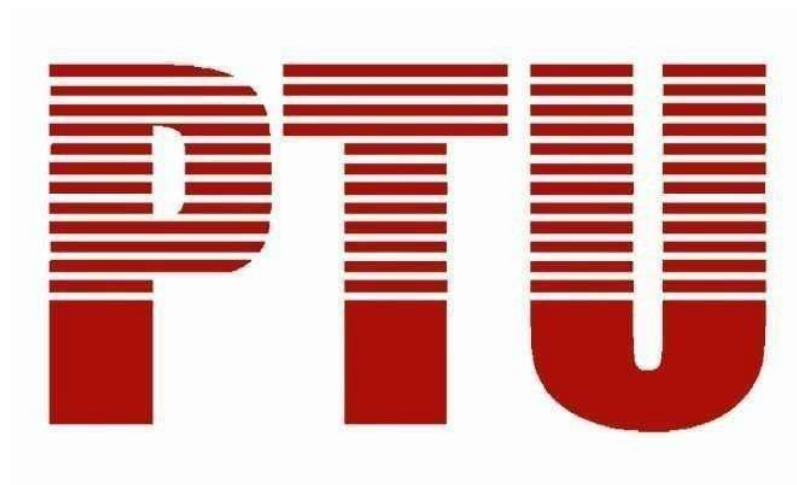


Scheme & Syllabus of

Bachelor of Vocational Studies

(E-Commerce & Digital Marketing)

Batch 2026



By Department of Academics
**I.K.G. Punjab Technical
University**

I. K. Gujral Punjab Technical University Jalandhar

Courses & Examination Scheme:

Semester	Credit Distribution			Total Credits
	No. of Papers	Credits (L+T/P)	Total Credits	
I	4	4	16	25
	6	1	6	
	1	3	3	
II	4	4	16	23
	2	2	4	
	3	1	3	
	1	Non-Credit (1L+2P)	0	
III	3	4	12	25
	1	3	3	
	4	2	8	
	2	1	2	
IV	4	4	16	23
	3	2	6	
	1	1	1	
V	4	4	16	24
	3	2	6	
	2	1	2	
VI	4	4	16	23
	3	2	6	
	1	1	1	

First Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
BVEDM101-26	Core Course	Digital Marketing Essentials	4	0	0	40	60	100	4
BVEDM102-26	Core Course	Introduction to E-Commerce	4	0	0	40	60	100	4
BVEDM103-26	Core Course	Basic IT Skills	4	0	0	40	60	100	4
BVEDM104-26	Core Course	Digital Design & Content Creating	4	0	0	40	60	100	4
BVEDM105-26	Core Course	Basic IT Skills Lab	0	0	2	30	20	50	1
BVEDM106-26	Core Course	Digital Design & Content Creating Lab	0	0	2	30	20	50	1
BTHU103/18	Ability Enhancement Compulsory Course (AECC)	English	1	0	0	40	60	100	1
BTHU104/18	Ability Enhancement	English Practical/Laboratory	0	0	2	30	20	50	1

I. K. Gujral Punjab Technical University Jalandhar

	Compulsory Course (AECC)								
HVPE101-18	Ability Enhancement Compulsory Course (AECC)	Human Values, De-addiction and Traffic Rules	3	0	0	40	60	100	3
HVPE102-18	Ability Enhancement Compulsory Course (AECC)	Human Values, De-addiction and Traffic Rules (Lab/ Seminar)	0	0	2	25	--	25	1
BMPD102-18	Core Course	Mentoring and Professional Development	0	0	2	25	--	25	1
	TOTAL		20	0	10	380	420	800	25

Note: One each seminar will be organized on Drug De-addiction and Traffic Rules. Eminent scholar and experts of the subject will be called for the seminar at least once during the semester. It will be binding for all students to attend the seminar.

Second Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
BVEDM201-26	Core Course	Marketing Management	4	0	0	40	60	100	4
BVEDM202-26	Core Course	Internet Applications	4	0	0	40	60	100	4
BVEDM203-26	Core Course	Social Media Marketing & SEO	4	0	0	40	60	100	4
BVEDM204-26	Core Course	Web Technologies (HTML, DHTML & CSS)	4	0	0	40	60	100	4
BVEDM205-26	Core Course	Social Media Marketing and SEO (Lab)	0	0	2	30	20	50	1
BVEDM206-26	Core Course	Web Technologies (HTML, DHTML & CSS) (Lab)	0	0	2	30	20	50	1
EMC-101-25	Core Course	Entrepreneurship Setup and Launch	0	0	4	60	40	100	2
EVS102-18	Ability Enhancement Compulsory Course (AECC)	Environment Studies	2	0	0	40	60	100	2
BMPD202-18	Core Course	Mentoring and Professional Development	0	0	2	25	--	25	1
UGDM-101-26	Skill Enhancement Course	Disaster Management and Preparedness (Non-Credit)	1	0	2	50	50	100	S/US
	TOTAL		19	0	12	395	430	825	23

Third Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
BVEDM301-26	Core Course	Entrepreneurship Development	3	0	0	40	60	100	3
BVEDM302-26	Core Course	Fundamentals of Finance & Accounts	4	0	0	40	60	100	4
BVEDM303-26	Core Course	UI / UX Design Fundamentals	4	0	0	40	60	100	4
BVEDM304-26	Core Course	Graphic Design	4	0	0	40	60	100	4
BVEDM305-26	Core Course	UI / UX Design Lab	0	0	4	30	20	50	2
BVEDM306-26	Core Course	Graphic Design Lab	0	0	4	30	20	50	2
BVEDM307-26	Core Course	Website Development – I	0	0	4	30	20	50	2
BVEDM308-26	Core Course	Design Thinking and Innovation	0	0	2	30	20	50	1
EMC-102-25	Core Course	Entrepreneurship (Marketing Basics)	0	0	4	60	40	100	2
BMPD302-18	Core Course	Mentoring and Professional Development	0	0	2	25	--	25	1
	TOTAL		15	0	20	365	360	725	25

Fourth Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
BVEDM401-26	Core Course	Advertising & Sales Management	4	0	0	40	60	100	4
BVEDM402-26	Core Course	Retailing	4	0	0	40	60	100	4
BVEDM403-26	Core Course	Database Management & SQL	4	0	0	40	60	100	4
BVEDM404-26	Core Course	Content Management System using WordPress	4	0	0	40	60	100	4
BVEDM405-26	Core Course	Database Management & SQL Lab	0	0	4	30	20	50	2
BVEDM406-26	Core Course	Content Management System using WordPress Lab	0	0	4	30	20	50	2
BVEDM407-26	Core Course	Website Development - II	0	0	4	30	20	50	2
BMPD402-18	Core Course	Mentoring and Professional Development	0	0	2	25	--	25	1
	TOTAL		16	0	14	275	300	575	23

I. K. Gujral Punjab Technical University Jalandhar

Fifth Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
BVEDM501-26	Core Course	Marketing Analysis	4	0	0	40	60	100	4
BVEDM502-26	Core Course	Consumer Behaviour	4	0	0	40	60	100	4
BVEDM503-26	Core Course	Web Development using PHP	4	0	0	40	60	100	4
BVEDM504-26	Core Course	Multimedia	4	0	0	40	60	100	4
BVEDM505-26	Core Course	Web Development using PHP Lab	0	0	4	30	20	50	2
BVEDM506-26	Core Course	Multimedia Lab	0	0	4	30	20	50	2
BVEDM507-26	Core Course	Minor Project	0	0	2	30	20	50	1
UGVAC2502	Core Course	Indian Constitution	2	0	0	40	60	100	2
BMPD502-18	Core Course	Mentoring and Professional Development	0	0	2	25	--	25	1
	TOTAL		18	0	12	315	360	675	24

Sixth Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
BVEDM601-26	Core Course	Customer Relationship Management	4	0	0	40	60	100	4
BVEDM602-26	Core Course	Supply Chain Management	4	0	0	40	60	100	4
BVEDM603-26	Core Course	AI Tools for Digital Marketing	4	0	0	40	60	100	4
BVEDM604-26	Core Course	Content Writing & Video editing	4	0	0	40	60	100	4
BVEDM605-26	Core Course	AI Tools for Digital Marketing Lab	0	0	4	30	20	50	2
BVEDM606-26	Core Course	Content Writing & Video editing Lab	0	0	4	30	20	50	2
BVEDM607-26	Core Course	Major Project	0	0	4	60	40	100	2
BMPD602-18	Core Course	Mentoring and Professional Development	0	0	2	25	--	25	1
	TOTAL		16	0	14	305	320	625	23

I. K. Gujral Punjab Technical University Jalandhar

BVEDM101-26 Digital Marketing Essentials

Course Outcomes:

CO#	Course outcomes
CO1	Understand the fundamentals of traditional and digital marketing, content strategy, and digital marketing frameworks.
CO2	Apply social media marketing, advertising strategies, and email marketing techniques to create effective digital campaigns.
CO3	Analyze and implement SEO, SEM, display advertising, and campaign performance measurement tools for digital marketing optimization.

Detailed contents

Unit 1:

Marketing- Traditional and Modern concept; marketing channels; its objectives and KPIs. Introduction to digital Marketing and its framework. Content Strategy-Planning, Creating, Distribute and promote Content, Optimize website UX and landing pages, measure impact.

Unit 2:

Social Media Marketing- Landscape; media channels; Content; implement and monitor campaigns and its measure impact. Social Media Advertising: Introduction, its types and platforms for Social Ads.

Unit 3:

Search engine Optimization (SEO) - Introduction; How search works; On-site SEO and off-site SEO; Audit and its future. Search Engine Marketing with AdWords (SEM) – Selection of AdWords and keywords, Create text Ads, CPC bidding, navigate AdWords, SEM Metrics and optimization.

Unit 4:

Display Advertising – how do display Ads work, display Ads and targeting, sales models, Video advertising. E-mail Marketing – E-mail list generation, create an effective Email Campaign, create an Email plan and measure its results.

Text Books:

1. Digital Marketing Essentials, Wiley Publications.
2. Digital Marketing, McGraw Hill Education.
3. Understanding Digital Marketing, Kogan Page Publishers.
4. Digital Marketing for Dummies, Wiley Publishing.

Reference Books:

1. The Art of Digital Marketing, Wiley Publishing.
2. Jab, Jab, Jab, Right Hook, Harper Business.
3. Contagious: Why Things Catch On, Simon & Schuster.
4. Email Marketing Rules, Create Space Independent Publishing.
5. SEO 2024, Independently Published.

I.K. Gujral Punjab Technical University Jalandhar

BVEDM102-26 Introduction to E-Commerce

Course Outcomes:

CO#	Course outcomes
CO1	Understand the concepts, framework, models, and dimensions of E-Commerce and E-Business.
CO2	Explain Internet technologies, web applications, EDI, and the role of web development in E-Business.
CO3	Analyze online business technologies, electronic payment systems, payment gateways, and website promotion tools.
CO4	Understand legal aspects of online transactions and evaluate E-Commerce applications in various business sectors.

Detailed contents

Unit 1: Introduction

E-Business - Origin and Need of E-Commerce, Factors affecting E -Commerce, Business dimension and technological dimension of E-Commerce, E-Commerce frame work
Electronic Commerce Models, Value Chains in Electronic Commerce.

Unit 2: Internet and E-Business

Introduction to Internet and its application, Intranet and Extranets. World Wide Web, Internet Architectures, Internet Applications, Business Applications on Internet, E - Shopping, Electronic Data Interchange, Components of Electronic Data Interchange, Creating Web Pages using HTML.

Unit 3:

Technology for Online Business: Internet, IT Infrastructure, Middleware Contents, Text and Integrating E-Business Applications, Mechanism of Making Payment Through Internet, Online Payment Mechanism, Electronic Payment Systems, Payment Gateways, Visitors to Website, Tools for Promoting Website, Plastic Money, Debit Card, Credit Card.

Unit 4:

Laws Relating to Online Transactions ,Applications in E-commerce: E-commerce Applications in Manufacturing, Wholesale, Retail and Service Sector

Text Books:

1. E-Commerce Strategy, Technologies and Applications, Whitley, David, Tata McGraw Hill.
2. Electronic Commerce, Schneider Gary P. and Perry, James T, Thomson Learning.
3. E-Commerce: The Cutting Edge of Business, Bajaj, Kamlesh K & Nag, Debjani , McGraw Hill

Reference Books:

1. E-Business and E-Commerce Management, Pearson Education.
2. Fundamentals of E-Commerce, New Age International Publishers.
3. Doing Business on the Internet, Tata McGraw Hill Publishing.
4. HTML and CSS: Design and Build Websites, Wiley Publishing.
5. Internet and World Wide Web How to Program, Pearson Education.

Course Outcomes:

CO#	Course outcomes
CO1	Understanding the concept of input and output devices of Computers.
CO2	Learn the functional units and classify types of computers, how they process Information and how individual computers interact with other computing systems and devices.
CO3	Learn basic word processing, Spreadsheet and Presentation Graphics Software skills.
CO4	Study to use the Internet safely, legally, and responsibly.
CO5	To develop an understanding and practical exposure to different IT tools used as an aid in business and e-commerce.

Detailed contents

Unit 1:

Human Computer Interface, Concepts of Hardware and Software; Data and Information.
Functional Units of Computer System: CPU, registers, system bus, main memory unit, cache memory, SMPS, Motherboard, Ports and Interfaces, expansion cards, ribbon cables, memory chips, processors.
Devices: Input and output devices, keyboard, mouse, joystick, scanner, OCR, OMR, bar code reader, web camera, monitor, printer, plotter.
Memory: Primary, secondary.

Unit 2:

Types of Languages: Machine, assembly and High level Language; Operating system as user interface, utility programs.
Word processing: Editing features, formatting features, saving, printing, table handling, page settings, spell-checking, macros, mail-merge, equation editors.

Unit 3:

Spreadsheet: Workbook, worksheets, data types, operators, cell formats, freeze panes, editing features, formatting features, creating formulas, using formulas, cell references, replication, sorting, filtering, functions, Charts & Graphs.
Presentation Graphics Software: Templates, views, formatting slide, slides with graphs, animation, using special features, presenting slide shows.

Unit 4:

The Impact of Computing and the Internet on Society.
Electronic Payment System: Secure Electronic Transaction, Types of Payment System: Digital Cash, Electronic Cheque, Smart Card, Credit/Debit Card E- Money, Immediate Payment System (IMPS).

