University of Mumbai

Website - mu.ac.in
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Academic Authorities,
Meetings & Services (AAMS)
Room No. 128, M. G. Road, Fort,
Mumbai – 400 032.
Tel. 022-68320033

Re- accredited with A ++ Grade (CGPA 3.65) by NAAC
Category- I University Status awarded by UGC

No. AAMS_UGS/ICD/2024-25/ 447 Date : 24th March, 2025

To,
The Director,
Garware Institute of Career Education
and Development,
Vidyanagari
Santacruz (East)
Mumbai – 400 098.

Sub : M. A (Disaster, Fire, and Industrial Safety Management) (Two year) (Sem I & II).

Sir,

With reference to the subject noted above, this is to inform you that the recommendations made by the **Advisory Committee & Board of Management** of Garware Institute of Career Education & Development at its Meeting held on **4th September, 2023** & resolution passed by the **Board of Deans** at its meeting held on **9th August,2023 vide** Item No. **9.2** have been accepted by the **Academic Council** at its meeting held on **1st November, 2023 vide** Item no. **9.4 (A) 5 (N)** and subsequently approved by the **Management Council** at its meeting held on **5th February, 2024 vide** Item No. **3** that in accordance therewith, in exercise of the powers conferred upon the Management Council under Section 74(4) of the Maharashtra Public Universities Act, 2016 (Mah. Act No. VI of 2017) the following program with Ordinance for Title of the Program, Eligibility and Regulation numbers for Duration of Program, Intake Capacity, Scheme of Examinations, Standard of Passing and Credit Structure along with syllabus of **M.A (Disaster, Fire, and Industrial Safety Management) (Sem I & II)** (Appendix – 'A') have been introduced and the same have been brought into force with effect from the academic year **2023-24**.

The New Ordinances & Regulations as per NEP 2020 is as follows :-

Sr. No	Name of the Programme	Ordinance no. for Title	Ordinance no. for Eligibility	Duration
A	P.G Diploma in Disaster, Fire, and Industrial Safety Management	O.GPA – 9A	O.GPA – 10 A	Two year
B	M. A (Disaster, Fire, and Industrial Safety Management)	O.GPA – 9 B	O.GPA – 10 B	
C	M.A. (Disaster, Fire, and Industrial Safety Management)	O.GPA – 9 C	O.GPA – 10 C	One year

2/-

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. No. AAMS_UGS/ICD/2024-25/ 447 Date : 24th March, 2025.

Regulation Nos	
Duration	R. GPA – 21
Intake Capacity	R. GPA – 22
Scheme of examination	R. GPA – 23
Standard of Passing	R. GPA – 24
Credit Structure	R. GPA – 25 A
	R. GPA – 25 B

(Dr. Prasad Karande)
REGISTRAR

A.C/9.4(A)5(N)/01/11/2023
M.C/3/5/2/2024

****

Copy forwarded with Compliments for information to:-

1) The Chairman, Board of Deans
2) The Dean, Faculty of Interdisciplinary Studies,
3) The Director, Board of Examinations and Evaluation,
4) The Director, Board of Students Development,
5) The Director, Department of Information & Communication Technology,
6) The Co-ordinator, MKCL.

Copy forwarded for information and necessary action to :-	
1	The Deputy Registrar, (Admissions, Enrolment, Eligibility and Migration Dept)(AEM), dr@eligi.mu.ac.in
2	The Deputy Registrar, Result unit, Vidyanagari drresults@exam.mu.ac.in
3	The Deputy Registrar, Marks and Certificate Unit,. Vidyanagari dr.verification@mu.ac.in
4	The Deputy Registrar, Appointment Unit, Vidyanagari dr.appointment@exam.mu.ac.in
5	The Deputy Registrar, CAP Unit, Vidyanagari cap.exam@mu.ac.in
6	The Deputy Registrar, College Affiliations & Development Department (CAD), deputyregistrar.uni@gmail.com
7	The Deputy Registrar, PRO, Fort, (Publication Section), Pro@mu.ac.in
8	The Deputy Registrar, Executive Authorities Section (EA) eau120@fort.mu.ac.in He is requested to treat this as action taken report on the concerned resolution adopted by the Academic Council referred to the above circular.
9	The Deputy Registrar, Research Administration & Promotion Cell (RAPC), rapc@mu.ac.in
10	The Deputy Registrar, Academic Appointments & Quality Assurance (AAQA) dy.registrar.tau.fort.mu.ac.in ar.tau@fort.mu.ac.in
11	The Deputy Registrar, College Teachers Approval Unit (CTA), concolsection@gmail.com
12	The Deputy Registrars, Finance & Accounts Section, fort draccounts@fort.mu.ac.in
13	The Deputy Registrar, Election Section, Fort drelection@election.mu.ac.in
14	The Assistant Registrar, Administrative Sub-Campus Thane, thanesubcampus@mu.ac.in
15	The Assistant Registrar, School of Engg. & Applied Sciences, Kalyan, ar.seask@mu.ac.in
16	The Assistant Registrar, Ratnagiri Sub-centre, Ratnagiri, ratnagirisubcentar@gmail.com
17	The Director, Centre for Distance and Online Education (CDOE), Vidyanagari, director@idol.mu.ac.in
18	Director, Innovation, Incubation and Linkages, Dr. Sachin Laddha pinkumanno@gmail.com
19	Director, Department of Lifelong Learning and Extension (DLLE), dlleuniversityofmumbai@gmail.com

Copy for information :-	
1	P.A to Hon'ble Vice-Chancellor, vice-chancellor@mu.ac.in
2	P.A to Pro-Vice-Chancellor pvc@fort.mu.ac.in
3	P.A to Registrar, registrar@fort.mu.ac.in
4	P.A to all Deans of all Faculties
5	P.A to Finance & Account Officers, (F & A.O), camu@accounts.mu.ac.in

To,

1	The Chairman, Board of Deans pvc@fort.mu.ac.in
2	**Faculty of Humanities,** **Dean** 1. Prof.Anil Singh Dranilsingh129@gmail.com **Associate Dean** 2. Dr.Suchitra Naik Naiksuchitra27@gmail.com 3.Prof.Manisha Karne mkarne@economics.mu.ac.in
	Faculty of Commerce & Management, **Dean** 1. Dr.Kavita Laghate kavitalaghate@jbims.mu.ac.in **Associate Dean** 2. Dr.Ravikant Balkrishna Sangurde Ravikant.s.@somaiya.edu 3. Prin.Kishori Bhagat kishoribhagat@rediffmail.com

