

Vidyasagar University

Curriculum for B.Sc (General) in National Cadet Corps (NCC) [Choice Based Credit System]

Semester-IV

Course	Course Code	Name of the Subjects	Course Type/ Nature	Teaching Scheme in hour per week			Credit	Marks
				L	T	P		
DSC-1D		DSC1DT: Military Sociology, Military Psychology, Communication Process, Field Engineering Weapon & Armaments and Adventure Training	Core Course	4	0	0	6	75
		Practical		0	0	4		
DSC-2D	TBD	DSC-2D (other Discipline)	Core Course				6	75
DSC-3D	TBD	DSC-3D (other Discipline)	Core Course				6	75
SEC-2		SEC2: Revolutionary war and low Intensity Operations Or Cyber Security & Crime Or Road Safety & Road Rights	Skill Enhancement Course-2	1	1	0	2	50
Semester Total							20	275

L = Lecture, **T** = Tutorial, **P** = Practical, **CC** = Core Course, **TBD** = To be decided, **SEC** = Skill Enhancement Course.

DSC-1 = Discipline Specific Core of Subject-1, **DSC-2** = Discipline Specific Core of Subject-2,

DSC-3 = Discipline Specific Core of Subject-3.

List of the Core Courses (CC) and Electives

Core Courses (CC)

DSC-1D: Military Sociology, Military Psychology, Communication Process, Field Engineering Weapon & Armaments and Adventure Trainings

Skill Enhancement Course (SEC)

**SEC-2A: Revolutionary war and low Intensity Operations
Or**

SEC-2B: Cyber Security & Crime

Or

SEC-2C: Road Safety & Road Rights

Semester-IV

Core Course (CC)

DSC-1D (CC-4): Military Sociology, Military Psychology, Communication Process, Field Engineering, Weapon & Armaments and Adventure Trainings

Credits 06

DSC1DT: Military Sociology, Military Psychology, Communication Process, Field Engineering, Weapon and Armaments and Adventure Trainings

Credits 04

Course Contents:

Module - I: Military Sociology: a) Study of Society, Social groups, social interaction: motivation, morality, Personality – Definition and determinants. Social aspects of war. Social effects of war. Post war social problems. Social background of military personnel of India. b) Armed Force and Society: Role of Indian Armed force society and inter-dependence, military aid to civil authorizes. Civil – Military relation in India. c) Indian Armed Forces and Disaster Management: Disaster – aims and objectives, Disaster management – meaning, concept, elements and preventive measures. War and disaster. d) Overseas bases and relations – peace keeping – anti piracy and exploration mission. e) Military Coups: causes and its consequences on society. f) Problem of ex-service men of India. Benefits of service for *Jawans* and Officers. One man one person demands. Role of women in Armed forces: contemporary trends.

Module - II: Military Psychology: Military Psychology - Meaning, definition, historical development, role, aim and importance. Relevance of Psychology in the defense problems. Use of the psychology in the war and military use of Psychology. Application of the principles of psychology in the Military training. Personal adjustment factors in adjustment during army life, the recruits of adjustment to combat. Problem of adjustment and the problem of Re-adjustment of ex-soldiers.

Module - III: Communication process: Communication- main elements, types and methods of communications, media. Communication systems- internet, Faxi mail, Satellites. Characteristics of Wireless Technology (Mobile, Wi Fi, etc). Characteristics of Walkie /Talkie. Basic Radio Telephony (RT) Procedure. Military Language. Latest trends and development (Multi Media, Video Conferencing, IT). Information system and type of information. Signals- introduction to radio, telephony procedure. Field signals. Air raid warnings.

Module - IV: Field Engineering: Principles and applications, camouflage and concealment. Section formation. Mines and types of mines fields, anti tanks and explosive.

Module - V: Adventure Training: Introduction to adventure Training, Planning Organization & Conduct. Cycle & Trekking Expeditions. Organization & Conduct of Sightseeing. Spirit of Mountaineering. Selection of camp site Layout & Sanitation in camp.

Module -VI: Weapon and Armaments

a. Evolution of arms and armaments in art of war.

b. **Modern weapons** - Small Arms - Theories of small arms. History, characteristics, design, variant, operating mechanism and military significance of following common arms used in Indian Army: Glock, Mouser, IM1 Galil sniper. .22 Rifle, .303 Rifle, 7.62 Self Loading Rifle . INSAS, LMG, 5.56 mm Rifle. Light Machine Gun (LMG).Multi caliber Individual Weapon System (MCIWS). Modern Submachine Carbine (MSMC), Artillery : Artillery Gun, No 35 HE Grenade, 2 inch Mortar. 40mm L-60 and L-70 BOFFORS GUN. DRDO 155 mm artillery gun, Dhanush Howitzer Indian Fields Gun. Shell and Ammunition: Explosive, Rockets and Mortar- Properties & Types. Missiles: Concept, characteristics, types. Anti Tank : Brief idea. Nuclear explosive: History, uses, effects, science for formation of nuclear bomb.

