



MUGBERIA GANGADHAR MAHAVIDYALAYA

P.O.—BHUPATINAGAR, Dist.—PURBA MEDINIPUR, PIN.—721425, WEST BENGAL, INDIA

NAAC Re-Accredited B Level Govt. aided College

CPE (Under UGC XII Plan) & NCTE Approved Institutions

DBT Star College Scheme Award Recipient

E-mail : mugberia_college@rediffmail.com // www.mugberiangangadharMahavidyalaya.org

Ref. No.—M.G.M. / / /
From—The Principal / Secretary,

Date.....

Report

On

Induction Program 2023

Organized by

The Department of Mathematics (UG & PG)

MugberiaGangadharMahavidyalaya

Date: 27 July 2023

[https://twitter.com/Swapank26545954/status/1685872529939058688?
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t=Rb5RSqzIzZqk8kMJhSCGAA&s=08](https://twitter.com/Swapank26545954/status/1686794600844062720?t=Rb5RSqzIzZqk8kMJhSCGAA&s=08)

NOTICE

Department of Mathematics (UG & PG)

**Mugberia Gangadhar Mahavidyalaya invites
you to the
B.Sc Sem I (Mathematics)**

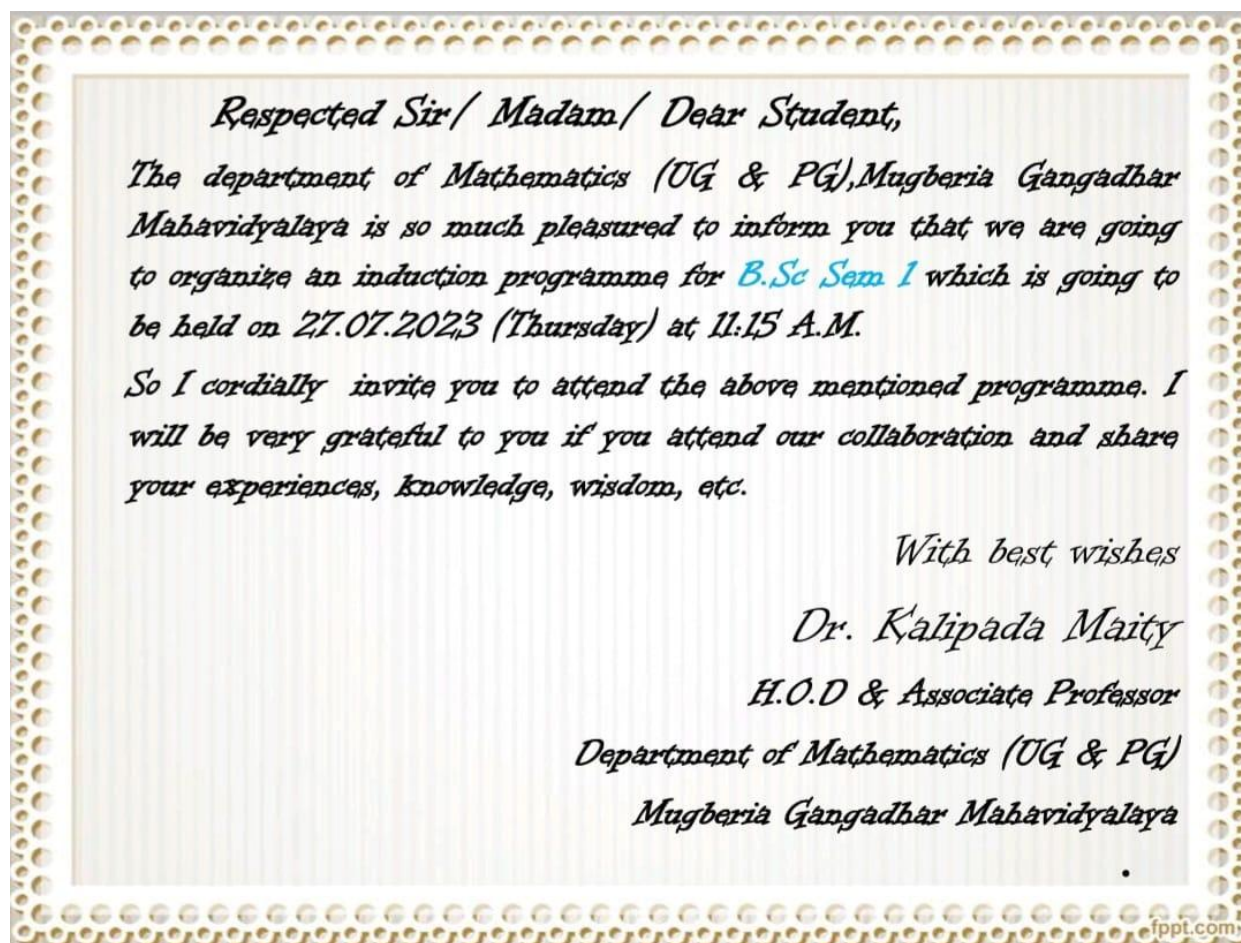
Induction Programme 2023

Organized by:

Department of Mathematics

Time 11.15AM

Date 27 July 2023



The following is the list of personalities to be present in the program :

- Dr. Swapan Kumar Mishra
Principal, Mugberia Gangadhar Mahavidyalaya

Dept. Teaching Faculty:

- Dr. Kalipada Maity, HOD & Associate Professor, Dept. of Mathematics (UG & PG)
- Dr. Manoranjan De , Assistant Professor, Dept. of Mathematics
- Mr. Suman Kumar Giri, SACT, Dept. of Mathematics
- Mr. Debraj Manna, SACT, Dept. of Mathematics
- Mr. Hiranmoy Manna, SACT, Dept. of Mathematics

- Mr. Bikas Panda, SACT, Dept. of Mathematics
- Mr. Goutam Mondal, Contractual Assistant Professor, Dept. of Mathematics
- Mr. SantuHati, Contractual Assistant Professor, Dept. of Mathematics
- Mr. SubhamMaity, Contractual Assistant Professor, Dept. of Mathematics

Student Union Member

- DurdantaGiri, General Secretary, student Union

Students and parents

- All Departmental students (UG & PG) and parents of UG Sem-I students.

The Induction Program of Dept. of Mathematics was held on 27th July 2023 at 11.30 a.m to 2.30 p.m in UG Sem-I class room of Dept. of Mathematics. In this program all the students of UG & PG of Mathematics department were participated. In this program Dr. Swapan Kumar Misra, Principal gave inaugural speech, and highlights all infrastructure like as our smart class room, library and various creative activity in our college. After that Dr. Kalipada Maity, HOD Dept. of Mathematics said about various activity of our department, Teaching method, Fourth year degree course, wall magazine, mathematical quiz competition, except it told that about how prepared various competitive exam such as NET, GATE, JAM, CTET etc. After that Dr. Manoranjan De, Assistant Professor told about various certificate course, and useful software which are available in our department also highlights how to improve our students to research oriented. And next Mr. Suman Giri, SAC Teacher told about our coursework, continuous assignment solve, and next all teacher highlights library, creative social work, and relation between how to concern mathematics related to any other subject etc.

After that all students of UG- semester-I had gone our college central library with our dept. teacher Dr. KalipadaMaity, Mr. GoutamMondal, Mr. SubhamMaity, and there our librarian Mr. Swapan Kumar Sasmal who help of our students seeing all books of Math Department, and also told how to search various book in our OPAC system.

Signature of all participant

Induction Programme			
Org:- Department of Mathematics			
Mugberia Gangaadhar Mahavidyalaya			
PAGE NO. : <u> </u>			
DATE <u>27/07/23</u>			
Time <u>11:30 A.M.</u>			
SL. NO.	Full Signature of Student and Teacher	Mobile number	Address
1.	Satyam Kumar Maity	8649892945	
2.	Swapan Kumar Mishra	9002275816	
3.	Kalipada a Maity	7934611354	Teacher, Dept. of Math.
4.	Manoranjan Das	9382292498	Dept. of Math, MGM
5.	Debraj Manna	8145389558	M.G. M
6.	Suman Kumar Rini	9564067646	
7.	Hiranmay Manna	7029369785	
8.	Bikash Panda	8745309713	
9.	Goutam K.V Mandal	8280267524	
10.	Sagar Maity	8597623517	Hariপুর
11.	Satyam Kumar Maity	8649892945	Barabari
12.	Debabrata Dolui	7364958116	Jirani
13.	Biswabrata Dhar	8509062129	Dhaipukuria
14.	Nibedita Maity	8617312615	Karnal puri
15.	Swarnali Jana	8597231035	Deolpoza
16.	Sasanka Pal	7319356662	Krishnanagar
17.	Diptimoy Maity	7872176677	Boyenda
18.	Satyajit Das	9883796734	Bhupatinagar
19.	Subhayan Kar	8250157158	Lakshi
20.	Saikat Jana	7872220480	Jorannagar
21.	Sourav Palza	8653524389	Balagada Pura
22.	Anirudh Pradhan	6294416525	Bahadurpur
23.	Dipti Rani Shit	9635175745	Halud Bari
24.	Jyishna Maity	7810865496	Laksh
25.	Purnima Dinda	9907686740	Kharab
26.	Anangsi Das	9091708877	Jorannagar
27.	Souryakanti Ghunia	9735368138	Mugberia
28.	Bhaskar Maity	8688500746	Mugberia
29.	Anirudh Datta	8348239768	Kultha Basulichan
30.	Durdanta Gera	8001007263	G. S
31.	Subham Maity	8373874066	Teacher, Dept. of Math

Parents Feedback form

Mugberia Gangadhar Mahavidyalaya
Annexure-V
Parent's Feedback

Name of Parent : Mithu Das
Parent Email-ID : _____
Parent Mobile No. : 9153153845
Name of program ward is pursuing : Induction Programme 2023
Year/Semester : 1st Date : 27.7.2023

Direction : For each item, indicate your opinion choosing a score from 1 to 5 with 5 being excellent and 1 being poor.