	Faculty of Science & Technology **Dean** 1. Prof. Shivram Garje ssgarje@chem.mu.ac.in **Associate Dean** 2. Dr. Madhav R. Rajwade Madhavr64@gmail.com 3. Prin. Deven Shah sir.deven@gmail.com
	Faculty of Inter-Disciplinary Studies, **Dean** 1.Dr. Anil K. Singh aksingh@trcl.org.in **Associate Dean** 2.Prin.Chadrashekhar Ashok Chakradeo cachakradeo@gmail.com
3	Chairman, Board of Studies,
4	The Director, Board of Examinations and Evaluation, dboee@exam.mu.ac.in
5	The Director, Board of Students Development, dsd@mu.ac.in DSW direcotr@dsw.mu.ac.in
6	The Director, Department of Information & Communication Technology, director.dict@mu.ac.in

AC-01/11/2023
Item No-9.4(A)5

As Per NEP 2020

University of Mumbai

Title of the program

A- P.G. Diploma in Disaster, Fire, and Industrial Safety Management

B- M.A. (Disaster, Fire, and Industrial Safety Management) (Two Year) } 2023-24

C- M.A. (Disaster, Fire, and Industrial Safety Management) - 2027-28

Garware Institute of Career Education and Development

Syllabus for
Semester- Semester I and II

Ref: GR dated 16th May,2023 for Credit Structure of PG

UNIVERSITY OF MUMBAI

(AS PER NEP 2020)

Sr. No.	Heading	Particulars	
1	Title of program O: GPA -9 A	A	P.G. Diploma in Disaster, Fire, and Industrial Safety Management
	O: GPA -9 B	B	M.A. (Disaster, Fire, and Industrial Safety Management) (Two Year)
	O: GPA -9 C	C	M.A. (Disaster, Fire, and Industrial Safety Management) (One Year)
2	Eligibility O: GPA -10 A	A	Any Graduate with three years recognized degree **OR** Passed Equivalent Academic Level 5.5
	O: GPA -10 B	B	1. The candidate who has successfully completed P.G. Diploma in Disaster, Fire, and Industrial Safety Management. 2. The candidate whose Post Graduate Diploma credits are 60% equivalent to M.A. (Disaster, Fire, and Industrial Safcty Management) & he/she earns minimum 8 Credits from P.G. Diploma in Disaster, Fire, and Industrial Safety Management. 3. As per NEP criteria on the basis of RPL-Recognition of Prior Learning, Candidate to be admitted to 2nd Year subject to He/she securing minimum 50% in the 1st Year assessment of PGDDFISM & proof of employment of Minimum 2 Years **OR** Passed Equivalent Academic Level 6.0
	O: GPA -10 C	C	Any Graduate with 4 year U.G. Degree (Honours / Honours with Research) Or Equivalent Academic Level 6.0
3	Duration of Program	A	1 Year

	R: GPA - 21	B	2 Years
		C	1 Year
4	R: GPA -22 Intake Capacity	40	
5	R: GPA -23 Scheme of Examination	NEP 50% Internal – Continuous Evaluation 50% External- Semester End Examination Individual Passing in Internal and External Examination	
6	Standards of Passing R: GPA -24	50% in each component	
7	Credit Structure R: GPA -25 A R : GPA -25 B	Attached herewith	
8	Semesters	A	Sem I & II
		B	Sem I, II, III, & IV
		C	Sem I & II
9	Program Academic Level	A	6.0
		B	6.5
		C	6.5
10	Pattern	Semester	
11	Status	New	
12	To be implemented from Academic Year Progressively	A	2023-24
		B	
		C	2027-28

Dr. Keyurkumar M. Nayak,
Director,
UM-GICED

Prof.(Dr.) Anil Kumar Singh
Dean,
Faculty of Interdisciplinary Studies

Preamble

Introduction

The course "M.A. in Disaster, Fire & Industrial Safety Management" is designed to provide students with a comprehensive understanding of managing disasters, ensuring industrial safety, and promoting fire safety in various settings. The program covers a wide range of subjects, including disaster management principles, industrial safety management, fire safety systems, risk assessment, emergency planning, and more. Through a combination of theoretical knowledge, practical applications, and research methodologies, students will develop the skills necessary to analyze and mitigate risks, respond to emergencies, and create effective safety strategies. This course aims to prepare graduates for careers in disaster management, industrial safety, and fire safety, where they can contribute to safeguarding lives, property, and the environment.

Program Objective:

1. Develop industry-relevant skills: Equip students with the knowledge, skills, and competencies sought after by employers in the field of disaster, fire, and industrial safety management.

2. Enhance job readiness: Prepare students to enter the workforce with the necessary practical skills, critical thinking abilities, and professional demeanor required for successful employment.

3. Meet industry demands: Align the curriculum with the current and emerging needs of industries, ensuring that graduates are well-prepared to address safety challenges in diverse sectors such as manufacturing, construction, energy, transportation, and emergency management.

4. Promote networking opportunities: Facilitate networking events, guest lectures, and industry collaborations to connect students with professionals and potential employers in the field.

5. Provide internship and practical training opportunities: Offer opportunities for students to gain hands-on experience through internships, cooperative education programs, and industry partnerships, enhancing their employability.

6. Foster career development skills: Support students in developing essential career skills such as resume writing, interview preparation, and job search strategies to enhance their prospects in securing employment.

7. Stay updated with industry trends: Continuously review and update the curriculum to incorporate emerging trends, best practices, and technological advancements in disaster, fire, and industrial safety management, ensuring graduates are equipped with current knowledge.

8. Develop professional competencies: Nurture students' professionalism, communication skills, teamwork abilities, and leadership qualities, which are highly valued by employers in the safety management field.

9. Provide access to job placement services: Offer career counseling, job placement assistance, and networking resources to facilitate the transition from academia to employment for students.

10. Prepare for diverse roles: Prepare students for a wide range of career opportunities in roles such as safety inspector, emergency planners, risk assessors, consultants, safety engineers, safety auditor, and compliance officers in various industries and organizations.

These program objectives focus on enhancing students' employability by aligning the curriculum with industry needs, providing practical training opportunities, fostering career development skills, and preparing graduates for a variety of roles in the field of disaster, fire, and industrial safety management.

Course Objectives:

1. Provide comprehensive knowledge to the learners on Disaster Preparedness, Mitigation & rehabilitation
2. Enable the learner to carry out risk assessment & vulnerability analysis
3. Generate community awareness & strengthen institutional mechanism for community mobilization & participation in Disaster Management
4. Develop communication skills for Disaster Preparedness
5. Create greater awareness about effective Disaster in various emergency
6. Equip learners with tools for meeting emergency medical requirements. Incorporate Gender Sensitive Disaster Management approach new skills & sharpen existing skills of govt. officials, voluntary activities. development professionals & elected representatives for effective Disaster Management situations.

