SCHEME OF EXAMINATION

&

SYLLABUS

FOR

MASTER OF BUSINESS ADMINISTRATION

(FIRE AND INDUSTRIAL SAFETY)

ACADEMIC SESSION 2024-25 ONWARDS

UNIVERSITY SCHOOL OF FIRE AND INDUSTRIAL SAFETY

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY

SECTOR-16 C, DWARKA, NEW DELHI – 110078 (INDIA)

www.ipu.ac.in

Master of Business Administration

(Fire And Industrial Safety)

Programme Outcomes (POs)

On completing the programme students should be able to:

PO1: Demonstrate an understanding of management concepts, principles and theories, and apply them in the context of organizational work practices.

PO2: Develop skills in strategic decision-making related to industrial safety policies, risk mitigation, emergency planning, and safety auditing in organizations.

PO3: Cultivate leadership qualities, communication, and team management skills, enabling graduates to lead safety teams, projects, and implement safety protocols efficiently.

PO4: Understanding the role of modern technology and innovation in safety management, including the use of advanced fire detection systems, safety equipment, and IoT-based safety monitoring

PO5: Demonstrate the ability to analyze management problems, to identify and collect relevant data andto apply a creative problem-solving approach.

PO6: Encouraging continuous learning and research in safety management, allowing graduates to keep pace with the evolving trends, technologies, and best practices in the industry.

PO7: Benchmark organizational and managerial practices against the principles of good governance, ethical conduct, corporate social responsibility and the imperatives of long-term societal welfare.

PO8: Demonstrate effective communication and interpersonal skills as well as the ability to work with and lead teams.

PO9: Develop a lifelong learning approach manifested in their attitude to learn, unlearn and relearn andin their pursuit of excellence in professional, personal and social life.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHIMASTER OF BUSINESS ADMINISTRATION (MBA)

SCHEME OF EXAMINATIONS

Criteria for Internal Assessment

All theory courses have internal assessment of 25 marks and 75 marks for external examination. For the courses related to labs, summer training and projects, internal assessment is 40 marks and external examination is 60 marks.

The internal assessment of the students (out of 25 marks) shall be as per the criteria given below:

- Written Test Compulsory (to be conducted as per Academic Calendar of the University
- IndividualAssignments/Presentation/Viva-Voce/GroupDiscussion/Class Participation

Note: Record should be maintained by faculty and made available to the University, if required.

The student will be evaluated continuously during the semester as part of internal assessment.

MAXIMUM & MINIMUM CREDITS OF THE PROGRAM

The total number of the credits of the MBA Programme is **108.**

Each student shall be required to appear for examination in all courses. However, for the award of the degree a student should secure at least **102** credits.

UNIVERSITY SCHOOL OF FIRE AND INDUSTRIAL SAFETY
GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY
NEW DELHI, INDIA

MBA (Fire and Industrial Safety)

SCHEME OF EXAMINATION *w.e.f.* 2024-25 Batch
in accordance with the NEP 2020 Guidelines

FIRST SEMESTER

Course Code	Course Title	Type	L	T/P	Credits
MFIS 101	Principles of Management	Core	2	-	2
MFIS 103	Information Technology Management	Core	2	-	2
MFIS 105	Managerial Economics	Core	2	-	2
MFIS 107	Basics of Fire and Life Safety Audit	Core	2	-	2
MFIS 109	Fire Prevention	Core	2	-	2
MFIS 111	Life Safety	Core	2	-	2
MFIS 113	Fire Protection	Core	2	-	2
MFIS 115	Building Codes and Standards	Core	2	-	2
MFIS 117	MOOC/ Open Elective*	Ability Enhancement	2	-	2
MFIS 151	Field Visits / Presentation**	Ability Enhancement	-	-	6
MFIS 153	Project Work	Ability Enhancement	-	-	6
	Total				**30**

* The student is required to choose one MOOC course of 2 credits as per his or her preference/choice from Swayam portal or any other online educational platform approved by the UGC / regulatory body from time to time. After completing the course, the student has to produce successful course completion certificate for claiming the credit. The course chosen by the student should be intimated to the MOOC Coordinator of the respective institution. Alternatively, the student can pursue any course at PG level offered in the campus by any USS/College with due

intimation to the Program Coordinator/Dean/Director of the School/College.

** There may be one field visit for the students in the 1st Semester and the students will be required to submit a report and present the same for evaluation.

SECOND SEMESTER

Course Code	Course Title	Type	L	T/P	Credits
MFIS 102	Marketing and Financial Management	Core	2		2
MFIS 104	Regulatory Framework for Industrial Safety	Core	2		2
MFIS 106	Communication in Organizations	Core	2		2
MFIS 108	Building Services Design	Core	2		2
MFIS 110	Performance Based Fire Design	Core	2		2
MFIS 112	Institutional & Legal Framework for Disaster Management	Core	2		2
MFIS 114	Geoinformatics for Fire Risk Assessment	Core	2		2
MFIS 116	MOOC/Open Elective*	Ability Enhancement	2	-	2
MFIS 152	Field Visits / Presentation	Ability Enhancement	-	-	6
MFIS 154	Dissertation	Ability Enhancement	-	-	6
	Total				**28**

* The student is required to choose one MOOC course of 2 credits as per his or her preference/choice from Swayam portal or any other online educational platform approved by the UGC / regulatory body from time to time. After completing the course, the student has to produce successful course completion certificate for claiming the credit. The course chosen by the student should be intimated to the MOOC Coordinator of the respective institution. Alternatively, the student can pursue any course at PG level offered in the campus by any USS/College with due intimation to the Program Coordinator/Dean/Director of the School/College.