Text Books:

1. Introduction to Information Technology, ITL Education Solutions limited, Pearson Education.
2. Computer Fundamentals, A. Goel, 2010, Pearson Education.
3. Fundamentals of Computers, P.K. Sinha & P. Sinha, 2007, BPB Publishers.

Reference Books:

1. Introduction to Computers by Peter Norton.
2. Computers Today by D. H. Sanders, McGraw Hill.
3. Computers by Larrylong & Nancylong, 12th edition, Prentice Hall.

I.K. Gujral Punjab Technical University Jalandhar

BVEDM104-26 Digital Design & Content Creating

Course Outcomes:

CO#	Course outcomes
CO1	Understand the fundamentals of digital design, visual communication, and content creation principles.
CO2	Apply graphic design tools and techniques to create digital content for social media and web platforms.
CO3	Develop creative multimedia content including images, videos, and promotional materials for branding and marketing.
CO4	Analyze and optimize digital content strategies for audience engagement and online communication.

Detailed contents
Unit 1: Introduction to Digital Design and Content Creation Fundamentals of Digital Design, Principles of Design, Color Theory, Typography, Layout Design, Visual Communication, Introduction to Content Creation, Role of Digital Content in Marketing and Branding, Overview of Design Tools and Platforms.
Unit 2: Graphic Design and Social Media Content Image Editing and Graphic Designing, Creating Posters, Banners, Infographics, Social Media Posts and Reels, Branding Elements, Designing for Different Digital Platforms, Introduction to Canva, Adobe Photoshop and Illustrator Basics.
Unit 3: Video Content and Multimedia Creation Basics of Video Editing, Storyboarding, Content Planning, Audio and Video Formats, Creating Promotional Videos, YouTube Content, Short-form Video Content, Animation Basics, Introduction to Video Editing Tools and Multimedia Applications.
Unit 4: Content Strategy and Digital Publishing Content Writing Basics, Blog and Social Media Content, SEO-friendly Content, Content Scheduling and Publishing, Audience Engagement Techniques, Analytics for Content Performance, Copyright and Ethical Issues in Digital Content Creation.

Text Books:

1. IT Tools, Khanna Publishing House.
2. Introduction to Information Technology, Pearson Education.
3. Graphic Design School, Wiley Publishing.
4. The Non-Designer's Design Book, Pearson Education.

Reference Books:

1. Digital Design Essentials, Wiley India.
2. Content Inc., McGraw Hill Education.
3. Creative Confidence, Crown Business Publishers.
4. YouTube Secrets, BenBella Books.
5. The Art of Social Media, Portfolio Publishers.

I.K. Gujral Punjab Technical University Jalandhar

BVEDM105-26 Basic IT Skills Lab

Course Outcomes:

CO#	Course Outcomes
CO1	Understand the practical usage of computer hardware, software, and operating system functions.
CO2	Apply basic word processing, spreadsheet, and presentation tools for business and academic purposes.
CO3	Perform internet operations, online communication, and electronic payment activities securely and efficiently.
CO4	Develop practical skills in using IT tools and applications for business, e-commerce, and digital communication.
CO5	Create and manage digital documents, spreadsheets, presentations, and online resources using modern IT applications.

Tasks	Details
Task 1:	Identify and study the basic components of a computer system and peripheral devices.
Task 2:	Perform operating system operations including file management, folder creation, copying, deleting, and organizing files.
Task 3:	Create, edit, save, and print documents using word processing software.
Task 4:	Apply formatting features including fonts, styles, alignment, spacing, and page setup in documents.
Task 5:	Create tables, insert images, headers, footers, and page numbers in documents.
Task 6:	Use spell check, grammar tools, mail merge, and equation editor features in word processing software.
Task 7:	Create worksheets and enter data in spreadsheet software.
Task 8:	Apply formulas, functions, and cell referencing techniques in spreadsheets.
Task 9:	Perform sorting, filtering, and conditional formatting operations in spreadsheets.
Task 10:	Create charts and graphs for data representation in spreadsheet software.
Task 11:	Create presentations using templates, themes, and slide layouts.
Task 12:	Add animations, transitions, images, charts, and multimedia elements in presentations.
Task 13:	Deliver and manage slideshow presentations using presentation software tools.
Task 14:	Browse internet resources using web browsers and search engines.
Task 15:	Create and manage e-mail accounts, compose e-mails, and attach files.
Task 16:	Perform online communication using video conferencing and collaboration tools.
Task 17:	Demonstrate the use of electronic payment systems such as UPI, IMPS, debit card, and net banking.
Task 18:	Study cyber security basics including password protection, phishing awareness, and safe internet practices.
Task 19:	Create cloud storage accounts and upload/download files using cloud services.
Task 20:	Prepare a mini project involving word processing, spreadsheet analysis, presentation creation, and internet research.

I.K. Gujral Punjab Technical University Jalandhar

Recommended Hardware & Software:

Intel Core i3 / i5 / i7 Processor with a speed of minimum 2 GHz, RAM 2 GB or higher, HDD 200 GB or higher, LED / LCD Screen, Internet Connectivity, Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Google Chrome, Microsoft Windows.

Text Books:

1. Introduction to Information Technology, Pearson Education.
2. Computer Fundamentals, Pearson Education.
3. Fundamentals of Computers, BPB Publications.
4. Microsoft Office 365 Bible, Wiley Publishing.

Reference Books:

1. Introduction to Computers, McGraw Hill Education.
2. Computers Today, McGraw Hill Education.
3. Computers, Prentice Hall Publications.
4. Computer Fundamentals and Programming in C, Oxford University Press.
5. Information Technology for Management, Wiley Publishing.

I.K. Gujral Punjab Technical University Jalandhar

BVEDM106-26 Digital Design & Content Creating Lab

Course Outcomes:

CO#	Course outcomes
CO1	Understand the practical concepts of digital design and multimedia content creation tools.
CO2	Create graphical and promotional content for social media and digital platforms.
CO3	Develop creative digital media content including posters, banners, reels, and branding materials.
CO4	Apply digital publishing and content optimization techniques for effective online communication.

Tasks	Details
Task 1:	Create posters and banners using design principles and color combinations.
Task 2:	Design social media posts for platforms such as Instagram, Facebook, and LinkedIn.
Task 3:	Create logos, visiting cards, and branding materials for a business.
Task 4:	Develop infographics and promotional creatives using online design tools.
Task 5:	Perform image editing, background removal, and photo enhancement.
Task 6:	Create short promotional videos and reels for digital marketing campaigns.
Task 7:	Add transitions, captions, filters, and audio effects in video content.
Task 8:	Design blog graphics, YouTube thumbnails, and web banners.
Task 9:	Publish and optimize content for social media engagement and branding.
Task 10:	Prepare a mini project on digital branding including graphics, reels, and social media content.

Recommended Hardware & Software:

Computer System with minimum 8 GB RAM, Digital Camera / Smartphone Camera, Graphic Tablet (Optional), Internet Connectivity, Adobe Photoshop / Canva / Adobe Illustrator, CapCut

Text Books:

1. Graphic Design School, Wiley Publishing.
2. The Non-Designer's Design Book, Pearson Education.
3. Digital Design Essentials, Wiley India.
4. Adobe Photoshop Classroom in a Book, Adobe Press.

Reference Books:

1. Content Inc., McGraw Hill Education.
2. Creative Confidence, Crown Business Publishers.
3. The Art of Social Media, Portfolio Publishers.
4. YouTube Secrets, BenBella Books.
5. Canva for Beginners, Independently Published.

**AECC
BTHU103/18 English**

Course Outcomes:

- The objective of this course is to introduce students to the theory, fundamentals and tools of communication.
- To help the students become the independent users of English language.
- To develop in them vital communication skills which are integral to their personal, social and professional interactions.
- The syllabus shall address the issues relating to the Language of communication.
- Students will become proficient in professional communication such as interviews, group discussions, office environments, important reading skills as well as writing skills such as report writing, note taking etc.

The recommended readings given at the end are only suggestive; the students and teachers have the freedom to consult other materials on various units/topics given below. Similarly, the questions in the examination will be aimed towards assessing the skills learnt by the students rather than the textual content of the recommended books.

Detailed Contents:

Unit1- 1 (Introduction)

- Theory of Communication
- Types and modes of Communication

Unit- 2 (Language of Communication)

- Verbal and Non-verbal
- (Spoken and Written)
- Personal, Social and Business
- Barriers and Strategies
- Intra-personal, Inter-personal and Group communication

Unit-3 (Reading and Understanding)

- Close Reading
- Comprehension
- Summary Paraphrasing
- Analysis and Interpretation
- Translation (from Hindi/Punjabi to English and vice-versa)

OR

- Precis writing /Paraphrasing **(for International Students)**
- Literary/Knowledge Texts

Unit-4 (Writing Skills)

- Documenting
- Report Writing
- Making notes
- Letter writing

I.K. Gujral Punjab Technical University Jalandhar

Recommended Readings:

1. *Fluency in English* - Part II, Oxford University Press, 2006.
2. *Business English*, Pearson, 2008.
3. *Language, Literature and Creativity*, Orient Blackswan, 2013.
4. *Language through Literature* (forthcoming) ed. Dr. Gauri Mishra, Dr. Ranjana Kaul,
Dr. Brati Biswas
5. *On Writing Well*. William Zinsser. Harper Resource Book. 2001
6. *Study Writing*. Liz Hamp-Lyons and Ben Heasley. Cambridge University Press. 2006.

I.K. Gujral Punjab Technical University Jalandhar

BTHU104/18 English Practical/Laboratory

Course Outcomes:

- The objective of this course is to introduce students to the theory, fundamentals and tools of communication.
- To help the students become the independent users of English language.
- To develop in them vital communication skills which are integral to personal, social and professional interactions.
- The syllabus shall address the issues relating to the Language of communication.
- Students will become proficient in professional communication such as interviews, group discussions and business office environments, important reading skills as well as writing skills such as report writing, note taking etc.

The recommended readings given at the end are only suggestive; the students and teachers have the freedom to consult other materials on various units/topics given below. Similarly, the questions in the examination will be aimed towards assessing the skills learnt by the students rather than the textual content of the recommended books.

Interactive practice sessions in Language Lab on Oral Communication

- Listening Comprehension
- Self Introduction, Group Discussion and Role Play
- Common Everyday Situations: Conversations and Dialogues
- Communication at Workplace
- Interviews
- Formal Presentations
- Monologue
- Effective Communication/ Mis- Communication
- Public Speaking

Recommended Readings:

1. *Fluency in English* - Part II, Oxford University Press, 2006.
2. *Business English*, Pearson, 2008.
3. *Practical English Usage*. Michael Swan. OUP. 1995.
4. *Communication Skills*. Sanjay Kumar and PushpLata. Oxford University Press. 2011.
5. *Exercises in Spoken English*. Parts. I-III. CIEFL, Hyderabad. Oxford University Press

HVPE101-18 Human Values, De-addiction and Traffic Rules

Course Objective

This introductory course input is intended

- a. To help the students appreciate the essential complementarity between 'VALUES' and 'SKILLS' to ensure sustained happiness and prosperity which are the core aspirations of all human beings.
- b. To facilitate the development of a Holistic perspective among students towards life, profession and happiness, based on a correct understanding of the Human reality and the rest of Existence. Such a holistic perspective forms the basis of Value based living in a natural way.
- c. To highlight plausible implications of such a Holistic understanding in terms of ethical human conduct, trustful and mutually satisfying human behavior and mutually enriching interaction with Nature.

Thus, this course is intended to provide a much needed orientational input in Value Education to the young enquiring minds.

Course Methodology

- The methodology of this course is universally adaptable, involving a systematic and rational study of the human being vis-à-vis the rest of existence.
- It is free from any dogma or value prescriptions.
- It is a process of self-investigation and self-exploration, and not of giving sermons. Whatever is found as truth or reality is stated as proposal and the students are facilitated to verify it in their own right based on their Natural Acceptance and Experiential Validation.
- This process of self-exploration takes the form of a dialogue between the teacher and the students to begin with, and within the student himself/herself finally.
- This self-exploration also enables them to evaluate their pre-conditionings and present beliefs.

Content for Lectures:

Module 1: Course Introduction - Need, Basic Guidelines, Content and Process for Value Education [6]

1. Understanding the need, basic guidelines, content and process for Value Education
2. Self Exploration-what is it? - its content and process; 'Natural Acceptance' and Experiential Validation- as the mechanism for self exploration
3. Continuous Happiness and Prosperity- A look at basic Human Aspirations
4. Right understanding, Relationship and Physical Facilities- the basic requirements for fulfillment of aspirations of every human being with their correct priority
5. Understanding Happiness and Prosperity correctly- A critical appraisal of the current scenario
6. Method to fulfill the above human aspirations: understanding and living in harmony at various levels

Module 2: Understanding Harmony in the Human Being - Harmony in Myself! [6]

7. Understanding human being as a co-existence of the sentient 'I' and the material 'Body'
8. Understanding the needs of Self ('I') and 'Body' - *Sukh* and *Suvidha*
9. Understanding the Body as an instrument of 'I' (I being the doer, seer and enjoyer)
10. Understanding the characteristics and activities of 'I' and harmony in 'I'
11. Understanding the harmony of I with the Body: *Sanyam* and *Swasthya*; correct appraisal of Physical needs, meaning of Prosperity in detail
12. Programs to ensure *Sanyam* and *Swasthya*
 - Practice Exercises and Case Studies will be taken up in Practice Sessions.

Module 3: Understanding Harmony in the Family and Society- Harmony in Human-Human Relationship [6]

13. Understanding harmony in the Family- the basic unit of human interaction
14. Understanding values in human-human relationship; meaning of *Nyaya* and program for its fulfillment to ensure *Ubhay-tripti*;
 - Trust (*Vishwas*) and Respect (*Samman*) as the foundational values of relationship
15. Understanding the meaning of *Vishwas*; Difference between intention and competence
16. Understanding the meaning of *Samman*, Difference between respect and differentiation; the other salient values in relationship
17. Understanding the harmony in the society (society being an extension of family): *Samadhan*, *Samridhi*, *Abhay*, *Sah-astitva* as comprehensive Human Goals
18. Visualizing a universal harmonious order in society- Undivided Society (*Akhand Samaj*), Universal Order (*Sarvabhaum Vyawastha*)- from family to world family!
 - Practice Exercises and Case Studies will be taken up in Practice Sessions.

Module 4: Understanding Harmony in the Nature and Existence - Whole existence as Co-existence [4]

19. Understanding the harmony in the Nature
20. Interconnectedness and mutual fulfillment among the four orders of nature- recyclability and self-regulation in nature
21. Understanding Existence as Co-existence (*Sah-astitva*) of mutually interacting units in all-pervasive space
22. Holistic perception of harmony at all levels of existence
 - Practice Exercises and Case Studies will be taken up in Practice Sessions.

