indicators Motivation Moral Values Honour Code	3
			L-II	<u>Case Studies</u> Shivaji, Jhansi Ki Rani,	2
7	Social Service and Community Development	5	SS-IV	Protection of Children & Women Safety	1
			SS-V	Road/Rail Travel Safety	1
			SS-VI	New Initiatives	2
			SS-VII	Cyber and Mobile Security Awareness	1
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER III					
S.No	Subject	hours	Chapter	Lesson	HOURS
8	Personality Development	5	PD-III	Group Discussions - Change your Mindset	2
			PD-V	Public Speaking	3
9	Leadership	4	L-II	Case Studies – APJ Abdul Kalam, Deepa Malik, Maharana Pratap, N Narayan Murthy	4
10	Disaster Management	3	DM-I	Disaster Management Capsule Organisation Types of Disasters Essential Services Assistance Civil Defence Organisation	3
11	Adventure	1	AD-I	Adventure activities	1
12	Border & Coastal Areas	2	BCA-I	History, Geography & Topography of Border/ Coastal Areas	2
TOTAL HOURS					15
TOTAL CREDITS					1

SEMESTER IV					
S.No	Subject	hours	Chapter	Lesson	HOURS
13	Personality Development	4	PD-III	Group Discussions - Time Management, Social Skills	4
14	Leadership	3	L-II	Case Studies – Ratan Tata, Rabindra Nath Tagore, Role of NCC cadets in 1965 war	3
15	Disaster Management	9	DM-II	Initiative Trg, Organising Skills, Dos and Don'ts Natural Disasters Man Made Disasters	9
		1	DM-III	Fire Services and Fire Fighting	1
16	Environmental Awareness	3	EA-I	Environmental Awareness and Conservation	3
17	General Awareness	4	GA-I	General Awareness	4
18	General Service Knowledge	6	GSK-1	Armed Forces & IAF Capsule	2
			GSK-2	Modes of Entry in IAF, Civil Aviation	2
			GSK-3	Aircrafts – Types, Capabilities & Role	2
TOTAL HOURS					30
TOTAL CREDITS					2

SIX SEMESTER NCC COURSE SYLLABUS

Training Objectives: Institutional Training

1. Institutional training includes basic military training of the cadets as part of the curriculum with its long-standing effort to mould young volunteers into disciplined and responsible citizens of India. NCC course is aimed to achieve following learning objectives:-

- (f) Develop character, camaraderie, discipline, secular outlook, the spirit of adventure, sportsman spirit and ideals of selfless service amongst cadets by working in teams, honing qualities such as self-discipline, self-confidence, self-reliance and dignity of labour in the cadets.
- (g) To create interest in cadets by including and laying emphasis on those aspects of Institutional Training which attract young cadets into the NCC and provides them an element of thrill and excitement.
- (h) To inculcate defence Services work ethos that is characterized by hard work, sincerity of purpose, honesty, ideal of selfless service, dignity of labour, secular outlook, comradeship, spirit of adventure and sportsmanship.
- (i) To create a pool of organized, trained and motivated youth with leadership qualities in all walks of life, who will serve the Nation regardless of which career they choose.
- (j) To provide conducive environment to motivate young Indians to choose the Armed Forces as a career.

SEMESTER I COURSE MODULE : NATIONAL CADET CORPS I

National Cadet Corps : Course Details			
Course Title: National Cadet Corps I			
Course Code	BNCC01GE03	Credits	1(Thr)+ 1(Pr) = 03
L /T + P	15+30	Course Duration	1 Semester
Semester	I (Odd)	Contact Hours	15(Thr)+30(Pr)=45Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion		
Assessment and Evaluation	As per the University norms i.e, 25% internal assessment and 75% end term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (I) Theory

2. Course Objectives: Cadets will be able to: -

- (j) Know about the history of NCC, its organization, and incentives of NCC for their career prospects.
- (k) Acquire knowledge of duties and conduct of ncc cadets.
- (l) Understand about different NCC camps and their conducts.
- (m) Understand the concept of national integration and its importance.
- (n) Understand the concept of self-awareness and emotional intelligence.
- (o) Understand the concept of critical & creative thinking.
- (p) Understand the process of decision making & problem solving.
- (q) Understand the concept of team and its functioning.
- (r) Understand the concept and importance of Social service.

3. Expected Learning Outcomes. After completing this course, the cadets will be able to: -

- (i) Imbibe the conduct of NCC cadets.
- (j) Respect the diversity of different Indian culture.
- (k) Practice togetherness and empathy in all walks of their life.
- (l) Do their own self analysis and will workout to overcome their weakness for better performance in all aspects of life.
- (m) Understand creative thinking & its components.
- (n) Think divergently and will try to break functional fixedness.
- (o) Make a team and will work together for achieving the common goals.
- (p) Do the social services on different occasions.

4. Course Content Part (I) Theory

(e) **Unit 1- NCC General (N) (Contact Hrs. 06).** Introduction of NCC, History, Aims, Objective of NCC & NCC as Organization, Incentives of NCC, Duties of NCC Cadet. NCC Camps: Types & Conduct.

(f) **Unit 2- National Integration & Awareness (NI) (Contact Hrs. 04)** . National Integration: Importance & Necessity, Factors Affecting National Integration, Unity in Diversity & Role of NCC in Nation Building, Threats to National Security.

(g) **Unit 3- Personality Development (Contact Hrs. 3).** Intra & Interpersonal skills - Self-Awareness- & Analysis, Empathy, Critical & creative thinking, Decision making and problem solving.

(h) **Unit 4- Social Service and Community Development(Contact Hrs. 02)**. Basics of social service and its need, Types of social service activities, Objectives of rural development programs and its importance, NGO's and their contribution in social welfare, contribution of youth and NCC in Social welfare.

Course Content Part (II) Practical

5. **Course Objectives:** Cadets will be able to: -

- (g) Understand that drill as the foundation for discipline and to command a group for common goal.
- (h) Appreciate grace and dignity in the performance of foot drill.
- (i) Understand the importance of a weapon its detailed safety precautions necessary for prevention of accidents.

Develop awareness about different types of terrain and how it is used in battle craft.

- (j) Develop the concept of various markings on the map and how they are co-related to the ground features.
- (k) Understand the various social issues and their impact on social life.
- (l) Develop the sense of self-less social service for better social & community life.

8. **Expected Learning Outcomes:** After completing this course, the cadets will be able to: -

- (a) Perform foot drill and follow the different word of command.
- (b) Fire a weapon effectively with fair degree of marksmanship.
- (c) Undertake point to point navigation and take part in route marches by day and night.
- (d) Perform the social services on various occasions for better community & social life.

9. **Course Content Part (II) Practical**

- (a) **Unit 1. Drill (Contact Hrs. 12)**. Foot Drill- Drill ki Aam Hidayaten, Word ki Command, Savdhan, Vishram, Aram Se, Murdna, Kadvar Sizing, Teen Line Banana, Khuli Line, Nikat Line, Khade Khade Salute Karna Parade Par, Visarjan, Line Tod, Tej Chal, Tham aur Dhire Chal, Tham.
- (b) **Unit 2. Weapon Training (WT) (Contact Hrs. 05)**. Introduction & Characteristics of .22 rifle, Handling of .22 rifle.
- (c) **Unit 3. Map Reading (MR) (Contact Hrs. 03)**. Definition of Map, Conventional signs, Scale and Grid System, Topographical forms and technical terms, Relief, Contours and gradients, Cardinal points and types of North, Magnetic Variation and Grid Convergence.
- (d) **Unit 4. Field Craft & Battle Craft (FC & BC) (Contact Hrs. 03)**. Introduction of Field Craft & Battle craft, Judging Distance, Method of Judging Distance.
- (e) **Unit 5. Social Service and Community Development (SSCD)(Contact**

Hrs.07). Cadets will participate in various activities throughout the semester e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc.

SEMESTER II COURSE MODULE : NATIONAL CADET CORPS II

Course Title: National Cadet Corps II			
Course Code	BNCC02GE03	Credits	1(Thr)+ 1(Pr)=02
L /T + P	15+30	Course Duration	1 Semester
Semester	II (Even)	Contact Hours	15(Thr)+30(Pr)=45Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (I) Theory

8. **Course Objectives:** Cadets will be able to: -

- (j) Understand the thinking & reasoning process.
- (k) Understand the process to cope with Stress & emotions.
- (l) Understand the importance of improving communication skills.
- (m) Identify the leadership traits.
- (n) Admire the qualities of great leaders.
- (o) Know about different legal provisions for children & women safety and protection.
- (p) Understand the various rules & measures to be taken to ensure Road/Rail safety.
- (q) Understand & spread awareness about latest Government initiatives for welfare of citizens and contribute towards Nation building.
- (r) Understand concepts of cyber and mobile security.

20. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -

- (g) Define thinking, reasoning, critical thinking and creative thinking.
- (h) To think critically about different life related issues.
- (i) Think divergently and will try to break functional fixedness.

- (j) Creatively in their real-life problems.
- (k) Understand the organizations related to disaster management and their functioning.
- (l) Appreciate the role of NCC cadets in disaster management.