THIRD SEMESTER

Course Code	Course Title	Type	L	T/P	Credits
MFIS 201	Summer Training Report	Ability Enhancement	-	-	6
MFIS 203	Supply Chain Management	Core	2	-	2
MFIS 205	Entrepreneurship Development	Core	2	-	2
MFIS 207	Operations Management	Core	2	-	2
MFIS 209	State Fire Service Acts, Rules & Byelaws	Core	2	-	2
MFIS 211	Disaster: Causes Impacts and Management	Core	2	-	2
MFIS 213	Fire Forensics	Core	2	-	2
MFIS 215	Industrial Security, Safety and Disaster Risk Reduction	Core	2	-	2
MFIS 217	Crisis Management	Core	2	-	2
MFIS 219	Incident Response System	Core	2	-	2
	Total				**24**

FOURTH SEMESTER

Course Code	Course Title	Type	L	T/P	Credits
MFIS 202	Project Dissertation	Ability Enhancement	-	-	6
MFIS 204	Strategic Management	Core	2	-	2
MFIS 206	Corporate Social Responsibility and Indian Knowledge System	Ability Enhancement and Indian Knowledge System	2	-	2
MFIS 208	Fire Risk and Hazard Analysis of Cities	Core	2	-	2
MFIS 210	Fire Risk and Hazard Analysis of Industry	Core	2	-	2
MFIS 212	Industrial Safety	Core	2	-	2
MFIS 214	Occupational Safety	Core	2	-	2
MFIS 252	Research seminar	Skill Enhancement	-	-	8
	Total				**26**

MAXIMUM & MINIMUM CREDITS OF THE PROGRAM

The total number of the credits of the MBA (Fire and Industrial Safety) Programme is 108. Each student shall be required to appear for examination in all courses. However, for the award of the degree a student should secure at least 102 credits.

In line with the NEP 2020 Guidelines, a student will be allowed to enter/re-enter the programme only at the odd semester and can only exit after the even semester. Re-entry at various levels as lateral entrants in academic programmes should be based on the earned credits and proficiency test records.

SEMESTER- I

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Principles of Management

Course Code: MFIS- 101 **L-2 Credits-2**

Objectives: This course is designed to expose the students to fundamental concepts of management, its principles and process in organizations.

Course Outcomes (COs)

CO1: Enumerate, explain, compare and analyze the concepts, theories and principles that have evolved in specific historical contexts and informed both academic thinking and practices related to the field of management.
CO2: Apply the knowledge of management theory and of organizational behaviour to analyze managerial issues and take decisions consistent with the organizational objectives of efficiency and effectiveness.
CO3: Gain the ability to think strategically and develop business plans that align with the long-term goals and vision of the organization.

Course Content

Unit I
Introduction to Management: Meaning and Nature of Management, Evolution of Management, Tasks and Responsibilities of a Professional Manager, Management by Objectives, Case Study.

Unit II
Process of Management: Planning- Concept, Process and Techniques, Directing - Definition, Principles and Process, Controlling - Definition, Process and Techniques, Decision Making - Concept, Importance and Models, Case Study.

Unit III
Fundamentals of Organizational Behaviour: Organizational Behaviour - Nature and Scope, OB Models merits and demerits, Personality concept and types, Perception and Attitude, Learning - concept and theories, Motivation - definition, importance and theories, Managing stress at Work concept and techniques, Organization Structure concept and types, Case Studies. Organizational Processes and Structure: Organizational Design and Structure, Organizational Culture and Climate, Cross Cultural Organizational Behavior

Unit IV

Group and their Dynamics, Work Teams: Group and their dynamics - Concept and Types, Work Teams definition and importance, Stages of team Building and its behavioral dynamics, Leadership Concept, Importance and Styles, Organizational Justice - Concept, Importance and Types.

Suggested Books: (All Latest Editions)

1. Robbins. Judge, S.P., T.A., Vohra, N. Organizational Behaviour. Pearson Education
Nahavandi, A. et al., Organizational Behavior. Sage Publication
2.Greenberg, J. and Baron, R.A. Behaviour in Organization. Pearson Education
3.Stoner, J.A.F., Freeman, R.E., Kodwani, A.D., et.al. Management. Pearson Education.
4. Newstorm, J.W. & Davis, K. Organizational Behaviour Human Behaviour at Work, McGraw Hill Education
5. Koontz, H, Weihrich, H, Mark V, Cannice, M.V. Essentials of Management - An International Innovation and Leadership Perspective, MC.Graw Hill.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Information Technology Management

Course Code: MFIS-103 **L - 2, Credits -2**

Objectives: The primary objective of this course is to familiarize the student coming from diverse background with basic concepts of information technology, its components and their applications in business processes.