Learning outcomes:

1. Develop a comprehensive understanding of the principles, theories, and frameworks of disaster management, industrial safety, and fire safety.
2. Apply risk assessment techniques to identify and evaluate potential hazards in industrial and disaster-prone environments.
3. Design and implement effective emergency response and recovery plans for various types of disasters.
4. Demonstrate knowledge of industrial safety regulations, codes, and standards, and ensure compliance in industrial settings.
5. Analyze fire safety systems and technologies, including fire detection, suppression, and protection systems.
6. Evaluate and manage environmental hazards to minimize their impact on human health and the ecosystem.
7. Apply statistical methods and data analysis techniques to support decision-making in safety management.
8. Develop leadership and organizational skills to effectively manage crises and emergency situations.
9. Communicate effectively with stakeholders, including employees, authorities, and the public, to promote safety awareness and foster a culture of safety.
10. Conduct research using appropriate methodologies to contribute to the field of disaster, fire, and industrial safety management.
11. Stay updated with emerging trends, technologies, and best practices in disaster, fire, and industrial safety through continuous learning and professional development.
12. Demonstrate ethical and professional conduct in the field of disaster, fire, and industrial safety management.

5) **Credit Structute of the Program - Parishishta – 1**

R: GPA -25 A

M.A.(Disaster, Fire and Industrial Safety Management)

Year	Level	Semester	Major		RM	OJT / FP	RP	Cum. Cr.	Degree
			Mandatory	Electives					
I	6.0	Sem I	Introduction of Disaster, DRR, Preparedness & Mitigation Management (4 Credits) Fire Engineering Science & Safety Management (4 Credits) Industrial Safety Management-I (4 Credits) Role of Health Services in Disaster Management (2 Credits)	Financial Management in DM (4 Credits) **OR** Effective Management of Natural & Manmade Disasters (4 Credits)	Research Methodology (4 Credits)				PG Diploma (after 3 Yr Degree)
			14	4	4	0	0	22	
		Sem II	Risk Assessment & Disaster Response Mechanism (4 Credits) Institutional & Legal Framework-I (2 Credits) Role of IT in Disaster Management (4 Credits) Rehabilitation, Reconstruction & Recovery (4 Credits)	Accidents/ Hazards in Industry (4 Credits) **OR** Fire Protection System in Hospitality Industry (4 Credits)		On Job Training/ Internship (4 Credits)			
Cum. Cr. For PG Diploma			28	8	4	4	-	44	

Exit option: PG Diploma (44 Credits) after Three Year UG Degree

R: GPA -25 B

Year	Level	Sem	Major		RM	OJT / FP	RP	Cum. Cr.	Degree
			Mandatory	Electives					
II	6.5	Sem III	Industrial Safety Management-II (2 Credits) Fire Safety Audit and Inspection (4 Credits) Institutional & Legal Framework-II (4 Credits) Climate Change (2 Credits)	Human Factors in Safety Management (4 Credits) **OR** Industrial Ventilation & Air Quality Management (4 Credits)			Research Project (Disaster Management Plan) (4 Credits)		PG Degree After 3- Yr UG Or PG Degree after 4- Yr UG
			12	4			4	20	
		Sem IV	Community Based Disaster Management (4 Credits) Fire Safety Systems and Technology (4 Credits) Trauma Management (4 Credits)	Logistics Management (4 Credits) OR Business Intelligence in Disaster Management (4 Credits)			Research Project (6 Credits)		
Cum. Cr. For PG Diploma			**24**	**8**	**4**	**4**	**-**	**42**	
Cum. Cr. for 2 Yr PG Degree			**52**	**16**	**4**	**4**	**10**	**86**	

2 Years-4 Sem. PG Degree (86 credits) after Three Year UG Degree or 1 Year-2 Sem PG Degree (44 credits) after Four Year UG Degree

Dr. Keyurkumar M. Nayak,
Director,
UM-GICED

Prof.(Dr.) Anil Kumar Singh
Dean,
Faculty of Interdisciplinary Studies

1st Year	Subject Code	Core Subject	Assessment Pattern			Teaching Hours			
		Paper	Internal Marks	External Marks	Total Marks (CA) 100	Theory Hours	Practical Hours	Total Hours	Total Credits
		Major Mandatory							
SEMESTER I	PGDDFISMS1MJP1	Introduction of Disaster, DRR, Preparedness & Mitigation Management	50	50	100	60	-	60	4
	PGDDFISMS1MJP2	Fire Engineering Science & Safety Management	50	50	100	60	-	60	4
	PGDDFISMS1MJP3	Industrial Safety Management-I	50	50	100	60	-	60	4
	PGDDFISMS1MJP4	Role of Health Services in Disaster Management	25	25	50	30	-	30	2
		Electives (Any 1)							
	PGDDFISMS1P5A	Financial Management in DM	50	50	100	60	--	60	4
	PGDDFISMS1P5B	Effective Management of Natural & Manmade Disasters	50	50	100	60	--	60	4
		Research Methodology (RM)							
	PGDDFISMS1P6	Research Methodology	50	50	100	60	--	60	4
		Total	**275**	**275**	**550**	**330**	-	**330**	**22**

1st Year	Subject Code	Core Subject	Assessment Pattern			Teaching Hours			
		Paper	Internal Marks	External Marks	Total Marks (CA) 100	Theory Hours	Practical Hours	Total Hours	Total Credits
	Major Mandatory								
SEMESTER II	PGDDFISMS2MJP7	Risk Assessment & Disaster Response Mechanism	50	50	100	60	--	60	4
	PGDDFISMS2MJP8	Institutional & Legal Framework-I	25	25	50	30	--	30	2
	PGDDFISMS2MJP9	Role of IT in Disaster Management	50	50	100	60	--	60	4
	PGDDFISMS2MJP10	Rehabilitation, Reconstruction & Recovery	50	50	100	60	--	60	4
	Electives (Any 1)								
	PGDDFISMS2P11A	Accidents/ Hazards in Industry	50	50	100	60	--	60	4
	PGDDFISMS2P11B	Fire Protection System in Hospitality Industry	50	50	100	60	--	60	4
	On Job Training/FP								
	PGDDFISMS2P12	On Job Training/ Internship	100	–	100	–	120	120	4
		Total	**325**	**225**	**550**	**270**	**120**	**390**	**22**

2nd Year	Subject Code	Core Subject	Assessment Pattern			Teaching Hours			
		Paper	Internal Marks	External Marks	Total Marks (CA) 100	Theory Hours	Practical Hours	Total Hours	Total Credits
	Major Mandatory								
SEMESTER III	MADFISMS3MJP13	Industrial Safety Management-II	25	25	50	30	-	30	2
	MADFISMS3MJP14	Fire Safety Audit and Inspection	50	50	100	60	-	60	4
	MADFISMS3MJP15	Institutional & Legal Framework-II	50	50	100	60	-	60	4
	MADFISMS3MJP16	Climate Change	25	25	50	30	-	30	2
	Electives (Any 1)								
	MADFISMS3P17A	Human Factors in Safety Management	50	50	100	60	--	60	4
	MADFISMS3P17B	Industrial Ventilation & Air Quality Management	50	50	100	60	--	60	4
	Research Project								
	MADFISMS3P18	Research Project	100	--	100	--	120	120	4
		Total	**300**	**200**	**500**	**240**	**120**	**360**	**20**