21. **Course Content Part (I) Theory**

(a) **Unit 1. Personality Development (Contact Hrs.5)**

- (iv) Thinking- Meaning and Concept of thinking, Reasoning, Process of thinking.
- (v) Critical Thinking- Meaning & concept of critical thinking, Features of critical thinking, Process of critical thinking.
- (vi) Creative thinking- Meaning & concept of creative thinking, Features of creative thinking, Process of creative thinking, levels of Creativity, Characteristics of creative person.

(b) **Unit 2. Leadership Development (Contact Hrs.5)** (i) Leadership capsule.

- (v) Important Leadership traits, Indicators of leadership and evaluation.
- (vi) Motivation- Meaning & concept, Types of motivation. Factors affecting motivation.
- (vii) Ethics and Honor codes.

(c) **Unit 3. Social Service and Community Development (Contact Hrs. 5)**

- (i) Protection of Children & Women Safety.
- (v) Road/Rail Safety.
- (vi) New Government Initiatives.
- (vii) Cyber and mobile Security Awareness.

Course Content Part (II) Practical

22. **Course Objectives**. Cadets will be able to: -

- (e) Understand that drill as the foundation for discipline and to command a group for common goal.
- (f) Appreciate grace and dignity in the performance of foot drill.
- (g) Understand the importance of a weapon its detailed safety precautions necessary for prevention of accidents.
- (h) Use terrain effectively for concealment, camouflage, indicate landmarks and give field signals.

23. **Expected Learning Outcomes**. After completing this course, the cadets will be able to: -

- (f) Perform foot drill gracefully.
- (g) Give and follow the different word of command.

- (h) Fire a weapon effectively with fair degree of marksmanship.
- (i) Use of bearing and service protractor and locate the places and objects on the ground.
- (j) Do the social service and feel connected with social problems.

24. **Course Content Part (II) Practical**

(a) **Unit 1. Drill (Contact Hrs. 12)**

- (iv) Foot Drill Dahine, Baen, Aageaur Piche Kadam Lena.
- (v) Tej Chal se Murdna, Tej Chal se Salute Karna, Tej Kadam Taal aur Tham, Tej Kadam Taal se Kadam Badalna.
- (vi) Teeno Teen se Ek File aur ek file se Teeno Teen Banana

(b) **Unit 2. Weapon Training (Contact Hrs. 04)** (i)

Range procedure & Theory of group.

- (ii) Short Range firing.

(c) **Unit 3. Map Reading (Contact Hrs. 05)**

- (v) Protractor Bearing and its conversion methods.
- (vi) Service protractor and its uses.
- (vii) Prismatic compass and its uses and GPS.
- (viii) Navigation by compass and GPS.

(d) **Unit 4. Field Craft & Battle Craft (Contact Hrs. 04)**

- (i) Indications of landmarks and Targets.
- (ii) Intro, Definitions, Types of Ground, Indication of Landmarks, Methods of iden of targets, difficult targets.

- (e) **Unit 5. Social Service and Community Development (Contact Hrs. 05)** Cadets will participate in various activities throughout the semester e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc. as per the requirement and similar announced days- National and state level.

SEMESTER III COURSE MODULE : NATIONAL CADET CORPS III

<u>COURSE TITLE: NATIONAL CADET CORPS III</u>			
Course Code	BNCC03GE02	Credits	1(Thr)+ 1(Pr)=02
L /T + P	15 +30	Course	1 Semester

Semester	III (Odd)	Duration Contact Hours	15(Thr)+30(Pr)=45Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (I) Theory

25. **Course Objectives.** Cadets will be able to: -
- (h) Understand the life history and leadership qualities of great leaders, sportspersons & entrepreneurs.
 - (i) Understand the various aspects of types of mindset.
 - (j) Understand public speaking methods & qualities.
 - (k) Understand the organizations related to disaster management and their functioning.
 - (l) Understand the role of NCC cadets in disaster management.
 - (m) Understand the various types of adventure activities.
 - (n) Understand the History, Geography & Topography of Border/ Coastal Areas.
26. **Expected Learning Outcomes.** After completing this course, the cadets will be able to:
- (a) Admire and get inspired from the accomplishments of leaders from various walks of life.
 - (b) Develop public speaking skills.
 - (c) Understand the importance of positive mindset and optimistic attitude in life.
 - (d) Appreciate the need & requirement for disaster management and his role in disaster management activities.
 - (e) Know the history & geographical peculiarity of our borders & coastal regions.
27. **Course Content Part (I) Theory**
- (d) **Unit 1. Personality Development (Contact Hrs.5)** (i) Group Discussions - Change your Mindset (ii) Public Speaking.
 - (e) **Unit 2. Leadership Development (Contact Hrs.4)**. Case Studies – APJ Abdul Kalam, Deepa Malik, Maharana Pratap, N Narayan Murthy.
 - (f) **Unit 3. Disaster management(Contact Hrs. 3)** (i) Disaster Management Capsule.

- (vii) Organisation.
 - (viii) Types of Disasters.
 - (ix) Essential Services.
 - (x) Assistance.
 - (xi) Civil Defence Organisation.
- (f) **Adventure (Contact Hrs. 1).** Adventure activities.
- (g) **Border & Coastal Areas(Contact Hrs. 2).** History, Geography & Topography of Border/ Coastal Areas.

Course Content Part (II) Practical

28. **Course Objectives.** Cadets will be able to : -
- (c) Understand that drill as the foundation for discipline and to command a group for common goal
 - (d) Appreciate grace and dignity in the performance of arm drill (c) Understand the concept and importance of social service.
 - (f) Understand the importance of a weapon its detailed safety precautions necessary for prevention of accidents.
 - (g) Actively participate in social service and community development activities.
29. **Expected Learning Outcomes.**After completing this course, the cadets will be able to: -
- (i) Perform arm drill gracefully.
 - (j) Give and follow the different word of command.
 - (k) Fire a weapon effectively with fair degree of marksmanship.
 - (l) Different positioning for fire and aiming.
 - (m) Use terrain effectively for concealment, camouflage, indicate landmarks and give field signals.
 - (n) Observe surroundings in better way.
 - (o) Develop the qualities of patience and confidence and become better individuals.
 - (p) Will develop physical as well as mental fitness.

30. **Course Content Part (II) Practical**

(a) **Unit 1. Drill(Contact Hrs. 08)**

- (i) Arm Drill.
- (v) Rifle ke saath Savdhan, Vishram aur Aram se.

- (vi) Rifle ke saath Parade Par aur Saj, Rifle ke saath Visarjan, Line Tod.
- (vii) Bhumi Shastra aur Uthao Shastra, Bagal Shastra aur Baju Shastra.
- (d) **Unit 2. Weapon Training(Contact Hrs. 04).** Short Range firing.
- (e) **Unit 3. Map Reading (Contact Hrs. 04).**
 - (iii) Setting of Map.
 - (iv) Findings North and Own Position.
- (h) **Unit 4. Field Craft & Battle Craft (Contact Hrs. 04)**
 - (i) (i) Observation.
 - (ii) Camouflage.
 - (iii) Concealment.
 - (j) **Unit 5. Social Service and Community Development (Contact Hrs. 05).** Cadets will participate in various activities throughout the semester e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc as per the requirement and similar announced days- National and State level.
- (k) **Unit 6. Obstacle Training(Contact Hrs. 05)**
 - (iii) Obstacle training - Introduction, Safety-measures, Benefits.
 - (iv) Obstacle Course- Straight balance, Clear Jump, Gate Vault, Zig- Zag Balance, High Wall.

SEMESTER IV COURSE MODULE : NATIONAL CADET CORPS IV

Course Title: National Cadet Corps IV			
Course Code	BNCC04GE03	Credits	2(Thr)+ 1(Pr)=03
L /T + P	30+30	Course Duration	1 Semester
Semester	IV (Even)	Contact Hours	30(Thr)+30(Pr)=60Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (I) Theory

48. **Course Objectives.** Cadets will be able to: -
- (h) Develop a sense of time management and social skills.
 - (i) Understand the life history & leadership qualities of personalities who have contributed in Nation Building and Literature.
 - (j) Understand the role of NCC cadets as 2nd line Defence in 1965 War.
 - (k) Develop awareness about various types of Natural and manmade disasters.
 - (l) Know about life saving tips during disasters.
 - (m) acquainted about Fire Services.
 - (n) Understand importance of Environmental Awareness & conservation.
 - (i) Understand importance of General Awareness.
 - (j) Know about Armed Forces.
- (b) **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -
- (ix) Effectively Manage time.
 - (x) Develop the qualities of social skills.
 - (xi) Imbibe leadership qualities.
 - (xii) Do group discussions effectively.

- (xiii) Be motivated to serve the nation by joining Armed forces.
- (xiv) Contribute in environmental awareness and conservation activities.
- (xv) Keep abreast of current affairs & general awareness.
- (xvi) Effectively contribute in managing disaster relief tasks.

49. **Course Content Part (I) Theory**

- (d) **Unit 1. Personality Development (Contact Hrs.4).** Group Discussions – Social Skills & Time management.
- (e) **Unit 2. Leadership Development (Contact Hrs.3).** Case Studies – Case Studies – Ratan Tata, Rabindra Nath Tagore, Role of NCC cadets in 1965 war.
- (f) **Unit 3. Disaster management(Contact Hrs. 10)**
 - (vi) Initiative Trg, Organising Skills.
 - (vii) Dos and Don'ts.
 - (viii) Natural Disasters.
 - (ix) Man Made Disasters.
 - (x) Fire Services and Fire Fighting.
- (g) **Environmental Awareness (Contact Hrs. 3).** Adventure Environmental Awareness and Conservation.
- (h) **General Awareness (Contact Hrs. 4).** General Awareness.
- (i) **Armed Forces(Contact Hrs. 6).** Army, Navy, Air Force and Central Armed Police Forces.