Module 5: Implications of the above Holistic Understanding of Harmony on Professional Ethics [6]

23. Natural acceptance of human values
24. Definitiveness of Ethical Human Conduct
25. Basis for Humanistic Education, Humanistic Constitution and Humanistic Universal Order
26. Competence in professional ethics:
 - a) Ability to utilize the professional competence for augmenting universal human order,
 - b) Ability to identify the scope and characteristics of people-friendly and eco-friendly production systems,
 - c) Ability to identify and develop appropriate technologies and management patterns for above production systems.

I.K. Gujral Punjab Technical University Jalandhar

27. Case studies of typical holistic technologies, management models and production systems
28. Strategy for transition from the present state to Universal Human Order:
 - a) At the level of individual: as socially and ecologically responsible engineers, technologists and managers
 - b) At the level of society: as mutually enriching institutions and organizations

Text Book

R R Gaur, R Sangal, G P Bagaria, 2009, *A Foundation Course in Value Education*.

Reference Books

1. Ivan Illich, 1974, *Energy & Equity*, The Trinity Press, Worcester, and HarperCollins, USA
2. E.F. Schumacher, 1973, *Small is Beautiful: a study of economics as if people mattered*, Blond & Briggs, Britain.
3. A Nagraj, 1998, *Jeevan Vidya ek Parichay*, Divya Path Sansthan, Amarkantak.
4. Susan George, 1976, *How the Other Half Dies*, Penguin Press. Reprinted 1986, 1991
5. PL Dhar, RR Gaur, 1990, *Science and Humanism*, Commonwealth Publishers.
6. A.N. Tripathy, 2003, *Human Values*, New Age International Publishers.
7. Subhas Palekar, 2000, *How to practice Natural Farming*, Pracheen(Vaidik) Krishi Tantra Shodh, Amravati.
8. Donella H. Meadows, Dennis L. Meadows, Jorgen Randers, William W. Behrens III, 1972, *Limits to Growth – Club of Rome's report*, Universe Books.
9. E G Seebauer & Robert L. Berry, 2000, *Fundamentals of Ethics for Scientists & Engineers*, Oxford University Press
10. M Govindrajran, S Natrajan & V.S. Senthil Kumar, *Engineering Ethics (including Human Values)*, Eastern Economy Edition, Prentice Hall of India Ltd.
11. B P Banerjee, 2005, *Foundations of Ethics and Management*, Excel Books.
12. B L Bajpai, 2004, *Indian Ethos and Modern Management*, New Royal Book Co., Lucknow. Reprinted 2008.

Relevant CDs, Movies, Documentaries & Other Literature:

1. Value Education website, <http://uhv.ac.in>
2. Story of Stuff, <http://www.storyofstuff.com>
3. Al Gore, *An Inconvenient Truth*, Paramount Classics, USA
4. Charlie Chaplin, *Modern Times*, United Artists, USA
5. IIT Delhi, *Modern Technology – the Untold Story*

I.K. Gujral Punjab Technical University Jalandhar

AECC

HVPE102-18 Human Values, De-addiction and Traffic Rules (Lab/Seminar)

One each seminar will be organized on Drug De-addiction and Traffic Rules. Eminent scholar and experts of the subject will be called for the Seminar atleast once during the semester. It will be binding for all the students to attend the seminar.

I.K. Gujral Punjab Technical University Jalandhar

BMPD102-18 Mentoring and Professional Development

Guidelines regarding Mentoring and Professional Development

The objective of mentoring will be development of:

- Overall Personality
- Aptitude (Technical and General)
- General Awareness (Current Affairs and GK)
- Communication Skills
- Presentation Skills

The course shall be split in two sections i.e. outdoor activities and class activities.
For achieving the above, suggestive list of activities to be conducted are:

Part – A (Class Activities)

1. Expert and video lectures
2. Aptitude Test
3. Group Discussion
4. Quiz (General/Technical)
5. Presentations by the students
6. Team building Exercises

Part – B (Outdoor Activities)

1. Sports/NSS/NCC
2. Field project.
3. Society Activities of various students chapter i.e. ISTE, SCIE, SAE, CSI, Cultural Club, etc.

Note: Evaluation shall be based on rubrics for Part – A & B.
Mentors/Faculty incharges shall maintain proper record student wise of each activity conducted and the same shall be submitted to the department.

I.K. Gujral Punjab Technical University Jalandhar

BVEDM201-26 Marketing Management

Course Outcomes:

CO#	Course outcomes
CO1	Explain the fundamental concepts of marketing, including needs, wants, demands, customer value, satisfaction, functions of marketing, and the importance of marketing in business and society.
CO2	Differentiate between various marketing philosophies such as Production Concept, Product Concept, Selling Concept, Marketing Concept, and Holistic Marketing Concept, and apply the elements of the Marketing Mix (7Ps) in business situations.
CO3	Analyze markets using segmentation, targeting, and positioning strategies, and identify appropriate bases for market segmentation to serve different customer groups effectively.
CO4	Understand the process and significance of Marketing Research, and apply research techniques in areas such as Consumer Research, Market Research, Product Research, Sales Research, and Advertising Research for managerial decision-making.

Detailed Contents

Unit 1:

Meaning and Definition of Marketing- Features of Marketing- Importance of Marketing – Functions of Marketing - Core Concept of Marketing - Need, Want, Demand, Value and Satisfaction

Unit 2:

Production, Concept, Product concept, selling concept Marketing concept, holistic Marketing concept. Marketing Mix: Meaning, Seven Ps of marketing mix.

Unit 3:

Market Segmentation: Concept and importance of Market Segmentation, Bases of market segmentation, Concept of Market Targeting and Positioning.

Unit 4:

Marketing Research: Meaning and Importance, Process of Marketing Research. Scope/Areas of Marketing Research: Consumer Research, Market Research, Product Research, Sales Research, Advertising & Sales Promotional Research

Text Books:

1. Philip Kotler: Marketing Management, Prentice Hall of India Ltd, New Delhi.
2. S. A. Sherlekar, “Marketing Management”, Himalaya Publishing House, Mumbai.
3. Marchand & B.Vardharajan: An introduction to Marketing, Vikas Publishing House, 5 Ansari Road, New Delhi.
4. Biplab S. Bose – Marketing Management Himalaya publishing House, Edition -2009
5. William I. Stanton, Ajay Pandit-Marketing Concepts & Cases,- The McGraw Hill companies Ltd. New Delhi.

I.K. Gujral Punjab Technical University Jalandhar

BVEDM202-26 Internet Applications

Course Outcomes:

CO#	Course outcomes
CO1	Understand the fundamentals of the Internet, Internet Services, Internet Addressing, Internet Service Providers (ISP), and explain the working of various Internet protocols and the World Wide Web (WWW).
CO2	Demonstrate the use of Internet applications including web browsing, search engines, FTP, Telnet, HTTP, TCP/IP, and perform efficient information retrieval using various search techniques.
CO3	Analyze the concepts of Intranet and Extranet, their applications, business value, working principles, and distinguish between different network environments.
CO4	Apply E-mail services effectively by creating, sending, receiving, organizing and managing e-mails, and demonstrate the implementation of e-mail clients such as Outlook Express for electronic communication.

Detailed Contents

Unit 1:

Introduction: About internet and its working, business use of internet, services offered by Internet, evaluation of internet, internet service provider (ISP), windows environment for dial up Networking (connecting to internet), audio on internet, internet addressing (DNS) and IP addresses).

Unit 2:

Internet Protocol: Introduction, file transfer protocol (FTP), Gopher, Telnet, other protocols like HTTP and TCP/IP. WWW: Introduction, working of WWW, Web browsing (opening, viewing, saving and printing a web page and bookmark),

Unit 3:

Search Engine: About search engine, component of search engine, working of search engine, Difference between search engine and web directory. Intranet and Extranet: Introduction, application of intranet, business value of intranet, working of intranet, role of extranet, working of extranet, difference between intranet and extranet.

Unit 4:

E-Mail Basic Introduction; Advantage and disadvantage, structure of an e-mail message, working of e-mail (sending and receiving messages), managing e-mail (creating new folder, deleting messages, forwarding messages, filtering messages) Implementation of outlook express.

Text Books:

1. "Understanding The Internet", Kieth Sutherland, Butterworth-Heinemann; 1st Edition(October 31, 2000).
2. "Internet Technologies", S. K. Bansal, APH Publishing Corporation (April 1, 2002).
3. "Data Communications and Networking", Behrouz A. Forouzan, 3rd Edition.

BVEDM203-26 Social Media Marketing & SEO

Course Outcomes:

CO#	Course outcomes
CO1	Understand the concepts of Digital Marketing and distinguish between Traditional Marketing and Digital Marketing. Apply Google Search Console tools to manage, monitor and optimize website visibility in search engines.
CO2	Configure and use Google Analytics to analyze website traffic, user behavior, goals, conversions, bounce rate and customized reports for data-driven decision making.
CO3	Develop Social Media Marketing campaigns using Facebook, Twitter and YouTube, and apply social media optimization techniques to enhance online presence and audience engagement.
CO4	Design and execute Email Marketing campaigns and integrate various digital marketing tools to create and evaluate effective digital marketing strategies for businesses.

Detailed Contents

Unit 1:

Introduction to Digital Marketing

Key Concepts of Digital Marketing, Traditional Marketing vs. Digital Marketing, The Opportunity of Digital Marketing, Characteristics of Digital Marketing, Implications of Digital Marketing, Strategies in Digital Marketing

Google Webmaster Tool

Introduction to Webmaster Tools, Start with the fundamentals, Get your site working on Webmaster Tools, Refine personal and site settings, Manage, monitor and maintain your site, Use the reports and features, Remove Content from Google, Search Traffic & Search Appearance, Google Index & Crawl, HTML Improvements, Sitemaps, Crawl Rate, Crawl Errors and Crawl Stats, Blocked URL's and Fetch as Google, Add and verify your new site to Webmaster Tools

Unit 2:

Google Analytics

Introduction to Google Analytics, How Google analytics works? Understanding Google Analytics Account Structure, Starting with Google analytics, How to set up analytics account, How to add analytics code in website, Understanding goals and conversions, How to setup goals? Understanding different types of goals, Understanding bounce & bounce rate, Difference between exit rate & bounce rate, How to reduce bounce rate? Understanding filters & segments? How to set up filters & segments? How to view customized reports? Monitoring traffic sources, Monitoring traffic behaviour

Unit 3:

SMO (Social Media Optimization) –Facebook, Twitter, YouTube

Introduction to Social Media, Types of Social Media, How Social Media is affecting Google Search, How to choose right social media, Integrating social media into your website and blogs, Facebook Marketing, Introduction to Facebook, Difference between Profiles, Places, Groups and Pages, Social media and communications strategy, Facebook Connect (Like, Share, Comment), Face

book pages (Creating, Managing, Retention), Pages (Dos & Don'ts), Face book Apps, Measuring and Monitoring, Sponsored Stories, Latest trends, Advantages and Challenges

Twitter Marketing

Introduction to Micro blogging and Twitter, Twitter Demographics, Use for reputation, promotion, sales, conversing, Who to follow, Tweeting, Searching tweets and users, Measuring Influence, Tools, Tracking Code, Twitter Account Promotion, How to Shorten and Measure your URLs

Unit 4:

Google + Marketing

What is Google Plus, Features, Tools & Techniques, Creating Profiles & Pages, Social Strategies and Tactics for Google+, Integration with your site, Google Plus: Circles | Hangouts | Stream, Google +1, Google Plus for Businesses, Photo Sharing Social Network : Picasa, Video Sharing Social Network : YouTube

Email Marketing

Introduction to Email Marketing, How Email Marketing Works, Sending Email

Text Books:

1. Puneet Singh Bhatia, Fundamentals of Digital Marketing, Pearson Education.
2. Raj Sachdev, Digital Marketing, McGraw Hill Education.
3. Seema Gupta, Digital Marketing, McGraw Hill Education.
4. Tanvi Gupta, Smita Mishra and Khushi Katyal, A Textbook on Digital Marketing, Puffins Publishers.
5. Avijit Kumar Roy and Aritra Kumar Roy, Text Book of Digital Marketing: Fundamentals, OrangeBooks Publication.

Reference Books:

1. Dave Chaffey and Fiona Ellis-Chadwick, Digital Marketing: Strategy, Implementation and Practice, Pearson Education.
2. Damian Ryan, Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation, Kogan Page.
3. Simon Kingsnorth, Digital Marketing Strategy: An Integrated Approach to Online Marketing, Kogan Page.
4. Gohar F. Khan and Marshall Sponder, Digital Analytics for Marketing, Routledge.
5. Ian Dodson, The Art of Digital Marketing, Wiley Publications.

BVEDM204-26 Web Technologies (HTML, DHTML & CSS)

Course Outcomes:

CO#	Course outcomes
CO1	Understand the fundamentals of Internet technologies and develop static web pages using HTML elements such as headings, paragraphs, lists, images, tables and hyperlinks.
CO2	Design interactive web pages using HTML forms, frames and multimedia elements with appropriate attributes and formatting techniques.
CO3	Apply Cascading Style Sheets (CSS) to create visually appealing web pages using selectors, colors, backgrounds, box model, positioning and layout techniques.
CO4	Develop responsive and multi-page websites by integrating HTML and CSS to meet modern web design standards and user requirements.

Detailed contents

Unit 1:

Internet Basics

Basic concepts, communicating on the internet, internet domains, internet server identities, establishing connectivity on the internet client IP address.

Introduction To HTML

Information Files Creation, Web Server, Web Client/Browser, Hyper Text Markup Language (HTML Tags, Paired Tags, Singular Tags), Commonly Used Html Commands (Document Head, Document Body), Title and Footer, Text Formatting (Paragraph Breaks, Line Breaks), Emphasizing Material in a Web Page (Heading Styles, Drawing Lines). Basic Formatting Tags HTML Basic Tags, Text Formatting (Paragraph Breaks, Line Breaks), Emphasizing Material in a Web Page (Heading Styles, Drawing Lines), Text Styles (Bold, Italics, Underline), Other Text Effects (Centering (Text, Images etc.), Spacing (Indenting Text), HTML Color Coding.

Unit 2:

Lists

Type of Lists (Unordered List (Bullets), Ordered Lists (Numbering), Definition Lists.