Sl. No.	Particulars	1	2	3	4	5
1.	Overall personality development of your ward					✓
2.	Importance to practical classes					✓
3.	Regular field/industry visits for practical learning				✓	
4.	Ambience of the College for effective delivery of academics					✓
5.	Infrastructure facilities in institution for learning (lecture Library/Computer labs etc.)					✓
6.	Co-curricular activities in the institute					✓
7.	Skills enhancement programs in the curriculum for better result in placement activities					✓
8.	Placement/career counseling activities in the institution					✓
9.	Cultural activities in the institution					✓
10.	Transparency in the examination and evaluation system of the institution					✓

We hope the said shot note on Feedback system can help any institution to strengthening the feedback mechanism.

Mithu Das.
27.7.2023.

Mugberia Gangadhar Mahavidyalaya
Annexure-V
Parent's Feedback

Name of Parent : Moumita Mishra (Maity)
Parent Email-ID : _____
Parent Mobile No. : 8733974848
Name of program ward is pursuing : Induction Programme - 2023
Year/Semester : 1st semester Date : 27.7.2023

Direction : For each item, indicate your opinion choosing a score from 1 to 5 with 5 being excellent and 1 being poor.

Sl. No.	Particulars	1	2	3	4	5
1.	Overall personality development of your ward					✓
2.	Importance to practical classes				✓	
3.	Regular field/industry visits for practical learning					✓
4.	Ambience of the College for effective delivery of academics				✓	
5.	Infrastructure facilities in institution for learning (lecture Library/Computer labs etc.)					✓
6.	Co-curricular activities in the institute					✓
7.	Skills enhancement programs in the curriculum for better result in placement activities				✓	
8.	Placement/career counseling activities in the institution					✓
9.	Cultural activities in the institution					✓
10.	Transparency in the examination and evaluation system of the institution					✓

We hope the said shot note on Feedback system can help any institution to strengthening the feedback mechanism.

Moumita Mishra (Maity)

Dept. of Mathematics (UG & PG)

Syllabus Planning & Distribution

Academic session : 2023-24

(Odd Semesters)

Course Duration: 14 Weeks

UG	Course Code	Course Name	Total Allotted Marks	Total credit	Allotted Teacher Name	Allotted Topic /Unit	Weekly Class Hour	Total Class Hours
SEM I	C1T	Calculus, Geometry & Differential Equations	75 (CA-05 CIA-10 End SEM -60)	4	Dr. KalipadaMaity	Differential equations Unit-IV	2	28
					Debraj Manna &Hiranmay Manna	Differential Calculus (Unit-I)	1+1 =2	28
					Goutam Mandal	Integral Calculus (Unit-III)	2	28
					SumanGiri	Geometry (Unit-II)	3	42
	SEC	MATLAB Theory & Practical	50	3	SantuHati	Unit-1	2	28
					SubhamMaity	Unit-2	2	28
	MDC	Introduction to IT	75	4	Dr. Manoranjan De	Units	2	28

					SumanGiri	Units	1	14
	GE1	Calculus, Geometry & Differential Equation	75 (CA-05 CIA-10 End SEM -60)	4	Debraj Manna	Units -1, 2, 4	5	70
	Minor-C1	75 (CA-05 CIA-10 End SEM -60)	4	Goutam Mandal	Units	1	14
					SubhamMaity	Units	2	28
SEM III	C5T	Theory of Real Functions & Introduction to Metric Spaces	75 (CA-05 CIA-10 End SEM -60)	6	Dr. KalipadaMaity	Metric Spaces	2	28
					Bikash Panda	Theory of Real Functions (Continuity)	3	42
					Hiranmay Manna	Theory of Real Functions(Limit & Differentiability)	3	42
	C6T	Group Theory I	75 (CA-05 CIA-10 End SEM -60)	6	Debraj Manna	Units 2 & 3	3	42
					Goutam Mandal	Units 1, 4 &5	3	42
	C7T	Numerical Methods	55 (CA-05 CIA-10 End SEM -40)	4	Dr. Manoranjan De	Theory part of Numerical Methods	4	56
			20	2	SantuHati	Practical Part using MATLAB	2	28

	SEC I	Logic & Sets	50 (CA-05 CIA-05 End SEM -40)	2	Suman Kr. Giri	All Units	2	28
	Pure Pass C7 (DSC 1C)	Real Analysis	75 (CA-05 CIA-10 End SEM -60)	6	MD, DM, HM, BP	All Units	4	56
	Pure SEC I	Logic & Sets	50 (CA-05 CIA-05 End SEM -40)	2	Suman Kr. Giri	All Units	2	28
SEM V	C11	Partial Differential Equations & Applications	75 (CA-05 CIA-10 End SEM -60)	6	Suman Kr. Giri	Unit 4 (Dynamics)	3	42
					SantuHati	Units 1,2,3	3	42
	C12	Group Theory II	75 (CA-05 CIA-10 End SEM - 60)	6	Hironmay Manna	Units-1, 3	3	42
					GoutamMondal	Units-2, 4	3	42
	DSE-1	Probability and Statistics	75 (CA-05 CIA-10 End SEM - 60)	6	Debraj Manna	Unit 1,2,3	4	56
					Bikash Panda	Unit 4 (Statistics)	3	42
	DSE 2	Linear Programming	75 (CA-05 CIA-10 End SEM - 60)	6	Dr. Manoranjan De	Unit 2,3	4	56
					SubhamMaity	Unit 1	2	28

(Even Semesters)

Course Duration : 14 Weeks

UG	Course Code	Course Name	Total Allotted Marks	Total credit	Allotted Teacher Name	Allotted Topic /Unit	Weekly Class Hour	Total Class Hours
SEM II	C3T	Real Analysis	75 (CA-05 CIA-10 End SEM -60)	6	SantuHati	Unit 1,2	3	42
					Dr. Manoranjan De	Unit 3,4	3	42
	C4T	Differential Equation & vector Calculus	75 (CA-05 CIA-10 End SEM -60)	6	Suman Kr. Giri	Unit-1,2	3	42
					GoutamMondal	Unit-3,	2	28
					SubhamMaity	Unit-4	2	28
					Dr. KalipadaMaity	Unit-5	2	28
	GE2	Algebra	75 (CA-05 CIA-10 End SEM -60)	6	Debraj Manna	All Units	4	56
					Hironmay Manna		1	14

UG	Course Code	Course Name	Total Allotted Marks	Total credit	Allotted Teacher Name	Allotted Topic /Unit	Weekly Class Hour	Total Class Hours
SEM IV	C8T	Riemann Integration and series of function	75 (CA-05 CIA-10 End SEM -60)	6	Hironmay Manna	Unit- 2,4	4	56
					BikashPanda	Unit-3,	2	28
					SantuHati	Unit-1	2	28
	C9T	Multivariate Calculus	75 (CA-05 CIA-10 End SEM -60)	6				
					DrManoranjan De	Unit-3	2	28
					GoutamMondal	Unit-4	5	70
	C10T	Ring Theory and Linear Algebra - I	75 (CA-05 CIA-10 End SEM -60)	6	Debraj Manna	Unit- 1,2,3,4	4	56
	SEC-2	Graph Theory	50 (CA-05 CIA-05 End SEM -40)	2	Suman Kr Giri	All Unit	3	42
	GE-4							

UG	Course Code	Course Name	Total Allotted Marks	Total credit	Allotted Teacher Name	Allotted Topic /Unit	Weekly Class Hour	Total Class Hours
		Metric Space	75 (CA-05	6	SubhamMaity	Unit-3,4,	2	24
					SantuHati	Unit- 5,6	2	24

SEM VI	C13T	and Complex Analysis	CIA-10 End SEM -60)		BikashPonda	Unit-1,2	2	28
	C14T	Ring Theory and Linear Algebra II	75 (CA-05 CIA-10 End SEM -60)	6	Debraj Manna	Unit-1	1	14
					Hironmay Manna	Unit-2,3	2	28
	DSE-3	Mechanics	75 (CA-05 CIA-10 End SEM -60)	6	Debraj Manna	Unit-1,2	2	28
					Suman Kr. Giri	Unit-3	2	28
	DSE-4	Mathematical Modeling	50 (CA-05 CIA-05 End SEM -40)	6	Dr. KalipadaMaity	Unit- 1	1	14
					Dr. Manoranjan De	Unit-2	2	28

MugberiaGangadharMahavidyalaya

Dept of Mathematics (UG & PG)

(Odd Semester)

Course Duration : 14 Weeks

PG	Course Code	Course Name	Total Allotted Marks	Total credit	Allotted Teacher Name	Allotted Topic /Unit	Weekly Class Hour	Total Class Hours
SEM I	MTM-101	Real Analysis	50	4	Hironmay Manna	All Units	4	56
	MTM-102	Complex Analysis	50	4	Goutam Kr Mondal	All Units	4	56
	MTM-103	Ordinary Differential Equations and Special Functions	50	4	Dr. KalipadaMaity	Unit-I	2	42
					SantuHati	Unit-II	3	42
	MTM-104	Advanced Programming in C and MATLAB	50	4	Dr. Manoranjan De	Unit - I	2	28
					SubhamMaity	Unit-II	2	28
	MTM-105	Classical Mechanics and non linear Dynamics	50	4	Bikash Panda	Units	4	56
					Dr. KalipadaMaity	Non-Linear Dynamics	1	14
	MTM-106	Graph Theory	25	2	SumanGiri	All	2	28

	MTM-197	Lab1(Computational Methods : Using MATLAB)	25	2	SubhamMaity	All	2	28
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PG	Course Code	Course Name	Total Allotted Marks	Total credit	Allotted Teacher Name	Allotted Topic /Unit	Weekly Class Hour	Total Class Hours
SEM III	MTM-301	Partial Differential Equations and Generalized Functions	50	4	SantuHati	Units	4	56
	MTM-302	Transforms and Integral Equations	50	4	Hironmay Manna	Integral Equations	2	28
					GoutamMondal	FT & LT & WT	2	28
	MTM-303	Stochastic Process &Regrassion	25	2	Dr. K. Maity	All	2	28
		Cryptography	25	2	SubhamMaity	All	3	42
	MTM-304	CBCS(Bengali)	50	4	Dr. Goutam Barman Rajesh Khan	All	4	56
	MTM-305A	Advanced Optimization	50	4	Dr. Manoranjan De	All	4	56