Course Content Part (II) Practical

50. **Course Objectives.** Cadets will be able to: -

- (f) Understand that drill as the foundation for discipline and to command a group for common goal.
- (g) Understand various signals to convey messages in the army.
- (h) Get acquainted various section formations.
- (i) Understand the basics of personal and public hygiene.
- (j) Get acquainted with the procedure to treat the wounds and fractures during emergencies.

51. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -

- (h) Perform weapon drill gracefully.
- (i) Give and follow the different word of command.
- (j) Appreciate grace and dignity in the performance of foot drill.

- (k) Apply signals in their day to day functioning.
- (l) Provide first aid during the emergencies.
- (m) Navigate to the given location on ground using compass and GPS.
- (n) Practice healthy practices for the personal sanitation and hygiene.

52. **Course Content Part (II) Practical** (a) **Unit 1. Drill (Contact Hrs. 08)**

- (iv) Arm Drill.
- (v) Salami Shastra.
- (vi) Squad Drill with Arms.

(e) **Unit 2. Weapon Training (Contact Hrs. 04)**. Short Range firing

(f) **Unit 3. Map Reading(Contact Hrs. 04)**

- (i) Map to Ground.
- (ii) Ground to Map.

(g) **Unit 4. Field Craft & Battle Craft(Contact Hrs. 04)**

- (i) Fire and Move Capsule.
- (vi) Field signal- with hand, with Weapons, Signal with Whistle.
- (vii) Field signals as means of giving orders.
- (viii) Field signals by day, Field signals by night.
- (ix) Section Formation.

(g) **Unit 5. Social Service and Community Development(Contact Hrs. 05)** Cadets will participate in various activities throughout the semester e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc as per the requirement and similar announced days- National and State level.

(h) **Unit 6. Health & Hygiene(Contact Hrs. 05)**

- (iv) Hygiene & Sanitation (Hygiene- Personal & Camp Hygiene).
- (v) First Aid in common medical emergencies.
- (vi) Treatment & Care of Wounds.

SEMESTER V COURSE MODULE : NATIONAL CADET CORPS V

Course Title: National Cadet Corps V			
Course Code	BNCC05GE02	Credits	1(Thr)+ 1(Pr)=02
L /T + P	15 +30	Course Duration	1 Semester
Semester	V (Odd)	Contact Hours	15(Thr)+30(Pr)=45Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (I) Theory

53. **Course Objectives**. Cadets will be able to: -

- (f) Understand the concept of Team and its functioning.
- (g) Hone Public speaking skills.
- (h) Understand the security set up and management of Border/Coastal areas.
- (i) Acquire knowledge about an Infantry Battalion organisation and its weapons.
- (j) Acquire knowledge about Indo-Pak Wars fought in 1965 & 1971.

Expected Learning Outcomes. After completing this course, the cadets will be able to: -

- (e) Participate in team building exercise and value team work.
- (f) Improve communication skills by public speaking activities.
- (g) Understand the security mechanism and management of Border/Coastal areas.
- (h) Get motivated to join armed forces.

54. **Course Content Part (I) Theory**

(a) **Unit 1. Personality Development (Contact Hrs.6).**

- (iii) Group Discussions –Team work.
- (iv) Public speaking.

- (e) **Unit 2. Border & Coastal Areas(Contact Hrs.2).** Security Setup and Border/Coastal management in the area.
- (f) **Unit 3. Introduction to Infantry Battalion and its Equipment(Contact Hrs. 3).** Organisation of Infantry Battalion & its weapons
- (g) **Military History(Contact Hrs. 4).** Study of Battles of Indo-Pak Wars 1965 & 1971.

Course Content Part (II) Practical

55. **Course Objectives.** Cadets will be able to: -

- (d) Understand that drill as the foundation for discipline and to command a group for common goal.
- (e) Appreciate grace and dignity in the performance of ceremonial drill.
- (f) Use the compass and GPS to locate places on the ground and map.

56. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -

- (d) Perform ceremonial drill and follow the different word of command.
- (e) Do the social service on various occasions and get connected with the community.
- (f) Do all the asana and gain the physical& mental fitness.

57. **Course Content Part (II) practical (a) Unit 1. Drill(Contact Hrs. 03)**

(i) Ceremonial Drill.

(ii) Guard Mounting.

(b) **Unit 2. Field Craft & Battle Craft(Contact Hrs. 04)**

(i) Fire control orders.

(iv) Types of fire control orders.

(v) Fire and Movement- when to use fire and movements tactics, Basic considerations, Appreciation of ground cover, Types of cover, Dead ground, Common Mistakes, Map and air photography, Selection of Fire position and fire control.

(g) **Unit 3. Map Reading(Contact Hrs. 04).**Google Maps & applications

(h) **Unit 4. Weapon Training(Contact Hrs. 04).**Short Range firing

(i) **Unit 5. Social Service and Community Development (Contact Hrs. 05)** Cadets will participate in various activities throughout the semester e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc. as per the requirement and similar announced days- National and State level.

(j) **Unit 6. Health & Hygiene(Contact Hrs. 05)**

- (iii) Yoga- Introduction, Definition, Purpose, Benefits.
 - (iv) Asanas-Padamsana, Siddhasana, Gyan Mudra, Surya Namaskar, Shavasana, Vajrasana, Dhanurasana, Chakrasana, Sarvaangasana, Halasana etc.
- (f) **Unit 7. Obstacle Training(Contact Hrs. 05)**
- (iii) Obstacle training – Intro, Safety measures, Benefits.
 - (iv) Obstacle Course- Straight balance, Clear Jump, Gate Vault, Zig- Zag Balance, High Wall etc.

SEMESTER VI COURSE MODULE : NATIONAL CADET CORPS VI

<u>Course Title: National Cadet Corps VI</u>			
Course Code	BNCC06GE03	Credits	2(Thr)+ 1(Pr)=03
L /T + P	30 +30	Course Duration	1 Semester
Semester	VI (Even)	Contact Hours	30(Thr)+30(Pr)=45Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, Seminar presentations by students, individual and group drills, group and individual field-based assignments, Educational Excursion		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (I) Theory

58. **Course Objectives.** Cadets will be able to: -

- (j) Get acquainted about counselling process its need and importance.
- (k) Know about SSB procedure and different tasks and tests.
- (l) Know about the conduction during the interview.
- (m) Understand the security challenges & role of cadets in Border Areas.
- (n) Know about the modes of entry in Armed forces, CAPF & police.
- (o) Understand the life history & leadership qualities of great generals.
- (p) Learn about 1999 Kargil war.
- (q) Acquire the knowledge about various wars and their heroes.

(r) Know about various components of communication process.

59. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -

- (g) Get motivated to join Armed forces, police & CAPF.
- (h) Write their CV effective and appealing.
- (i) Face SSB interview effectively in their future.
- (j) Understand individual responsibilities & role in meeting the security challenges on Border/Coastal areas.
- (k) Imbibe the feeling of patriotism.
- (l) Communicate more effectively.

60. **Course Content Part (I) Theory**

(a) **Unit 1. Personality Development (Contact Hrs.3).**

(iv) Career Counselling.

(v) SSB Procedure.

(vi) Interview Skills.

(e) **Unit 2. Border & Coastal Areas(Contact Hrs.2).** Security Challenges & Role of cadets in Border management.

(f) **Unit 3. Armed Forces(Contact Hrs. 3).** Modes of Entry into Army, Police and CAPF.

(g) **Military History(Contact Hrs. 19).**

(v) Biographies of Renowned Generals.

(vi) War Heroes : Param Veer Chakra Awardees.

(vii) Study of Battles of Kargil.

(viii) War Movies.

(e) **Communication(Contact Hrs. 3).** Introduction to Communication & Latest Trends.

Course Content Part (II) Practical

61. **Course Objectives.** Cadets will be able to: -

- (e) Understand that drill as the foundation for discipline and to command a group for common goal.
- (f) Appreciate grace and dignity in the performance of ceremonial drill.
- (g) Know about various knots and lashing used in soldiering.
- (h) Acquire awareness about the basic weapon system in use in the Armed Forces.

62. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -
- (e) Perform foot drill and follow the different word of command.
 - (f) Aiming range and figure targets.
 - (g) Use the different knots and lashing in day-to-day life for different purposes.
 - (h) Develop the feeling of altruism.
63. **Course Content Part (II) Practical.**
- (a) **Unit 1. Drill (Contact Hrs. 03).**
 - (iii) Ceremonial Drill.
 - (iv) Guard of Honour.
 - (h) **Unit 2. Weapon Training(WT) (Contact Hrs. 04).** Short Range firing.
 - (i) **Unit 3. Map Reading(MR) (Contact Hrs. 04).** Google maps and Applications.
 - (j) **Unit 4. Field Craft & Battle Craft(FCBC) (Contact Hrs. 03).** Knots, Lashing and Stretchers.
 - (k) **Unit 5. Social Service and Community Development(SSCD) (Contact Hrs. 05).** Cadets will participate in various activities throughout the semester e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc as per the requirement and similar announced days- National and State level.
 - (l) **Unit 6 Introduction of Infantry Weapons &Equipment(INF) (Contact Hrs.03).** Characteristics of 5.56MM INSAS Rifle, Ammunition, Fire Power, Stripping, Assembling & Cleaning Practice.
 - (m) **Unit 7. Communication (COM) (Contact Hrs. 03).**
 - (v) Basic Radio Telephony (RT) Procedure.
 - (vi) Introduction, Advantages, Disadvantages, Need for standard procedures.
 - (vii) Types of Radio telephony communication.
 - (viii) Radio telephony procedure, Documentation.