Adding Graphics to Html Documents

Using The Border Attribute, Using The Width and Height Attribute, Using The Align Attribute, Using The Alt Attribute.

Tables

Introduction (Header, Data rows, The Caption Tag), Using the Width and Border Attribute, Using the Cell padding Attribute, Using the Cell spacing Attribute, Using the BGCOLOR Attribute, Using the COLSPAN and ROWSPAN Attributes

Linking Documents

Links (External Document References, Internal Document References), Image as Hyperlinks.

Frames

Introduction to Frames: The tag, Targeting Named Frames. DHTML: Cascading Style Sheets, Style Tag.

Unit 3:

Forms Used by a Web Site

The Form Object, The Form Object's Methods (The Text Element, The Password Element, The Button Element, The Submit (Button) Element, The Reset (Button) Element, The Checkbox Element, The Radio Element, The Text Area Element, The Select and Option Element, The Multi Choice Select Lists Element).

Unit 4:

Introduction to CSS, Advantages of CSS, Types of CSS (Inline CSS, Internal CSS, External CSS), CSS Syntax and Selectors, Class Selector, ID Selector, Grouping Selectors, Colors and Backgrounds, Text and Font Properties, Borders and Margins, Padding, Box Model, Width and Height Properties, Styling Lists and Tables, Styling Links (Hover, Active and Visited States), Positioning (Static, Relative, Absolute and Fixed), Display Property, Float and Clear, CSS Pseudo Classes, CSS Flexbox Basics, Creating Responsive Web Pages, Linking External CSS with HTML.

Text Books/Reference Books:

1. Internet for EveryOne: Alexis Leon, 1st Edition, Leon Techworld, Publication, 2009.
2. Greenlaw R; Heppe, "Fundamentals of Internet and WWW", 2nd Edition, Tata McGraw-Hill, 2007.
3. Raj Kamal, "Internet & Web Technologies", edition Tata McGraw-Hill Education.2009.

E-Books/ Online learning material:

1. BayrossIvan, "HTML, DHTML, JavaScript, PERL, CGI", 3rd Edition, BPB Publication,2009.
2. Chris Payne, "Asp in 21 Days", 2nd Edition, Sams Publishing, 2003 PDCA.
3. A Beginner's Guide To Html [Http://www.Nesa.Nine.Edit/General/Internet/www/Html.Prmter](http://www.Nesa.Nine.Edit/General/Internet/www/Html.Prmter)
4. https://www.tutorialspoint.com/html/html_tutorial.pdf
5. <https://www.w3schools.com/js/>
6. <https://www.w3schools.com/html/>
7. https://www.cs.uct.ac.za/mit_notes/web_programming.html
8. http://www.pagetutor.com/table_tutor/index.html

I.K. Gujral Punjab Technical University Jalandhar

BVEDM205-26 Social Media Marketing and SEO (Lab)

Course Outcomes:

CO#	Course outcomes
CO1	Understand the fundamentals of Digital Marketing and create websites or blogs integrated with search engine tools and web analytics platforms.
CO2	Apply Google Search Console and Google Analytics to monitor website performance, analyze traffic, measure user behavior, and track conversions.
CO3	Develop and manage Social Media Marketing campaigns using Facebook, Twitter (X), YouTube and Email Marketing tools for brand promotion and customer engagement.
CO4	Design and execute a complete Digital Marketing Campaign by integrating Website/Blog, Search Engine Optimization, Web Analytics, Social Media Marketing and Email Marketing, and evaluate campaign performance using analytics reports.

Tasks	Details
Task 1:	Create a blog or website using Blogger/Google Sites and explain the difference between Traditional Marketing and Digital Marketing with suitable examples.
Task 2:	Register the website in Google Search Console, verify ownership, and submit an XML Sitemap.
Task 3:	Analyze website indexing, crawl status, search appearance, and generate a report using Google Search Console.
Task 4:	Create a Google Analytics account and integrate the tracking code with the website/blog.
Task 5:	Monitor website traffic, users, sessions, bounce rate, and traffic sources using Google Analytics.
Task 6:	Create goals and conversions in Google Analytics and analyze the conversion report.
Task 7:	Create and manage a Facebook Business Page. Publish promotional posts and integrate Like, Share, and Comment features.
Task 8:	Create a Twitter account for business promotion, publish tweets using hashtags, and analyze audience engagement.
Task 9:	Create a YouTube channel, upload a promotional video, optimize it using title, description, tags, and analyze video performance.
Task 10:	Design and execute an Email Marketing campaign using an email marketing tool. Create an email template, send the campaign, and analyze open rate and click rate.
Mini Project	Develop a complete Digital Marketing Campaign for a local business including Website/Blog, Google Search Console, Google Analytics, Social Media Marketing (Facebook/Twitter/YouTube), and Email Marketing. Prepare a final report with screenshots and analytics results.

Recommended Hardware & Software:

Computer System with minimum 8 GB RAM / Intel Core i3 or AMD Ryzen 3 Processor or higher / Minimum 256 GB SSD Storage / Digital Camera or Smartphone Camera for content creation and social media campaigns / Graphic Tablet (Optional) for designing graphics and creatives / Headphones with Microphone / Stable Internet Connectivity / Operating System: Windows 10/11 or Ubuntu Linux / Web

I.K. Gujral Punjab Technical University Jalandhar

Browser: Google Chrome or Mozilla Firefox / Graphic Design Tools: Adobe Photoshop / Canva / Adobe Illustrator / Video Editing Tools: CapCut / Adobe Premiere Rush / OpenShot / Website Creation Tools: Google Sites / Blogger / WordPress / Analytics Tools: Google Analytics / Google Search Console / Social Media Platforms: Facebook / Instagram / X (Twitter) / YouTube / LinkedIn / Email

Text Books:

1. Seema Gupta, Digital Marketing, McGraw Hill Education.
2. Puneet Singh Bhatia, Fundamentals of Digital Marketing, Pearson Education.
3. Vandana Ahuja, Digital Marketing, Oxford University Press.
4. Ian Dodson, The Art of Digital Marketing, Wiley Publications.

Reference Books:

1. Damian Ryan, Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation, Kogan Page.
2. Dave Chaffey and Fiona Ellis-Chadwick, Digital Marketing: Strategy, Implementation and Practice, Pearson Education.
3. Philip Kotler, Hermawan Kartajaya and Iwan Setiawan, Marketing 4.0: Moving from Traditional to Digital, Wiley Publications.
4. Simon Kingsnorth, Digital Marketing Strategy: An Integrated Approach to Online Marketing, Kogan Page.
5. Ryan Deiss and Russ Henneberry, Digital Marketing for Dummies, Wiley Publications.

I.K. Gujral Punjab Technical University Jalandhar

BVEDM206-26 Web Technologies (HTML, DHTML & CSS) LAB

Course Outcomes:

CO#	Course outcomes
CO1	Demonstrate the fundamentals of Internet technologies and create well-structured web pages using HTML tags, text formatting, lists, images and hyperlinks.
CO2	Design and develop web pages using tables, frames and forms with appropriate HTML elements and attributes.
CO3	Apply Cascading Style Sheets (CSS) to create visually appealing web pages using selectors, colors, backgrounds, box model and layout properties.
CO4	Develop responsive and multi-page websites by integrating HTML and CSS to meet user requirements and modern web design standards.

Tasks	Details
Task 1:	Create a simple HTML webpage demonstrating basic HTML structure, headings, paragraphs, line breaks, horizontal lines and text formatting tags.
Task 2:	Design a webpage using different heading styles, text alignment, spacing and HTML color coding.
Task 3:	Create a webpage using Bold, Italic, Underline and other text formatting effects.
Task 4:	Create Ordered Lists, Unordered Lists and Definition Lists with suitable examples.
Task 5:	Insert images in a webpage using Border, Width, Height, Align and Alt attributes.
Task 6:	Design HTML tables using Header, Caption, Border, Cell Padding, Cell Spacing, Background Color, Colspan and Rowspan attributes.
Task 7:	Create hyperlinks for external webpages, internal webpages and images as hyperlinks.
Task 8:	Design webpages using Frames and create navigation between different frames using named targets.
Task 9:	Create a Student Registration Form using Text Box, Password Box, Radio Button, Check Box and Text Area.
Task 10:	Design Login and Feedback Forms using Select Box, Submit Button and Reset Button.
Task 11:	Apply Inline CSS to format text, headings, backgrounds and images.
Task 12:	Create webpages using Internal CSS and External CSS for styling multiple pages.
Task 13:	Apply CSS properties such as Colors, Backgrounds, Borders, Margins, Padding and Box Model.
Task 14:	Design and style Lists, Tables and Hyperlinks using CSS.
Task 15:	Create a Responsive Website consisting of Home, About, Gallery and Contact pages using HTML and CSS.

Recommended Hardware & Software:

Computer System with minimum 4 GB RAM, Intel Core i3 Processor or higher, Minimum 100 GB Free Disk Space, Internet Connectivity ,Operating System: Windows 10 or above, Web

I.K. Gujral Punjab Technical University Jalandhar

Browser: Google Chrome, Mozilla Firefox, Text Editor: Notepad++, Visual Studio Code, Web Development Tools: HTML5, CSS3, Web Browser Developer Tools, Office Suite: Microsoft Office or LibreOffice, PDF Reader: Adobe Acrobat Reader.

Text Books:

1. Jon Duckett, *HTML and CSS: Design and Build Websites*, Wiley Publications.
2. Terry Felke-Morris, *Basics of Web Design: HTML5 and CSS*, Pearson Education.
3. Elisabeth Robson and Eric Freeman, *Head First HTML and CSS*, O'Reilly Media.
4. Zak Ruvalcaba, Anne Boehm and Mary Delamater, *Murach's HTML and CSS*, Murach Publications.

Reference Books:

1. Jennifer Niederst Robbins, *Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript and Web Graphics*, O'Reilly Media.
2. Elizabeth Castro and Bruce Hyslop, *HTML and CSS: Visual QuickStart Guide*, Peachpit Press.
3. Paul McFedries, *Web Design Playground: HTML and CSS the Interactive Way*, Wiley Publications.
4. Keith J. Grant, *CSS in Depth*, Manning Publications.
5. Matthew MacDonald, *HTML5: The Missing Manual*, O'Reilly Media.

EMC-101	L	T	P
Entrepreneurship Setup and Launch	0	0	4

Introduction:

This semester lays the foundation for the learner to understand what entrepreneurship is, beyond just starting a business. It introduces key ideas like problem-solving, value creation, and self-awareness. The learner will begin exploring basic business concepts while discovering their own interests and strengths.

Learners Objective:

1. Understand the core concepts of entrepreneurship through relatable, real-life examples.
2. Begin to see themselves as problem-solvers and creators.
3. Learn about business paths and choose one to try based on interest or local fit.
4. Launch a micro-hustle (online or offline) to earn their first income.
5. Build confidence and self-belief by doing.

Outcome: By the end of this semester, learners will start a simple business activity, earn their first income, and build belief in their ability to do business.

Guiding Principles/Approach:

This syllabus is built on principles of **experiential learning, growth mindset development, and identity-first learning**. Drawing from learning science and behavior design, the course shifts students from passive learning to *active doing*, where they try out small business activities in real contexts. The design helps students not just learn entrepreneurship but begin to see themselves as entrepreneurs. Emphasis is placed on *small wins, peer collaboration, and locally relevant opportunities* to ensure learning feels achievable and connected to their realities. The curriculum focuses on conceptual understanding without heavy theory, combining *practical action, reflection, and collaboration*. *By making progress visible and success feel possible, it plants the seeds of self-reliance, initiative, and long-term motivation.*

Semester Syllabus:

Format: 12 weeks, 4 hours/week | 2 credits

Revenue Target: ₹10,000

Week	Learning Goal	Measurable Outcome
1	Understand what entrepreneurship is and who can be an entrepreneur	Students define entrepreneurship in their own words and list 2 entrepreneurs from their local area or community
2	Connect personal identity to entrepreneurship (strengths, interests, struggles)	Students create a “value map” showing how a skill/interest/problem from their life could become a business opportunity

3	Learn about 5 business paths: content creation, drop-shipping, cloud kitchen/food business, gig economy and local services	Students explore 1–2 examples from each domain and share one they’re most curious to try and why
4	Choose a path and generate a basic business idea	Students write down a clear offer (what, for whom, why) and one way to reach their customer
5	Take first real action: message, post, pitch, or sell	Students reach out to or serve 1 real potential customer and record what happened
6	Reflect on first attempt and share with peers	Students share their result, a challenge faced, and one idea to improve next time
7	Improve and try again: aim for first ₹100	Students apply a change, try again, and aim to make their first ₹100 or get meaningful response
8	Learn how to identify and understand your target customer	Students talk to 2 potential customers or observe them and list 3 insights about their needs
9	Learn how to serve your target audience better	Students improve one part of their offer (product, delivery, messaging, or interaction) based on customer feedback or need
10	Explore core entrepreneurial values (resilience, honesty, effort)	Students reflect on 1 value they’re building and show it in a business task or peer story
11	Focus on earning and staying consistent	Students complete a second earning task and track their consistency (e.g., same product or message for 3 days)
12	Reflect on earnings, grit, and how to keep going	Students record total earnings, one resilience moment, and one support system or habit they’ll continue with

Weekly Component:

Component	Duration	Description
Learning Module	~1.5 hrs	- Introduces key concepts in a simple and engaging way - Includes, examples, and 1–2 interactive discussions or quizzes
Action Lab	~2 hrs	- Hands-on task on the weekly concept - Includes step-by-step guidance, templates, and worksheets - Ends with a submission (e.g., video, reflection, or proof of action)
Resources	Self-paced	- Supplementary videos, short readings, real- life stories, and tools to deepen understanding at their own pace

Evaluation Criteria

Evaluation Component	Description	Weightage
Weekly Task Completion	Timely submission of weekly tasks including reflections, activities, quizzes etc.	40%
Target Completion	Performance-based evaluation on hitting revenue or profit targets (e.g., generating ₹10,000 revenue)	30%
Final Project	A comprehensive project based on the semester's theme	30%

Week 1: What is Entrepreneurship? Who Can Be an entrepreneur?

INTRODUCTION: Could *You* Be an entrepreneur?

When people hear “entrepreneur,” they often think it means having a company, investors, or an MBA. Some even believe it's only for toppers or those with high grades. But entrepreneurship is more about mindset than qualifications: it's about seeing a problem and doing something about it. Like someone who starts selling snacks because their school canteen is always shut, or a friend who fixes broken chargers for others. If you've ever spotted a need and thought, “I can solve this,” - you’ve already taken your first step.