2nd Year	Subject Code	Core Subject	Assessment Pattern			Teaching Hours			
		Paper	Internal Marks	External Marks	Total Marks (CA) 100	Theory Hours	Practical Hours	Total Hours	Total Credits
SEMESTER IV	**Major Mandatory**								
	MADFISMS4MJP19	Community Based Disaster Management	50	50	100	60	-	60	4
	MADFISMS4MJP20	Fire Safety Systems and Technology	50	50	100	60	-	60	4
	MADFISMS4MJP21	Trauma Management	50	50	100	60	-	60	4
	Electives								
	MADFISMS4P22A	Logistics Management	50	50	100	60	--	60	4
	MADFISMS4P22B	Business Intelligence in Disaster Management	50	50	100	60	--	60	4
	Research Project								
	MADFISMS4P23	Research Project	200	--	200	--	180	180	6
		Total	**400**	**200**	**600**	**240**	**180**	**420**	**22**

Sem.I

SUBJECT-WISE SYLLABUS
(SEMESTER-I)

PGDDFISMS1MJP1: Introduction of Disaster, DRR, Preparedness & Mitigation Management

Course Objectives:

1. To provide a comprehensive understanding of the concept of disaster and its evolution from Western and Indian perspectives.
2. To familiarize students with the classification of disasters and their features and impact.
3. To introduce the phases of disaster management and the key components defined by relevant acts and agencies.
4. To explore the relationship between disasters and gender issues.
5. To develop knowledge and skills related to meteorology and the understanding of natural and man-made disasters.

Learning Outcomes:

1. Identify and describe the evolution of the concept of disaster from Western and Indian perspectives.
2. Explain the classification and features of different types of disasters.
3. Demonstrate an understanding of the phases and components of disaster management.
4. Analyze the role of gender issues in disaster management.
5. Apply knowledge of meteorology to assess and understand various natural and man-made disasters.

PGDD FISM S1MJ P1	Introduction of Disaster, DRR, Preparedness & Mitigation Management	60
	1. Evolution of Concept of Disaster. Western & Indian Perspective 2. Disaster Definition-Features and impact 3. Classification of Disasters	6
	4. Introduction of Disaster Management. Defined by the Act – 2005, NDMA, NIDM &UN 5. Various Phases of Disaster Management	6
	6. Disasters and Gender Issues	3
	7. Elementary of Meteorology	3
	8. Natural Disasters: floods, Earthquakes, Drought, Cyclones, landslides, Thunderstorms, Lightning, Avalanches, Heat and Cold waves, Climate Change, Use of Weather Websites and apps, Alert & Warning	9
	9. Man-made disasters: Building/Bridge collapse/Air/Road/Rail accidents, Bomb Blasts, Industrial accidents, CBRN, Forest Fire.	3
	10. Concept of Disaster Management – Risk Reduction & Preparedness	3
	11. Concept of Disaster Prevention and Mitigation	3

	12. Need for Disaster preparedness in India	3
	13. Components of Disaster Preparedness – (Planning, Training, Education and Communication)	6
	14. Identification of Vulnerable Groups and Preparedness	3
	15. Education and Training (Formal Education and Special Training)	3
	16. Role of Information Technology in Preparedness – GIS, GPS etc.	3
	17. Need for Mock Drill and Evacuation Drill	3
	18. Community Resiliency Indicator (CRI)	3

Reference Books:

1. "Introduction to Emergency Management" by George Haddow, Jane Bullock, and Damon Coppola
2. "Disaster Management: International Lessons in Risk Reduction, Response and Recovery" by Bimal Kanti Paul
3. "Disaster Management and Preparedness" by Michael Beach, Doug Walton, and David E. Sugden
4. "Introduction to Emergency Management" by Brenda D. Phillips
5. "Introduction to International Disaster Management" by Damon P. Coppola
6. "Disaster Risk Reduction: Approaches and Cases in India" by P.G. Dhar Chakrabarti and S.B. Karlekar
7. "Disaster Risk Reduction for the Built Environment" by Lee Bosher
8. "Disaster Preparedness and Management" by Michael Beach
9. "Community-Based Disaster Risk Reduction" by Ian Davis
10. "Disaster Mitigation, Preparedness, Response, Recovery, and Reconstruction" by C. Jayaraman and S. Madheswaran

PGDDFISMS1MJP2: Fire Engineering Science & Safety Management

Course Objectives:

1. To provide a thorough understanding of the chemistry of fire, fire safety principles, and fire protection equipment.
2. To develop practical skills in first aid fire extinguishers, foam equipment, and pump operation.
3. To examine the hazards associated with electricity, gas fires, and dust explosions.
4. To evaluate building construction principles, high-rise safety measures, and fire safety auditing.
5. To apply the principles of heat and combustion-sensitive detection devices in fire engineering.

Learning Outcomes:

1. Explain the chemistry of fire and the fundamental principles of fire safety.
2. Demonstrate proficiency in the use of first aid fire extinguishers, foam equipment, and pump operation.
3. Analyze the risks associated with electricity, gas fires, and dust explosions, and propose appropriate control measures.
4. Evaluate building construction principles and high-rise safety measures for fire prevention.
5. Apply the principles of heat and combustion-sensitive detection devices in fire engineering and

safety management.

PGDDFISMS1MJP2	Fire Engineering Science & Safety Management	30
	1. Chemistry of Fire and Heat	3
	2. First Aid Fire Extinguishers	3
	3. Electricity and Electric Fire	3
	4. Foam and Foam Equipment	3
	5. Explosives & Its types	3
	6. Gas Fire and Dust Explosion	3
	7. Pump and Primers	3
	8. Hydraulics	3
	9. Fire Project	6
	10. Building Construction	3
	11. High rise buildings	3
	12. Practical Firemanship	6
	13. Fire Safety Principles and Fire Protection Equipment	3
	14. Principle of Heat and Combustion Sensitive Detection Devices	3
	15. Special Services	6
	16. Fire Safety Audit and Electrical Audit	6

Reference Books:

1. "Fire Protection Engineering in Building Design" by Jane Lataille
2. "Fire Engineering Science" by G. E. Andrews
3. "Introduction to Fire Protection Engineering" by John Wiley and Sons
4. "Fire Safety Engineering: Design of Structures" by John A. Purkiss
5. "Fire Dynamics" by Gregory E. Gorbett and James L. Pharr

PGDDFISMS1MJP3: Industrial Safety Management-I

Course Objectives:

1. To develop an understanding of industrial safety management principles and practices.
2. To equip students with knowledge to plan and implement safety measures in industrial settings.
3. To provide methods for monitoring and ensuring safety, health, and environmental compliance.
4. To promote accident prevention principles and employee participation in safety initiatives.
5. To emphasize safe handling of chemicals and addressing hazards in industrial operations.