Course Outcomes (COs)

CO1: Recall the components of an Information Technology based system.
CO2: Identify the challenges in storage and retrieval of data.
CO3: Classify the software into various types on the basis of different criteria.
CO4: Create and analyze the database using SQL and spreadsheet tools.
CO5: Build an appropriate computer network as per the organizational needs
CO6: Develop web pages using HTML.
CO7: Contrast the information systems for managerial decision making
CO8: Understand the new and emerging technologies

Course Content

Unit I

Information Technology: Components of IT systems, Characteristics and Classification of Computers**. Computer Architecture, Computer Memory:** Types of Memory, Storage devices, Mass Storage Systems. Concept of Cloud Computing, Data Centres and their challenges.

Unit II

Computer Software: Types of Software. System Software: Introduction to Operating System, Need, Functions and Types of Operating systems. Introduction to GUI. Compiler, Interpreter and Assembler, Types of Computer Programming Languages.

Application Software and their uses. Features of Good Software and emerging trends in software development. Spreadsheet and Presentation Software. Data Analysis using Excel.

DBMS: Traditional File concepts and Database Environment, Database Management Systems Concepts, Types of Data Models, ER Modeling, Integrity Constraints, SQL

queries.

Unit III

Data Communication and Networks: Concepts of Data Communication, Types of Data-Communication Networks, Communications Media, Concepts of Computer Networks, Primary Network Topologies, Network Architectures-The OSI Model, Inter-Networking devices. The Internet, Intranet and Extranets: Internet Services, World Wide Web, Creating Web Pages using HTML.

Unit IV

Functional and Enterprise Systems: Data, Information and Knowledge Concepts, Decision Making Process, Concept and Classification of Information Systems. Security Issues in Information Technology, Emerging Trends in Information Technology: Block Chain, Artificial Intelligence, Machine Learning, Internet of Things and their applications.

Suggested readings: (All Latest Editions)

1. ITL Education Solutions. Introduction to Information Technology, 2/e, Pearson Education.
2. Turban, Rainer and Potter. Introduction to Information Technology, John Wiley and Sons.
3. Behl R. Information Technology for Management, McGraw Hill Education.
4. Joseph A. Brady and Ellen F Monk. Problem Solving Cases in Microsoft and Excel, homson Learning.
5. Mukta Sharma and Surabhi Shankar. Computer Applications, Galgotia Publishing Company
6. Saini A.K. and Mukta Sharma, Web Technologies, Galgotia Publishng Company

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Managerial Economics

Course Code: MFIS-105 **L - 2, Credits - 2**

Objectives: The course is aimed at building a perspective necessary for the application of modern economic concepts, precepts, tools and techniques in evaluating business decisions taken by a firm. The course will also look at recent developments in business in the context of economic theory.

Course Outcomes (COs)

CO1: Examine various economic ideologies, economic theories and techniques of economic analysis and discuss their relevance for managerial decision making.

CO2: Identify and explain factors influencing supply and demand, analyze the dynamic role of markets in allocation of productive resources in a free market economy and offer critique of market based model from sustainable development perspective.

CO3: Examine various approaches and models that explain consumer choices and behaviour and apply them for analyzing the demand.

C04: Discuss the theory of production and analyze the effects of technology and variations in input proportions on output, both in the short run and long run.

CO5: Identify and compare different market structures and analyze pricing and output decisions in different market forms.

CO6: Analyze business cycles, macro-economic conditions and policies and develop effective business strategies.

Course Content

Unit I

Introduction: Nature, Scope and Significance of Managerial Economics, its Relationship with other Disciplines, Role of Managerial Economics in Decision Making; Opportunity cost Principle, Incremental Concept, Cardinal and Ordinal Approaches to Consumer Behaviour: Equi- Marginal Principle, Law of Diminishing Marginal Utility, Indifference Curve Analysis.

(12 Hours)

Unit II

Demand Analysis and Theory of Production: Demand Function, Elasticity of Demand, Demand Forecasting, Applications of Demand Analysis in Managerial Decision Making; Theory of Production: Production Function, Short Run and Long Run Production Analysis, Isoquants, Optimal Combination of Inputs.

Unit III

Theory of Cost and Market Structures: Theory of Cost in Short and Long Runs, Market Structures: Price-Output decisions under Perfect Competition, Monopoly, Monopolistic Competition and Oligopoly.

Unit IV

Introduction to Macro Economics: Nature and Importance of Macro Economics; Market, Command, and Mixed Economies, The Invisible Hand. The economic role of government.; Economic Growth and Development; policy framework of money supply, inflation, and interest rates.