Component 1: Learning Module (~1.5 hours) Unit 1:

What is Entrepreneurship?

1. *Solving problems or creating value in exchange for money.*
2. Entrepreneurship is not just about starting a company: it's about initiative, resourcefulness, and value creation.
3. Different types of entrepreneurs: small shop owners, street vendors, YouTubers, local tailors, mechanics, and more.
4. Entrepreneurs build opportunities instead of waiting for them.

Simple Slide/Visual Aid Tip:

A circle that says "Problem", an arrow pointing to "Solution", then an arrow to "Earn". That's entrepreneurship.

<A video that visually shows how entrepreneurship starts with spotting a problem (e.g., long food lines), creating a solution (e.g., pre-order lunch service), and earning from it: illustrating the simple flow: Problem → Solution → Earn>

MCQ 1

Q: What best describes entrepreneurship?

- A. Getting a job in a company
- B. Solving problems for others and earning from it ☒
- C. Studying business in college
- D. Buying expensive things

Feedback:

1. *Correct! Entrepreneurs solve problems or offer value and get paid for it.*
2. *Not quite! Entrepreneurship is about creating something useful, not just getting a job or studying.*

Unit 2: Who Can Be an entrepreneur?

Entrepreneurship starts with spotting a problem, finding a solution, and creating value. Today, anyone with a phone and an internet connection can start a business: money helps, but mindset and initiative matter more at the start.

You just need:

1. A problem to solve
2. A simple skill or product
3. The courage to start small

Examples Carousel (Swipeable cards)

1. **Pooja (India)** – Sells handmade rakhis on Instagram, learned designing on YouTube.
Problem she saw: Expensive or generic rakhis in the market; no personal touch.
2. **Luis (Mexico)** – Repairs used phones in his garage, now has loyal customers.
Problem he saw: Many people couldn't afford new phones or didn't trust local repair shops.
3. **Sana (Kolkata)** – Started tiffin delivery from her home kitchen, now earns ₹500/day.
Problem she saw: Office workers struggled to find affordable, homemade meals.
4. **Sal Khan (USA)** – Started Khan Academy with YouTube lessons to help his cousin.
Problem he saw: His cousin needed help with math, but good learning resources were hard to access.

MCQ

Q: Which of these can be a form of entrepreneurship?

- A. Making reels on skincare tips and selling homemade face packs 
- B. Buying new clothes from malls
- C. Studying engineering
- D. Playing games without sharing or streaming

Feedback:

1. *Correct! Sharing useful tips + selling a product = solving a need!*
2. *Try again! Entrepreneurship is about creating value and helping others.*

Reflection Prompt

1. If you had to earn ₹100 this week, what would you do?

Component 2: Action Lab (~2 hours) Task

Find & Learn from 2 Entrepreneurs Near You

Steps (Checklist):

1. Look around your neighborhood or online: find 2 people who earn through their own work
2. Ask or observe:
 - a) What do they do?
 - b) How do they earn?

- c) What makes them entrepreneurial?
- 3. Use the **Entrepreneur Tracker Template** (available in the resources tab)

Final Deliverable

Learner submits:

- 1. A short definition of entrepreneurship (in their words)
- 2. 2 entries from the Entrepreneur Tracker (name, what they do, what learner learned)

→ Submitted in the submissions tab.

Supplementary Resources (Optional)

- 1. [Danny O'Neill - Getting started | Entrepreneurship | Khan Academy](#)
- 2. [The Better India – Stories of local entrepreneurs](#)

Week 2: Can I Be an entrepreneur?

INTRO – What Makes an entrepreneur?

You don't need a suit, a degree, or a lot of money to be an entrepreneur.

You need one thing: a mindset. Entrepreneurs notice problems around them: and do something about it. From the boy fixing bikes outside his house to the girl teaching dance on Instagram, they all started small. What matters most is not what you have: it's how you think and act.

Component 1: Learning Module (~1.5 hours)

Unit 1: What Makes an entrepreneur?

Key Concepts:

1. **Entrepreneurs are driven by curiosity:** they ask questions, explore possibilities, and seek better ways to do things.
2. **They take initiative:** they act, experiment, and create using limited resources with creativity and courage
3. **They learn by doing:** embracing mistakes as stepping stones to progress.
4. **They take full ownership:** one day they're the marketer, the delivery person, and the customer support, all in one.
5. **They are resilient:** they persist through challenges, adapt to change, and keep moving forward with purpose.

Real-Life Examples:

1. Nithin & Nikhil Kamath (Zerodha) – Started India's largest stock brokerage without formal degrees or external funding, just deep curiosity about stock markets and a desire to simplify investing.
2. *Qualities: Took initiative early and stayed persistent through challenges.*
3. Prajakta Koli (MostlySane) – Started by making comedy sketches about everyday Indian life: family, school, relationships: and became one of India's top digital creators.
4. *Qualities: Stayed consistent, adapted over time, and built strong audience trust.*
5. Tilak Mehta (Paper n Parcels) – As a teenager, launched a courier startup using Mumbai's dabbawala network for delivery.
6. *Qualities: Thought creatively and acted with confidence at a young age.*

Unit 2: Start Small: Build Ideas from What You Know

In the last unit, you learned that entrepreneurs don't just have ideas: they act, solve problems, and use what they have.

But the big question now is:

“What can I offer?”

That's where the Value Map comes in. It helps you take your first step toward thinking and acting like an entrepreneur: in your own way.

What is a Value Map?

A Value Map connects three simple things:

A. What people around you need

→ *Look around: is there something people often struggle with or something that could be better?*

B. What you *enjoy* or are *willing to try*

→ *You don't need to be an expert. Start with small things you like doing: talking to people, fixing, organizing, helping, designing, or learning something new.*

→ *Even if you're just curious about something: that's enough to begin.*

C. What solution you can create

→ *Use what you enjoy or are learning to try solving a real need around you: even in a small way*

Visuals:

3 overlapping circles:

1. “People Need”
2. “I Can”
3. “My Offer”

Examples:

1. People Need → Affordable meals

I Can → Cook + have access to home kitchen My Offer → ₹40 tiffin service

2. People Need → Study tips in Punjabi I Can → Speak clearly + love teaching

My Offer → 3-minute video tips on Instagram

MCQ

Q: What's the first step to being an entrepreneur?

- A. Waiting for the perfect idea
- B. Solving a problem with your skills 
- C. Buying a shop
- D. Studying for years

Feedback:

1. *Correct! Entrepreneurs start by solving small problems using what they already have.*
2. *Try again! It's not about waiting: it's about starting.*

Reflection Prompt

1. If someone gave you ₹500 and asked you to earn from it, what would you do?

Component 2: Action Lab (~2 hours)**Task: Create Your Personal Value Map Steps (checklist in app):**

1. Think of 2–3 problems people face around you (hunger, phone repair, boredom, etc.)
2. List your own skills, interests, or resources.
3. Match each problem with something you could offer.
4. Use the **Value Map Template in the resources** to organize your ideas.

Final Deliverable (Submitted in App):

1. Your completed **Value Map** (in 3 columns: Need, Skill, Offer)
2. Highlight **1 idea** you'd like to explore for your future hustle

Supplementary Resources (Optional)

1. "Start with Why" by Simon Sinek
2. [10 Characteristics of Successful Entrepreneurs | Business: Explained](#)

Course Outcomes:

1. Students will enable to understand environmental problems at local and national level through literature and general awareness.
2. The students will gain practical knowledge by visiting wildlife areas, environmental institutes and various personalities who have done practical work on various environmental Issues.
3. The students will apply interdisciplinary approach to understand key environmental issues and critically analyze them to explore the possibilities to mitigate these problems.
4. Reflect critically about their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world

UNIT-1: Introduction to Environmental Studies

Multidisciplinary nature of Environmental Studies: Scope & Importance

Need for Public Awareness

UNIT-2: Ecosystems

Concept of an Ecosystem: Structure & functions of an ecosystem (Producers, Consumers & Decomposers)

Energy Flow in an ecosystem: Food Chain, Food web and Ecological Pyramids

Characteristic features, structure & functions of following Ecosystems:

- Forest Ecosystem
- Aquatic Ecosystem (Ponds, Lakes, River & Ocean)

UNIT-3: Natural Resources

Renewable & Non-renewable resources

Forest Resources: Their uses, functions & values (Biodiversity conservation, role in climate change, medicines) & threats (Overexploitation, Deforestation, Timber extraction, Agriculture Pressure), Forest Conservation Act

Water Resources: Their uses (Agriculture, Domestic & Industrial), functions & values, Overexploitation and Pollution of Ground & Surface water resources (Case study of Punjab), Water Conservation, Rainwater Harvesting,

Land Resources: Land as a resource; Land degradation, soil erosion and desertification

Energy Resources: Renewable & non-renewable energy resources, use of alternate energy resources (Solar, Wind, Biomass, Thermal), Urban problems related to Energy

I.K. Gujral Punjab Technical University Jalandhar

UNIT-4: Biodiversity & its conservation

Types of Biodiversity: Species, Genetic & Ecosystem

India as a mega biodiversity nation, Biodiversity hot spots and biogeographic regions of India

Examples of Endangered & Endemic species of India, Red data book

UNIT-5: Environmental Pollution & Social Issues

Types, Causes, Effects & Control of Air, Water, Soil & Noise Pollution

Nuclear hazards and accidents & Health risks

Global Climate Change: Global warming, Ozone depletion, Acid rain, Melting of Glaciers & Ice caps, Rising sea levels

Environmental disasters: Earthquakes, Floods, Cyclones, Landslides

UNIT-6: Field Work

Visit to a National Park, Biosphere Reserve, Wildlife Sanctuary

Documentation & preparation of a Biodiversity (flora & fauna) register of campus/river/forest

Visit to a local polluted site : Urban/Rural/Industrial/Agricultural

Identification & Photography of resident or migratory birds, insects (butterflies)

Public hearing on environmental issues in a village

Suggested Readings:

1. Bharucha, E. Text Book for Environmental Studies. University Grants Commission, New Delhi.
2. Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd. Bikaner.
3. Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad – 380 013, India, Email:mapin@icenet.net (R)
4. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p
5. Clark R.S., Marine Pollution, Clanderson Press Oxford (TB)
6. Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001, Environmental Encyclopedia, Jaico Publ. House, Mumabai, 1196p
7. De A.K., Environmental Chemistry, Wiley Eastern Ltd.
8. Down to Earth, Centre for Science and Environment (R)
9. Gleick, H.P. 1993. Water in crisis, Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute Oxford Univ. Press. 473p
10. Hawkins R.E., Encyclopedia of Indian Natural History, Bombay Natural History Society, Bombay (R)
11. Heywood, V.H & Waston, R.T. 1995. Global Biodiversity Assessment. Cambridge Univ. Press 1140p.
12. Jadhav, H & Bhosale, V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284 p.

I.K. Gujral Punjab Technical University Jalandhar

13. Mckinney, M.L. & School, R.M. 1996. Environmental Science systems & Solutions, Web enhanced edition. 639p.
14. Mhaskar A.K., Matter Hazardous, Techno-Science Publication (TB)
15. Miller T.G. Jr. Environmental Science, Wadsworth Publishing Co. (TB)
16. Odum, E.P. 1971. Fundamentals of Ecology. W.B. Saunders Co. USA, 574p
17. Rao M N. & Datta, A.K. 1987. Waste Water treatment. Oxford & IBH Publ. Co. Pvt. Ltd. 345p.
18. Sharma B.K., 2001. Environmental Chemistry. Geol Publ. House, Meerut
19. Survey of the Environment, The Hindu (M)
20. Townsend C., Harper J, and Michael Begon, Essentials of Ecology, Blackwell Science (TB)
21. Trivedi R. K. and P.K. Goel, Introduction to air pollution, Techno-Science Publication (TB)
22. Wanger K.D., 1998 Environmental Management. W.B. Saunders Co. Philadelphia, USA 499p

I.K. Gujral Punjab Technical University Jalandhar
BMPD202-18 Mentoring and Professional Development

Guidelines regarding Mentoring and Professional Development

The objective of mentoring will be development of:

- Overall Personality
- Aptitude (Technical and General)
- General Awareness (Current Affairs and GK)
- Communication Skills
- Presentation Skills

The course shall be split in two sections i.e. outdoor activities and class activities.

For achieving the above, suggestive list of activities to be conducted are:

Part – A
(Class Activities)

1. Expert and video lectures
2. Aptitude Test
3. Group Discussion
4. Quiz (General/Technical)
5. Presentations by the students
6. Team building Exercises

Part – B
(Outdoor Activities)

1. Sports/NSS/NCC
2. Field Project
3. Society Activities of various students chapter i.e. ISTE, SCIE, SAE, CSI, Cultural Club, etc.

Note: Evaluation shall be based on rubrics for Part – A & B.

Mentors/Faculty incharges shall maintain proper record student wise of each activity conducted and the same shall be submitted to the department.

**Disaster Management and Preparedness
(Non-Credit Course)
UGDM-101-26**

**Model Course Curriculum (Undergraduate level – All disciplines)
Credit Distribution, Eligibility and Pre-Requisites of the Course**

Course Code	SKILL ENHANCEMENT COURSE (DISASTER RISK REDUCTION)	Contact hours		L	T	P*	C
				1	0	2	2
Semester	II	Lecture	Practical	Type			
Course Title	Disaster Risk Reduction and Management: Skills for Safety and Resilience	15 (1 hour/ week)	30# (2 hours/ week)	Compulsory			
Credits	2			Undergraduate			
Eligibility	12 th Pass (recommended for I Year, II Semester)						
Total Marks	100			(50 Marks Internal and 50 Marks end semester exam)			
Course Objective:							
To equip students with the knowledge, skills and competencies to identify, assess, mitigate disasters and design effective disaster management plans and strategies at individual, institutional and community levels, aligning with national and global frameworks.							
Learning Outcome:							
By the end of this course, students will be able to:							
1. Identify hazards, vulnerabilities and risks at individual, institutional and community levels. 2. Outline the legal and institutional frameworks of DRR in India and globally. 3. Demonstrate life-saving skills, emergency communication, disaster response and risk mitigation techniques. 4. Utilize and implement basic tools and technologies for risk assessment, preparedness and resilience-building. 5. Prepare disaster management plans and design community awareness activities, or prototypes in regional/local contexts.							
Unit: 1	Understanding Disaster Risk Reduction and Management						
• Basic concepts and terminology: Hazard, Vulnerability, Capacity, Exposure, Disaster, Risk, Disaster Management & Disaster Risk Reduction. • Hazard profile of India: Regional profile. • Disaster Management Cycle: Mitigation, preparedness, response, relief, recovery, rehabilitation. • Policy and legal frameworks: DM Act 2005, DM Amendment Act 2025, National Policy, State-specific Acts; PM 10 Points agenda. • International frameworks: Sendai Framework, Paris Agreement, SDGs.							