Learning Outcomes:

1. Understand the fundamental principles and concepts of industrial safety management.
2. Develop effective safety plans and implement safety measures in industrial settings.
3. Monitor and ensure compliance with safety, health, and environmental regulations.
4. Apply accident prevention strategies and encourage employee participation in safety initiatives.
5. Demonstrate knowledge of safe handling practices for chemicals and address hazards in industrial operations.

PGDD FISM S1MJ P3	Industrial Safety Management-I	60
	1. Introduction to industrial safety Management	3
	2. Planning for Safety 3. Organizing for Safety	3
	4. Monitoring for Safety, health & Environment	3
	5. Principles of Accidents Prevention	3
	6. Education & Training for Safety, Health & Environment	3
	7. Employee Participation in Safety	3
	8. Safe Handling and Storage of Chemicals	3
	9. Major Industrial Disasters	3
	10. Machine Operations & Guarding	3
	11. Safety In Use of Machines 12. Power Tools Safety	3
	13. Material Handling & Storage of Materials	3
	14. Plant Design & Housekeeping	6
	15. Heat Treatment, Welding and Gas Cutting	3
	16. Hazards at Work Place	3
	17. Working at Different Levels	3
	18. Industrial Visit at CIL	6
	19.Safety Project	6

Reference Books:

1. "Industrial Safety Management and Risk Assessment" by K. U. Mistry
2. "Industrial Safety and Health Management" by V. V. Narayanan
3. "Industrial Safety and Hazards Management" by H. B. Srivastava

4. "Industrial Safety Engineering: Principles and Applications" by N. K. Chari
5. "Industrial Safety and Health Management" by R. B. Gupta

PGDDFISMS1MJP4: Role of Health Services in Disaster Management

Course Objectives:

1. To introduce the role of health services in disaster management.
2. To explain the concepts of disaster epidemiology and the pattern of injury.
3. To familiarize students with the skills and competencies required for managing disaster victims.
4. To develop a hospital disaster management plan.
5. To emphasize the importance of personal protective equipment (PPE) in various calamities.

Learning Outcomes:

1. Describe the role and responsibilities of health services in disaster management.
2. Analyze the epidemiology and patterns of injury during disasters.
3. Apply skills and competencies for effective management of disaster victims.
4. Develop a comprehensive hospital disaster management plan.
5. Understand the significance of using personal protective equipment in different disaster scenarios.

PGDD FISM S1MJ P4	Role of Health Services in Disaster Management	60
	1. Introduction	3
	2. Role of a Hospital Administration & Disaster Epidemiology and Pattern of Injury	6
	3. Various skills & competencies for managing disaster victims	6
	4. Hospital Disaster Management plan	12
	5. Safe patient Transportation/ Evacuation of patients –Mock Drill	12
	6. Health Challenges' Posed by Disaster	6
	7. Forensic Medicine	6
	8. Stock Inventory 9. Manpower Planning 10. Post disaster Evaluation 11.Maintenance of Record & Reports 12. Importance of PPE in Various Calamities	9

Reference Books:

1. "Public Health Management of Disasters: The Practice Guide" by Linda Y. Landesman
2. "Hospital Emergency Response Teams: Triage for Optimal Disaster Response" by Howard G.

Smith and Phillip L. Coule
3. "Disaster Nursing and Emergency Preparedness for Chemical, Biological, and Radiological Terrorism and Other Hazards" by Tener Goodwin Veenema
4. "Hospital Emergency Response Teams: An Essential Component of Disaster Response" by Susan Briggs and Alan L. Stillman
5. "Disaster Medicine" by David E. Hogan and Jonathan L. Burstein

PGDDFISMS1P5: Elective 1 (Select Any 1 from Elective Basket)

PGDDFIS MS1P5	Elective 1 (Select Any 1 from Elective Basket)	60
Option 1	Financial Management in Safety Management	60
UNIT I	• Budgeting and financial planning for safety programs • Cost estimation and resource allocation • Developing safety budgets and financial forecasts • Cost-benefit analysis of safety initiatives	15
UNIT II	• Procurement and contract management • Procurement processes and procedures • Vendor selection and contract negotiation • Contract administration and performance management	15
UNIT III	• Cost control and optimization strategies • Monitoring and controlling safety-related costs • Waste reduction and efficiency improvement • Value engineering and cost-saving initiatives	15
UNIT IV	• Financial reporting and performance measurement • Key performance indicators (KPIs) for safety management • Financial reporting frameworks and metrics • Data analysis and interpretation for decision-making	15
Option 2	Financial Management in Safety Management	60
UNIT I	Natural Disasters (Part 1) - Floods and Cyclones Causes and impacts of floods Flood risk assessment and management strategies Cyclone formation and prediction Preparedness and response to floods and cyclones	15
UNIT II	Natural Disasters (Part 2) - Earthquakes and Landslides Understanding earthquake hazards and risk Seismic zoning and building codes Landslide causes, types, and mitigation measures Search and rescue operations in earthquake and landslide scenarios	15

UNIT III	Manmade Disasters (Part 1) - Fires and Industrial Accidents Fire safety and prevention measures Firefighting techniques and equipment Industrial accident prevention and preparedness Chemical and radiological incidents and response	15
UNIT IV	Manmade Disasters (Part 2) - Terrorism and Cyber Attacks Types and characteristics of terrorist attacks Counter-terrorism strategies and response Cybersecurity threats and vulnerabilities Incident response in case of cyber attacks	15

PGDDFISMS1P6: RESEARCH METHODOLOGY

Course Objectives:

1. To understand the meaning, functions, and importance of market research in the context of research methodology.
2. To familiarize students with the research process, including defining research problems, formulating titles, and setting hypotheses.
3. To explore different research designs, including exploratory, descriptive, and experimental research designs.
4. To develop skills in data collection using primary and secondary sources, questionnaires, and data processing techniques.
5. To introduce sampling methods and the characteristics of a good sample design.
6. To provide an overview of statistical techniques, such as confidence intervals, hypothesis tests, ANOVA, chi-square test, and non-parametric tests.
7. To enhance report writing skills and the presentation of research results.