COURSE MODULE: NATIONAL CADET CORPS CAMP -I

Course Title: National Cadet Corps Camp I			
Course Code	BNCCCAMP03GE05	Credits	2(Thr)+ 3(Pr)=05
L /T + P	30+90	Course Duration	10 Days (24 hours each)
Semester	III (Odd)	Contact Hours	30(Thr)+90(Pr)=120Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, individual and group tasks, team work, field-based assignments, Physical Training, endurance building and skill development practices		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (I) Theory

64. **Course Objectives.** Cadets will be able to: -
- (g) Acquire knowledge about the various aspects of personality development.
 - (h) Understand the concept of leadership traits, moral values and character traits.
 - (i) Develop awareness about the various types of natural disasters.
 - (j) Develop sensitivity to the changing environment and understand the importance of conservation.
 - (k) Understand the importance of hygiene and sanitation and common first aid procedures.
 - (l) Acquire awareness about various types of weapon systems in the Armed Forces.
65. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -
- (g) Acquire adequate skill sets to overcome their weakness and reshape their personality.
 - (h) Imbibe good moral values and character traits in their daily life.
 - (i) Become useful members of the society and form part of disaster response team, if need arises.
 - (j) Respect and make efforts to conserve natural resources
 - (k) Follow good personal hygiene practices and provide first aid in emergencies.
 - (l) Be motivated to join the armed forces.

66. **NCC Camp-I : Course Content Part (I) Theory**

- (j) **Unit 1. Personality Development (PD) (Contact Hrs. 04)**. Introduction to Personality Development, Factors influencing/shaping personality, Time Management and Interview Skills.
- (k) **Unit 2. Leadership (LDR) (Contact Hrs. 04)**. Leadership Traits, Moral Values and Character Traits.
- (l) **Unit 3. Disaster Management (DM) (Contact Hrs. 04)**. Assistance during natural disasters, Do's and Don'ts for NCC Cadets performing Disaster Management Duties
- (m) **Unit 4. National Integration and Awareness (NIA)(Contact Hrs. 04)**. Water Conservation and Rain Harvesting, Waste Management and Energy Conservation
- (n) **Unit 5. Health and Hygiene (H&H)(Contact Hrs. 04)**. Hygiene and Sanitation, First Aid in Common Medical Emergencies.
- (o) **Unit 6. Infantry Weapons (IW) (Contact Hrs. 02)**. Characteristics of Company Support Weapons.
- (p) **Unit 7. Weapon Training (WT) (Contact Hrs. 04)**. Characteristics of Point 22 Rifle and its Ammunition, Range Procedure and Safety Precautions.
- (q) **Unit 8. Military History (MH) (Contact Hrs. 04)**. Guest lectures by War Veterans/decorated soldiers/veterans.
- (r) **Unit 9. Communication (COM) (Contact Hrs. 04)**. Basics of communication.

NCC Camp-I : Course Content Part (II) Practical

67. **Course Objectives**. Cadets will be able to: -

- (k) Understand that drill is the foundation of discipline and command a group for a common goal.
- (l) Understand the importance of a weapon its detailed safety precautions necessary for prevention of accidents.
- (m) Develop awareness about different types of terrain and how it is used in Battle Craft.
- (n) Develop the concept of various markings on the map and how they are co-related to the ground features.
- (o) Acquire awareness about the various types of weapon systems in the Armed Forces.
- (p) Understand the concept and importance of social service.
- (q) Understand the various nuances of Personality Development.
- (r) Understand the concept and importance of Physical Training in everyone's life.
- (s) Acquire skill sets about various games and understand the importance of team work.

- (t) Develop awareness about different cultures and different modes of its projection in artistic forms.

68. **Expected Learning Outcomes**. After completing this course, the cadets will be able to: -

- (j) Perform foot drill, arms drill, ceremonial drill and will be able to give out different words of command.
- (k) Fire a weapon effectively with fair degree of marksmanship.
- (l) Undertake point to point navigation and take part in route marches by day and night.
- (m) Use terrain effectively for concealment, camouflage, indicate landmarks and give field signals.
- (n) Be motivated to join the armed forces.
- (o) Acquire adequate skill sets to overcome their weakness and enhance their personality.
- (p) Gain adequate physical and mental endurance capabilities.
- (q) Play team games and be able to communicate and coordinate effectively in group events or situations.
- (r) Respect the diversity of Indian culture and develop pride by showcasing their own culture to others.

69. **NCC Camp-I : Course Content Part (II) Practical**

- (m) **Unit 1. Drill (Drill)(Contact Hrs. 16)**. Drill ki Aam Hidayaten aur Words of Command, Savdhan, Vishram, Aram Se aur Mudna, Khuli Line aur Nikat Line mein march, Salute Karna Parade Par, Visarjan aur Line Tod, Tej Chal, Tham aur Dhire Chal, Tham, Dahine, Baen, Aage aur Piche Kadam lena, Tejchaal se Mudna, Tejchaal se Salute karna, Tej kadambaal aur Tham, Tej Kadambaal se kadam badhana, Teenon Teen se ek file Banana aur ek file se Teenon Teen Banana, Rifle Ke Saath Saavdhan, Vishram aur Aaram se, Rifle ke saath Parade par aur saaj, Rifle Ke saath visarjan aur line tod, Bhumi Sashtra aur Uthao Sashtra, Bagal Sashtra aur Baaju Shastra.
- (n) **Unit 2. Weapon Training (WT) (Contact Hrs. 14)**. Stripping, Assembling, Cleaning of Point 22 rifle, Sight Setting and Sight Picture of Point 22 Rifle, Loading, Cocking and Unloading, Lying Position, Holding and Aiming of Point 22 rifle, Trigger Control and Firing of Shot, Theory of Group, Short-Range Aiming and Firing, Firing Practice I to VII.
- (o) **Unit 3. Field Craft & Battle Craft (FC/BC) (Contact Hrs. 06)**. Introduction of Field Craft & Battle craft, Judging Distance, Indication of Landmarks and Targets, Observation, Camouflage and Concealment, Field Signals, Section formations.
- (p) **Unit 4. Map Reading (MR) (Contact Hrs. 12)**. Introduction to Map and Conventional signs, Scale and Grid System, Topographical forms and technical terms, Relief, Contours and gradients, Cardinal points and types of North, Types of Bearing and use of Service Protector, Prismatic Compass and its use, setting of a map, Finding North and own Position, Map to Ground and Ground to map, Point to Point march, Route March – I, Route March -II.

- (q) **Unit 5. Infantry Weapons (IW) (Contact Hrs. 01).** Characteristics of Battalion Support Weapons.
- (r) **Unit 6. Social Service and Community Development (SSCD) (Contact Hrs. 04).** Basics of Social Service and its need, Rural Development Programme, Civic Responsibilities: Cadets will participate in various activities throughout the camp e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc., Road /Rail Travel Safety
- (s) **Unit 7. Personality Development (PD) (Contact Hrs. 06).** Self-Awareness, Empathy, Critical and Creative Thinking, Decision making and problem Solving, Coping with Stress and Emotions, Time Management.
- (t) **Unit 8. Obstacle Training (OT) (Contact Hrs. 02).** OT Practice – I:- Untimed, Cadets will be familiarized with all the obstacles in the Obstacle Course and briefed about the correct method to do them, OT Practice -II: Timed practice for all the cadets and record to be maintained.
- (u) **Unit 9. Physical Training (PT) (Contact Hrs. 09).** Physical Training will be carried out on each day of the camp, except on last day, in morning hours. Training has to be progressive in degree of difficulty to improve individual stamina and endurance. Training to include warming up, running, exercises to strengthen upper body, lower body and core muscles. Two period each to be devoted to route march by day and night respectively and one period will be earmarked for trekking expedition as part of Adventure Activity.
- (v) **Unit 10. Games Training (G)(Contact Hrs. 09).** Games Training will be carried out on each day of the camp, except on last day, in evening hours. Training has to be progressive in degree of difficulty to improve individual skills, coordination, team work and desire to excel. Training to ensure that each and every boy and girl cadets participate in at least one game activity everyday.
- (w) **Unit 11. Cultural Activity (C)(Contact Hrs. 09).** Cultural Activity will be carried out on each day of the camp, except on last day, in evening hours. Cadets have to divided in Nine Groups consisting of a mix of boy and girl cadets and preferably belonging to the same geographical area. Each group has to present the unique culture, custom, tradition, folk lore, songs, drama, paintings and cuisine during one hour allotted. There will be a prize for the best group to encourage participation and to develop pride in their unique culture. This training activity should ensure that each and every boy and girl cadet participate in at least one game activity every-day.
- (x) **Unit 12. Spare (S)(Contact Hrs. 02).** Two periods in each camp will be earmarked as spare to cover disruptions in training activity due to weather or other administrative reasons.