- **Role of Institutions in DRR (overview only):** NDMA, NIDM, IMD, CWC, GSI, BIS, ISRO, INCOIS, SDMA, DDMA, NDRF.
- **Case studies of different disasters in India:** Lessons learned (minimum 2).

Unit: 2	Preparedness, Mitigation and Response Planning
----------------	---

- Framework for Developing Disaster Management Plans.
- Hazard, Vulnerability, Capacity and Risk (HVCR) Assessment tools and techniques: Transect walk, Hazard mapping, Problem tree, Chapatti diagram etc.
- Mitigation and Preparedness: Evacuation planning, mock drills, tabletop exercises; disaster-specific mitigation, Crowd Management techniques.
- Basics of Incident Response System (IRS).
- Role of emergency forces: NDRF, SDRF, police, fire services, armed forces, NCC, NSS.
- Planning for more vulnerable groups.
- Emerging technologies: Drones, digital literacy, mobile apps (GIRI tool, SAFAR, Meghdoot, UMANG, Sachet, CWC Flood Alerts, IMD, BIS, IHIP), social media for DRR.
- Basics of safe construction and structural & nonstructural audit exercise (safety of home/college buildings).
- Funding mechanisms for disasters in India.
- Emergency Communication Network.

Unit: 3	Life-Saving Skills
----------------	---------------------------

- **First Aid in disasters:** Golden hour concept, CPR, wounds, choking, burns, fractures, animal bites (snake/dog/rabid), heat-related illnesses, triaging, stampede.
- **Household and personal preparedness and protection:** 72-hour emergency kit, safe food storage, water purification, ORS use, water sanitation and hygiene (WASH) and Infection Prevention Control (IPC) practices, Basic Sign Language.
- **Search and Rescue methods.**
- **Fire safety and electrical/gas/LPG safety:** Causes, prevention, fire extinguisher demonstration, indigenous methods (Natural first-aid remedies- aloe vera, turmeric, coconut oil, salt solution); traditional risk-reduction practices.
- **Disaster-specific response:** Floods, landslides, earthquakes, CBRN emergencies, pandemics, drowning, lightning, gas leakage, cyclone, heatwave, coldwave.
- **Psychosocial support in DRR;** Steps for implementing psychological first aid and its importance.
- **Public health preparedness:** Public health impacts of various disasters, Prevention of post-disaster water-borne and vector-borne diseases.

Unit: 4	Field Exposure and Community Engagement
----------------	--

- **Field visits:** District Emergency Operations Centre, State Disaster Response Force/ National Disaster Response Force units, fire stations, State Emergency Operations Center, hazard-prone communities, heat-prone areas (flood-prone village, fire-vulnerable urban slum).
- **Practical exposure:** Mock drills, demonstrations and simulations (multi-hazard, evacuation, earthquake, flood); interaction with responders and officials (Aapda Mitras, National Cadet Corps/National Service Scheme/Nehru Yuva Kendra Sangathan, Red Cross).

- **Community Engagement projects:** Street plays (nukkad natak), awareness campaigns, DRR clubs (institute and community level clubs), Information, Education and Communication material (podcasts, videos, comics, photo essays, posters, Knowledge exchange webinars).
- **Environmental hazards:** Youth/community participation (tree plantation, soil conservation).
- **Project/assignment:** Preparation of institutional/household DM plan in local language; budget-friendly multi-disaster survival kit prototype; reflective field report, youth-led community engagement projects and creation of IEC/digital communication materials.
- **Multidisciplinary integration:** Links with local governments, HEIs, youth/adolescent networks.
- **Activities for mitigating disaster risks:** Increasing green cover, plantation and knowledge of human anatomy.
- **Interaction with:** State, district, gram panchayat level officials, DRR helpline numbers, and knowledge of physical resources required and available locally; interview /session with disaster survivors.

Total Lecture hours	15 hours
Total Practical hours (field/project/exercises)	30 hours
Total hours	45 Hours
Mode of Evaluation: Quizzes, Assignments, Multiple choice questions test, field work report, project, presentation, community activity, simulation	

* According to NEP 2020 guidelines, 2 credits of practical or field work are generally equivalent to 1 credit.

Inclusive of all practical/field visits/interactions/guest sessions.

Note: The approach of this course is to inculcate awareness of hazards and develop the capacity to respond to disasters with an aim for DRR. Hence, it is recommended to use the expertise of professionals during field visits and practical training. These professionals can be from the NDRF, SDRF, Indian Armed Forces, Firefighting department, medical and sports arenas and others who have first-hand experience and knowledge in such skills (a suggestive list is annexed).

Suggestive Resource Materials

Books/Handbooks

1. Sphere Handbook for humanitarian response standards.
Link: <https://spherestandards.org/handbook/>
2. Health emergency and disaster risk management framework (Health EDRM). WHO. Link: <https://www.who.int/publications/i/item/9789241516181>

Websites of Key Agencies

1. National Disaster Management Authority (NDMA): <https://ndma.gov.in>
India's apex body for policy and planning in disaster management.
2. National Institute of Disaster Management (NIDM): <https://nidm.gov.in>
Apex national level training and capacity-building institution for disaster risk reduction.
3. India Meteorological Department (IMD): <https://mausam.imd.gov.in>
Provides official weather forecasts, warnings and alerts.
4. Central Water Commission (CWC): <http://www.cwc.gov.in>
Responsible for flood forecasting and hydrological data.
5. Flood Forecasting Portal (FFWC): <https://ffs.india-water.gov.in/>
Real-time flood forecasting and inundation alerts for India.
6. Geological Survey of India (GSI): <https://www.gsi.gov.in>
Provides hazard maps and geological risk assessments.
7. India Disaster Resource Network (IDRN): <https://idrn.gov.in>
Inventory of emergency response resources across India.
8. Coalition for Disaster Resilient Infrastructure (CDRI): <https://cdri.world/>
Global initiative led by India for promoting resilient infrastructure.
9. Indian Space Research Organisation (ISRO): <https://www.isro.gov.in/>
Space agency of India; information regarding academic programmes and fellowships
10. Indian Institute of Remote Sensing: <https://www.iirs.gov.in/>
Research, educational programmes and resources related to remote sensing and geo-informatics
11. DRDO Avalanche Warning Bulletin: <https://drdo.gov.in/drdo/avalanche-warning-bulletin>
Snow and avalanche forecasts for high-altitude regions.
12. Building Materials and Technology Promotion Council (BMTPC): <https://www.bmtpc.org/>
Promoting sustainable, cost-effective, and disaster-resistant building materials and technologies
13. National Information Centre of Earthquake Engineering (NICEE) at IIT Kanpur:
<https://www.nicee.org/EQTips.php>
Learning Seismic Design and Construction

Mobile Applications

1. Bhooskhalan App (GSI)
Reports and monitors landslide events in India.
2. MausamGram App (IMD)
Hyperlocal weather forecast and alerts powered by IMD.
3. Sachet App (NDMA)
Alerts for natural and human-induced disasters and industrial safety incidents.
4. SAFAR (System of Air Quality and Weather Forecasting and Research):
<https://safar.tropmet.res.in/>
Real-time air quality and environmental health forecasting.

NDMA Booklets

1. AAPDA MITRA: A prime example of community-based disaster management: <https://ndma.gov.in/sites/default/files/IEC/Booklets/AAPDA%20MITRA%20A5%20BOOK%20Final.pdf>
2. DISABILITY INCLUSIVE DRR: Transformative journey towards a disability-inclusive society: <https://ndma.gov.in/sites/default/files/IEC/Booklets/Disability%20inclusive%20DRR.pdf>
3. BEATING THE HEAT: How India successfully reduces mortality due to heat waves: <https://ndma.gov.in/sites/default/files/IEC/Booklets/HeatWave%20A5%20BOOK%20Final.pdf>
4. PSYCHOSOCIAL CARE: Mitigating impact of disasters on mental health: <https://ndma.gov.in/sites/default/files/IEC/Booklets/Psychosocial%20A5%20Book.pdf>
5. REACHING OUT TO SAVE LIVES: How social media transformed India's readiness towards disasters: <https://ndma.gov.in/sites/default/files/IEC/Booklets/Social%20Media%20A5%20BOOK.pdf>
6. THUNDERSTORM AND LIGHTNING: Tackling weather hazards: <https://ndma.gov.in/sites/default/files/IEC/Booklets/Thunderstorm%20Lightning%20NDMA%20A5%20BOOK%20New.pdf>

NIDM Training Modules and Guidelines

1. Do's and Don'ts for Common Disasters: https://nidm.gov.in/PDF/IEC/DOS_E_24.pdf
Simple safety instructions for major disasters.
2. Community-based disaster risk management: https://nidm.gov.in/PDF/Modules/ToTModule_CBDRM2025.pdf
3. Management of crowds at large congregations: https://nidm.gov.in/PDF/Modules/TrgMod_CrowdatLargeCongregations.pdf
4. Climate change and extreme events risk reduction: https://nidm.gov.in/PDF/Modules/TM_CCEERR_23.pdf
5. Health adaptation and resilience to climate risks; https://nidm.gov.in/PDF/Modules/NIDM_HARCR2021.pdf
6. NIDM IEC Material: <https://nidm.gov.in/iec.asp>
Informational and awareness-raising content on DRR.
7. Social and Behavioural Change Communication (SBCC) Training Module: https://nidm.gov.in/sbc_training_module.asp
Training content for behaviour change during disasters.
8. SBC Toolkit – Cyclone: https://nidm.gov.in/sbc_cyclone.asp
Preparedness and response strategies for cyclone-prone areas.
9. SBC Toolkit – Flood: https://nidm.gov.in/sbc_floods.asp
Community-level flood preparedness material.
10. SBC Toolkit – Earthquake: https://nidm.gov.in/sbc_eq.asp
Guidelines for earthquake risk reduction.
11. NIDRR Checklist and Planning Tools: <https://nidm.gov.in/pdf/sbc/DRR%20Checklist%20PDF%20for%20WEB.pdf>
Tools for local disaster preparedness planning.
12. NIDRR Communication Materials User Guide: <https://nidm.gov.in/pdf/sbc/NIDM%20User%20Guide%20Communication%20Material%20PDF%20for%20WEB.pdf>
Reference for community-level communication campaigns.

13. NIDM Training Modules: <https://nidm.gov.in/modules.asp>
Topic-wise training modules for educators and practitioners.

Other Key Materials

1. NDMA Awareness Booklets: <https://ndma.gov.in/Resources/booklets>
Official illustrated booklets on various disaster types.
2. Indian Red Cross Society: <https://indianredcross.org>
Offers first aid, blood services, and disaster relief training.
3. International Federation of Red Cross and Red Crescent Societies:
<https://www.ifrc.org>
4. NIDM Audio-Visual Material (YouTube): <https://www.youtube.com/@NIDMINDIA>
Videos, webinars, and documentaries on DRR.
5. UNDRR resources: <https://www.undrr.org/> Resources for global frameworks
6. Class 9–10 CBSE Teachers' Manual (Life Skills)

Resources on Youth Engagement for Disaster Risk Reduction

1. The Power of Youth Engagement in Disaster Risk Reduction activities (Technical Report · May 2020):
<https://www.researchgate.net/publication/351049159>
2. Participation in Disaster Risk Reduction (DRR) Education: Analysing the Practices, Issues and Challenges - Open Journal of Earthquake Research, 2023, 12, 198-222:
<https://www.scirp.org/journal/ojer>
3. Youth Participation in Disaster Risk Management and Climate Change Adaptation (Book · October 2023): <https://www.researchgate.net/publication/382973623>
4. Nalla, V., & Ranjit, N. (Eds.). (2022). Afterwards: Graphic narratives of disaster risk and recovery from India. Indian Institute for Human Settlements. <https://doi.org/10.24943/9788195648559>

Online courses

• NIDM

1. Comprehensive Disaster Risk Management Framework (CDRMF):
https://elearning.nidm.gov.in/enrol/blpayment/course_overview.php?id=193
2. Gender Aspects of Disaster Recovery and Reconstruction:
https://elearning.nidm.gov.in/enrol/blpayment/course_overview.php?id=187
3. Risk Sensitive Land Use Planning:
https://elearning.nidm.gov.in/enrol/blpayment/course_overview.php?id=191
4. Safe cities: https://elearning.nidm.gov.in/enrol/blpayment/course_overview.php?id=197
5. Community- Based Disaster Risk Management:
https://elearning.nidm.gov.in/enrol/blpayment/course_overview.php?id=217
6. Climate Change and Disaster Risk:
https://elearning.nidm.gov.in/enrol/blpayment/course_overview.php?id=216

• SWAYAM and NPTEL MOOCs:

1. Disaster Recovery and Build Back Better (BBB):
https://onlinecourses.nptel.ac.in/noc22_ar05/preview

2. Climate Change and Disaster Risk Management
https://onlinecourses.swayam2.ac.in/ntr25_ed113/preview
3. Disaster Management:
https://onlinecourses.swayam2.ac.in/ntr25_ed102/preview
4. Disaster Management:
https://onlinecourses.swayam2.ac.in/cec25_hs135/preview
5. Disaster Risk Reduction and Management:
https://onlinecourses.swayam2.ac.in/ini25_hs32/preview
- **NIDM courses on iGOT Karmayogi for government officials (<https://igotkarmayogi.gov.in>):**
 1. Dos and Don'ts of Disaster Preparedness
 2. Basics of Disaster Management
 3. School Safety: Hazard risk vulnerability analysis
 4. Crowd management
 5. School safety beyond structures: Planning and mitigation
 6. Flood management