Suggested readings: (All Latest Editions)

1. Hircshey, M. Managerial Economics. Thomson South-Western.Salvatore, D. ManagerialEconomics in a Global Economy. McGraw-Hill.
2. Samuelson, W. F., && Marks, S. G. Managerial economics. John Wiley & Sons.
3. Truett, Dale B. and Truett J. Lila . Managerial Economics: Analysis, Problems, Cases,John Wiley & Sons.
4. Petersen, H. C., Cris, L W and Jain, S.K. Managerial Economics, Pearson Education
5. Satya P Das. Microeconomics for Business, Sage Publishing

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Basics of Fire and Life Safety Audit

Course Code: MFIS -107 **L - 2, Credits - 2**

Course Outcomes

CO1: Understand the fundamental concepts and objectives of fire and life safety audits, including their importance in risk management and regulatory compliance.

CO2: Analyze the methodologies and tools used in conducting fire and life safety audits, including risk assessment techniques and compliance checklists.

CO3: Evaluate the effectiveness of existing fire and life safety measures within organizations and identify potential areas of risk and non-compliance.

CO4: Develop comprehensive audit reports with actionable recommendations for improving fire and life safety practices, ensuring enhanced protection for occupants and assets.

Course Content

Unit I:

Introduction to Fire and Life Safety Audit, Requirements, Role of Fire and Life Safety Auditor, Fire Officers and Consultants.

Unit II:

Fire Occupational Safety and Life Safety Audit, Statutory and Recommendatory Legal Provisions of Fire and Life Safety in India, Europe, USA and Australia, Code of Practice.

Unit – III:

Fire Safety Management Audit, Safety Management Audit Model, Audit Process, Organizational Strength, Audit Report and Action Planning, Preparing for Audit.

Unit – IV

Guidance for Auditing Management Systems in National and International Standards, Terms and Definitions, Principles of Audit, Conducting Audit Follow-Up, Competence and Evaluation of Auditors.

Reading List:

1. Fire Safety Management Audit, Specification August 2017 or as amended, Published by British Safety Council.

2. Code of Practice on Occupational Safety and Health Audit, IS 14489:1998 Published by Bureau of Indian Standards.
3. Guidelines for Auditing Management System, ISO 19011, Published by International Standard Organization.
4. NFPA 921 Guide for Fire and Explosion Investigation 2014, Published by National Fire Protection Association, USA.
5. Fire and Life Safety Codes of Europe, USA and Australia Published by National Fire Protection Association, USA, British Council and Australian Standards.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Fire Prevention

Course Code: MFIS 109 **L - 2, Credits - 2**

Course Outcomes (COs)

CO1: Understand the fundamental principles of fire prevention, including fire dynamics, causes of fire, and risk factors associated with various environments.
CO2: Analyze and evaluate existing fire prevention measures and practices in different industries, identifying strengths and areas for improvement.
CO3: Develop effective fire prevention strategies and programs that incorporate best practices, regulatory requirements, and community awareness initiatives.
CO4: Assess the impact of training and education on fire prevention efforts, demonstrating the importance of fostering a culture of safety within organizations.

Course Contents

Unit I:
Principles of Fire Science, Classification of Fire, Spread of Fire, Sources of Ignition, Products of Combustion, Electricity and Fire Risks, Fire Load

Unit II:
Classification of Occupancy, Hazards of Contents, Fire Resistance Rating of Various Building Materials.

Unit III:
Building Rehabilitation, Historic Buildings, Repairs, Renovations, Modification, Reconstruction, Change of Occupancy

Unit IV:
Fire Drills, Emergency Plans, Fire Command Centre, Fire Prevention and Fire Protection Programme.

Reading List:

1. SP7:2016 National Building Code of India Volume 1 & 2 (Published by Bureau of Indian Standards)
2. NFPA 101 Life Safety Code (Published by National Fire Protection Association, USA).

3. Fire Protection Handbook Volume – I & II (Published by National Fire Protection Association, USA)
4. International Fire Code (Published by International Code Council, INC.)
5. Fire Fighting The Essential Handbook by Barendra Mohan Sen (Published by UBS Publishers' Distributors Pvt. Ltd, New Delhi)
6. IS codes on 'Fire and Life Safety' published by Bureau of Indian Standards, India

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Life Safety

Course Code: MFIS 111 **L - 2, Credits - 2**

Course Outcomes (COs)

CO1: Understand the key concepts and principles of life safety, including the identification of hazards and the assessment of risks to human life in various environments.
CO2: Analyze life safety codes, standards, and regulations to ensure compliance and the effective implementation of safety measures in buildings and facilities.
CO3: Evaluate emergency response plans and evacuation procedures, emphasizing the importance of preparedness and training for staff and occupants.
CO4: Develop and propose comprehensive life safety strategies and solutions that enhance the protection of individuals in both public and private spaces.

Course Contents

Unit I:
General Definitions, Construction and Compartmentation, Fire Barriers; Smoke Partitions; Smoke Barriers; Vertical Openings, Special Hazard Protection.

Unit II:
High Rise Buildings; Egress and Occupation Strategy; Fire Safety Requirement for Lifts; Horizontal Exits.

Unit III:
Occupancy Wise Life Safety Requirements; Atrium Protection; Commercial kitchen; Car Parking Facilities; Metro Stations.