	MTM-306A	Operational Research Modelling -I	50	4	Dr. KalipadaMaity	Inventory + PERT CPM	2	28
					Bikash Panda	Replacement + Simulation	2	28

MugberiaGangadharMahavidyalaya

Dept of Mathematics (UG &PG)(Even semester)

PG	Course Code	Course Name	Total Allotted Marks	Total credit	Allotted Teacher Name	Allotted Topic /Unit	Weekly Class Hour	Total Class Hours
SEM II	MTM-201	Fluid Mechanics	50	4	SantuHati	All	4	56
	MTM-202	Numerical Analysis	50	4	Dr. Kalipada Maity	All	4	56
	MTM-203	Unit-1: Abstract Algebra	25	2	GoutamMondal	Unit -I	2	28
		Unit-2: Linear Algebra	25	2	Bikash Panda	Unit-II	2	28
	C-MTM-204	Bengali	50	4	Dr. Pintu Ray Choudhuri&PranabMahapatra	All	4	56
	MTM-205	General theory of Continuum Mechanics	50	4	Suman Kr. Giri + SubhamMaity	All	4	56
	MTM-206	General Topology	25	2	Hironmay Manna	All	2	28

	MTM-297	Lab 2: (Language C Programming with Numerical methods)	25	2	Dr. Manoranjan De	All	3	42
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PG	Course Code	Course Name	Total Allotted Marks	Total credit	Allotted Teacher Name	Allotted Topic /Unit	Weekly Class Hour	Total Class Hours
SEM IV	MTM-401	Functional Analysis	50	4	Dr. Arpan Dhara	All	4	56
	MTM-402	Fuzzy Mathematics with applications	25	2	SantuHati	Unit -1	2	28
		Magneto Hydro Dynamics	25	2	Goutam Mandal	Unit-2	2	28
	MTM-403	Soft Computing	25	2	Dr. Manoranjan De	Units	2	28
	MTM-404 A	Non-Linear Optimization	25	2	Bikash Panda	Units	2	28
	MTM-497	LAB : Optimization(using MATLAB & LINGO)	25	2	SubhamMaity	Units	2	28
	MTM-405A	Operational Research Modelling -II	25	2	Dr. KalipadaMaity	Units	2	28
	MTM-498	LAB : OR(using	25	2	Bikash Panda	Units	2	28

		MATLAB & LINGO)						
	MTM-499A	LAB : Soft computing (using MATLAB)	25	2	Dr. Manoranjan De	All	2	28
	MTM-406	Dissertation Project Work	50	4	All Teachers	-	6	84

A few moments of induction day 2023



MUGBERIA

GANGADHAR

MAHAVIDYALAYA

ROUTINE FOR SCIENCE 2023-2024

		10.15 - 11.15	11.15 - 12.15	12.15 - 1.15	01.15 - 02.15	02.15 - 03.15	03.15 - 04.15	04.15 - 05.15
		1	2	3	4	5	6	7
M O N D A Y	I							
		AEC-1(ENG)	MAMH(KM)	MATH-SM	CHMG-BS-Minor MAMG-DM-Minor			
			MAMH(PG)BP	MATH(PG)HM	MATH(PG)SM		MATH(PG)SH	
	III		CHMG-RM-GE3T	MAMH(BP)	PHYG-GE3-TDD	MATH-DM	MATH-HM	
			MATH(PG)HM	MATH(PG)KM		MATH(PG)SH	MAMH(PG)BP GATE	
	V		MATH-DM	MAMH-SH	MATH-HM	MAMH(BP)	MATH-SM	
	E T I U E							
		VAC-1(ENVS)		MATH-MD MLD	MAMG--Minor DSC-SM	MAMH-SH LAB	CHMG-Minor1P BS	CHMG-Minor1P BS
			MATH(PG)BP	MATH(PG)SM	MATH(PG)GM	MATH(PG)HM		

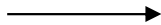
S D A Y	III		MAMH(KM)	MAMH(BP)	CHMG-RM-GE3T	MAMH-GM	MATH-MD	
			MATH(PG)MD	MATH(PG)KM	MATH(PG)HM	MAMH(PG)BP	MATH(PG)SM	
	V		MATH-HM	MAMH-SH	MAMH-GM	MAMH-MD	MAMH-SH JAM	
W E D N E S D A Y	I		MAMH-SH LAB		CHMG-GE1P MM			
				MAMH-SG	MAMG-DSC2A GM			
					MAMG-DM-Minor			
			MATH(PG)GM	MATH(PG)HM	MATH(PG)MD	MATH(PG)SM	MATH(PG)SH LAB	
T H	III			MATH-DM	MAMH-SH	MATH-HM	MATH-GM	
			MATH(PG)MD	C.B.C.S	MATH(PG)SM	MATH(PG)SH	MATH(PG)MD GATE	
	V		MATH-HM	MATH-MD		MAMH--DM		
					MAMH-SG		MAMH-SG JAM	
T H	I	VAC-1(ENVS)			CHMG-Minor-MM			
			MAMH-SG		MAMG-DM-Minor	MATH-HM		

U R S D A Y V		MATH(PG)KM	MATH(PG)MD	MATH(PG)HM		MATH(PG)GM	
	III	MATH-HM	MATH-MD	PHYG-GE3T WS DSC-SM	MAMH-SG	PHY-PAC-DD (MATH)	
		MAMH(PG)DM	MATH(PG)KM	MATH(PG)GM	MATH(PG)MD	MATH(PG)SM	
	V	MAMH-GM	MAMH-GM	MAMH-SG	MAMH-DM		
F R I D A Y V		ACC(ENG)		CHMG-BS-Minor	MAMH-SG		
		MATH-SM	MAMH-GM	MAMG-Minor-SG			
	I	MATH(PG)SH	MATH(PG)SG	MATH(PG)SM	MATH(PG)BP		
	III	MATH-KM	MATH-MD	PHYG/ECOG GE3T	MAMH-GM	MAMH-SH	
		MATH(PG)BP	MATH(PG)SH	MATH(PG)KM	MATH(PG)MD		
S		MAMH-SG	MAMH-BP	MATH-MD	MATH-SM		
					MAMGE1-DM-Minor		
				MAMGE1-DM-Minor	MATH-MD		

A T U R D A Y	I	MAMH-SG	MATH-KM	MLD	MAMH-GM
		MATH(PG)BP	MATHPG(SG)	MATH(PG)KM	MATH(PG)GM
	III	MATH-DM	MAMH-BP	MATH-MD	MAMH-SG
		MAMH(PG) GM	MATH(PG)SH	MATH(PG)KM GATE	
	V	MATH-MD	MAMH-DM	MAMH-SH	MAMH-BP

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VIDYASAGAR UNIVERSITY

Paschim Midnapore, West Bengal



PROPOSED (DRAFT) SYLLABUS OF

COMMON COURSES UNDER CCFUP, 2023

FOR SEMESTER – I & II

Based on

**Curriculum & Credit Framework for Undergraduate Programmes
(CCFUP), 2023 & NEP-2020**

FOR ALL UNDERGRADUATE PROGRAMMES

(w.e.f. Academic Year 2023-2024)

COMMON COURSES FOR UNDERGRADUATE PROGRAMMES (UNDER CCFUP, 2023)

SEM	Course Type	Course Code	Course Title	Credit	L-T-P	Marks		
						CA	ESE	TOTAL
1	SEMESTER-I							
	AEC	AEC01	Communicative English -1	2	2-0-0	10	40	50
	MDC	MDC-01 (Any one to be chosen)	Indian Constitution	3	3-0-0	10	40	50
			Social value and Ethics	3	3-0-0	10	40	50
			Sports and fitness	3	3-0-0	10	40	50
			Basics of information technology (IT)	3	3-0-0	10	40	50
			Basics of Accounting	3	3-0-0	10	40	50
			NGO & its Operations	3	3-0-0	10	40	50
			Business Organization	3	3-0-0	10	40	50
VAC	VAC01	Environment Studies (ENVS)	4	2-0-2	50	50	100	
II	SEMESTER-II							
	AEC	AEC02	MIL-1 (Bengali / Hindi)	2	2-0-0	10	40	50
	MDC	MDC02 (Any one to be chosen)	Nation, Culture & India	3	3-0-0	10	40	50
			Gender Studies	3	3-0-0	10	40	50
			Community nutrition and Public health	3	3-0-0	10	40	50
			Physical and Cultural Geography of Bengal	3	3-0-0	10	40	50
			Natural Resource Management	3	3-0-0	10	40	50
			Digital Technologies	3	3-0-0	10	40	50
			Financial Literacy and Household Decision-Making	3	3-0-0	10	40	50
	VAC	VAC02 (Any one to be chosen)	Human Rights	4	4-0-0	10	40	50
			Yoga and Wellness	4	4-0-0	10	40	50
			Disaster Management	4	4-0-0	10	40	50
	Summer Intern.	CS	Community Service (activities to be decided by the Colleges)	4	0-0-4	-	-	50

Ability Enhancement Course (AEC)

Ability Enhancement Course (AEC) - 01

AEC-1T: Communicative English-01

Credits 02 (Full Marks-50)

Course Contents:

1. Communication Skills

- a) Types and Models of Communication
- b) Verbal and Non-verbal Communication
- c) Barriers and Strategies
- d) Inter-personal Communication

2. Listening Skills:

- a) Active and Passive Listening

3. Speaking Skills:

- a) Different forms of Speaking – Formal/Informal
- b) Group Discussion
- c) English in Situations: Greeting & Leave Taking, Making & Granting/Refusing Requests, Queries & Giving Information/Direction, Describing objects/process, Narrating events & Commentary, Persuasion & Motivation, Complaints & Apologies, Expressing disapproval, Alerting & Warning

4. Reading Skills:

- a) Different types of Reading
- b) Comprehension

Suggested Readings:

- 1. *A Textbook of English and Communication Skills*. Richa Mishra and Ratna Rao, New Delhi: Macmillan: 2019
- 2. *Many Coloured Glass*. Board of Editors, Department of English, Vidyasagar University, Delhi: Macmillan, 2013.
- 3. *Connect: Course in Communicative English*, Debashis Bandyopadhyay & Malathi Krishnan, Cambridge University Press, New Delhi, 2018.