Annexure - I

Fire Services Departments list

S. no.	State/ UT	Contact No.	E-mail	Website
1	Andaman & Nicobar	03192-230216	dgp@and.nic.in	http://andssw1.and.nic.in/ospfire/
2	Andhra Pradesh	040-23442944	vivekdube@hotmail.com	https://fireservices.ap.gov.in/
3	Arunachal Pradesh	0360-2212576	igp.arunpol@nic.com	https://anjaw.nic.in/divisions/fire-station/
4	Assam (Guwahati)	0361-2511329	info@asfso.org	https://fireandemergency services.assam.gov.in/
5	Bihar (Patna)	0612-2221191	sfocumdirector-bih@gov.in	https://fireservice.bihar.gov.in/
6	Chandigarh	91-98881117800	supdtfire42@gmail.com	https://web.archive.org/web/20140203030327/http://mcchandigarh.gov.in/firedept.htm
7	Chhatisgarh	+91-771-2512330 2512331, 2512332 2512333	-	https://cghgcd.gov.in/
8	Dadra & Nagar Haveli and Daman & Diu	0260-2242666 0260-2241101 0260-2241666/101	Sfo-dmn-dd@ddd.gov.in	https://fes.ddd.gov.in/Home/Contact_us
9	Goa	+91 7391047132 101 / 112	dir-fire.goa@nic.in	https://dfes.goa.gov.in/overview-functioning/contact-us/
10	Gujarat	0079-23259509	afes@ahmedabadcity.gov.in	https://fscop.gujfiresafetycop.in/Default.aspx
11	Haryana	0172-2704941	dulbhry@yahoo.co.in	-
12	Himachal Pradesh	0177-2629945	fire-hp@nic.in	https://himachal.nic.in/fire
13	Jammu & Kashmir	0191-2457821/3013	info.fesjk@jk.gov.in	https://www.fireandemergencyjk.co.in/

14	Jharkhand	9123461101	sfojhkfire@gmail.com	https://advantage.jharkhand.gov.in/fire/
15	Karnataka	91-80-22282392 22285659 22286632	md@kumbangalore.com ebiz.karnatakaonline1@gmail.com	https://ebiz.karnataka.gov.in/kum/ksfesd.aspx
16	Ladakh	91 -99062 62252	Ladakhfireservice101@gmail.com	-
17	Kerala	0471-2320872 2320868	dg.frs@kerala.gov.in	https://fire.kerala.gov.in/
18	Lakshadweep	04896-262258	lak-sop@nic.in	-
19	Madhya Pradesh	0755-2554081 82,2552356 2655367	lsbaghel.mpuad@gmail.com commuadmp@mpurban.gov.in	-
20	Manipur	0385-2450101 +91 8415925200	fireservice.mn@gov.in, nabamanipurfire@gmail.com	https://manipurfireservice.gov.in/
21	Meghalaya	0364-2224668	fes.meg@meghalaya.gov.in	https://megfireservice.gov.in/
22	Maharashtra	<u>022 69820555</u>	info@mahafireservice.gov.in	https://mahafireservice.gov.in/
23	Mizoram	0389-2341203	so.fire@mizoram.gov.in firemizo@gmail.com	https://fireservice.mizoram.gov.in/
24	Nagaland	0370-2221817	firedept-ngl@gov.in nlfnes@gmail.com	https://nfes.nagaland.gov.in/
25	New Delhi	011-23414000	director.dlfire@nic.in	https://dfs.delhi.gov.in/
26	Odisha	0671-2300317	cghomeguar dorrisa@gmail.com dircdodisha@gmail.com	www.odishafshgscd.gov.in

27	Puducherry	0413-2336677	Fire.pon@nic.in	https://fire.py.gov.in/
28	Punjab	09815941207 0172-2619278 2619145	dlgmsc123@ gmail.com dirlocalgovtpunjab @gmail.com	https://lgpunjab.gov.in/cms/fire-services.php
29	Rajasthan	0141-2222403	dlbrajasthan@ gmail.com	-
30	Sikkim	101, 03592-202001	controlroom@ sikkimfire.nic.in	https://sikkimfire.nic.in/About_us.htm
31	Tamil Nadu	9443655001/044- 28294129	tnfrs.tn@nic.in	https://www.tnfrs.tn.gov.in/
32	Telangana	040-23442955	ts_firechief@ yahoo.com	https://fire.telangana.gov.in/
33	Tripura	0381) 232-6451	dg.fire-tr@gov.in	http://www.fireservice.tripura.gov.in/
34	Uttarakhand	0135- 2654900/ 2712685	ddtfireukd@gmail. com	https://ukfireservices.com/uttarakhand_fire/
35	Uttar Pradesh	0522-2287236	shqup@gmail.com	www.upfireservice.gov.in
36	West Bengal	033-22527172	dg.wbfes@gmail. com	https://wbfes.gov.in/

Annexure - II

National Disaster Response Force battalions list

Unit	Address	Control Room No.	E-mail
1 st Battalion NDRF	1 st BN NDRF, Patgaon PO - Azara, Distt. Kamrup Metro, Guwahati - 781017	0361-2840027	assam01-ndrf[at] nic[dot]in
2 nd Battalion NDRF	2 nd BN NDRF Near RRI Camp. Haringhata Mohanpur, Nadia (West Bengal) Pin - 741246	033-25875032	wb02-ndrf[at] nic[dot]in
3 rd Battalion NDRF	3 rd BN NDRF, PO-Mundali Cuttack - Odisha Pin - 754013	0671-2879710	ori03-ndrf[at]nic[dot] in
4 th Battalion NDRF	4 th BN NDRF, Suraksha Campus, Arrakonam, Distt. Ranipet, Tamilnadu - 631152	04177-246594 9442140269	tn04-ndrf[at]nic[dot] in
5 th Battalion NDRF	5 th BN NDRF Sudumbare, Mavel, Pune Maharashtra-412109	9422315628 9422318427	mah05-ndrf[at] nic[dot]in
6 th Battalion NDRF	6 th BN NDRF, Jarod Camp Teh-Wagodia, Vadodara (Gujarat) Pin - 391510	9429199493	guj06-ndrf[at] nic[dot]in
7 th Battalion NDRF	7 th BN NDRF, Bibiwala Road Bhatinda (Punjab) Pin 151001	0164-2246030	pun07-ndrf[at] nic[dot]in
8 th Battalion NDRF	8 th BN NDRF, Kamla Nehru Nagar, Ghaziabad, UP Pin - 201002	0120-2766013	up08-ndrf[at] nic[dot]in
9 th Battalion NDRF	9 th BN NDRF, Bihata Patna Bihar, Pin-801103	8544415050 8544415049	patna-ndrf[at] nic[dot]in
10 th Battalion NDRF	10 th BN NDRF, Village Kondapavuluru, PO- Surampalli, Gannavaram Mandal Krishna (AP) PIN-521212	--	ap10-ndrf[at]nic[dot] in

11 th Battalion NDRF	11 th BN NDRF, Sanskritik Sankul, Maqbool Alam Road Varanasi, UP-221002	0542-2501202	up-11ndrf[at]gov-[dot]in
12 th Battalion NDRF	12 th BN NDRF, Itanagar Arunachal Pardesh-791112	0360-2999577	bn12[dot]ndrf[at]gov[dot]in
13 th Battalion NDRF	13 th BN NDRF, Ladhowal Ludhiana, Punjab-141008	0161-2921304	jk13[dot]ndrf[at]gov[dot]in
14 th Battalion NDRF	14 th BN NDRF, Nurpur Jassur, Kangra Himachal Pradesh PIN-176201	01893-292602	co14[dot]ndrf[at]gov[dot]in
15 th Battalion NDRF	15 th BN NDRF, PO-Gadarpur Distt - Udham Singh Nagar Uttarakhand, PIN-263152	05949-231198 7579098442	co15[dot]ndrf[at]gov[dot]in
16 th Battalion NDRF	16 th BN NDRF, Near Dada Dev Mandir Road, Sector-7 Dwarka, New Delhi PIN-110077	011-20893564	co16[dot]ndrf[at]gov[dot]in

Annexure - III

State Disaster Response Force list

State	Email id	Contact no.	Website
Andhra Pradesh	apsdrf@gmail.com	-	https://apsdma.ap.gov.in/apsdrf.php
Arunachal Pradesh	dirts@arunpol.nic.in	-	https://sdma-arunachal.in/sdrf/
Assam	asdmaghy@gmail.com	+91-361-2237221 (O) +91-361-2237010 (F)	https://sdrf.assam.gov.in/
Bihar	info@bsbma.org	+91-6115252028-29 (O)	state.bihar.gov.in/disastermgmt/
Chhattisgarh	dghomeguard.cg@gmail.com	+91-771-2512306 (O)	cghgcd.gov.in
Gujarat	control-pu@gujarat.gov.in	+91-79-23254442 (O)	http://www.gsdma.org/Content/creation-of-state-disaster-response-force-sdrf-4191
Goa	Dir-fire.goa@nic.in	(+91) 7391047132 101 1122225500 / 2423101 2425101 / 2455400	https://dfes.goa.gov.in/disaster-management/state-disaster-response-force/
Haryana	fcr@hry.nic.in	+91-172-2711925 (O) +91-124-2269913	http://hdma.gov.in/en/sdrf-norms
Himachal Pradesh	sp1-sdrf@hp.gov.in , sdma-hp@nic.in	+91-98160-06938 (M) +91-177-2626212(O)	hpsdma.nic.in/Index1.aspx?lid=1410&lsid=1460&pid=1457&lev=3&langid=1
Karnataka	dgp.ksfes@ka.gov.in	+91-80-25570733 (O) +91-80-22971501	https://ksdrf.karnataka.gov.in/en
Kerala	seoc.gok@gmail.com , keralasdma@gmail.com	+91-471-2364424 2331345 (O)	https://sdma.kerala.gov.in/sdrf/
Madhya Pradesh	secyhomep@mp.gov.in	+91-755-2708062 (O)	https://negd.gov.in/isl/Directory/statedata/25
Maharashtra	sdrfgrunagpur@gmail.com	+91-7104-238032 (F)	https://sdma.maharashtra.gov.in/en/
Manipur	sdrfgrunagpur@gmail.com	+91-385-2450038(O)	https://manipursdma.com/

Meghalaya	sdmadeptt007@gmail.com	+91-364- 2500053 (O)	https://msdma.gov.in/sdrf.html
Mizoram	jsdmr@gmail.com	+91-389-2315205 (O) 2322745 (F)	https://dmr.mizoram.gov.in/page/sdrf
Nagaland	homecommissioner.nagaland@gmail.com	+91-370-2270068(O) 2270071 (F)	https://nsdma.nagaland.gov.in/sdrf
Odisha	srcodishagov@gmail.com	+91-674-2534180(O)	https://www.osdma.org/#gsc.tab=0
Punjab	fcr@punjab.gov.in	+91-172-2743854(O), 2740904(O)	https://revenue.punjab.gov.in/?q=disaster-management-plans
Rajasthan	adgp.sdrf@rajpolice.gov.in , adgpsdrf@gmail.com	+91-141-2741927(O)	https://dmrelief.rajasthan.gov.in/content/raj/dmr/en/home.html#
Sikkim	NA	-	https://ssdma.nic.in/
Tamil Nadu	marutham28@gmail.com	+91-44-24328392(O)	https://www.tn.gov.in/go.php?dep_id=MjY=&year=MjAyMQ==
Tripura	sarat.kumar.das@gmail.com	+91-381-2413318/357(O) 2413318(F)	https://tdma.tripura.gov.in/
Uttar Pradesh	NA	+91-522-2238200(O) +91-522-2238084(F)	https://www.sdrfup.in/
Uttarakhand	cosdrf-police-uk@nic.in	+91-135-2410197(O) +91-9412057650	https://usdma.uk.gov.in/
West Bengal	ps.dmd-wb@nic.in	+91-33-22143674 501003(O), 22144005(F)	http://wbmdm.gov.in/Pages/Default.aspx
Dadra & Nagar Haveli and Daman & Diu	dmc-dnh@nic.in	+91-260-2630304 (O) 2641113 (F) +91-7874148005	https://daman.nic.in/state-disaster-managment-dd.aspx
Jammu and Kashmir	ighg@jkpolice.gov.in	+91-194-2455165 (O)	https://www.jkpolice.gov.in/jk-civil-defence
Ladakh	utdrfleh@gmail.com	+91-1982-251169(O)	https://ldma.ladakh.gov.in/
Lakshadweep	lak-sop@nic.in	+91-4896-262258(O)	https://lakshadweep.gov.in/disaster-management/

Annexure - IV

State Emergency Operations Centers list

S.no.	Ministry/State	Contact Number	Email	Website
1	National Emergency Response Center, Disaster Management Division, Ministry of Home Affairs	011-23438252 011-23438253 Help Line: 011-1070	dresponse-nerc@gov.in	https://ndmindia.mha.gov.in
2	Ministry of Railways	+9123382638(O) 9717641291(M)	safetycontrolrb@gmail.com	https://indianrailways.gov.in/index1.html
3	Andaman & Nicobar Island	03192-238880	statecontrolroom@gmail.com	https://ddm.and.nic.in/
4	Andhra Pradesh	08645-246600 0863-2377119 2377120,	seoc-apsdma@ap.gov.in	http://apsdma.ap.gov.in/
5	Arunachal Pradesh	-	arun01ddm@gmail.com	https://itanagar.nic.in/disaster-management/
6	Assam	+91-361-2237219 +91-361-2237377 +91-9401044617 +91-9435-592762	sdma-assam@gov.in, statedmcontrolroomassam@gmail.com	https://asdma.assam.gov.in/
7	Bihar	+91-612-2294204 +91-612-2294205	secy-disastermgmt-bih@nic.in	https://state.bihar.gov.in/disastermgmt
8	Chandigarh (UT)	+91-1722704048	civildefence.chandigarh@gmail.com	https://chandigarh.gov.in/departments/other-departments/sdma

9	Chhattisgarh	+91-7712221242 +91-7712510593	cgrelief@gmail.com	https://sdma.cg.nic.in/
10	Dadra & Nagar Haveli Daman & Diu	91-260-2253000 +91-260-112	eoc-dnhdd@nic.in	https://ddd.gov.in/
11	Delhi	0107, 011- 23982164, 23831077	ddma1077.delhi@ nic.in	https://ddma.delhi.gov. in/
12	Goa	+91-832-2419444 +91-832-2419446	usrev1-sect.goa@ nic.in , usrev2-sect. goa@nic.in	https://sdma.goa.gov. in/
13	Gujarat	+91-79-23251900 +91-79-23251903	revcontrol1@ gujarat.gov.in	http://gsdma.org/
14	Haryana	+91-172-2545938	sdmaharyana@ gmail.com	http://hdma.gov.in/en
15	Himachal Pradesh	+91-177-2628940	seocshimla@gmail. com, sdma_hp@ nic.in	https://hpsdma.nic.in/
16	Jammu & Kashmir	-	jksdma@gmail.com; jksdma@gmail.com, pcrjammuoff@ jkpolice.gov.in; pcrkashmir@gmail. com	https://jksdma.jk.gov. in/
17	Jharkhand	+91-651-2446923	dmjharkhand@ gmail.com	https://www.jharkhand. gov.in/home
18	Karnataka	080-22340676 080-22353980	sodmrevenue@ gmail.com	https://ksdma. karnataka.gov.in/ english

