

Govt. Nagarjuna P.G. College of Science, Raipur (C.G.)



CURRICULUM & SYLLABI (Based on CBCS & LOCF)

M.Sc. II SEMESTER

PROGRAMME STRUCTURE

Course Nature	Course Code	Course Title	Course Type (T/P)	Hrs/ Week	Credits	Marks		
						CIA	ESE	Total
Core	DS-201	Area Study of the Indian Ocean	T	6	4	30	70	100
Core	DS-202	Contemporary & Modern Warfare	T	6	4	30	70	100
Core	DS-203	Defence Mechanism of India	T	6	4	30	70	100
Core	DS-204	Border Management in India	T	6	4	30	70	100
Core	DS-205	Basics of Military Map Reading - II	P	6	2	30	70	100
Core	DS-206	Spotting of Military Equipment	P	6	2	30	70	100

Applicable for admission from A.Y. 2026-27 onwards

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M. Sc. II Semester

Session: January-June 2027

Course/Paper - I (Code: DS-201)

Course Title: Area Study of the Indian Ocean

Detailed Syllabus/Curriculum:

Unit	Topics	No. of Lectures	CO No.
I	- Indian Ocean: Location, Area Expansion and Importance - India's Supremacy over the Indian Ocean: Past and Present - Geo-political, Geo-economic and Strategic significance of the Indian Ocean	15	1
II	- Important Gulfs, Seas, Bays of the Indian Ocean - Important Strait, Channels, Routes of the Indian Ocean - Important Islands of the Indian Ocean	15	2
III	- India's interests and involvement in the Indian Ocean - China interests and involvement in the Indian Ocean - Extra-regional powers interests and involvement in the Indian Ocean	15	3
IV	- India's strategic perspective in Indian Ocean - India's economic and maritime interests in the Indian Ocean - India's threat perceptions in Indian Ocean	15	4

Websites/Government Reports:

1. Indian Navy (2015) Ensuring Secure Seas: India's Maritime Security Strategy.
2. Annual Reports of Ministry of Defence, Government of India.
3. Lok Sabha and Rajya Sabha Star and Unstar Questions on Indian Ocean.
4. Indian Navy Official Website.
5. Official Website of Ministry of Defence, Government of India.
6. Official Website of Ministry of Earth & Ocean Science, Government of India.

Reference Books:

1. Sridharan, K. (1965): A Maritime History of India.
2. Mahan, Alfred T. 1898. The Influence of Sea Power Upon History 1660-1783, Boston: Little, Brown and Company.
3. Chaudhary, Rahul Roy (2000): India's Maritime Security.
4. Misra, R.N. (1986): Indian Ocean and India's Security
5. Toussant, A. (1990): History Indian Ocean.
6. Lyer Nandhini (1986): India and the Indian Ocean
7. Namboodri, P.K.S. Indian interests in the Indian Ocean
8. Poulouse, T.T. (1974): Power rivalry in the Indian Ocean
9. Sandhu, Paramjit Singh (2007): India's Maritime Security
10. Misra, K.P. (1977) : Quest for international order in the Indian Ocean
11. The Atlas of World Geography: Prof. Enrys Jones
12. A World Atlas of Military History (1945-1984): Tom Hartman, Jihn Mitchell
13. World Atlas of Weapons and War : John Willians

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Course/Paper - II (Code: DS-202)

Course Title: Contemporary & Modern Warfare

Detailed Syllabus/Curriculum:

Unit	Topics	No. of Lectures	CO No.
I	• Concept, Nature, Scope, Theories and Principles of War • Generations of Warfare: Ancient, Modern and Contemporary • Causes and Effects of War	15	1
II	• War Conventions and Treaties • Legal Aspects of War (Just War Theory) • Democratic Peace Theory	15	2
III	• Conventional Warfare in Nuclear age • Limited War: Meaning, Origin, Scope and Objectives • Guerilla Warfare: Concept, Origin, Scope and Objectives	15	3
IV	• Categorization of War: Civil War, Limited War, Chemical and Biological War, Nuclear War, Guerilla War, Insurgency and Counter Insurgency, Low Intensity Conflicts. • Grey Zone Warfare to Full spectrum warfare • Space, Cyber, Drones & Future of Warfare	15	4