Ability Enhancement Course (AEC) - 02

AEC-2T: MIL-01

Credits 02 (Full Marks-50)

Bengali - 1: বাংলা ভাষা - প্রসঙ্গ ও অনুবাদ

Course Contents:

বিভাগ -ক

বাংলা ভাষা - প্রসঙ্গ

১. ভাষাপরিকল্পনা
২. বাংলা বানানবিধি
৩. ধর্ম, পেশা, লিঙ্গ ভিত্তিক বাংলা সমাজভাষা
৪. বর্তমান আদর্শ কথ্য-বাংলার প্রকৃতি (ব্যাকরণগত বৈশিষ্ট্য, শব্দভাণ্ডার)

বিভাগ -খ

অনুবাদ

১. অনুবাদ (বাংলা থেকে ইংরেজি ও ইংরেজি থেকে বাংলা)

Suggested Readings:

১. Sociolinguistics Pattern –William Lebov
২. Sociolinguistic–R.H. Hudson
৩. ভাষা ও সমাজ-মৃণাল নাথ
৪. সমাজভাষা বিজ্ঞান –রাজীব হুমায়ুন
৫. Theories of translation– J. Williams

OR

HINDI- 1: हिन्दी व्याकरण और सम्प्रेषण

Course Contents:

इकाई I: हिंदी व्याकरण—संज्ञा, सर्वनाम, विशेषण, वचन, क्रिया, अव्यय, उपसर्ग, प्रत्यय, संधि तथा समास का परिचय।

हिंदी की वर्ण-व्यवस्था : स्वर एवं व्यंजन, प्रकार, उच्चारण स्थान।

इकाई II: हिंदी वाक्य रचना, वाक्य और उपवाक्य। वाक्य भेद। वाक्य का रूपांतर।

इकाई III: सम्प्रेषण की अवधारणा और महत्व

सम्प्रेषण के प्रकार, सम्प्रेषण माध्यम और तकनीक।

इकाई IV: भाषा सम्प्रेषण के चरण : श्रवण, अभिव्यक्ति, वाचन तथा लेखन।

सहायक ग्रंथ :

1. हिन्दी व्याकरण – कमाताप्रसाद गुरु
2. हिन्दी शब्दानुशासन – किशोरीदास वाजपेयी
3. हिन्दी व्याकरण – एन. सी. ई. आर. टी.
4. आधुनिक हिन्दी व्याकरण और रचना – डॉ. वासुदेव नंदन प्रसाद
5. बेसिक हिन्दी – बद्रीनाथ कपूर
6. हिन्दी मुहावरे – श्री ब्रह्मस्वरूप दिनकर शर्मा

Multidisciplinary Course (MDC)

Multidisciplinary Course (MDC)- 01

MDC-01T: Indian Constitution

Credits 03 (Full Marks-50)

Course contents:

Unit-I: Historical Background – Constituent Assembly of India – Philosophical Foundations Of The Indian Constitution – Preamble – Fundamental Rights – Directive Principles Of State Policy – Fundamental Duties – Citizenship – Constitutional Remedies For Citizens.

Unit-II: Union Government – Structures of the Union Government and Functions – President – Vice President – Prime Minister – Cabinet – Parliament – Lok Sabha – Composition and Powers - Rajya Sabha – Composition and Powers - Supreme Court of India – Judicial Review

Unit-III: State Government – Structure and Functions – Governor – Chief Minister – Cabinet – State Legislature – Judicial System in States – High Courts and other Subordinate Courts.

Suggested Readings:

1. Durga Das Basu, “Introduction to the Constitution of India “, Prentice Hall of India, New Delhi.
2. R.C.Agarwal, (1997) “Indian Political System”, S.Chand and Company, New Delhi.
3. Sharma, Brij Kishore, “Introduction to the Constitution of India”, Prentice Hall of India, New Delhi

OR

MDC-01T: Social Value and Ethics

Credits 03 (Full Marks-50)

Course contents:

Unit-I: Philosophy of Life and Individual Qualities

Human Life on Earth - Purpose of Life, Meaning and Philosophy of Life. The Law of Nature – Protecting Nature /Universe. Basic Culture - Thought Analysis - Regulating desire - Guarding against anger - To get rid of Anxiety – The Rewards of Blessing - Benevolence of Friendship - Love and Charity - Self – tranquility/Peace.

Unit-II: Social Values (Individual and Social Welfare)

Family - Peace in Family, Society, The Law of Life Brotherhood - The Pride of Womanhood – Five responsibilities/duties of Man : - a) to himself, b) to his family, c) to his environment, d) to his society, e) to the Universe in his lives, Thriftiness (Thrift)/Economics. Health - Education - Governance - People's Responsibility / duties of the community, World peace.

Unit-III: Mind Culture & Tending Personal Health

Mind Culture - Life and Mind - Bio - magnetism, Universal Magnetism (God –Realization and Self Realization) - Genetic Centre – Thought Action – Short term Memory – Expansiveness – Thought – Waves, Channelizing the Mind, Stages - Meditation, Spiritual Value. Structure of the body - the three forces of the body- life body relation, natural causes and unnatural causes for diseases, Methods in Curing diseases.

Suggested Readings:

1. Value Education for Health, Happiness and Harmony, The World Community Service, Centre Vethathiri Publications (Unit 1 – III).
2. Thirukkural with English Translation of Rev. Dr. G.U. Pope, Uma Publication, 156, Serfoji Nagar, Medical College Road, Thanjavur 613 004 (for Units I - III).
3. R S Nagaarazan, Textbook on Professional Ethics And Human Values, New Age International Publishers, 2006 (for Units IV-V).
4. Bharatiya Dharma neeti Edited by Amita Chatterjee, published by Jadavpur University; Dvitiya samskarana edition (2013)

OR

MDC-01T: Sports and fitness

Credits 03 (Full Marks-50)

Course contents:

Unit -1: Introduction to Sports

1. Concept of Play, Games and Sports..
1. Objectives and importance of Play, Games and Sports.
2. Fundamental movements of Sports in relation to joints.
3. Warming up and Limbering down
 - a) General warm up exercises
 - b) Specific warm up exercises

Unit-2: Health and Performance Related Physical Fitness

1. Meaning and Definition of Fitness and Physical Fitness
2. Components of Health and Performance Related Physical Fitness
3. Importance of Physical Fitness in present society
4. Assessment of Health and Performance Related Physical Fitness

Unit-3: Rules & Regulations of the games:

- a) Football,
- b) Handball,
- c) Volleyball,
- d) Basketball,
- e) Badminton,
- f) Table Tennis,

- g) Cricket,
- h) Kabaddi,
- i) Kho-kho.
- j) Basic Techniques and Tactics of these games.

Suggested Readings:

1. Saha, A. K. Sarir Siksher Ritiniti, Rana Publishing House, Kalyani.
2. Bandopadhyay, K. Sarir Siksha Parichay, Classic Publishers, Kolkata.
3. Atkins, J. R. (1872). The Book of Racquets. A Practical Guide to the Game and its History and to the different Courts in which it is played. London: Frederick Warne & Co. Lord Aberdare. The JT Faber Book of Tennis and Rackets. London: Quiller Press, 2001. ISBN 1-899163- 62-X.
4. Shekar, K.C. (30 August 2008). "Volleyball: Skills and Techniques" Khel Sahitya Kendra 10: 8175244100.
5. Dearing Joel, (August 24, 2018) Volleyball Fundamentals (Sports Fundamentals), Human Kinetics; 2 edition, ISBN-10: 1492567299.
6. Ray Power. (May 1, 2014), "Making the Ball Roll: A Complete Guide to Youth Football for the Aspiring Soccer Coach", Bennion Kearny Limited, ISBN-10: 1909125520.

OR

MDC-01T: Basics of information technology (IT)

Credits 03 (Full Marks-50)

Course contents:

Unit-I: Introduction to Computers

Introduction, Definition, Characteristics of computer, Evolution of Computer, Block Diagram Of a computer, Generations of Computer, Classification Of Computers, Applications of Computer, Capabilities and limitations of computer.

Unit-II: Basic Computer Organization:

Role of I/O devices in a computer system. Input Units: Keyboard, Terminals and its types. Pointing Devices, Scanners and its types, Voice Recognition Systems, Vision Input System, Touch Screen, Output Units: Monitors and its types. Printers: Impact Printers and its types. Non Impact Printers and its types, Plotters, types of plotters, Sound cards, Speakers.

Unit-III: Software:

Software and its needs, Types of S/W. System Software: Operating System, Utility Programs Programming Language: Machine Language, Assembly Language, High Level Language their advantages & disadvantages. Application S/W and its types: Word Processing, Spread Sheets Presentation, Graphics, DBMS s/w.

Unit-IV: Operating System:

Functions, Measuring System Performance, Assemblers, Compilers and Interpreters. Batch Processing, Multiprogramming, Multi Tasking, Multiprocessing, Time Sharing, DOS, Windows, Unix/Linux.

Unit-VI: Data Communication:

Communication Process, Data Transmission speed, Communication Types (modes), Data Transmission Medias, Modem and its working, characteristics, Types of Networks, LAN Topologies, Computer Protocols, Concepts relating to networking.

Unit-VII: Business Data Processing:

Introduction, data storage hierarchy, Method of organizing data, File Types, File Organization, File Utilities.

Suggested Readings:

1. A. Goel, Computer Fundamentals, Pearson Education, 2010.
2. P. Aksoy, L. DeNardis, Introduction to Information Technology, Cengage Learning, 2006.
3. P. K.Sinha, P. Sinha, Fundamentals of Computers, BPB Publishers, 2007.