Learning Outcomes:

1. Define the concept of market research and explain its functions and importance.
2. Apply the research process by formulating research problems, titles, and hypotheses.
3. Evaluate different research designs and select appropriate designs for specific research objectives.
4. Collect and analyze data using primary and secondary sources, questionnaires, and data processing techniques.
5. Compare and contrast different sampling methods and apply them to different research scenarios.
6. Apply appropriate statistical techniques, such as confidence intervals, hypothesis tests, ANOVA, chi-square test, and non-parametric tests, to analyze research data.
7. Prepare comprehensive research reports and effectively present research findings.

PGD DFIS MS1P 6	RESEARCH METHODOLOGY	60
	1. Market Research: - Meaning, Functions & Importance.	6
	2. Research Process a. Defining Research Problem, b. Title Formulation; c. Setting of Hypothesis, d. Research Design – Exploratory, Descriptive and Experimental Research Designs.	12
	3. Data Collection a. Primary & Secondary Sources, b. Questionnaire, c. Processing of Data – Editing, Coding, Classification and Tabulation.	15
	4. Sampling Methods a. Sampling Design, b. Criteria of Selecting a Sampling Procedure, c. Characteristics of Good Sample Design.	12
	5. Analysis and Report Writing - a. Selection of Appropriate Statistical Techniques - b. Confidence Intervals and Hypothesis Tests Based on Two Samples; One way and Two way ANOVA; Chi Square Test. c. Introduction to Non Parametric Tests. d. Presentation of Result: Report Writing.	15

Reference Books:

1. "Research Methodology: A Step-by-Step Guide for Beginners" by Ranjit Kumar
2. "Business Research Methods" by Donald R. Cooper and Pamela S. Schindler
3. "Research Methodology: Methods and Techniques" by C.R. Kothari
4. "Marketing Research: An Applied Orientation" by Naresh K. Malhotra
5. "Research Methodology: Concepts and Cases" by Deepak Chawla and Neena Sondhi

Sem.II

SUBJECT-WISE SYLLABUS

(SEMESTER-II)

PGDDFISMS2MJP7: Risk Assessment & Disaster Response Mechanism

Course Objectives:

1. To develop a deep understanding of multi-hazard, risk, vulnerability, and assessment concepts.
2. To enable students to identify vulnerabilities and assess risks in various contexts.
3. To provide knowledge of vulnerability analysis and risk assessment methodologies.
4. To foster an understanding of the principles and strategies of disaster risk reduction.
5. To familiarize students with the legal and policy framework governing risk assessment and vulnerability analysis.
6. To equip students with needs and damage assessment techniques for effective resource allocation.
7. To familiarize students with the roles and responsibilities of different agencies in disaster response.

Learning Outcomes:

1. Demonstrate a comprehensive understanding of the concepts of multi-hazard, risk, vulnerability, and assessment.
2. Apply appropriate methods to identify vulnerabilities and assess risks in different scenarios.
3. Conduct vulnerability analysis and risk assessment using relevant methodologies.
4. Design and implement effective strategies for disaster risk reduction.
5. Interpret and adhere to legal and policy requirements in conducting risk assessments and vulnerability analysis.
6. Understand the fundamental principles and key components of disaster response.
7. Develop effective disaster response plans considering different scenarios and stakeholders.

PGDD FISMS 2MJP7	Risk Assessment & Disaster Response Mechanism	60
	1. Understanding the concepts of Multi Hazard, Risk , Vulnerability & Assessment (MHRVA)	3
	2. Identifying vulnerability and Risk	3
	3. Vulnerability analysis & Risk Assessment	3
	4. Disaster Risk Reduction	3
	5. Vulnerability – social factors, Economic factor	3
	6. Disaster Risk Governance : Understanding of Laws, Policies and Responsibilities	6
	7. Risk Assessment (Building, Hospital, Institution, Factory etc.)	3
	8. Strategic Development & Vulnerability Reduction	3
	9. Concept of Structural Audit	3
	10. Introduction to Disaster Response Plan	3
	11. Activating Preparedness Plan	3

	12. Role of EOC - Communication	3
	13. Incident Response System	3
	14. Needs & Damage Assessment	3
	15. Role of NDRF, Armed Forces, Police Etc. 16. Role of Central, State & Local Administrative (MCGM) and International Agencies 17. Role of NGO, CBDM, Media, PPP	6
	18. Human Behaviour in Disaster Management	3
	19. Provide relief	3
	20. Emergency Support Function	3

Reference Books:

1. "Disaster Risk Assessment and Mitigation: Arrival of Tsunami Wave in India" by R. Venkata Rao
2. "Vulnerability Assessment and Risk Reduction: A Handbook for Disaster Managers" by Santosh Kumar
3. "Risk Assessment and Vulnerability Analysis: Principles and Applications" by V. R. Singh
4. "Multi-Hazard Risk Assessment: Methods, Models and Applications" by S. K. Nath
5. "Understanding Risk: The Theory and Practice of Financial Risk Management" by S. C. Kuchhal
6. "Disaster Response and Recovery: Strategies and Tactics for Resilience" by K. Srinivas Reddy
7. "Emergency Response Planning: For Corporate and Municipal Managers" by R. W. McKinney
8. "Disaster Management: A Reference Book" by R. B. Singh

PGDDFISMS2MJP8: Institutional & Legal Framework-I

Course Objectives:

1. To provide an overview of the disaster management structure in India.
2. To familiarize students with the Disaster Management Act, 2005.
3. To introduce the National Building Code and its relevance in disaster management.
4. To explore various national and international frameworks and agencies in disaster management.
5. To highlight the importance of sustainable development goals in disaster management.

Learning Outcomes:

1. Understand the organizational structure of disaster management in India.
2. Explain the key provisions and implications of the Disaster Management Act, 2005.
3. Apply the guidelines of the National Building Code to ensure disaster-resilient structures.
4. Identify and analyze the roles and functions of national and international agencies in disaster management.
5. Evaluate the alignment of disaster management practices with sustainable development goals.

PGDD FISMS 2MJP8	Institutional & Legal Framework-I	60

	1. Disaster Management Structure of India	3
	2. Disaster Management Act, 2005	9
	3. National Building Code	6
	4. Various National and International Framework and Agencies	6
	5. Sustainable Development Goals	6
	6. Institutions at National level NDMA, NIDM, NDRF, National Disaster Relief Fund and Other Types of Funding for DM	9
	7. State, District, Tahasil & Village Level institutions	6
	8. Disaster Management plan of Mumbai	9
	9. Understanding of Epidemic Diseases Act 1897	6

Reference Books:

1. "Disaster Management: Global Challenges and Local Solutions" by Dhirendra V. Sharma
2. "Disaster Management: A Reference Book" by Michael K. Lindell and Carla Prater
3. "Disaster Management and Sustainable Development" by P.C. Joshi
4. "National Building Code of India" by Bureau of Indian Standards (BIS)
5. "Disaster Management Act, 2005" by Government of India

PGDDFISMS2MJP9: Role of IT in Disaster Management

Course Objectives:

1. To explore the role of informatics and computer applications in disaster management.
2. To introduce key IT-based capabilities for disaster management, such as data science and communication systems.
3. To analyze the application of geographic information systems (GIS) and remote sensing in disaster management.
4. To examine the use of artificial intelligence and machine learning in disaster management operations.
5. To assess the ethical and privacy implications of IT in disaster management.