COURSE MODULE : NATIONAL CADET CORPS CAMP – II

Course Code	BNCCCAMP05GE05	Credits	2(Thr)+ 3(Pr)=05
L /T + P	30+90	Course Duration	10 Days (24 hours each)
Semester	V (Odd)	Contact Hours	30(Thr)+90(Pr)=120Hours
Methods of Content Interaction	Lecture, Tutorials, Group discussion, Collaborative work, self-study, individual and group tasks, team work, field-based assignments, Physical Training, endurance building and skill development practices		
Assessment and Evaluation	As per the University norms i.e. 25% internal assessment and 75% End of term exams , or 30% internal assessment and 70% end of term exams etc.		

Course Content Part (II) Theory

70. **Course Objectives.** Cadets will be able to: -

- (g) Acquire the concept self-awareness, emotional intelligence, critical and creative thinking, decision making and problem solving.
- (h) Learn about various indicators of good leadership and get an insight on principle of leadership and motivation.
- (i) Develop awareness about the various types of natural disasters and disaster management organization in our country.
- (j) Familiarize with natural resources, changing environment and understand the importance of conservation and waste management.
- (k) Value the importance of Physical and Mental health and understand how to deal with wounds of various types.
- (l) Acquire awareness about organization and role of an Infantry Battalion in the Armed Forces.

71. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -

- (g) Develop a sense of responsibility, smartness in appearance and improve self-confidence, inculcate importance of empathizing with others, improve their deep-thinking ability and apply ideas and be able to face problems in a constructive manner with solutions.
- (h) Imbibe good leadership traits and apply them in practical life and appreciate the visible outcome of leadership and motivation.
- (i) Appreciate role of the org during emergency and become useful members of disaster response team, if need arises.

- (j) Learn about the various natural resources, their utilization and practice method of conservation of these resources in daily life.
- (k) Appreciate value of physical and mental health in daily life and spread awareness about treatment and care of wounds in their society.
- (l) Be motivated to join the armed forces.

72. **NCC Camp-II : Course Content Part (I) Theory.**

- (j) **Unit 1. Personality Development (PD) (Contact Hrs. 04).** Self-Awareness, Emotional intelligence, Critical and Creative Thinking, Decision-Making and Problem Solving.
- (k) **Unit 2. Leadership (LDR) (Contact Hrs. 02).** Indicators of Good Leadership, Leadership and Motivation.
- (l) **Unit 3. Disaster Management (DM) (Contact Hrs. 02).** Disaster Management Organization NDMA and NDRF, Types of Disasters.
- (m) **Unit 4. Environmental Awareness and Conservation (EAC) (Contact Hrs. 02).** Natural Resources, Conservation and Management, Water Conservation, Waste Management, Energy Conservation.
- (n) **Unit 5. Health and Hygiene (H&H) (Contact Hrs. 02).** Physical and Mental Health, Treatment and Care of Wounds.
- (o) **Unit 6. Infantry Weapons (IW) (Contact Hrs. 01).** Organization of Infantry Battalion.
- (p) **Unit 7. Weapon Training (WT) (Contact Hrs. 02).** Characteristics of Point 22 Rifle and its Ammunition, Range Procedure and Safety Precautions.
- (q) **Unit 8. Military History (MH) (Contact Hrs. 04).** Guest lectures by War Veterans/decorated soldiers/veterans.
- (r) **Unit 9. Communication (COM) (Contact Hrs. 04).** Latest trends in communication.

NCC Camp-II : Course Content Part (II) Practical

73. **Course Objectives.** Cadets will be able to: -

- (k) Inculcate spirit of discipline and follow command as a group for a common goal.
- (l) Fire a weapon with adequate safety precautions necessary for safe firing.
- (m) Understand the lay of the ground and use it skillfully towards own objective.
- (n) Understand and use the map, satellite imagery and GPS effectively.
- (o) Identify and be well versed with the primary weapon systems used in the Armed Forces.
- (p) Lead a life of selflessness and provide service towards society development and nation building.
- (q) Understand the importance of changing mindset, team work, social skills etiquettes and manners, interview skills and importance of effective communication in daily life.

- (r) Learn the importance of physical fitness and nuances of physical training.
- (s) Inculcate esprit-de-corps through team games.
- (t) Have knowledge about cultural diversity of India and learn ways and means to adopt them.

74. **Expected Learning Outcomes.** After completing this course, the cadets will be able to: -

- (l) Practice problem solving, critical thinking in real life situations.
- (m) Practice leadership of small teams and groups under challenging environment.
- (n) Develop a positive attitude, have manners and etiquettes in social life, develop a sense of cooperation for group or team work, participate in an interview with confidence and inculcate verbal and non-verbal communication skills.
- (o) Develop adequate physical and mental endurance capabilities.
- (p) Fire a weapon effectively with fair degree of marksmanship.
- (q) Undertake point to point navigation and take part in endurance marches by day and night.
- (r) Use terrain effectively for concealment, camouflage, indicate landmarks and give field signals.
- (s) Be motivated to join the Armed Forces.
- (t) Play team games and be able to communicate and coordinate effectively in group events or situations.
- (u) Perform foot drill, arms drill, ceremonial drill and will be able to take part in ceremonial parade and events.
- (v) Respect the diversity of indian culture and develop pride by showcasing their own culture to others.

75. **NCC Camp-II : Course Content Part (II) Practical**

(m) **Unit 1. Drill (Drill) (Contact Hrs. 16).** Tejchaal se Mudna, Tejchaal se Salute karna, Tej kadamtaal aur Tham, Tej Kadamtaal se kadam badhana, Teenon Teen se ek file Banana aur ek file se Teenon Teen Banana, Rifle Ke Saath Saavdhan, Aaram se, Rifle ke saath Parade par aur saaj, Rifle Ke saath visarjanaur line tod, Bhumi Sashtira aur Uthao Sashtira, Bagal Sashtira aur Baaju Shashtra, Salami Sashtira, Squad Drill, Guard Mounting, Guard of Honour, Platoon / Company Drill, Word of Command and Instructional Practice.

(n) **Unit 2. Weapon Training (WT) (Contact Hrs. 14).** Stripping, Assembling, Cleaning of Point 22 rifle, Sight Setting and Sight Picture of Point 22 Rifle, Loading, Cocking and Unloading, Lying Position, Holding and Aiming of Point 22 rifle, Trigger Control and Firing of Shot, Theory of Group, Short-Range Aiming and Firing, Musketry Training, Firing Practice I to VII.

- (o) **Unit 3. Field Craft & Battle Craft (FC/BC) (Contact Hrs. 06).** Observation, Camouflage and Concealment, Field Signals, Section formations, Fire Control Orders, Fire and Movement, Knots and Lashings.
- (p) **Unit 4. Map Reading (MR) (Contact Hrs. 12).** Introduction to Map and Conventional signs, Scale and Grid System, Topographical forms and technical terms, Relief, Contours and gradients, Cardinal points and types of North, Types of Bearing and use of Service Protector, Prismatic Compass and its use, setting of a map, Finding North and own Position, Map to Ground and Ground to map, Point to Point march, Endurance March – I (10 KM), Endurance March -II (20 KM).
- (q) **Unit 5. Infantry Weapons (IW) (Contact Hrs. 01).** Characteristics of Infantry Company support weapons and 5.56 MM INSAS Rifle.
- (r) **Unit 6. Social Service and Community Development (SSCD)(Contact Hrs. 04).** Contribution of Youth Towards Social Welfare: Cadets will participate in various activities throughout the camp e.g., Blood donation Camp, Swachhata Abhiyan, Constitution Day, Jan Jeevan Hariyali Abhiyan, Beti Bachao Beti Padhao etc., Social Evils: Female Feticide, Dowry, Child Abuse, Trafficking and Corruption, Drug Abuse and Drug Trafficking, Protection of Children and POCSO Act 2012.
- (s) **Unit 7. Personality Development (PD)(Contact Hrs. 06).** Change Your Mindset, Team Work and Team Building, Social Skills, Etiquettes and Manners, Interview Skills, Communication Skills–I, Communication Skills -II
- (t) **Unit 8. Obstacle Training (OT)(Contact Hrs. 02).** OT Practice – I: Untimed, Cadets will be familiarized with all the obstacles in the Obstacle Course and briefed about the correct method to do them, OT Practice -II: Timed practice for all the cadets and record to be maintained.
- (u) **Unit 9. Physical Training (PT) (Contact Hrs. 09).** Physical Training will be carried out on each day of the camp, except on last day, in morning hours. Training has to be progressive in degree of difficulty to improve individual stamina and endurance. Training to include warming up, running, exercises to strengthen upper body, lower body and core muscles. Two period each to be devoted to route march by day and night respectively and one period will be earmarked for trekking expedition as part of Adventure Activity.
- (v) **Unit 10. Games Training (G)(Contact Hrs. 09).** Physical Training will be carried out on each day of the camp, except on last day, in evening hours. Training has to be progressive in degree of difficulty to improve individual skills, coordination, team work and desire to excel. Training to ensure that each and every boy and girl cadets participate in at least one game activity everyday
- (w) **Unit 11. Cultural Activity (C) (Contact Hrs. 09).** Cultural Activity will be carried out on each day of the camp, except on last day, in evening hours. Cadets have to divided in Nine Groups consisting of a mix of boy and girl cadets and preferably belonging to the same geographical area. Each group has to present the unique culture, custom, tradition, folk lore, songs, drama, paintings and cuisine during one hour allotted. There will be a prize for the best group to encourage participation and to develop pride in their unique culture. This training activity should ensure that each

and every boy and girl cadets participate in at least one game activity every day (Contact Hrs. 09)

- (x) **Unit 12. Spare (S) (Contact Hrs. 02)**. Two periods in each camp will be earmarked as spare to cover disruptions in training activity due to weather or other administrative reasons.