Books Recommended:

1. Kautilya Arthshastra, by R. Shamashatri
2. The Art of War, by Sun Tzu
3. Principles of War, by Carl Von Clausewitz
4. On War, by Carl Von Clausewitz
5. A study of war, by Quincy Wright
6. Guerrilla Warfare, by Mao-Tse-Tung
7. Encyclopaedia Britannica

Reference Books:

1. Howard, Michael (1965): Theory and Practice of War
2. Robert E. Osgood (1957): Limited war
3. Brodie, Bernard (1959): Strategy in the Missile Age
4. Osanka, F.M (1966): Modern Guerrilla Warfare
5. Montgomery (1968): History of warfare
6. Howard, Michael (1983): The Causes of war
7. Gupta, Rakesh (1985): Militarisation of Outer-space

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Course/Paper - III (Code: DS-203)

Course Title: Defence Mechanism of India

Detailed Syllabus/Curriculum:

Unit	Topics	No. of Lectures	CO No.
I	• Nationalization of Indian armed forces after independence • Higher Defence Organization of India • Powers of the President in relation to the Armed forces	15	1
II	• Cabinet Committee on Security • Ministry of Defence – Organisation and Functions • National Security Council – Organisation and Functions • India' Nuclear Command Authority – Organisation	15	2
III	• Army – Organisation, Characteristics and Role • Navy - Organisation, Characteristics and Role • Air Force - Organisation, Characteristics and Role • Chief of Defence Staff (CDS) – Role, Function and Mandate	15	3
IV	• Central Paramilitary Forces (CPMF) / Central Armed Police Forces (CAPF) - Organization, Function & Role • Indian Intelligence Agencies - Organization, Function & Role • Civil Defence Organization - Importance, Role & Function • Civil-Military Relations	15	4

Government Report/Websites:

1. Annual Reports of Ministry of Defence, Government of India.
2. Annual Reports of Ministry of Home Affairs, Government of India.
3. Press Information Bureau, Government of India.
4. Kargil Review Committee Reports on National Security.
5. Ministry of Defence, Official Website.
6. Ministry of Home Affairs, Official Website.
7. Indian Army Official Website.
8. Indian Navy Official Website.
9. Indian Airforce Official Website.

Reference Books:

1. Indian Army, A Sketch of its History & Organization: E.H.E. Choen
2. Defence Organization in India: Venkateshwara
3. Stephen P. Cohen and Sunil Dasgupta, 2012. Arming without Aiming: India's Military Modernization, Washington: Brookings Institution Press.
4. Stephen P. Cohen, 2001. The Indian Army: Its Contribution to the Development of a Nation, New Delhi: Oxford University Press.
5. Vappala Balachandran, 2014. National Security and Intelligence Management/A New Paradigm, Mumbai: Indus Books Source.

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Course/Paper – IV (Code: DS-204)

Course Title: **Border Management in India**

Detailed Syllabus/Curriculum:

Unit	Topics	No. of Lectures	CO No.
I	• Concepts and Theories of Border Studies • Historical Evolution of India's Borders • Types of Borders: Land, Maritime, Aerial • Ethnic, cultural, and religious complexities in border regions	15	1
II	• Issues and Challenges in Border Management with Pakistan • Issues and Challenges in Border Management with China • Issues in Border Management with Bangladesh and Myanmar • Border Management Challenges with Maritime Border States	15	2
III	• Role of CAPFs (BSF, ITBP, SSB, Assam Rifles) in India's Border Management • Role of Indian Army and the Indian Navy in Border Security • Role of Intelligence Agencies and local administration • Role of BRO in Indian Border Infrastructure & Management	15	3
IV	• Border Management through Development – BADP, VVP. • Border Infrastructure Management Scheme, Comprehensive Integrated Border Management System • Role of Technology for Effective Border Surveillance • Strategic Importance of Border Management for India's National Security	12	4

Report/Website Recommended:

1. Ministry of Home Affairs Reports on Border Management.
2. Annual Reports of Ministry of Defence and Ministry of Home Affairs.
3. Border Management Division, Ministry of Home Affairs
4. Articles from Defence Think i.e. USI, MP-IDSA, VIF, ORF, CLAWS.