OR

MDC-01T: Basics of Accounting

Credits 03 (Full Marks-50)

Course Contents:

(Total lecture hours: 45)

Unit-I: Introduction to Financial Accounting:

(Lecture hours: 9)

Meaning, Importance and objectives of Accounting; Concepts and Convention of Accounting. Meaning, Users, Sources of accounting information; Some Basic Terms –Transaction, Account, Asset, Liability, Capital, Expenditure, Income, Revenue, Profit, Loss, Concept of revenue and capital transactions, Accounting Year, Financial Year; Features of recordable transactions and events; Recording of Transactions; Types of Accounts - Personal account, Real Account and Nominal Account; Golden Rules and American Approach of Accounting-Rules for Debit and Credit; Double Entry System, Accounting Equation, Process of accounting – Business transactions – Journal entries – Ledger posting, Trial Balance

Unit-II: Accounting for Depreciation:

(Lecture hours: 6)

Concept; Causes of Depreciation; Objectives of Providing Depreciation; Methods of providing depreciation: Fixed Instalment Method and Reducing Balance Method.

Unit-III: Accounting for Joint Venture:

(Lecture hours: 8)

Meaning and features; Distinction between Partnership and Joint Venture; Accounting Treatment of Joint venture

Unit-IV: Single entry System of Book keeping and Conversion of Single Entry to Double Entry system of Book Keeping (Lecture hours: 5)

Unit-V: Final accounts of Non-Profit Organizations: (Lecture hours: 9)
Meaning and Features of Non-Profit Organization; Preparation of Receipt and Payment Account; Income & Expenditure Account and Balance Sheet.

Unit-VI: Final Accounts of Sole Trading Concern: (Lecture hours: 8)
Preparation of Trading and Profit and Loss account and Balance sheet.

Suggested Readings::

1. Mukherjee and Mukherjee, Financial Accounting, Vol. I, Oxford University Press
2. Hanif & Mukherjee, Financial Accounting Vol. I, McGraw Hill
3. Sukla, Grewal, Gupta: Advanced Accountancy Vol. I, S Chand
4. R. L. Gupta & Radheswamy, Advanced Accountancy, Vol. I, S. Chand
5. Basu and Das, Principles and Practices of Accounting, Rabindra library, Kolkata.
6. S.Kr. Paul & Chandrani Paul, Financial Accounting, Vol-I, New Central Book Agency (P) Ltd., Kolkata

OR

MDC-01T: NGO & its Operations Credits 03 (Full Marks-50)

Course contents:

Unit 1: Introduction: Concept and Functions of NGOs

- 1.1 Concept of NGOs:
Definition and meaning of NGOs, Historical evolution of NGOs, Role and significance of NGOs in society
- 1.2 Functions of NGOs:
Social welfare and development activities, Advocacy and awareness campaigns, Empowerment and capacity-building initiatives

Unit 2: Types and Characteristics of NGOs

- 2.1 Types of NGOs:
Charitable NGOs, Service NGOs, Advocacy NGOs, Operational NGOs, Networking NGOs International NGOs (INGOs), Community-Based Organizations (CBOs)
- 2.2 NGO Characteristics:
Non-profit nature, Voluntary participation, Private initiative, Independence and autonomy, Social objectives
- 2.3 Strengths and Weaknesses of NGOs
Advantages of NGOs in development work, Challenges and limitations faced by NGOs

Unit 3: Strategic Planning and Leadership in NGOs

3.1 Planning and Leading a Team:

Importance of strategic planning in NGOs, Setting goals and objectives, Formulating action plans, Effective team leadership and management

3.2 Conflict Resolution:

Understanding conflicts in NGO settings, Conflict resolution techniques, Promoting harmonious work environments

Unit 4: Issues Related to NGO Operations

4.1 Concentration of Power, Staff, and Accountability:

Power dynamics within NGOs, Ensuring transparency and accountability, Staff management and motivation

4.2 Fundraising:

Importance of fundraising for NGO sustainability, Fundraising strategies and techniques, Ethical considerations in fundraising activities

Unit 5: Funding Agencies and Schemes

5.1 National Bank for Agriculture and Rural Development (NABARD):

Overview of NABARD and its role, funding opportunities for rural development projects

5.2 National Human Rights Commission (NHRC)

Understanding the role of NHRC in protecting human rights, Collaboration opportunities for NGOs

5.3 Schemes for NGOs under the Government of India:

Introduction to various government schemes and programs, Eligibility criteria and application procedures for NGO participation

Suggested Readings:

1. Abebe, Desset., 2011, *Effects Of Regulatory Mechanisms On The Function Of Human Rights NGOs: Regulating The 'Right To Association'...To Foster Or To Tamper?* London: Lap Lambert Academic Publishing.
2. Alsop, Ruth., & Kurey, Bryan., 2005. *Local Organizations in Decentralized Development: Their Functions and Performance in India (Directions in Development)*, World Bank Publications.
3. Anita, Abraham. 2015. *Formation and Management of NGOs (Non-Governmental Organizations)*, 4th ed, Universal LexisNexis.
4. Baur, Dorothea., 2011. *NGOs as Legitimate Partners of Corporations: A Political Conceptualization: 36 (Issues in Business Ethics)*. India: Springer.
5. Baviskar, B.S., 2001, "NGOs and Civil Society in India" in *Sociological Bulletin*, Vol 50, No 1.
6. Chandra, Snehlata., 2003. *Guidelines for NGOs Management in India*, Kanishka Publishers Distributors.
7. Chandra, Snehlata., 2007, *Non-Governmental Organisations: Structure, Relevance and Function*, Kanishka Publishers.
8. Dobriyal, N.C., 2009. *NGOs and Government Organisation: Role, Duties and Function*. Sumit Enterprises.

9. Elliot, C., 1987, "Some Aspect of Relations between the North and South in the NGO Practices", *Annual Review of Anthropology* 26:439-64.
10. Gangrade, K.D., & Sooryamoorthy, R., 2001, *NGOs in India: A Cross- Sectional Study: 136 (Contributions in Sociology)*, Jaipur-New Delhi: Rawat Publication.
11. Goel, O.P., 2004. *Strategic Management and Policy Issues of NGOs. India*: Isha Books.
12. Kohli, A., & Sharma, S.R, 1997, *Organisation of Social Welfare*, New Delhi: Anmol Publication.
13. Kumar, R., & Goel, S.L., 2005. *Administration and Management of NGOs: Text and Case Studies*, Deep & Deep Publications.
14. Latha, Kakumani Lavanya., & Prabhakar, Kotte., 2011, " Non-Government Organizations: Problems & Remedies in India", in *Serbia Journal of Management*, Vol 6, Issue 1.
15. Lawani, B.T., 1999. *Non-Government Organizations in Development*, Jaipur: Rawat Publications.
16. Lewis, David. 2014. *Non Governmental Organizations: Management and Development*, London: Routledge.
17. Mohanty, Ranjita. 2002, "Civil Society and NGOs", in *The Indian Journal of Political Science*, Vol 63, No 2/3.
18. Palekar, S.A., 2012, "Role of NGOs in Policy- Making in India", in *The Indian Journal of Political Science*, Vol 73, No 1.

OR

MDC-01T: Business Organisation

Credits 03 (Full Marks-50)

Course contents:

(Total lecture hours: 45)

Unit-I: Introduction: Business: Definition- Nature and Scope- Objectives of Business; Social responsibility of Business; Classification of Business: Industry, Trade & Commerce and their functions; Different economic systems: Socialistic economy, Capitalistic Economy and Mixed Economy

Lecture hours: 9

Unit -II: Forms of Business Organization: Sole Proprietorship, Partnership, Limited liability partnership, Joint Stock Company, One Person Company, Private limited Company: Features and economic significance.

Lecture hours: 8

Unit-III: Business Combination and Concentration: Concept of Business Combination; Causes of combination; Types, advantages and disadvantages; Vertical and Horizontal Combination; Pool and Cartel.

Lecture hours: 10

Unit-IV: Business intermediaries: Meaning; Concept of wholesalers, retailers and distributors; Role and significance

Lecture hours: 9

Unit -V: Administrative Organization in Business: Concept; Different types of Organisation Structure: Formal and Informal Organisation, Line and Staff organization; Centralisation and Decentralisation: Advantages and disadvantages.

Lecture hours: 9

Suggested readings

1. Bose, C.P., Business Organisation and Management.
2. Companies Act, 2013.
3. Maheshwari, K.L., Maheshwari, R.K. & Madhu Bhatia – Vyavsayik Sanghtan.
4. Maheshwari, K.L., Maheshwari, R.K. & Ram Milan - Business Organisation.
5. Padmakar Asthana – Business Organisation.
6. Sekhri, Arun, Organisation, MUMBAI, Himalaya Publishing House, 2014.
7. Talloo, Thelman J., Business Organisational and Management, TMH, New Delhi.
8. Tulsian, P.C., Business Organisation, Pearson Education, New Delhi.
9. Vasishth, Neeru, Business Organisation, Taxmann, New Delhi.
10. Y.K. Bhushan - Business Organisation.

Multidisciplinary Course (MDC)- 02

MDC-02T: Nation, Culture and India

Credits 03 (Full Marks-50)

Course contents:

Unit-I: Introducing India

1. The Land of India: Geographical Setting; Physical and Natural Environment. The Names of our Country – Past and present: Jambudvipa, Sindhu (Indus), Inde, Hind, Hindustan, India, Bharat.
2. The Peopling of India from Pre-historic time with special reference to Indo-Aryans speaking people, the Persians, the Arabsetc., and their contribution to the making of Indian History and Culture. Nation and Nation-building in India.
3. Historical Background of India: Historical Background of India through the ages – Brief outline of Prehistoric, Protohistory, Iron Age and Mahajanapada. Brief history India's Freedom Struggle with special reference to growth of Nationalism, Moderate and Extremist movements, Gandhian Movements.

Unit-II: Indian Literature, Culture, Tradition, and Practices:

1. Evolution of script and languages in India: Harappan Script, Brahmi Script and Devanagari Script. Sanskrit. Pali and Prakrit languages.
2. The Vedas – Vedic Culture and Society. Epics - the Ramayana and the Mahabharata, Puranas, Buddhist and Jain Literature. Outline of Sanskrit Literature, Telugu Literature, Kannada Literature, Malayalam Literature, Sangama Literature, Literature, Persian and Urdu, Hindi Literature.
3. Plural cultural traditions of India. Outline of religions in India – Hinduism, Buddhism, Jainism, Islam, Christian, Persian, Tribal.