Unit IV:
Building Materials, Glazing Interior Surface Finishes, Facade

Reading List:

1. SP7:2016 National Building Code of India Volume 1 & 2 (Published by Bureau of Indian Standards)
2. NFPA 101 Life Safety Code (Published by National Fire Protection Association, USA).
3. Fire Protection Handbook Volume – I & II (Published by National Fire Protection Association, USA)

4. International Fire Code (Published by International Code Council, INC.)
5. Fire Fighting Operations in High-Rise and Standpipe-Equipped Buildings by David M. McGrail (Published by PennWell Corporation, USA)
6. IS codes on ‘Fire and Life Safety’ published by Bureau of Indian Standards, India

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MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Fire Protection

Course Code: MFIS 113 **L - 2, Credits - 2**

Course Outcomes (COs)

CO1: Understand the fundamental principles of fire protection, including fire behavior, causes, and prevention strategies.
CO2: Analyze various fire protection systems and technologies, including detection, suppression, and alarm systems, and their applications in different environments.
CO3: Evaluate fire safety regulations, codes, and standards to assess compliance and effectiveness in protecting life and property.
CO4: Develop comprehensive fire protection plans and risk assessments tailored to specific organizational needs and regulatory requirements.

Course Contents

Unit I:
Objectives, Fundamental Requirements, Minimum Requirements Based on Building Occupancy Classification.

Unit II:
Fire Detection and Alarm Systems, Voice Evacuation and Public Address System, Electrical Installations, Emergency Power Supply, Lightening Protection, Escape Lighting and Exist Signages.

Unit III:
Fire Fighting System, Wet Riser, Down-Corner, Dry Riser, Static Water Storage Tanks, Fire Pumps and Appurtenances, Fire Extinguishers, Automatic High Velocity and Medium Velocity Water Spray Systems, Fixed Foam Installations, Gas Based Suppression Systems, Automatic Water Mist Systems, Special Provision for High Rise Buildings.

Unit IV:
Heating, Ventilation, Air Conditioning and Refrigeration Systems; Mechanical Smoke Exhaust systems, Pressurization of staircase and protection of escape routes, arrangements for Smoke Exhaust and Pressurization of Areas Below Ground, Smoke management in Atrium and High Rise Buildings.

Reading List:

1. SP7:2016 National Building Code of India Volume 1 & 2 (Published by Bureau of Indian Standards)
2. NFPA 101 Life Safety Code (Published by National Fire Protection Association, USA).
3. Fire Protection Handbook Volume – I & II (Published by National Fire Protection Association, USA)
4. International Fire Code (Published by International Code Council, INC.)
5. IS codes on 'Fire and Life Safety' published by Bureau of Indian Standards, India
6. NFPA 13 Automatic Sprinkler Systems Handbook (Published by National Fire Protection Association, USA)
7. NFPA70 'National Fire Alarm and Signaling Code (Published by National Fire Protection Association, USA)
8. NFPA92 'Standard for Smoke Control System (Published by National Fire Protection Association, USA)
9. CPWD General Specifications for Electrical Works Part V-(Wet Riser & Sprinkler System) (Published by Central Public Works Department, Govt. of India)

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MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Building Codes and Standards

Course Code: MFIS 115 **L - 2, Credits - 2**

Course Outcome

CO1: Understand the key principles and objectives of building codes and standards, including their role in ensuring safety, health, and sustainability in construction.
CO2: Analyze various building codes and standards applicable to fire safety, structural integrity, accessibility, and environmental impact.
CO3: Evaluate compliance with building codes and standards in real-world scenarios, identifying potential areas of risk and non-compliance.
CO4: Develop recommendations for the effective implementation of building codes and standards in design and construction practices to enhance safety and performance**.**

Course Contents

Unit I:
Introduction to Codes, Standards, Good Practice, Handbook and Special Publications, Aspect of Applicability at Local Jurisdiction, Requirements and Regulations of Authority Having Jurisdiction.

Unit II:
National Building Code of India – Changes and revision from Inception to 2016, Aspect of IS Codes – Revision and Referencing in NBC, Interrelation of Part and Sections of NBC.

Unit III:
Local Building Code, Regulations, Act and Bye-Laws, Changes and Amendments of above by Authority Having Jurisdiction, Gazette Notifications and Adoption of Local Code, Issue of NOC, Occupancy Certificate and Renewals, Adoption of NBC by Authority Having Jurisdiction.

Unit IV:
Cinematography Act State wise aspect of Applicable Act wide Rules and Bye-Laws, Reference and alignment to NBC under Special Occupancy.