Learning Outcomes:

1. Explain the importance of informatics and computer applications in the context of disaster management.
2. Utilize IT-based capabilities, such as data science and communication systems, to support disaster management operations.
3. Apply geographic information systems (GIS) and remote sensing technologies for effective disaster management.
4. Evaluate the application of artificial intelligence and machine learning in disaster management operations.
5. Critically analyze and assess the ethical and privacy considerations related to the use of IT in disaster management.

PGDD FISM S2MJ P9	Role of IT in Disaster Management	60
	1. Informatics for Disaster Management	3
	2. Understanding of Computer Applications Related to D M	3
	3. Communication systems	3
	4. Key IT based capabilities for Disaster Management	3
	5. Introduction of Data Science, Data Recovery, Business Continuity Plan & Cyber Security	9
	6. Introduction of Geo-targeted alerts & warnings along with dissemination system	9
	7. Introduction of Application of Artificial Intelligence and Machine Learning	12
	8. GIS & Remote Sensing in Disaster Management	12
	9. Operations Management	3
	10. Resource Mapping Systems	3

Reference Books:

1. "Information Technology for Disaster Management" by Samui, P., et al.
2. "Geographic Information Systems (GIS) for Disaster Management" by Brian Tomaszewski
3. "Disaster Informatics for Society" by Murthy, C. S. R., et al.
4. "Artificial Intelligence Techniques for Rational Decision Making in the Context of Disaster Management" by Fulgence, M. S., et al.
5. "Machine Learning Applications in Disaster Management" by Antoniou, V., et al.

PGDDFISMS2MJP10: Rehabilitation, Reconstruction & Recovery

Course Objectives:

1. To familiarize students with the concepts, importance, and processes of rehabilitation, reconstruction, and recovery.
2. To teach methods for damage assessment and reporting.
3. To understand the roles and responsibilities of various agencies in rehabilitation and reconstruction efforts.
4. To focus on the development of physical and economic infrastructure for sustainable recovery.
5. To explore funding mechanisms and participatory approaches in rehabilitation and reconstruction.

Learning Outcomes:

1. Gain a comprehensive understanding of the concepts, importance, and processes of rehabilitation, reconstruction, and recovery.

2. Apply appropriate methods for damage assessment and reporting in post-disaster scenarios.

3. Analyze and comprehend the roles and responsibilities of different agencies involved in rehabilitation and reconstruction.

4. Develop strategies for the development of physical and economic infrastructure for sustainable recovery.

5. Evaluate different funding mechanisms and demonstrate knowledge of participatory approaches in rehabilitation and reconstruction.

PGDDFISMS2MJP10	Rehabilitation, Reconstruction & Recovery	60
	1. Rehabilitation, Reconstruction and Recovery – Meaning, Need and Importance	6
	2. Damage Assessment and Reporting	12
	3. Role of Various Agencies in Rehabilitation and Reconstruction	12
	4. Development of Physical & Economic Infrastructure- Creating Livelihood and Job Opportunities	12
	5. Funding arrangement for Rehabilitation and Reconstruction	6
	6. Participative Rehabilitation process, recovery planning	12

Reference Books:

1. "Rehabilitation and Reconstruction in Post-Disaster Recovery" by C. V. R. Murty

2. "Rehabilitation and Reconstruction in Natural Hazards Management" by R. B. Singh

3. "Disaster Recovery and Reconstruction: Approaches and Strategies" by D. K. Nanda

4. "Community-Based Disaster Recovery and Resilience: Exploring Global Opportunities and Challenges" by J. E. S. H. Paton

5. "Rehabilitation and Recovery: Towards Resilient Communities" by R. K. Singh

PGDDFISMS2P11: Elective

PGDDFISMS2P11	Elective 1 (Select Any 1 from Elective Basket)	60

Option 1	Accidents/ Hazards in Industry	60
UNIT I	Introduction to Industrial Accidents and Hazards - Overview of industrial accidents and their impact - Types of hazards in industrial settings - Factors contributing to industrial accidents - Legal and regulatory frameworks for occupational safety	12
UNIT II	Chemical Hazards and Safety - Classification of hazardous chemicals - Chemical handling and storage practices - Risk assessment and control measures for chemical hazards - Emergency response procedures for chemical spills or leaks	12
UNIT III	Machinery and Equipment Safety - Hazards associated with machinery and equipment operation - Risk assessment and mitigation strategies - Lockout/tagout procedures for maintenance and repair - Training and personal protective equipment (PPE) requirements	12
UNIT IV	Electrical Safety - Electrical hazards and risk assessment - Electrical safety standards and regulations - Safe work practices for electrical installations and maintenance - Grounding, bonding, and insulation requirements	12
UNIT V	Confined Space and Permit-to-Work Systems - Hazards associated with confined spaces - Permit-to-work systems and procedures - Atmospheric monitoring and ventilation in confined spaces - Emergency rescue planning for confined space incidents	12
Option 2	Fire Protection System in Hospitality Industry	60
UNIT I	Introduction to Fire Protection in Hospitality - Overview of fire safety in the hospitality industry - Importance of fire prevention and protection - Relevant codes, regulations, and standards - Case studies on fire incidents in the hospitality sector	12
UNIT II	Fire Behavior and Dynamics - Understanding fire behavior and characteristics - Fire spread mechanisms and stages - Factors influencing fire growth in hospitality facilities - Case studies on fire behavior in hotels and restaurants	12
UNIT III	Fire Prevention Measures - Fire prevention strategies and techniques - Building design considerations for fire safety - Proper storage and handling of flammable materials - Fire prevention inspections and maintenance	12

UNIT IV	Fire Detection Systems - Types and components of fire detection systems - Smoke detectors, heat detectors, and flame detectors - Alarm systems and notification devices - Integration of fire detection systems with building management systems	12
UNIT V	Emergency Evacuation and Egress - Emergency evacuation planning and procedures - Means of egress requirements in hospitality facilities - Evacuation routes, signage, and emergency lighting - Training and drills for staff and guests	12

PGDDFISMS2P12: On Job Training / Field Project

Course Objectives:

1. To provide students with practical exposure to real-world work environments.
2. To enhance students' knowledge and skills through hands-on experience in various sites.
3. To develop students' professional competencies and work readiness.
4. To foster networking opportunities and industry connections.
5. To facilitate the integration of theoretical knowledge with practical applications through internships.