Unit-III: Cultural Heritage and Performing Arts:

1. Indian Art and Architecture in Ancient time, Dance, Music, Theatre, Drama, Painting, Martial Arts Traditions, Fairs and Festivals, Indian Cinema, Folk and Tribal arts.
2. Indian Women in art, literature, freedom struggle.
3. Indian's Cultural Contribution to the World. Indian Medical Systems. History of Railways, Postal system, Currency and Banking System.

Suggested Readings:

1. L. Basham, A Cultural History of India, Oxford University Press, 1997
2. L. Basham, A Wonder that was India, Rupa, New Delhi, 1994
3. N. R. Ray, An Approach to Indian Art, Publication Bureau, Chandigarh, 1974
4. Kanjiv Lochan: Medicines of Early India, Delhi
5. Hitendra Patel: Adhunik Bharat ka Aitihāsik Yatharth
6. Nayanjot Lahiri, Marshaling the Past: Ancient India and its Modern Histories, Permanent Black, 2012
7. R.C. Majumdar (ed.), History and Culture of Indian People (Relevant Volumes and Chapters),
8. Bhartiya Vidya Bhawan, Bombay.
9. S. C. Ghosh, History of Education in Modern India, 1758-1986, Orient Longman, Hyderabad, 1995
10. Tirthankar Ray, The Economic History of India 1857-1947, OUP, 2006
11. Vijay Joshi and I.M.D. Little, India's Economic Reforms, 1991-2001, OUP, 1996

OR

MDC-02T: Gender Studies

Credits 03 (Full Marks-50)

Course contents:

- 1. Gender as a Social Construct**
 - 1.1 Gender, Sex, and Sexuality
 - 1.2 Masculinity and Femininity
- 2. Gender Discrimination and Stereotype:**
 - 2.1 Family
 - 2.2 Workspace
- 3. Power and Resistance:**
 - 3.1 Women's Movement in India
- 4. Gender and Intersectionality:**
 - 4.1 Caste, Class, Race, Sexuality
 - 4.2 Religion
 - 4.3 Ability and Disability
- 5. Gender-Based Violence**
 - 5.1 Sexual Harassments
 - 5.2 Domestic Violence
 - 5.3 Rape
 - 5.4 Cyber Crime

Suggested Readings:

1. Ahuja, Ram., 1989. "Crime Against Women", in Lalita Parihar (ed.) *Journal of the Indian Law Institute*, Vol 31, No 1.
2. Ahuja, Ram., 2003. *Violence Against Women*. Delhi: Rawat Publications.
3. Banerjee, Supurna., & Ghosh, Nandini., 2018. *Caste and Gender in Contemporary India*, Taylor & Francis
4. Bhasin, Kamla., 1993. *What is Patriarchy?*, Kali for Women.
5. Geetha, V., 2006. *Gender*, Bhatkal & Sen.
6. Jackson, Stevi., & Scott, Sue., 2001, *Gender: A Sociological Reader*, London: Routledge.
7. Kandiyoti, Deniz., 1988, "Bargaining with Patriarchy." *Gender and Society*, vol. 2, no. 3.
8. Kumar, Radha., 1999, "From Chipko to sati: The Contemporary Indian Women's Movement", in Nivedita Menon (ed.) *Gender and Politics in India*, New Delhi: Oxford University Press.
9. Menon, Nivedita., 2012. *Seeing like a Feminist*, India: Penguin Zubaan.
10. Murthy, Laxmi., & Dasgupta, Rajashri., 2013. *Our Pictures, Our Words – A Visual Journey Through the Women's Movement*, New Delhi: Zubaan Books.
11. Ortner, Sherry. 1974, "Is Female To Male As Nature Is To Culture?," in Michelle Zimbalist Rosaldo and Louise Lamphere (ed.) *Women, Culture and Society*. Stanford: Stanford University Press.
12. Rubin, Gayle. 2006. "Thinking Sex: Notes for a Radical Theory of Politics of Sexuality", in Peter Aggleton and Richard Parker (ed.) *Culture, Society and Sexuality*. London: Routledge.

13. Ryle, Robyn. 2011. *Questioning Gender: A Sociological Exploration*. Thousand Oaks, CA: Pine Forge Press.
14. Tharu, Susie. & Niranjana, Tejaswini., 1994, "Problems for a Contemporary Theory of Gender." *Social Scientist*, vol. 22, no. 3/4.
15. West, Candace., & Fenstermaker, Sarah., (ed.), 2002. *Doing Gender, Doing Difference: Inequality, Power and Institutional Change*, London: Routledge.
16. Wies, Jennifer R., & Haldane, Hillary J., (ed.), 2011, *Anthropology at the Front Lines of Gender-Based Violence*. Vanderbilt University Press.

OR

MDC-02T: Community nutrition and Public health

Credits 03 (Full Marks-50)

Course contents:

Unit-I: Population, society, community and community health:

Definition and brief study of community, family, village and block. Definition, dimension and determinant of health, positive health, health situation in India. Population, society, community and community health concepts. Nutrition - Introduction. Relationship between health and nutrition. Food as source of nutrients, functions of food, definition of nutrition, nutrients & energy. Adequate, optimum & good nutrition. Malnutrition and under nutrition, over nutrition. Human nutrition- principle, interrelationship between nutrition, health & diseases. Visible symptoms of good health. Nutrition - fitness, athletics & sports. National nutritional policy - Aim, objectives, guidelines and thrust areas. PDS - Public distribution system. Meaning, nature and importance of nutrition education to the community, Training of workers in nutrition education programme.

Unit-II: Food and Diet:

Balanced diet. Diet Survey – Principles. Composition and nutritional value of common Indian food stuff - rice, wheat, pulses, egg, meat, fish and milk. Dietary fibres - role of fibers in human nutrition. Calorie requirement. Vitamins and minerals. Malnutrition and under nutrition.

Principles of formulation of balanced diets for growing child, adult man and woman, pregnant and lactating woman. Diet management of obese, diabetic, hypertensive person and athlete. Basic idea on PCM, marasmus, kwashiorkor and their prevention. Iron and iodine deficiency. Recommended dietary allowances, malnutrition and chronic energy, LBW, PEM, xerophthalmia, micronutrient disorders. Physiology of starvation and obesity. Food toxicity. Effect of processing on nutritive values of foods.

Unit-III: Epidemiology:

Epidemiology: Principle of Epidemiology and Epidemiological methods: Terms used in describing disease transmission and control. Morbidity and mortality indicators. Measurements of epidemiological indicators, Epidemiology study designs. Concepts. Public health and public health issues: Basic ideas. Etiology, epidemiology and prevention of malaria, dengue, filaria, hepatitis, AIDS, nutritional anemia, atherosclerotic disorders. Causes and management of thalassemia, gout, obesity, endemic goiter, dental carries.

Unit-IV: Nutrition intervention Programmes:

Objectives, operation of feeding programmes. ICDS, MDM, TINP, NNMS, IRDP, DWACRA. National organizations and their role in nutrition programmes - ICMR, NIN, NNMB, ICAR, CFTRI, NIPCCD. International organizations - FAO, WHO, UNICEF, UNESCO, World Bank.

Unit-IV: Experiments approach:

1. Survey on the status of dietary intake in the surrounding area through visits, etc.
2. Diet survey report of a family (as per ICMR specification). Each student has to submit a report on his/her own family. [Report should be as per ICMR specification. Report should be hand written].
3. A report (hand-written) on the basis of field survey from one of the followings:
 - (a) Physiological parameters of human (at least three parameters).
 - (b) Anthropometric measurements on human (at least three parameters).
4. Epidemiological data collection, epidemiologic methods and field survey for any outbreak or incidence of diseases. Observational (descriptive and analytical) and experimental studies.
5. Epidemiological approach and measurements - vital statistics (rates, ratios and proportions), measurements of health indicators.

Suggested Readings:

1. Essential Food and Nutrition. by M. Swaminathan. The Bangalore Printing & Publishing Co. Ltd.
2. Text Book of Preventive and Social Medicine, M.C. Gupta and B. K. Mahajan, Jaypee Brothers
3. Fundamentals of Biostatistics by V. B. Rastogi, Ane Books
4. Park's Text Book of Preventive and Social Medicine by K. Park, Banarsidas Bhanot Publishers.
5. Introduction to Clinical Nutrition by V. Sardesai, CRC Press.
6. Food Microbiology by W.C Frazier and D.C. Westhoff. Tata McGraw Hill Publisher.
7. Basics of Epidemiology - Concepts made simple by Dr. Anil Mishra, Notion Press; 1st edition
8. Epidemiological Studies: A Practical Guide: Alan J. Silman, Gary J. Macfarlane, Tatiana Macfarlane. 3rd Edition. Oxford Academic Publication, Oxford University Press.
9. Modern Epidemiology by Timothy L. Lash, Wolters India Pvt Ltd.
10. Epidemiology Concepts and Methods, by Oleckno W. A. CBS Publishers & Distributors
11. Basic Epidemiology by R Beaglehole, Aitbs Publishers

OR

MDC-02T: Physical and Cultural Geography of Bengal

Credits 03 (Full Marks-50)

Course contents:

1. Geographic location, Physiographic Divisions, Rivers, soils, climate and Natural hazards
2. Natural vegetation, wildlife, and Ecotourism
3. Demography, migration, Scheduled tribes.
4. Agriculture and fishing, Mining, Industrial development, Major cities,
5. Heritage and cultural diversity, and tourist places

Suggested Readings:

1. Dhara, M.K., Basu, S.K., Bandyopadhyay, R.K., Roy, B., Pal, A.K. (Eds.) 1999. Geology and Mineral Resources of the States of India, Part-1: West Bengal. Geological Survey of India Miscellaneous Publication.
2. Ghurey, G.S. 1963. The Scheduled Tribes of India, 1980 reprint, Transaction Books.
3. Johnson, B.L.C. (Ed) 2001. Geographical Dictionary of India, Vision Books.
4. Khullar, D.R. 2011. India: A Comprehensive Geography, Kalyani Publishers
5. Mandal, H., Mukherjee, S., Datta, A. 2002. India: An Illustrated Atlas of Tribal World, Anthropological Survey of India.
6. Pathak, C.R. 2003. Spatial Structure and Processes of Development in India, Regional Science Association Kolkata.
7. Rudra, K 2018. Rivers of the Ganga-Brahmaputra-Meghna Delta: A Fluvial Account of Bengal, Springer Nature
8. Bose S.C 1968. Geography of West Bengal, National Book Trust, India, New Delhi,
9. Sharma, T.C. 2012. Economic Geography of India, Rawat Publications.
10. Singh, R.L. 1971. India: A Regional Geography, National Geographical Society of India.
11. Spate, O.H.K., Learmonth, A.T.A. 1967. India and Pakistan: A General and Regional Geography, Methuen.