Reading List:

1. Model Fire Service Bill & Rules of 1958 and as amended from time to time, Published by DG FS CD & HG, MHA, GOI
2. Fire and Life Safety Acts, Rules, Local Building Bye Laws published by Government of Delhi, Maharashtra, Gujarat, Karnataka, Odisha and West Bengal.
3. NBC 1997, 2005 and 2016.
4. IS Codes and Standards – Various.
5. Development Control Regulation – Greater Mumbai
6. The Cinematography Act, 1952 and Rules (with further Amendments)

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

MOOC/ Open Elective

Course Code: MFIS 117 **L - 2, Credits - 2**

To remove rigid boundaries and facilitate new possibilities for learners in education system, study webs of active learning for young aspiring minds is India's Nation Massive Open Online Course (MOOC) platform. Massive Open Online Courses (MOOCs) are online courses which are designed to achieve the three cardinal principles of India's education policy: Access, Equity and Quality. MOOCs provide an affordable and flexible way to learn new skills, career development, changing careers, supplemental learning, lifelong learning, corporate eLearning & and deliver quality educational experiences at scale and more.

A student is required to earn 3 credits by completing a quality–assured MOOC programme offered on the SWAYAM portal or any other online educational platform approved by the UGC / regulatory body from time to time at PG level. Successful Completion Certificate should be submitted to respective institute for earning the course credit.

Alternatively, student can pursue any course offered in the campus by any USS/College at PG level with due intimation to the Program Coordinator/Dean /Director of the School/College.

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MASTER OF BUSINESS ADMINISTRATION
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Field Visits / Presentation

Course Code: MFIS 151 **L - 0, Credits - 6**

The field visit and presentation should focus on the practical application of management concepts, theories, or techniques learned throughout the MBA program. Students will visit organizations or institutions relevant to their area of study to observe real-world management practices and gather insights on specific organizational or social issues. During the presentation, students will summarize their field visit experiences, highlighting key observations and connecting them to theoretical frameworks. Students are expected to demonstrate critical thinking and practical understanding by articulating their findings and reflections. Upon completion, a detailed report summarizing the visit, methodology, observations, and conclusions will be submitted.

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Project Work

Course Code: MFIS 153 **L - 0, Credits - 6**

The project work should focus on applying management concepts, theories, or techniques acquired throughout the program to analyze and address a specific organizational or social issue or challenge. Students will be evaluated on the clarity, depth, and originality of their work, as well as their ability to connect theory to practice and communicate their findings effectively.

SEMESTER- II

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Marketing and Financial Management

Course Code: MFIS 102 **L - 2, Credits - 2**

Course Outcomes (COs)

CO1: Understand the fundamental concepts of marketing and financial management, and their interrelationship in driving organizational success.

CO2: Analyze market trends, consumer behavior, and competitive landscapes to develop effective marketing strategies that align with financial objectives.

CO3: Apply financial management principles to evaluate marketing investments, assess profitability, and make data-driven decisions for resource allocation.

CO4: Develop comprehensive marketing plans that incorporate financial metrics, ensuring sustainability and growth in a competitive environment.

Course Contents

Unit I

Introduction to Marketing: Meaning and Scope of Marketing; Marketing Philosophies; Concept of Customer Value and Customer Satisfaction, Marketing Management Process-An Overview: Concept of Marketing Mix; Understanding Marketing Environment; Consumer Buyer Behavior; Market Segmentation, Targeting and Positioning; Overview of Competitive Marketing Strategies**,** Basics of Rural Marketing, Social Marketing; Sustainable Marketing; Digital Marketing; Ethical Issues in Marketing

Unit II

Product and Pricing Decisions: Product Concept; Product Classifications; Product Levels; Product Differentiation; Product Mix; Product Line Decisions; Product Life Cycle-Concept. Promotion and Distribution Decisions: Concept of Integrated Marketing Communication; Promotion Mix-Advertising, Personal Selling, Publicity. Direct Marketing and Sales Promotion

Unit III

Financial Objectives; Impact of Financial and Economic Environment on Financial Management; Time Value of Money, Computation of EMI, Annuity.

Unit IV

Introduction to Capital Structure: Net Income Approach, Net Operating Income Approach, Traditional Approach and MM Approach, Cost of Capital: Leverage Analysis, Operating Leverage, Financial Leverage, Combined Leveraged. EBIT-EPS Analysis, Capital Gearing, Capital Budgeting.

Suggested Readings: (All Latest Editions)

1. Kotler, P., Keller, K.L., Marketing Management, Pearson Education.
2. Lamb, C.W, Hair, J.F, Sharma, D. & Mc Daniel C., Marketing- A South Asian Perspective Edition, Cengage India Pvt. Ltd, Delhi
3. Baines, P.. Fill, C., Page, K., Sinha, P.K., Marketing: Asian Edition, Oxford University Press, New Delhi.
4. Brigham, E. F., & Houston, J. F. Fundamentals of Financial Management. Cengage Learning India Pvt Ltd.
5. Tata McGraw Hill. Van Horne, James, C. Principles of Financial Management, Pearson
6. Pandey, I.M. Financial Management, Pearson Education.
Ravi Kishore. Financial Management, Taxmann's Publications

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Regulatory Framework for Industrial Safety

Course Code: MFIS 104 **L - 2, Credits - 2**

Course Objective:

This subject aims to provide students with a comprehensive understanding of the regulatory frameworks governing industrial safety. It covers national and international laws, standards, and best practices, ensuring students understand the legal responsibilities, compliance requirements, and safety management systems applicable in the industrial sector.