SECTION II : RULES AND REGULATIONS
GOVERNING NCC CREDIT COURSE UNDER CHOICE BASED CREDIT SYSTEM AS
GENERIC ELECTIVE FOR SENIOR DIVISION/WING

RULE 1 :Definitions of Key Terms

1.1 General Definitions

1.1.1 'Choice Based Credit System' (CBCS).The CBCS provides choice for the student to select courses from the prescribed courses (Elective or Soft – Skill courses). It provides a 'Cafeteria' approach in which the students can take courses of their choice, learn at their own pace, study additional courses and acquire more than the minimum required credits, and adopt an inter-disciplinary approach.

1.1.2'Academic Year'.Two consecutive (one odd + one even) semesters shall constitute one academic year.

1.1.3'Credit Course'.Course, usually referred to as paper having specific title and code number, is a component of a programme. It consists of a list of topics/concepts/theories/principles/activities/tasks etc. which a student has to learn during the programme of study. Each course has some credits according to the nature and load of content. Each course should define the learning objectives/learning outcomes. A course may be designed to be delivered through lectures/tutorials/laboratory work/field work/out reach activities/project work / vocational training / physical training /viva / seminars /term papers / assignments / presentations / self-study work etc., or a combination of some of these.

1.1.4'Course Instructor/Teacher'.The course instructor generally will be a teaching faculty who has taken up the responsibility of teaching it and evaluating the performance of the students in that course. NCC course will be imparted by the ANO (Associate NCC Officer) and PI (Permanent Instructor) / Girl Cadet Instructor (GCI) staff together according to their area of specialization. Certain specific topics and training activity is imparted by Military Officers and Whole Time Lady (WTLO).

1.1.5'Credit'.A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work per week. Thus, in each semester's NCC course, credits are assigned on the basis of the number of lecture/tutorial/field work/physical training/excursions and other forms of learning required for completing the contents in a 15-18 week schedule. 2 hours of laboratory work/field work is generally considered equivalent to 1 hour of lecture.

v. 1 credit = 1 hour of instruction per week (1 credit course = 15 contact hours of instruction per semester)

vi. 4 credit = 4 hour of instruction per week (4 credit course = 60 contact hours of instruction per semester)

vii. 1 credit = 2 hour of practical per week (1 credit course = 30 contact hours of instruction per semester)

viii. 4 credit = 8 hour of practical per week (4 credit course = 120 contact hours of instruction per semester)

Number(s) of credit(s) assigned to a particular course are mentioned in the detailed syllabus of the courses.

1.1.6'Credit Point'.It is the product of the grade point and the number of credits for a course.

1.1.7'Letter Grade'.It is an index of the performance of students in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P, and F. A letter grade is assigned to a student on the basis of evaluation of her/his performance in a course on a ten-point scale.

1.1.8'Grade Point'.It is a numerical weight allotted to each letter grade on a 10 -point scale.

Letter Grade	Grade Point
O	9-10
A+	8-9
A	7-8
B+	6-7
B	5-6
C	4-5
P	4
F	0
Ab	0

Note :University may use the above said criteria for providing the grades to the students or may adopt the same criteria which they are practicing for providing the letter grade and grade point for other subjects.

1.1.9'Programme'.An educational programme leading to the award of degree, Diploma or Certificate course. NCC course shall be offered only at under graduate level programmes for any stream or type of programme for example – Nonprofessional courses BA, B.SC. B. Com etc. professional courses – B.A., LLB, B.A./B.Sc., B.Ed., BCA, BBA, B. Tech, MBBS etc.

1.1.10'Credit – Based Semester System (CBSS)'.Under the CBSS, the requirement of awarding a degree or diploma or certificate is prescribed in terms of number of credits to be completed by the students.

1.1.11 'Semester' Each semester shall consist of 15 to 16 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from July to December and even semester from January to June. The Credit-based semester system provides flexibility in designing curriculum and assessing credits based on the course content and hrs of teaching.

1.1.12 'Semester Grade-Point Average (SGPA)' Semester Grade Point Average or SGPA, is an average grade point earned by the student at the end of an academic session i.e. semester at college. The formula for calculation of SGPA is the sum of all the credit points awarded for the subjects divided by total credits allotted to that semester. It shall be expressed up to two decimal places.

1.1.13 'Cumulative Grade Point (CGPA)' It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all the semesters. It shall be expressed up to two decimal places.

1.1.14 'Transcript/ Grade card or certificate' Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade and / or marks secured) along with SGPA of semester. Overall Grade Certificate will be issued on completion of the course showing semester wise SGPA & CGPA.

1.1.15 'The University/ College/ Institution' The University/ College/ Institution in present document means the any recognized central/ state/ Deemed university or institution meant for higher education.

1.1.16 'NCC Course' In the present document 'NCC Course' means the course designed for imparting NCC curriculum in educational institutions as elaborated in this document under Choice Based Credit System as a General Elective Course for Senior Division/ Senior Wing.

1.2 Definitions Specific to NCC

1.2.1 'Institutional Training' Implies training conducted for NCC cadets as per Training Manuals and Cadet Hand Book issued by DG NCC, Ministry of Defence.

1.2.2 'Common Subjects' Implies those subjects specifically taught in NCC curriculum which are common to Army, Navy and Air Force and general training that can be imparted by Associate NCC Officers or Military staff or a suitably qualified person.

1.2.3 'Specialised Subjects' Implies subjects specifically taught in NCC curriculum by military instructors comprising specialised topics for Army, Navy and Air Force Cadets respectively.

1.2.4 'NCC Camps and Centralised Training Events' Collective training events conducted usually for 10 days with large number of cadets living under field conditions in selected places away from home. The training camp comprises of focused physical and mental training routines of different types as per syllabus and curriculum. Some training like route marches may happen overnight. Camps include, adventure camps, national integration camps, Republic Day Parade Training Camps, ThalSainik,

VayuSainik and NauSainik camps and other outdoor training activities as described in DG NCC Training Manuals.

1.2.5 NCC 'B' and 'C' Certificate Examinations. These are defined in Special National Cadet Corps Order 2020 issued by DG NCC, Ministry of Defence.

1.2.6 'Training Faculty'. Persons suitably trained & responsible for imparting training of different types and nature to students.

1.2.7 'Military Officers'. They are regular commissioned officers of Indian Armed Forces who serve in the NCC and render command, administrative and instructional functions for NCC.

1.2.8 'Whole Time Lady Officers (WTLO)'. They are women officers commissioned directly into the NCC.

1.2.9 'Associate NCC Officer (ANO)'. ANO will be a university/ college/ school faculty who are qualified in the PRCN (Pre-commission Course of NCC) conducted by DGNCC and are commissioned as Associate Officers in NCC as defined in NCC Act 1948 and NCC Rules. They have the eligibility to impart certain component of NCC Course and undertake training of cadets.

1.2.10 'Permanent Instructor (PI)'. PI Staff are Junior Commissioned Officers (JCO) and Non-Commissioned Officers (NCO) on deputation from Armed Forces to NCC as governed by NCC Act 1948. Retired PI Staff may be hired by a college as a substitute for ANO with prior concurrence of DGNCC.

1.2.11 'Girl Cadet Instructors (GCI)'. GCI are lady instructors' equivalent to PI Staff for specifically imparting instructions to women NCC cadets of Senior Wing.

1.2.12 'NCC Organizational Structure'. NCC is an adjunct of Indian Armed Forces that operates under the ambit of the Ministry of Defence through the Defence Secretary with Raksha Mantri as the political head.

1.2.13 'DGNCC'. Directorate General of NCC renders the command and administrative function of NCC. The executive head of NCC is Director General of NCC who is a Lt Gen rank officer from the Army.

1.2.14 'State NCC Directorate'. State NCC Directorates are directorates subordinate to DG NCC and render command and administrative control to NCC at State level and is headed by an Additional or Deputy Director General

1.2.15 'NCC Group HQ'. NCC Group HQs are subordinate to State Directorates and render command and administrative control to NCC at district or cluster of districts in a state and is headed by a Group Commander.

1.2.16 'NCC Units'. NCC Units are subordinate to Group HQs at the lowest rung of the command and administrative control exercised by military officers and is headed by a Commanding Officer or Officer Commanding. The NCC Units directly engage

with educational institutions and ANOs and are primarily responsible for training of NCC in institutions under their jurisdiction.

1.2.17 'NCC Division/ Wing'. NCC Division/Wing are minor units of senior division/wing of NCC comprising of 160 senior cadets allotted to educational institutions. It can be further subdivided into NCC platoons of 53 to 54 cadets.