OR

MDC-02T: Natural Resource Management

Credits 03 (Full Marks-50)

Course contents:

Unit-I: Natural resources: Definition and types. Sustainable utilization approach of Natural Resources (economic, ecological and socio- cultural)

Unit-II: Land: Utilization (agricultural, pastoral, horticultural, silvicultural); Soil degradation and management.

Unit-III: Water: Fresh water (rivers, lakes, groundwater, aquifers, watershed); Marine; Estuarine; Wetlands; Threats and management strategies.

Unit -IV: Forests: Definition, Cover and its significance (with special reference to India); Major and minor Forest products; Depletion; Management.

Unit- V: Energy: Renewable and non-renewable sources of energy

Unit- VI: Contemporary practices in resource management: EIA, GIS, Participatory Resource Appraisal, Ecological Footprint with emphasis on carbon footprint, Resource Accounting; Waste management.

Unit- VII: National and international efforts in resource management and conservation

Suggested Readings:

1. Vasudevan, N. (2006). Essentials of Environmental Science. Narosa Publishing House, New Delhi.
2. Singh, J. S., Singh, S.P. and Gupta, S. (2006). Ecology, Environment and Resource Conservation. Anamaya Publications, New Delhi.
3. Rogers, P.P., Jalal, K.F. and Boyd, J.A. (2008). An Introduction to Sustainable Development. Prentice Hall of India Private Limited, New Delhi.

OR

MDC-02T: Digital Technologies**Credits 03 (Full Marks-50)****Course contents:**

Unit-I: Introduction and Evolution of Digital systems, Role and significance of Digital Technology, Information & communication technology & tools, Computer system & it's working, Software and its types, Operating Systems: types and functions.

Communication systems: Principles, model & transmission media, Computer networks, Internet: concept and applications, WWW, Web Browsers, search engines, Messaging, e-mail, social networking.

Unit- II: Computer Based Information system: significance and types, e-Commerce & digital marketing: basic concepts, benefits & challenges.

Digital India & e-Governance: Initiatives, Infrastructure, Services and Empowerment.

Digital financial tools: Unified Payment Interface, Aadhaar enabled payment System, USSD, Credit/Debit Cards, e-Wallets, Internet banking, NEFT/RTGS and IMPS, Online Bill Payments and PoS, Cyber Security: Threats, Significance, Challenges, Precautions, safety Measures & Tools,

Unit- III: Emerging Technologies & their applications: Overview of Cloud Computing, Big Data, Internet of things, Virtual reality, Block chain, robotics, Artificial intelligence, 3D Printing, Future of digital technologies.

Suggested Readings:

1. Fundamentals of Computers by E Nalagurusamy, ata mcgraw Hill.
2. Data Commination and Networking by Behrouz A. Forouzan, Mcgraw Hill Educaition.
3. Emerging Technologies in Computing: Theory, Practice, and Advances, by P.Kumar, A omar, and R.Sharmila, 1st Edition, 2021.
4. Essentials of cloud computingby K. Chandrasekharan, CrC press, 2014.
5. Blockchanin: Blueprint for a new economy by M. Swan, O'Reilly Media, 2015
6. Introduction to Computers by Peter Norton, Tata McGraw Hill.

OR

Course Contents:

Unit I: Introductory concepts: Concept of Income, Expenditure, Saving and Investment; Concept of financial planning and use of a financial diary; Household budgets; Household decision making: Purchase decisions – small and large, Investing, Retirement planning and Borrowing; Simple and compound interest; Interest and inflation; Consumer credit – The fallacy of ‘zero interest loan’.

(7 lectures)

Unit II: Financial knowledge and awareness: Bank deposits: savings account, current account, recurring deposits and fixed deposit; Small saving investment schemes; Corporate Fixed deposits; PF and PPF; NPS and other Pension products, Corporate financial instruments like equity share, debentures, etc.; Bond; Mutual fund; Tax-free bonds; RBI Floating rate bond; Gold bond; Digital wallets: benefits, types, features and uses; QR code.

(9 lectures)

Unit III: Bank and financial inclusion: Concept of KYC; BSBDA and Jan Dhan account; Pradhan Mantri Jeevan Jyoti Bima Yojana and Pradhan Mantri Suraksha Bima Yojana; Financial inclusion and financial inclusion index; Mudra scheme; E-banking: NEFT and RTGS; Precautions in e-payments; Risks associated with digital payments; Role of RBI as the regulator.

(8 lectures)

Unit IV: Insurance: Concept of insurance and risk avoidance; Basic terms in insurance – premium, sum assured, agent, commission, claim; Types of insurance: Life insurance, Accidental insurance, Fire insurance, Health insurance, Crop insurance, etc.: Personal health policies and Public health policies; Role of TPA; Insurance companies in India; IRDA.

(8 lectures)

Unit V: Investment in stock market: Investment and Speculation; A brief discussion on return and risk; Trading in shares; Dematerialization and Demat account; SEBI- Role and functions.

(6 lectures)

Unit VI: Rights and awareness of Consumers and Investors: The principle of “Buyer be aware” – its exceptions; Consumer disputes: Role of Consumer Affairs Department; Consumer Protection Act and Consumer Courts; Investor right; Investor awareness and activism; Investor association; Investor grievances and redressal mechanism; Ombudsman.

(7 lectures)

Suggested readings

1. The Basics of Finance: Financial Tools for Non-Financial Managers: Bryan E Milling, iUniverse
2. Smart Guide to Managing Personal Finance: Alfred Glossbrenner and Emily Glossbrenner, John Wiley
3. Total Money Makeover: Dave Ramsey, Thomas Nelson
4. Stock exchanges, Investments and Derivatives: P. Rajib and V. Raghunathan, TMH
5. Investing in India - A Value Investor's Guide: Rahul Saraogi, Wiley

6. Financial Inclusion in India: Policies & Programmes: N. Mani, New Century
7. Financial Education Series: Reserve Bank of India
8. Introduction to Financial Planning: Indian Institute of Banking & Finance, Taxmann
9. Risk Analysis, Insurance and Retirement Planning: Indian Institute of Banking & Finance, Taxmann
10. Financial Planning & Wealth Management: Concepts and Practice: Joydeep Sen, Shroff Publishers
11. Consumer Protection Act: R.K. Bangia, Allahabad Law Agency
12. Consumer Rights and Awareness: M. Nazer, Discovery Publishing
13. Financial Education Material: SEBI (e-content)
14. OECD/INFE Toolkit For Measuring Financial Literacy and Financial Inclusion: OECD (e-content)

Value Added Course (VAC)

Value Added Course (VAC)- 01

VAC-01: ENVS- Environmental Studies

Credits 04 (Full Marks-100)

Course contents:

Unit-I: Introduction to environmental studies (2 lectures)

- Multidisciplinary nature of environmental studies;
- Scope and importance; Concept of sustainability and sustainable development.

Unit-II: Ecosystems (6 lectures)

- What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of the following ecosystems: a) Forest ecosystem; b) Grassland ecosystem c) Desert ecosystem d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Unit-III: Natural Resources: Renewable and Non-renewable Resources (8 lectures)

- Land resources and land use change; Land degradation, soil erosion and desertification;
- Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations. Joint forest management.
- Water: Use and over--exploitation of surface and ground water, floods, droughts, conflicts over water (international & interstate).
- Energy resources: Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

Unit-IV: Biodiversity and Conservation (8 lectures)

- Levels of biological diversity: genetic, species and ecosystem diversity; Bio-geographic zones of India; Biodiversity patterns and global biodiversity hot spots
- India as a mega--biodiversity nation; Endangered and endemic species of India
- Threats to biodiversity: Habitat loss, poaching of wildlife, man--wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.
- Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.

Unit-V: Environmental Pollution (8 lectures)

- Environmental pollution: types, causes, effects and controls; Air, water, soil and noise pollution
- Nuclear hazards and human health risks
- Solid waste management: Control measures of urban and industrial waste.
- Pollution case studies.
- Noise pollution.

Unit-VI: Environmental Policies & Practices**(7 lectures)**

- Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture
- Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD).
- Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.
- Environmental policy and gender issues

Unit-VII: Human Communities and the Environment**(6 lectures)**

- Human population growth: Impacts on environment, human health and welfare.
- Resettlement and rehabilitation of project affected persons; case studies.
- Disaster management: floods, earthquake, cyclones and landslides.
- Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan.
- Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.
- Environmental communication and public awareness, case studies (e.g. CNG vehicles in Delhi)

Unit-VIII: Field work**(Equal to 5 lectures)**

- Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc.
- Visit to a local polluted site--Urban/Rural/Industrial/Agricultural.
- Study of common plants, insects, birds and basic principles of identification.
- Study of simple ecosystems--pond, river, Delhi Ridge, etc.
- Disaster management.
- Coastal ecosystem

Suggested Readings:

- i. Carson, R. 2002. *Silent Spring*. Houghton Mifflin Harcourt.
- ii. Gadgil, M., & Guha, R. 1993. *This Fissured Land: An Ecological History of India*. Univ. of California Press.
- iii. Gleeson, B. and Low, N. (eds.) 1999. *Global Ethics and Environment*, London, Routledge.
- iv. Gleick, P. H. 1993. *Water in Crisis*. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
- v. Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. *Principles of Conservation Biology*. Sunderland: Sinauer Associates, 2006.
- vi. Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. *Science*, 339: 36--37.
- vii. McCully, P. 1996. *Rivers no more: the environmental effects of dams* (pp. 29--64). Zed Books.
- viii. McNeill, John R. 2000. *Something New Under the Sun: An Environmental History of the Twentieth Century*.
- ix. Odum, E.P., Odum, H.T. & Andrews, J. 1971. *Fundamentals of Ecology*. Philadelphia: Saunders.
- x. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. *Environmental and Pollution Science*. Academic Press
- xi. Rao, M.N. & Datta, A.K. 1987. *Waste Water Treatment*. Oxford and IBH Publishing Co.Pvt. Ltd.
- xii. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. *Environment*. 8th edition. John Wiley & Sons.