Weapon Carriers: Characteristics, mechanisms of operation, fire power and military importance of following: Land war weapon carrier, Naval war weapon carrier, Air war weapon carrier, Strategic transport aircraft, Tactile transport aircraft. Military Glider, Military Helicopter Fighter airplane, Bomber, Fighter- Bomber Airplane.

Weapons of Mass Destruction - Chemical & Biological Weapons: concept, characteristics and , uses. Nuclear weapons: Nuclear Command Authority in India. Strategic forces command, Indian land based nuclear armed ballistic missile, : Indian Sea based nuclear armed ballistic missiles, Nuclear armed cruise missiles. Air Defense: Brief idea.

DSC1DP: Practical

Credits 02

Practical

a) **Adventure training :**

Parasailing, Sailing, Slithering, Rock climbing, Cycling and trekking.

b) **Weapon Training**

Stripping as aiming & Sight setting of Riffle. Lying position 'and hold', including bolt manipulation. Trigger control and firing a shot. Aiming, Range figures targets–Range procedure and safety precautions. Alteration of Sight and firing shots. Firing in different wind conditions. Range classification firing.

On Guard hip firing. The point 2 point. Training stick (Self defense & attack).

LMG - Stripping, assembling, piston group and barrel. LMG - Loading, unloading, Sight, aiming and holding.

c) **Weapon Training - Field craft, Battle craft, Patrolling and Field engineering:**

1. Judging distance and indication of targets.
2. Camouflage & Concealment
3. Fire discipline & Fire control order.
4. Observation and Concealment exercise.
5. Simple Verbal orders.
6. Field Signals
7. Section battle drill.

d) **Weapons and Armaments:**

1. Demonstrate following arms: .22 Riffles, .303 Riffles, Self Loading Rifles, INSAS LMG 5.56 mm, LMG, Sten Machine Carbine. Pistol & Revolvers. No 36 HE Grenade, Artillery Gun, Air Defense Gun.

Students will require drawing and explaining the important stages of mechanisms of the above weapons.

2. Students will be required to draw sectional diagrams showing the parts connected with the mechanisms of movements and firing of the following armaments: Tanks, Air craft - Fighters, Bombers, Transport, Helicopters. Naval Ships - Frigates, Destroyers, Submarine and Torpedo.

e) **Project:** Project report will be based on Field visit to military establishment/ places of military interests.

f) **Laboratory Note Book and Viva Voce:**

Students will be required to maintain records of all works done in connection with the topic taught in this paper.

Skill Enhancement Course (SEC)

SEC-2A: Revolutionary war and low Intensity Operations

Credits 02

SEC2AT: Revolutionary war and low Intensity Operations

Course Contents:

A. Guerilla War / Asymmetric Warfare: 1. Meaning and concept, 2. Principal and characteristic 3. Guerilla strategy and Tactics, 4. Contributors to the Guerilla war

B. Insurgency ad counters Insurgency: 1. Meaning and concept, 2. Basic Characteristics, 3. Causes, 4. Counter Measures.

Or

SEC-2B: Cyber Security & Crime

Credits 02

SEC2BT: Cyber Security & Crime

Course Contents:

Unit I: Introduction to Cyber Technologies. Information Systems - Networks/LAN/WAN - Military Sensors

Unit II: Types of Cyber Crime. Hacking - Password Cracking - Insecure Network Connection – Theft at Tele Communication Services

Unit III: Impact of Cyber Crime on National Security. Impact on Armed Forces & Law enforcement Agencies' Information Systems - Impact on National Economy/Market - Impact on Citizen Security

Unit IV: Detection and Prevention methodologies. Risk Identification - Levels of Protection - Cyber Defensive Measures

Unity V: Cyber Laws. Overview of General Laws and Procedures in India - Introduction to Indian Cyber Law - Cyber Crime and Digital Evidence- Indian Perspective.

Or

SEC-2C: Road safety & Road Rights

Credits 02

SEC2CT: Road safety & Road Rights

Course Contents:

1. Conceptual framework – i) Introduction, ii) Meaning, iii) Concept, iv) Need
2. i) Road Safety & National Security, ii) Importance of Study of Road Safety.
3. Road Infrastructure & Road Safety – i) Quality of Road, ii) Use of Techniques & Material for Road building.
4. Inspection System
5. Road network and its Impact – i) Types of Roads, ii) Road signs.
6. License System of Vehicles and Motor Vehicles Act and Rules, WB Safe Drive –Save Life