1.2.18 'NCC Troop'. NCC Troop are minor units of junior division/wing of NCC comprising of 100 junior cadets allotted to educational institutions. It can be further subdivided into NCC half troops comprising of 50 junior cadets.

RULE 2 : Admission and Other Provisions

2.1 The NCC Course under the CBCS as 'General Elective' shall be of three years (Six Semester) duration which may be completed in maximum duration of four year (8 semesters).

2.2 Students may complete NCC course minimum in Six semesters and maximum in eight semesters. Cadets may complete their 'B' Certificate in four semesters minimum and maximum six semesters. Cadets already having 'B' certificate may complete their 'C' certificate in minimum two semesters and maximum four semesters, and they may join NCC course 5 in first semester of college.

2.3 The intake to the course shall be decided according to the seats allotted to University/ college/ institution by DG NCC according to the availability of required infrastructure, faculty and resources.

2.4 The admission to the NCC Course under the CBCS as a 'General Elective' shall be governed by the provisions as laid down by the NCC Act 1948/ SNCCO 2020/ contemporary SNCCO and Academic council of parallel body of university. These rules and regulations may be modified from time to time (if needed) by the Academic body of the university in consultation with DG NCC or Act/ Ordinances prepared by DG NCC.

2.5 Students will be enrolled as NCC cadet as per existing Acts & Rules.

2.6 At the time of reporting for admission, the candidates are required to present medical & physical fitness documents as well as the admission proof of the university and submit the self-attested copies of aforesaid documents.

2.7 The admission of any candidate is liable to be cancelled without giving any further notice forthwith or at any time during the period of the course, if it is detected that the candidate has/had produced fake/forged certificate (s)/ document(s), indulged in any act of misconduct/indiscipline and has/had concealed any other relevant information at the time of admission.

2.8 The admission of the candidate to the course shall be subject to such ordinance, rules and regulations as may be framed from time to time by the university in consultation with DG NCC and NCC act 1948.

2.9 DG NCC shall have jurisdiction in case of any dispute relating to the provisional admission in the course.

RULE3 : For Eligibility, Medium of Instrs & Categories

3.1 Eligibility Conditions. Be governed by provisions of NCC Act and Rules and directions from DG NCC from time to time. These are readily available on DG NCC website www.nccindia.nic.in.

3.2 Standards for physical Fitness criteria for Male and Female Cadets/students shall be governed by provisions of NCC Act and Rules and policy documents released by DG NCC from time to time.

RULE4 : Medium of Instruction. English or Hindi. However, ANOs and training instructors are free to use vernacular language for helping students who are not fluent in Hindi or English.

RULE 5 : Course and Students. NCC course is unique, due to the nature of its military training content and component hence it is normally offered to students enrolled as NCC cadets only. This NCC Course is primarily designed for students enrolled as NCC cadets under provisions of NCC Act 1948. Institution allotted NCC will have the obligation to offer this course to all students from their institute enrolled as cadets as per vacancy allotted to the institution by DG NCC as also to those cadets enrolled under Open Quota seats.

RULES 6 :NCC Course for 'Cadet' Category

6.1. NCC Course for 'Cadet'

- (f) NCC course for Cadets comprises of total 24 credits (08 for theory, 06 for practical and 10 for camp component) over 6 semesters courses i.e., NCC course I to NCC course VI and NCC Camp I & NCC Camp II.
- (g) Cadets will not only earn the academic credits but also be given 'B', and 'C' Certificates after passing the exam conducted by DG NCC.
- (h) Students would be free to join NCC Course I or subsequent Courses in any semester, not necessarily Semester I or the designated Semester.
- (i) A student can opt for only one of the six Courses per semester and that too sequentially implying NCC Course II cannot be joined before completing NCC Course I and so on.
- (j) Under this category a fresh student/cadet will compulsorily have to opt for all six NCC Courses in minimum six Semesters. However, 'B' certificate holder may directly join NCC Course Number 5 in any semester. He will have to complete NCC Course Number 5 and NCC Course Number 6 for obtaining 'C' certificate and he will be awarded credit points only for NCC Course Number 5 and NCC Course Number 6.

NCC GENERAL ELECTIVE CREDIT COURSE DESIGN SUMMARY					
Semester	Credits Allocated			Total	Remarks
	Theory	Practical	Camp		
Semester - I	1	1		2	
Semester - II	1	1		2	
Semester – III	1	1	5	7	Credits of 1st Camp merged with 3rd Sem
Semester – IV	2	1		3	
Semester – V	1	1	5	7	Credits of 2nd Camp merged with 5th Sem
Semester - VI	2	1		3	
Total	08	6	10	24	Twenty-Four Credits

RULE 7 :Mobility& Credit Bank

- 7.6 The mobility shall be permissible from the regular mode programme to the regular mode programme of learning only and cannot be replaced by open/distance/online programme.
- 7.7 It shall be the responsibility of the student to assess the feasibility and practicality of vertical mobility (across the Universities), as it doesn't entitle a student to be exempted or relaxed from any of the requisites (sessional, attendance, assignments, End-semester examinations and programme duration etc.) for completing the course.
- 7.8 After completing one semester/ one year cadet/student may pursue NCC course from any other institution/ University/ College having NCC and carry credits in credit bank as per NEP 2020. The NCC students/ Cadets of some other university shall in any case be admitted only at the beginning of the session to the fulfilment of the other requirements of the NCC Course (attendance, Formative assessment, Field-work, practical etc).
- 7.9 A student of NCC course availing inter-university mobility shall continue to be a bonafide student of the university where he/she initially got admission and as per the university/ Institutional rules for the inter-university mobility.
- 7.10 In case of inter-university mobility of NCC cadet for NCC Course is also the subject to availability of NCC for the cadets in that particular university/ institution and it shall be interpreted as inter-battalion migration (means another regimental no. shall be allotted to the cadet).

RULE 8 :Examination & Promotion

- 8.3 The examination of all the NCC courses shall be internal in nature and generally consisting of continuous internal assessment and End of semester Examination. For the preparation of final grade in a particular course, the continuous internal assessment (Formative in nature) and the End Semester Examination (Summative in nature) shall have the weightage as decided for other courses by the university as per the University norms for e.g., 25% internal assessment and 75% End of term exams or 30% internal assessment and 70% End of term exams etc.
- 8.4 For assigning the Grades and credit points to NCC Course Universities/ Institutions are free to use the same criteria which are decided by their academic bodies for providing the grades and credit points to the other courses **RULE 9 :Continuous Internal Assessment**
- 9.6 The Continuous Internal Assessment of the NCC Cadets' and NCC students' learning and performance shall be carried out by the ANOs and PI staff.
- 9.7 Continuous Internal Assessment will be 100% Practical that includes Drill Square test, Map Reading, Weapon Training, Field craft & Battle craft.
- 9.8 CO of nominated NCC Unit will be deemed as Head of the Department and shall be responsible for approving the schedule and pattern of the continuous internal examination.

- 9.9** ANO of the nominated institute shall maintain all the records related to attendance, teaching and assessment in a systematic manner, including award of final grade.
- 9.10** In case a student fails to appear in any Continuous Internal Assessment, they will be given a chance to reappear in retest and in case he/she fails to obtain 'P' grade he/she will be made to repeat the exam by carrying it forward for semester retest .

RULE 10 :Re-appear in the End Semester Examination for Improvement of Grades

- 10.5.** If a student wishes to improve her/his grade(s) in NCC course(s), she/he can re-appear in the End Semester Examination in the subsequent odd/even semester(s), whenever the examination of the particular course(s) is held, on payment of fees in addition to the prescribed semester fee within the maximum permissible duration for the programme of study of the student/cadet.
- 10.6.** A student may improve her/his points/grade by reappearing in the End Semester Examination of a course as per the provisions of reappearing mentioned above. In such cases points obtained by the student in the Continuous Internal Assessment of the particular course shall be carried forward to the subsequent End Semester Examination of the course. However, in such case, the points/grades obtained on the basis of latest appeared End Semester Examination shall be considered for calculation of final CGPA of the programme.
- 10.7.** The re-appear examination of a course for improvement of grade shall be based on the syllabi of the course in force at the time of initial registration to the course.
- 10.8.** A student who has got the Migration/Transfer Certificate issued from the University shall not be allowed to re-appear in any examination for improvement of grade.

RULE 11 :Repeating Courses

- 11.3** A student having attendance shortage in any course may repeat the course by taking re-admission in that course in subsequent odd/even semester(s), whenever the course is being offered, within the maximum permissible duration of the programme.
- 11.4** If a student repeats a course, she/he has to fulfil all the desired requirements afresh including attendance, Continuous Internal Assessment and the End Semester Examination. In such case the course content shall be based on the syllabi of the course in force at the time of repetition of the course.

RULE 12 : Promotion Rules

- 12.5** A student shall be declared as 'promoted' to the next semester when she/he earns 'P' Grade or above in the last concluded semester examination, maintaining the spirit and pattern of semester system and covering the mandatory components, such as Continuous Internal Assessment and End-Semester Examination in the NCC Courses.
- 12.6** A student shall be 'Provisionally Promoted' to the next semester if she/he secures less than 'P' grade but he /she has to pass all the courses of NCC course within permissible duration.
- 12.7** A cadet shall be eligible to attend the 'B' Certificate exam if he/she passed all the first four semester NCC course and completed one ATC/CATC. Similarly, cadet will be eligible to attend 'C' certificate examination if he/she has 'B' certificate and he /she has

passed V, VI semester NCC course and attended one CATC/ATC after fourth semester and after having obtained 'B' certificate.