Course Outcomes

CO1: Understand the key components of the regulatory framework governing industrial safety, including national and international safety standards and legislation.
CO2: Analyze the roles and responsibilities of various regulatory bodies and stakeholders in enforcing industrial safety regulations.
CO3: Evaluate the impact of regulatory compliance on organizational practices, risk management, and safety culture within industrial settings.
CO4: Develop strategies for effective compliance and implementation of industrial safety regulations, emphasizing continuous improvement and best practices

Course Contents

Unit 1: Introduction to Industrial Safety Regulations

- **Overview of Industrial Safety**: Understanding the need for safety in industries, common industrial hazards (chemical, electrical, mechanical, etc.), and the importance of risk management.
- **Evolution of Safety Legislation**: History and development of industrial safety laws in India and globally.
- **International Frameworks**: Introduction to international standards like ISO 45001, OHSAS 18001, and their significance in industrial safety.
- **Key Regulatory Bodies**: Overview of Indian regulatory bodies such as the National Safety Council, the Directorate General Factory Advice Service & Labour Institutes (DGFASLI), and international agencies like OSHA (Occupational Safety and Health Administration).

Unit 2: Indian Legal Framework for Industrial Safety

- **Factories Act, 1948**: Comprehensive understanding of the act's provisions related to workplace safety, health, and welfare measures.
- **Environment Protection Act, 1986**: Regulations on pollution control, waste management, and environmental safety.
- **The Mines Act, 1952**: Regulations on safety, health, and working conditions in mining operations.
- **Explosives Act, 1884 & Gas Cylinders Rules, 2016**: Legal provisions regarding handling and storage of hazardous materials.
- **The Public Liability Insurance Act, 1991**: Liability of industries in case of hazardous incidents.
- **The Petroleum Act, 1934**: Regulatory norms for the handling, transport, and storage of petroleum products.

Unit 3: Safety Management Systems and Compliance

- **Safety Management Systems (SMS)**: Overview of components of SMS such as policy, planning, implementation, monitoring, and review.
- **Compliance and Audits**: Role of compliance in industrial safety. Types of audits—internal, external, third-party—and their importance.
- **Workplace Safety Programs**: Developing and managing safety programs, hazard analysis, risk assessments, and implementing corrective actions.
- **Roles of Safety Officers and Managers**: Understanding the responsibilities of safety professionals in ensuring compliance with regulations and promoting a culture of safety.
- **Incident Reporting and Investigation**: Guidelines for reporting workplace accidents and conducting investigations to prevent future incidents.

Unit 4: Global Best Practices and Emerging Trends in Industrial Safety

- **Emerging Safety Challenges**: Addressing new and evolving risks due to automation, chemical industries, construction, and power plants.
- **Technological Innovations in Safety**: Role of technology (e.g., AI, IoT, wearable safety devices) in improving safety measures.

- **Case Studies of Global Industrial Accidents**: Analysis of major industrial accidents (e.g., Bhopal Gas Tragedy, Chernobyl, Deepwater Horizon) and the regulatory changes that followed.
- **Corporate Social Responsibility (CSR) and Safety**: The role of CSR in promoting safety and welfare in industries.
- **Future Regulatory Trends**: Understanding upcoming global and national legislative changes and initiatives focused on industrial safety.

Recommended Reading:

1. **"Safety and Health in Industry"** by T. R. Ramanujam
2. **"Industrial Safety and Health Management"** by C. Ray Asfahl and David W. Rieske
3. **"Industrial Safety and Environment"** by K. U. Mistry
4. **The Factories Act, 1948** - Bare Act
5. **ISO 45001:2018** - Occupational Health and Safety Management Systems

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Communication in Organizations

Course Code: MFIS 106 **L - 2, Credits - 2**

Objectives: The aim of the course is to train students to enhance their skills in written and oral communication. The course will help students develop competence in communication so that they can successfully handle the challenges of all types of communication in business environment.

Course Outcomes (COs)

CO1: Recognize the scope and significance of communication and its relevance for enhancing individual and organizational performance in the context of global business operations.
CO2: Explain the concepts, theories and principles of communication informing various communication strategies and practices aimed at effective communication with different stakeholders of the organization.
CO3: Identify and apply various tools and techniques for developing appropriate communications strategies aimed at positioning the organization and build brand image.
CO4: Exhibit the use of interpersonal communication skills and etiquettes for impactful business dealings and lasting relationship building reflected in dressing sense, listening skills, cultural sensitivity etc.
CO5: Devise an effective communication strategy and protocols that can be successfully employed by individuals and teams while participating in business negotiations.

Course Contents

Unit I
Introduction to Business Communication: Business communication – definition, importance. Forms and types of communication (Downward, upward, horizontal and lateral communication), Formal and informal communication network. Process of communication, Barriers and Gateways to communication.

Unit II
Written Communication and Application of Communication: Principles of Written Communication – 7C's Concept. Business and Commercial Letter (Request letters, Good News letters, Persuasive letters, Sales letters). Job application and Resume Writing.