Reference Books:

1. Moffat, A. (2007), The Borders: A History of the Borders from Earliest Times, Birlinn Ltd
2. Pushpita Das – India's Border Management: Select Issues and Concerns
3. Das, G. (2011), Securing India's Borders: Challenges and Policy Options, New Delhi: Centre for Land Warfare Studies.
4. Das, P. (2021), India's Approach to Border Management: From Barriers to Bridges, New Delhi, India: KW Publishers Pvt Ltd
5. Raza, M. (2021), Contested Lands: India, China and the Boundary Dispute, Westland.

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Session: January-June 2027
M.Sc. (Defence Studies) Semester-II (Lab Course-A)

Program	Subject	Year	Semester
M.Sc.	Defence Studies	I	II
Course Code	Course Title		Course Type
DS - 205	Basics of Military Map Reading - II		Core
Credit	Hours Per Week (L-T-P)		
	L	T	P
02	2	-	4
Maximum Marks	CIA		ESE
100	30		70

Detailed Syllabus/Curriculum:

Topics	No. of Lectures
• Map - Definitions, Types, Marginal Information • Mapping: Location on maps of various types of military establishment and concern. • Direction & Cardinal Point • Types of North, Angle of Convergence • Bearing and inter Conversion of bearing • Grid System • Sessional Work and Record	60

Books Recommended:

1. NCC Army Wing Map Reading Manual (Ministry of Defence, Govt. of India)
2. Military Map Reading – Service Publication (Indian Army or NCC Manual)
3. Map Reading and Interpretation – Indian Military Academy
4. Field Surveying and Map Reading – S.K. Roy
5. Basic Map Reading Manual – Army Education Corps
6. Military Geography for Professionals and the Public – John Collins
7. Topographical Map Reading – R. P. Misra & A. Ramesh
8. Surveying and Levelling (Vol. I & II) – B. C. Punmia
9. Oxford School Atlas / Orient Blackswan Atlas (for Practice and General Reference)
10. Survey of India Toposheets (Scale 1:50,000)

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M.Sc. (Defence Studies) Semester-II (Lab Course-B)

Program	Subject	Year	Semester
M.Sc.	Defence Studies	I	II
Course Code	Course Title		Course Type
DS - 106	Spotting of Military Equipment		Core
Credit	Hours Per Week (L-T-P)		
	L	T	P
02	2	-	4
Maximum Marks	CIA		ESE
100	30		70

Detailed Syllabus/Curriculum:

Topics	No. of Lectures
• Identification & Draw the Indian Army's Tanks • Identification & Draw of Indian Navy War Ships & Submarines • Identification & Draw of Fighter Aircrafts • Spotting of selected equipment used by Indian Armed Forces • Identification & Spotting of selected equipment used by Pakistan and Chinese Armed Forces. • Preparation of 5–15 Minutes Power Point Presentations on world affairs, international relations, regional conflicts or emerging strategic developments associated with Defence & Security Studies. • Group Discussion on contemporary strategic, internal and external security issues. • Sessional Work & Record	60

Books Recommended:

- 1) **Indian Defence Yearbook** – *Publications Division, Govt. of India*
- 2) **NCC Army, Navy, Air Wing Training Manuals** – *Ministry of Defence, Govt. of India*
- 3) **Annual Report** – Ministry of Defence, Government of India
- 4) **Indian Armed Forces Official Websites** (Army, Navy, Air Force)
- 5) **Combat Vehicles of the Indian Army** – *Bharat Rakshak / DRDO publications*
- 6) **Combat Aircraft of the Indian Air Force** – *R.K. Jain*
- 7) **Air Power in Indian Defence** – *CAPS (Centre for Air Power Studies)*
- 8) **The Illustrated Guide to Modern Naval Ships** – *Mike Spick*
- 9) **Jane's Defence Equipment Handbooks** – *Jane's Information Group*
- 10) **MP-IDSA (Manohar Parrikar Institute for Defence Studies and Analyses)** Publications