12.8 If a cadet/student is repeating a course in an academic session, whatever may be the reason, it shall not be counted in the total number of seats and shall not affect the fresh intake of cadets / student in that academic session.

RULE 13 :Computation of SGPA & CGPA

13. Computation of SGPA and CGPA . University may use their own criteria for giving the SGPA & CGPA which is prepared by the authorised academic body for the other course

II. NON-GRADIAL COURSES

1. NSS/NCC/Physical Education & Yoga Practices 2 (0+2)Theory

Course aims at evoking social consciousness among students through various activities viz., working together, constructive and creative social work, to be skilful in executing democratic leadership, developing skill in programme development to be able for self employment, reducing gap between educated and uneducated, increasing awareness and desire to help sections of society.

Following activities are to be taken up under the NSS course:

- Introduction and basic components of NSS: Orientation
- NSS programmes and activities
- Understanding youth
- Community mobilisation
- Social harmony and national integration
- Volunteerism and shramdan
- Citizenship, constitution and human rights
- Family and society
- Importance and role of youth leadership
- Life competencies
- Youth development programmes
- Health, hygiene and sanitation
- Youth health, lifestyle, HIV AIDS and first aid
- Youth and yoga
- Vocational skill development
- Issues related environment
- Disaster management
- Entrepreneurship development
- Formulation of production oriented project
- Documentation and data reporting
- Resource mobilization
- Additional life skills
- Activities directed by the Central and State Government

All the activities related to the National Service Scheme course is distributed under four different courses viz., National Service Scheme I, National Service Scheme II, National Service Scheme III and National Service Scheme IV each having one credit load. The entire four courses should be offered continuously for two years. A student enrolled in NSS course should put in at least 60 hours of social work in different activities in a semester other than five regular one day camp in a year and one special camp for duration of 7 days at any semester break period in the twoyear. Different activities will include orientation lectures and practical works. Activities directed by the Central and State Government have to be performed by all the volunteers of NSS as per direction.

SYLLABUS

Semester I

Course Title: National Service Scheme I

Introduction and basic components of NSS:

Orientation: history, objectives, principles, symbol, badge; regular programmes under NSS, organizational structure of NSS, code of conduct for NSS volunteers, points to be considered by NSS volunteers awareness about health

NSS programmes and activities

Concept of regular activities, special camping, day camps, basis of adoption of village/slums, conducting survey, analysing guiding financial patterns of scheme, youth programme/ schemes of GOI, coordination with different agencies and maintenance of diary

Understanding youth

Definition, profile, categories, issues and challenges of youth; and opportunities for youth who is agent of the social change

Community mobilisation

Mapping of community stakeholders, designing the message as per problems and their culture; identifying methods of mobilisation involving youth-adult partnership

Social harmony and national integration

Indian history and culture, role of youth in nation building, conflict resolution and peace-building

Volunteerism and shramdan

Indian tradition of volunteerism, its need, importance, motivation and constraints; shramdan as part of volunteerism

Citizenship, constitution and human rights

Basic features of constitution of India, fundamental rights and duties, human rights, consumer awareness and rights and rights to information **Family and society**

Concept of family, community (PRIs and other community based organisations) and society

Semester II

Course Title: National Service Scheme II

Importance and role of youth leadership

Meaning, types and traits of leadership, qualities of good leaders; importance and roles of youth leadership **Life competencies**

Definition and importance of life competencies, problem-solving and decision-making, inter personal communication

Youth development programmes

Development of youth programmes and policy at the national level, state level and voluntary sector; youth-focused and youth-led organisations

Health, hygiene and sanitation

Definition needs and scope of health education; role of food, nutrition, safe drinking water, water born diseases and sanitation (Swachh Bharat Abhiyan) for health; national health programmes and reproductive health.

Youth health, lifestyle, HIV AIDS and first aid

Healthy lifestyles, HIV AIDS, drugs and substance abuse, home nursing and first aid

Youth and yoga

History, philosophy, concept, myths and misconceptions about yoga; yoga traditions and its impacts, yoga as a tool for healthy lifestyle, preventive and curative method

Semester III

Course Title: National Service Scheme III

Vocational skill development

To enhance the employment potential and to set up small business enterprises skills of volunteers, a list of 12 to 15 vocational skills will be drawn up based on the local conditions and opportunities. Each volunteer will have the option to select two skill-areas out of this list

Issues related environment

Environmental conservation, enrichment and sustainability, climatic change, natural resource management (rain water harvesting, energy conservation, forestation, waste land development and soil conservations) and waste management

Disaster management

Introduction and classification of disaster, rehabilitation and management after disaster;

role of NSS volunteers in disaster management.

Entrepreneurship development

Definition, meaning and quality of entrepreneur; steps in opening of an enterprise and role of financial and support service institution.

Formulation of production oriented project

Planning, implementation, management and impact assessment of project

Documentation and data reporting

Collection and analysis of data, documentation and dissemination of project reports

Semester IV

Course Title: National Service Scheme IV

Youth and crime

Sociological and psychological factors influencing youth crime, cyber crime, peer mentoring in preventing crime and awareness for juvenile justice

Civil/self defence

Civil defence services, aims and objectives of civil defence; needs and training of self defence

Resource mobilisation

Writing a project proposal of self fund units (SFUs) and its establishment

Additional life skills

Positive thinking, self confidence and esteem, setting life goals and working to achieve them, management of stress including time management.

Physical Education Practices

Semester I: Physical Education

21. Teaching of skills of Football – demonstration, practice of the skills, correction, involvement in game situation (For girls teaching of Tennis)
22. Teaching of different skills of Football – demonstration, practice of the skills, correction, involvement in game situation (For girls teaching of Tennis)

23. Teaching of advance skills of Football – involvement of all the skills in game situation with teaching of rules of the game
24. Teaching of skills of Basketball – demonstration, practice of the skills, correction of skills, involvement in game situation
25. Teaching of skills of Basketball – demonstration, practice of the skills, involvement in game situation
26. Teaching of skills of Basketball – involvement of all the skills in game situation with teaching of rule of the game
27. Teaching of skills of Kabaddi – demonstration, practice of the skills, correction of skills, involvement in game situation
28. Teaching of skills of Kabaddi – demonstration, practice of the skills, correction of skills, involvement in game situation
29. Teaching of advance skills of Kabaddi – involvement of all the skills in game situation with teaching of rule of the game
30. Teaching of skills of Ball Badminton – demonstration, practice of the skills, correction of skills, involvement in game situation
31. Teaching of skills of Ball Badminton – involvement of all the skills in game situation with teaching of rule of the game
32. Teaching of some of Asanas – demonstration, practice, correction and practice
33. Teaching of some more of Asanas – demonstration, practice, correction and practice
34. Teaching of skills of Table Tennis – demonstration, practice of skills, correction and practice and involvement in game situation
35. Teaching of skills of Table Tennis – demonstration, practice of skills, correction and practice and involvement in game situation
36. Teaching of skills of Table Tennis – involvement of all the skills in game situation with teaching of rule of the game
37. Teaching – Meaning, Scope and importance of Physical Education
38. Teaching – Definition, Type of Tournaments
39. Teaching – Physical Fitness and Health Education
40. Construction and laying out of the track and field (*The girls will have Tennis and Throw Ball).

Semester II: Physical Education

Teaching of skills of Hockey – demonstration practice of the skills and correction.

20. Teaching of skills of Hockey – demonstration practice of the skills and correction. And involvement of skills in games situation
21. Teaching of advance skills of Hockey – demonstration practice of the skills and correction. Involvement of all the skills in games situation with teaching of rules of the game
22. Teaching of skills of Kho-Kho – demonstration practice of the skills and correction.

23. Teaching of skills of Kho-Kho – demonstration practice of the skills and correction. Involvement of the skills in games situation
24. Teaching of advance skills of Kho-Kho – demonstration practice of the skills and correction. Involvement of all the skills in games situation with teaching of rules of the game
25. Teaching of different track events – demonstration practice of the skills and correction.
26. Teaching of different track events – demonstration practice of the skills and correction.
27. Teaching of different track events – demonstration practice of the skills and correction with competition among them.
28. Teaching of different field events – demonstration practice of the skills and correction.
29. Teaching of different field events – demonstration practice of the skills and correction.
30. Teaching of different field events – demonstration practice of the skills and correction.
31. Teaching of different field events – demonstration practice of the skills and correction with competition among them.
32. Teaching of different asanas – demonstration practice and correction.
33. Teaching of different asanas – demonstration practice and correction.
34. Teaching of different asanas – demonstration practice and correction.
35. Teaching of different asanas – demonstration practice and correction.
36. Teaching of weight training – demonstration practice and correction.
37. Teaching of circuit training – demonstration practice and correction.
38. Teaching of calisthenics – demonstration practice and correction.

Note: 1) Compulsory Uniform: Half pants, Tee Shirts, Shoes and socks all white (Girls will have white Tee Shirt and Track pants) **2)** The games mentioned in the practical may be inter changed depending on the season and facilities.