- xiii. Rosencranz, A., Divan, S., & Noble, M. L. 2001. Environmental law and policy in India. Tripathi 1992.
- xiv. Sengupta, R. 2003. Ecology and economics: An approach to sustainable development. OUP.
- xv. Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.
- xvi. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. Conservation Biology: Voices from the Tropics. John Wiley & Sons.
- xviii. Thapar, V. 1998. Land of the Tiger: A Natural History of the Indian Subcontinent. Warren, C. E. 1971. Biology and Water Pollution Control. WB Saunders.
- xix. Wilson, E. O. 2006. The Creation: An appeal to save life on earth. New York: Norton.
- xx. World Commission on Environment and Development. 1987. Our Common Future. Oxford University Press.

Value Added Course (VAC) - 02

VAC-02: Human Rights

Credits 04 (Full Marks-50)

Course contents:

Unit -1: Human Rights: Society and Development-Human Rights in the World

Unit- 2: Human Rights in India: Civil and Political Rights - Human Rights Commissions

Unit -3: Violation of Rights: Violation of Human Rights and Remedies -Violation of Economic, Social and Cultural Rights

Unit - 4: Rights of the Juveniles& Elderly People

- a) Rights of the Juveniles and Child Labour and Old People,
- b) Protection of Rights to Health,
- c) Human Rights and the Civil Society

Suggested Readings

1. Agarwal, H.O., Implementation of Human Rights Covenants with Special Reference to India (Allahabad: Kitab Mahal, 1983).
2. Alam, Aftab, ed., Human Rights in India: Issues and Challenges (New Delhi: Raj Publications, 1999).
3. Amnesty International, Human Rights in India (New Delhi: Sage Publications, 1994).
4. Bajwa, G.S. and D.K. Bajwa, Human Rights in India: Implementation and Violations (New Delhi: D.K. Publishers, 1996).
5. Basu, D.D., Human Rights in Constitutional Law (New Delhi: Prentice Hall, 1994).
6. Baxi, Upendra, Inhuman Wrongs and Human Rights (Delhi: HarAnand Publications, 1994).
7. Begum, S.M., ed., Human Rights in India: Issues and Perspectives (New Delhi: APH Publishing Co., 2000).
8. Bhagwati, P.N., Legal Aid as Human Rights (Dharwad: JagrutBharut, 1985).
9. Bhargava, G.S. and R.M.Pal, ed., Human Rights of Dalits: Societal Violation (New Delhi: Gyan Publishing House, 2000).

OR

VIDYASAGAR UNIVERSITY, PASCHIM MIDNAPORE, WEST BENGAL

Course contents:

Unit -I: Introduction of Yoga

- 1.1 Meaning, Definition, Aim, Objectives and Importance of Yoga
- 1.2 History and Development of Yoga
- 1.3 Astanga Yoga, Hatha Yoga, Observation of International Yoga Day
- 1.4 Suryanamaskar, Pranayamas and Meditations.

Unit -II: Health and Health Problems in India

- 2.1 Health: Meaning, Definition, Dimensions and Factors.
- 2.2 Health Education: Meaning, Definition, Aim, Objectives and Principles. Personal Hygiene: Care of Eyes, Ear, Nose, Skin, Mouth, Teeth and Feet.
- 2.3 Aim, Objectives and Functions of Health Agencies: World Health Organization (WHO), United Nations Educational Scientific & Cultural Organization (UNESCO), United Nations International Children's Emergency Fund (UNICEF). Integrated Child Development Services (ICDS), Ministry of Health and Family Welfare (MHFW).
- 2.4 Life Style Diseases (Hypokinetic): obesity and Diabetes. Life Style Diseases (Hyperkinetic): Hypertension and Psychological Disorder-Stress.

Unit -III: Wellness and Wellness Programme

- 3.1 Wellness - Concept, Definition, Components, Significance with reference to Positive Lifestyle.
- 3.2 Concepts of Quality of Life and Body Image.
- 3.3 Factors affecting Wellness.
- 3.4 Wellness Programme in Reference to Physical Activities & Yoga

Suggested Readings

1. Corbin, C. B. G. J. Welk. W. R Corbin, K. A. Welk (2006) Concepts of Physical Fitness: for Wellness. McGraw Hill, New York, USA.
2. Kamlesh, M. L. & Singh, M. K. (2006) Physical Education (Naveen Publications).
3. Kansal, D.K. (2008) Textbook of Applied Measurement, Evaluation & Sports Selection. Sports & Spiritual Science Publications, New Delhi.
4. Uppal, A.K. (2004), Fitness and Health 5th ed. (U.K., Human Kinetics).
5. Sharma Jai Prakash And Sehgal Madhu(2006). Yog-Shiksha. Friends Publication. Delhi.
6. Mukerji, A.P. (2010). The Doctorine and Practice of Yoga, General Books, LLC, New Delhi.
7. Sarin N (2003). Yoga Dawara Rogoon Ka Upchhar. Khel Sahitya Kendra.
8. Text Book Hath Yoga Pradipika.
9. Text Book Patanjali Yoga Sutra.
10. Kayal, R. Yoga Sikha. Clasique Books. Kolkata.
11. Sahu, D. A Critical review on Modern Trend of Yogic Asana. Clasique Books. Kolkata.

OR

Course contents:**Unit -1: Introduction to Disaster: Disaster:**

- Concepts and definitions (Disaster, Hazards, Vulnerability, Resilience, Risks).
- Factors & significance, causes, nature, types and magnitude of disasters.
- Parameters of Disaster Risks. Levels of disasters as per national guideline.
- Difference between accidents and Disasters.
- Simple and Complex disasters,
- Brief explanation of some frequently occurring natural disasters in India.

Unit -2: Impacts of disasters:

Impacts of disasters (including social, economic, political, environmental, health, psychosocial, etc.).

Global trends in disasters: urban disasters, pandemics, complex emergencies, Climate change.

Hazards, Response time, frequencies, forewarning, exposure time of different hazards.

Common approaches to study natural and manmade hazards; vulnerability and disasters.

Unit -3: Disaster Management:

Aims of disaster management. Principles and component of disaster management. Dimension of natural and anthropogenic disaster.

Unit- 4: Consequences of disaster:

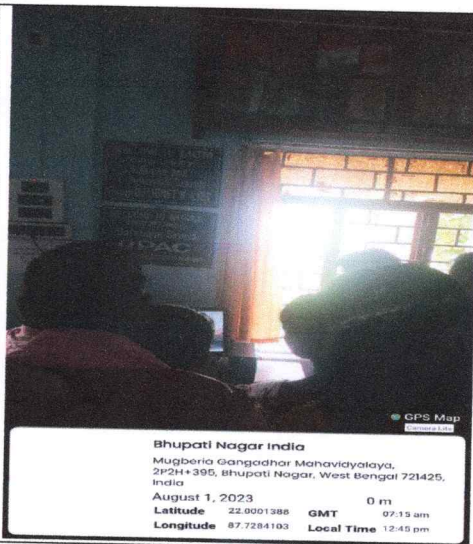
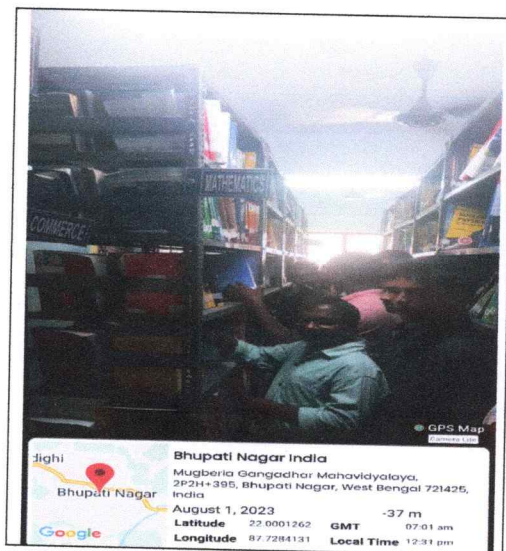
Causes and consequences of hazards-physical, economic, cultural. Repercussion of disasters and hazards, Economic damage. Loss of human and animal life. Destruction of Ecosystem.

Unit -5: Global perspectives:

- Natural disaster - Study of environmental impacts induced by human activity. Causes, impact, consequences, trends understanding of: Earthquake, volcanisms, cyclones, tsunami, floods, draughts and famines, landslides and avalanches, heat and cold waves.
- Man-made disasters: Biological disasters, chemical disasters, nuclear disasters, building fire, cold fire, forest fire, oil fire, air pollution, water pollution, deforestations, industrial pollution, road accidents, rail accidents, air accidents, sea accidents, oil slicks and spills, out- break of disease and epidemic, building collapse, rural and urban fire, war and conflicts, over exploitation of natural resources.

Suggested Readings

1. Disaster Management Guidelines, GOI-UND Disaster Risk Program (2009-2012)
2. Damon, P. Copola, (2006) Introduction to International Disaster Management, Butterworth Heineman.
3. Gupta A.K., Niar S.S and Chatterjee S. (2013) Disaster management and Risk Reduction, Role of Environmental Knowledge, Narosa Publishing House, Delhi.
4. Murthy D.B.N. (2012) Disaster Management, Deep and Deep Publication PVT. Ltd. New Delhi.
5. Modh S. (2010) Managing Natural Disasters, Mac Millan publishers India LTD.



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