19	Kerala	+91-471-2364424	keralasdma@gmail.com	https://sdma.kerala.gov.in/
20	Laddakh (UT)	+91-1982-251169 +91-1982-260887 260888	igpladakh@gmail.com	https://leh.nic.in/document-category/disaster-management/
21	Lakshadweep	+91-4896-263100	controlroomkvt@gmail.com, lk-coll@nic.in, ldmaeoc@gmail.com	https://lakshadweep.gov.in/disaster-management/
22	Madhya Pradesh	+91-755-2441419 +91-755-2527177	reliefcom@nic.in	https://mpsdma.mp.gov.in
23	Maharashtra	+91-22-22027990 +91-22-22794229	controlroom@maharashtra.gov.in; director.dm@maharashtra.gov.in	https://rfd.maharashtra.gov.in/en
24	Manipur	+91-385-2443941 +91-385-2443441	ranjitoff@gmail.com	https://manipur.gov.in/?page_id=1649
25	Meghalaya	+91364-2502098	sdmadeptt007@gmail.com	https://msdma.gov.in/
26	Mizoram	+91-389-2342520 +91-389-2335837	mizoramdmr@gmail.com, dmr.gov@gmail.com	https://dmr.mizoram.gov.in/
27	Nagaland	0370-22911200	sdma.nagaland@gmail.com, seoc.nsdma@gmail.com	https://nsdma.nagaland.gov.in/home
28	Odisha	+91-6742534177	srcodishagov@gmail.com	https://www.osdma.org/?lang=en

29	Puducherry	+91-4132253407	seoc.pon@nic.in, eocpdy@gmail.com	https://puducherry-dt.gov.in/disaster-management/
30	Punjab	0172-2740298 Civil CR- 2740397 2740936 2440035 +91-172-2720153	sccr.pd2020@gmail.com	https://revenue.punjab.gov.in/?q=floodsnatural-calamities
31	Rajasthan	+91-1412227084	relief-rj@nic.in	https://dmrelief.rajasthan.gov.in/#
32	Sikkim	+91-3592201145	ssdma01@gmail.com	https://www.ssdma.nic.in/
33	Tamil Nadu	044-28593990 044-28414513	tnstateeoc@gmail.com	https://www.cra.tn.gov.in/disaster.php
34	Telangana	040-23454088 1079, 40-23454088	instaxx@telangana.gov.in, commr_dm@telangana.gov.in	https://fire.telangana.gov.in/
35	Tripura	+91-381-2416045 +91-381-2416241	scrtripura@gmail.com	https://tdma.tripura.gov.in/
36	Uttarakhand	+91-135-2710334	seoc.dmmc@gmail.com	https://usdma.uk.gov.in/
37	Uttar Pradesh	+91-522-2235083	rahat@nic.in	https://upsdma.up.nic.in/
38	West Bengal	+91-33-22143526 22141378(F)	wbdmeoc@gmail.com	http://wbdmd.gov.in/Pages/Default.aspx

Annexure - V

List of State Disaster Management Authorities

S. No.	States	Office Address	Email	Contact No.
1	Andhra Pradesh	Andhra Pradesh State Disaster Management Authority D.No:21/2B Pathuru Cross Road Centre Kunchanpalli (PO) Tadepalli Mandal Guntur District Andhra Pradesh-522501	commr_relief_rev@ap.gov.in	0863-2377099 0863-2377105
2	Arunachal Pradesh	Directorate of Disaster Management Daying Ering Colony Itanagar -791111	dcitanagar@gmail.com, dani.salu@gov.in danisulu@gmail.com	0360-2215581
3	Assam	Assam State Disaster Management Authority Ancillary Block, Janata Bahawan Dispur Guwahati-781006	sdma-assam@gov.in, statedmcontrolroomassam@gmail.com	0361-2237221
4	Bihar	Bihar State Disaster Management Authority Sardar Patel Bhawan 5 th Floor, D & E Block Nehru Path (Bailey Road) Patna, Bihar-800023	info@bsdma.org	0612- 2547232
5	Himachal Pradesh	Himachal Pradesh State Disaster Management Authority Disaster Management Cell, HP Secretariat, Shimla -171002	sdma-hp@nic.in	0177-2880321, 2880320, 2621022
6	Jharkhand	Disaster Management Authority, T. A. Division Building Near Gol Chakkar, Dhurwa, Ranchi, Jharkhand - 834004	dmjharkhand@gmail.com, sec-home-jhr@nic.in,	0651- 2400220, 2400700

7	Karnataka	Revenue Department (Disaster Management) Karnataka State Natural Disaster Monitoring Centre, Major Sandeep Unnikrishnan Road, Near Attur Layout, Yelahanka, Bangalore - 560 064	secy.dm@gmail. com director@ ksndmc.org, dmc. kar@gmail.com	080- 67355000, 22032995 22032495
8	Kerala	Kerala State Disaster Management Authority, Observatory Hills, Vikas Bhavan P.O. Kerala, Thiruvananthapuram- 695033	seoc.gok@gmail. com, Keralasdma@ gmail.com, sdma. kerala.gov.in commissioner dmkerala@gmail. com	471-2364424 2778888
9	Madhya Pradesh	Madhya Pradesh State Disaster Management Paryavaran Parisar E-5, Arera Colony, Bhopal-462016	secyhomep@ mp.gov.in, ed@ mp.gov.in, dmi@mp.gov.in reliefcom@mp.nic. in, mpstatecoord. sdma@mp.gov.in	-
10	Manipur	Directorate of Relief & Disaster Management, Babupara, DC complex, Imphal West, Manipur-795001	seocmanipur@ gmail.com cs-manipur@nic.in, secymanipurdm@ gmail.com	0385-2451144 , 2450064
11	Meghalaya	State Disaster Management Authority, Meghalaya, Shillong-793001	comsecy.sg.gom@ gmail.com, sdmadeptt-meg @gov.in,	0364-2223509
12	Mizoram	Disaster Management & Rehabilitation P.O Vaivakawn, Chawnpui Aizawl - 796009	mizoramdmr@ gmail.com, secydmr123@ gmail.com	0389 2342520

13	Nagaland	Nagaland State Disaster Management Authority, Civil Secretariat Kohima-797001	sdma.nagaland@gmail.com, nsdma.nagaland@gmail.com	0370-2270050
14	Odisha	Odisha State Disaster Management Authority Rajiv Bhawan Unit V, Odisha Bhubaneswar-751001	osdma@osdma.org, md@osdma.org	0674-2395398, 2395531
15	Sikkim	Sikkim State Disaster Management Authority, Land Revenue and Disaster Management Department, Tashiling Secretariat, Block-B Gangtok, Sikkim- 737101	directorssdma@gmail.com	03592201145
16	Tamil Nadu	Tamil Nadu State Disaster Management Authority, Ezhilagam, Chepauk, Chennai-600005	tnsdma.director@gmail.com tnsdma@tn.gov.in	044-28528745, 044-28523299
17	Tripura	Tripura Disaster Management Authority 1 st Floor, New Capital Complex, Secretariat, Tripura Agartala-799001	secydws.sanitation2023@gmail.com	0381 241 3357, 2418053, 2416045
18	Uttar Pradesh	UPSDMA, Pick up Bhawan, Vibhuti Khand, Gomtinagar Uttar Pradesh-226001	upsdma@gmail.com	0522-2306882, 2306823, 2723950,

19	Delhi	Delhi Disaster Management Authority (DDMA) 5, Sham Nath Marg Prema Kunj, Civil Lines Delhi, 110054	specialceo-dm@delhi.gov.in singh.sushil@gov.in	23930611, 23928860, 011- 23936477
20	Lakshadweep	Kavaratti UT of Lakshadweep Kavaratti -682555	secretary-utl1@utl.gov.in ldmaeoc@gmail.com	4896263725
21	Gujarat	Gujarat State Disaster Management Authority Block No. 11, 5 th Floor, Udyog Bhawan Sector-11 Gandhinagar- 382011	ceo@gsdma.org info@gsdma.com	079--23259276, 23259275 23259302 23259246
22	Puduchery	I -Floor, New Revenue Complex,Vazhudavoor Road, Pettaiyanchathiram Puducherry- 605 009	dcrev.pon@nic.in	0413-2299502
23	Punjab	Department Revenue Rehabilitation and Disaster Management 3 rd Floor, Punjab Civil Secretariat-1, Sector 1 Chandigarh - 160001	fcr@punjab.gov.in	0172-2743854
24	Uttarakhand	Uttarakhand State Disaster Management Authority 36, IT Park, Dehradun Uttarakhand-248001	usdmauttara khand@gmail.com	0135-2710334 0135-2659850
25	Goa	Goa State Disaster Management Authority Administrative Block Secretariat, Alto-Porvorim Goa-403501	sdma.goa.gov.in, cs-go@nic.in	0832- 2419550,0832 2419446

26	West Bengal	West Bengal Disaster Management & Civil Defence Department Nabanna, 2 nd Floor, 325 Sarat Chatterjee Road Mandirtala, Shibpur, Howrah -711102	ps.dmd-wb@nic.in, secrelief@wb.gov.in	2214-3674
27	Andaman & Nicobar Islands	Directorate of Disaster Management Anticorruption Building 2nd Floor, Link Road Goal Ghar Port Blair 744 101	ddm.and@nic.in, dirdmani@gmail.com	03192- 241774
28	Chandigarh	UT of Chandigarh Estate Office Building Sector 17 Chandigarh-160017	dc-chd@nic.in	0172-2700109
29	Leh -Ladakh	Ladakh Disaster Management Authority, Civil Secretariat, Leh-Ladakh Pin-194101	admsecyut@gmail.com	01982-255567
30	J & K	Civil Secretariat Srinagar-190008	dmrrr-sec@jk.gov.in	0191- 2545535, 2545725(Jammu) 0194-2506462, 2506418 (Srinagar)
31	Telangana	Telangana Disaster Response Fire Services O/o Director General Telangana Disaster Response and Fire Services, Beside IRDA Nanakramguda Financial District, Hyderabad Telangana-500032	dg-fireservices@telangana.gov.in,	

32	Rajasthan	Disaster Management Relief & Civil Defence of Secretariat, Jaipur-302005	relief-rj@nic.in	0141-2227084
33	Maharashtra	Maharashtra State Disaster Management Authority Room No. 101 1 st Floor Main Building, Mantralaya Mumbai-40032	director.dm@maharashtra.gov.in	
34	Haryana	Haryana, Revenue & Disaster Management Department Room No. 429, 4 th Floor, New Haryana Secretariat, Sector-17 Chandigarh-160017	secretaryrevenue2@gmail.com	0172-2704453

Annexure - VI

List of important institutions and suggestive sites for field visit

Organisation	Address	Contact number(s)	Email	Website
National Disaster Management Authority	NDMA Bhawan, A-1 Safdarjung Enclave New Delhi - 110029	+91-11-26701700	controlroom@ndma.gov.in	https://ndma.gov.in/
National Institute of Disaster Management	NIDM, Delhi Plot No. 15, Pocket-3 Block-B, Sector-29 Rohini, Delhi – 110042 NIDM, Vijayawada (South Campus) Kondapavaluru Village Gannavaram Mandal Krishna District Andhra Pradesh 521212	011-20873412	info[dot]nidm[at]nic[dot]in	https://nidm.gov.in/
Geological Survey of India (GSI)	27 Jawaharlal Nehru Road, Kolkata 700016 West Bengal (gsi.gov.in)	Tel: 033-2252 1779 / 033-2252 1714	nmh4@gsi.gov.in (lands-slides nodal) (bhusanket.gsi.gov.in)	https://www.gsi.gov.in
India Meteorological Department (IMD)	Mausam Bhawan Lodi Road New Delhi - 110003	Tel: 011-24344253 / 011-24344599	ananda.das@imd.gov.in (and duty-officer cyclone: cyclonewarningdivision@gmail.com) (Mausam)	https://mausam.imd.gov.in
Indian National Centre for Ocean Information Services (INCOIS)	“Ocean Valley” Pragathi Nagar (BO) Nizampet (SO) Hyderabad - 500090 Telangana	Tel: +91-40-23886000	webmaster@incois.gov.in (incois.gov.in)	https://www.incois.gov.in

Wadia Institute of Himalayan Geology (WIHG)	33 GMS Road Near Ballupur Chowk, Dehradun 248001/248171 Uttarakhand	Tel: +91-135-2525555 also +91-135-2525109	director@ wihg.res.in / registrar@ wihg.res.in (wihgnew. wihg.res.in)	https://www.wihg.res.in
Indian Institute of Remote Sensing (IIRS)	4 Kalidas Road, P.O. Box No 135, Dehradun - 248001, Uttarakhand	Tel: +91-135-2524103	director@iirs. gov.in (iirs. gov.in)	https://www.iirs.gov.in
Survey of India (SOI)	O/o The Surveyor General of India Post Box No. 37 Survey of India, Hathibarkala Estate Dehradun – 248001 (Uttarakhand)	Tel: +91-135-2743331 +91-135-2744064	helpdesk. soi@gov.in	https://www.surveyofindia.gov.in
Indian Space Research Organisation (ISRO)	Headquarters: Antariksh Bhavan New BEL Road Bengaluru – 560 094 (Karnataka)	+91 80 22172119	isropr[at] isro[dot] gov[dot]in	https://www.isro.gov.in
National Remote Sensing Centre (NRSC)	Balanagar Hyderabad, Telangana (Head office)	04023879572 9573/9574	feedback@ nrsc.gov.in	https://www.nrsc.gov.in
Central Water Commission (CWC)	3 rd Floor (South) Sewa Bhawan R.K. Puram, Sector-1 New Delhi – 110066	+91-11-26187232(0)	secy-cwc[at] nic[dot]in	https://cwc.gov.in/en/
Smritivan Earthquake Memorial and Museum	Bhujio Dungar, Bhuj Kutch – 370020 Gujarat	Tel: +91-635-719-9991	smritivankut@ gmail.com	https://www.smritivanearthquakemuseum.com
8 th Battalion NDRF	Kamla Nehru Nagar Ghaziabad(UP) Pin - 201002	0120-2766618	up08-ndrf[at] nic[dot]in	NA