Learning Outcomes:

1. Gain practical experience and understanding of real-world work environments.
2. Apply theoretical knowledge and skills in practical settings during site visits.
3. Develop professional competencies, including communication, teamwork, and problem-solving skills.
4. Build industry connections and expand professional networks.
5. Integrate theoretical knowledge with practical applications through internships, enhancing employability.

PGDDFISMS2P12	On Job Training / Field Project	120
	1.. Visit at Various Sites 2. Internship	120

PASSING PERFORMANCE GRADING :
The Performance Grading of the learner shall be on ten point scale be adopted uniformly.

Letter Grades and Grade Point

Semester GPA/ Program CGPA Semester / Program	% of Marks	Alpha-Sign/Letter Grade Result	Grading Point
9.00 – 10.00	90.0 - 100	O (Outstanding)	10
8.00 - < 9.00	80.0 < 90.0	A+ (Excellent)	9
7.00 - < 8.00	70.0 < 80.0	A (Very Good)	8
6.00 - < 7.00	60.0 < 70.0	B+ (Good)	7
5.50 - < 6.00	55.0 < 60.0	B (Average)	6
5.00 - < 5.50	50.0 < 55.0	C (Pass)	5
Below 5.00	Below 50	F (Fail)	0
AB (Absent)		Absent	

NOTE : VC : Vocational Courses, SEC : Skill Enhancement Courses, AEC : Ability Enhancement Courses, VEC : Value Education Courses, VSC : Vocational Skill Course, IKS : Indian Knowledge System, OJT: On The Job Training, FP: Field Projects.

The performance grading shall be based on the aggregate performance of Internal Assessment and Semester End Examination.

The Semester Grade Point Average (SGPA) will be calculated in the following manner: SGPA = □CG / □C for a semester, where C is Credit Point and G is Grade Point for the Course/ Subject.

The Cumulative Grade Point Average (CGPA) will be calculated in the following manner: CGPA = □CG / □C for all semesters taken together.

PASSING STANDARD:

Passing 50% in each subject /Course separate Progressive Evaluation (PE)/Internal Evaluation and Semester-End/Final Evaluation (FE) examination.

A. Carry forward of marks in case of learner who fails in the Internal Assessments and/ or Semester-end examination in one or more subjects (whichever component the learner has failed although passing is on total marks).
B. A learner who PASSES in the Internal Examination but FAILS in the Semester-end Examination of the Course shall reappear for the Semester-End Examination of that Course. However, his/her marks of internal examinations shall be carried over and he/she shall be entitled for grade obtained by him/her on passing.
C. A learner who PASSES in the Semester-end Examination but FAILS in the Internal Assessment of the course shall reappear for the Internal Examination of that Course. However,

his/her marks of Semester-End Examination shall be carried over and he/she shall be entitled for grade obtained by him/her on passing

ALLOWED TO KEEP TERMS (ATKT)

A. A learner shall be allowed to keep term for Semester II irrespective of the number of heads/courses of failure in the Semester I.

B. A learner shall be allowed to keep term for Semester III wherever applicable if he/she passes each of Semester I and Semester II.

OR

C. A learner shall be allowed to keep term for Semester III wherever applicable irrespective of the number of heads/courses of failure in the Semester I & Semester II.

D. A learner shall be allowed to keep term for Semester IV wherever applicable if he/she passes each of Semester I, Semester II and Semester III.

OR

E. A learner shall be allowed to keep term for Semester IV wherever applicable irrespective of number of heads/courses of failure in the Semester I, Semester II, and Semester III

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University of Mumbai's
Garware Institute of Career Education and Development
Board of Studies – Committee members
M.A. (Disaster, Fire, and Industrial Safety Management)
Held on 10th July, 2023 at 11.00 a.m.

Attendance Sheet

Sr. No.	Name of the Member	Signature
1	Dr. Keyurkumar M. Nayak, Director, UM-GICED	
2	Smt. Shilpa Borkar, Placement Officer, UM-GICED	
3	Mr. Ashutosh Medhekar Course Coordinator	
4	Mr. Shekhar Chandratre Industry Experts	
5	Mr. Mahesh Narvekar BMC (Disaster Management)	
6	Dr. R V Sharma Industry Experts	
7	Mr. Vilas Tawde Industry Experts	
8	Mr. Kiran Hatyal Industry Experts	
9	Prof. (Dr.) Mahesh Kamble TISS University	
10	Mr. Rajendra Lokhande Subject Experts	
11	Mr. D M Patil Subject Experts	03/07/23
12	Mr. Rajendra Paynaik Subject Experts	
13	Dr. Shivkumar Kolle Alumni	
14	Ms. Bhakti Bhardwaj Alumni	

Dr. Keyurkumar M. Nayak,
Director,
UM-GICED

Prof.(Dr.) Anil Kumar Singh
Dean,
Faculty of Interdisciplinary Studies

Appendix B

Justification for M.A (Disaster, Fire, and Industrial Safety Management)

1.	Necessity for starting the course	The University of Mumbai's Garware Institute of Career Education & Development plans to introduce a two years full time M.A in Disaster, Fire, and Industrial Safety Management. This course aims to prepare graduates for careers in disaster management, industrial safety, and fire safety, where they can contribute to safeguarding lives, property, and the environment.
2.	Whether the UGC has recommended the course:	Yes, UGC has recommended the course as per gazette no. DL(N)-04/0007/2003-05 dated 11th July 2014. UGC encourages the incorporation of skill oriented and value-added courses to develop skilled manpower.
3.	Whether all the courses have commenced from the academic year 2023-2024	Yes, it would be commencing from the Academic year 2023-24 as per NEP 2020. However, the course was launched in the year 2017.
4.	The courses started by the University are self-financed, whether adequate number of eligible permanent faculties are available?	Yes, this course is self-financed. The expert visiting faculty from industries come to teach this course.
5.	To give details regarding the duration of the Course and is it possible to compress the course?	The duration of the course is two years (four semesters). It cannot be further compressed.
6.	The intake capacity of each course and no. of admissions given in the current academic year:	The intake capacity of this course is 40 students. The admission procedure is still ongoing.
7.	Opportunities of Employability/ Employment available after undertaking these courses:	Employment opportunity is available in public and private sector organizations as Disaster Management Officer, Emergency Management Specialist, Emergency Medical Technician, Fire Inspectors, Fire

Dr. Keyurkumar M. Nayak,
Director,
UM-GICED

Prof.(Dr.) Anil Kumar Singh
Dean,
Faculty of Interdisciplinary Studies