Unit III
Oral Communication: Principles of Oral Presentations, Factors Effecting Presentation, Video-conferencing and Skype, Non-Verbal Communication (Para language, Time, Space, Silence, Body

language). Relating through Informative and Persuasive speeches, Listening.

Unit IV

Recent Trends in Business Communication: Online Communication and Personal Relationships, Handling Online Meetings, Business Communication via Social Network, Writing Social Blogs. Inter-cultural communication. Ethical and Legal Issues.

Suggested Readings (All Latest Editions)

1. Courtland L. Bovée et. al., Business Communication Today, Pearson
2. Steve Duck and David T. McMahan, The Basics of Communication, Sage, South Asia
3. Lesikar R et.al., Business Communication: Connecting in a Digital World, McGraw Hill.
4. Murphy H et.al., Effective Business Communication, McGraw Hill.
5. Reddy C.R. Business Communication, Wiley Publications.
6. Chaturvedi M.Art and Science of Business Communication, Pearson.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Course Code: MFIS 108 **L - 2, Credits - 2**

Course Outcomes

CO1: Understand the fundamental concepts and principles of building services, including HVAC, electrical, plumbing, and fire protection systems.
CO2: Analyze the requirements and regulations for designing efficient and safe building services that meet the needs of occupants and comply with safety standards.
CO3: Apply design methodologies and software tools to create effective building service plans that enhance safety, functionality, and sustainability.
CO4: Evaluate the performance of building services systems in real-world applications, identifying opportunities for improvement and innovation in design practices.

Course Content

Unit I:
Basics of Electrical and definition, Design and Planning of Safe Electrical Services, distribution of electric supply, safety devices in electrical circuits, Emergency Lighting Design to meet egress and Evacuation requirements, Electrical Load Estimation & Lighting Design, Transformer & DG Selection & Sizing, Switchgears Selection & Sizing, Panel & Distribution Board Types & Designing, Cables, Wires & Conduit Selection & Sizing, Introduction to Codes & Standards, Exit and Emergency Lighting Design to meet egress and Evacuation requirements, Lightning and Earthing Systems.

Unit II:
Heating, ventilation and Air conditioning systems: Introduction, Refrigeration Cycle and Types of Air-Conditioning System, General Heat Load Calculation, Psychrometric Chart, Chillers/ DX Systems, Cooling Towers, VRF System, District Cooling and Coil Selection Air Distribution System, Ventilation System, Heating System, Hydronic System, Fire Protection, Case Study and Project Discussion.

Unit III:
Water supply system in the buildings: Drainage Systems, Water Supply Systems, Pipe Material & Insulation of Piping Systems, Energy Conservation, Introduction to Codes & Standards, Case

Study & Project Discussion.

Unit IV:
Fuel gas systems: Codes and Practice for household and Industries.

Unit V:
Elementary Building Management System – Basics of BMS, Studying BMS Architecture, Input Output Summary, DDC controllers & Field Devices, Understanding cause and effect matrix, Graphical representation, Maintenance and regular building services health check. Vital measurements and record keeping (log books).

Unit VI:
Mechanical Services – Aspect of Smoke Mitigation approach from pressurization and Ventilation consideration. Control and Logic of Smoke Mitigation System, Aligning Mechanical Design Systems and Services to Compartmentation Design to avoid spread of fire with Passive Fire Rating over Duct Work, Duct Work Construction, Dampers and their controls.

Unit VII:
Fire Protection and Fire Fighting – Design and Planning of Water Storage, Fire Pumps, Hydrants, Sprinkler System, Selection and location planning of Fire Extinguishers, Aspect of Kitchen Hood, Server, IT Rooms and Helipads Fire Protection System, Design and Planning of Fire Alarm System with PA System including Cause and Effect Integration.

Reading List:

1. NBC 2016
2. IS 15105, 2189, 2190 & 3844
3. ASHRAE fundamentals of HVAC 2017
4. ISHRE HVAC Data Book 2017
5. ASHRAE Design Guide for Tall Buildings 2018
6. FSAI Suraksha Index (FSI) – Building Rating System Published by FSAI

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
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Performance Based Fire Design

Course Code: MFIS 110 **L - 2, Credits - 2**

Course Outcome

CO1: Understand the principles and objectives of performance-based fire design, including its advantages over traditional prescriptive approaches.

CO2: Analyze building designs and materials to assess fire performance and determine compliance with safety standards and regulations.

CO3: Apply fire modeling techniques and tools to simulate fire scenarios and evaluate the effectiveness of design solutions in mitigating fire risks.

CO4: Develop performance-based fire safety strategies and recommendations for various types of buildings, ensuring both safety and functional performance

Course Contents

Unit I: An Introduction to Prescriptive and Performance based Design Approach

Criteria for Prescriptive and performance-based Design for fire and life safety systems in buildings. Specific aspect of Performance based design of Fire and Life Safety Services for Large and Mixed-use Projects.

Assessing on aspect of Prescriptive Design and Results as obtained as so compared with Performance based design Special Considerations on Performance Based Design on Evacuation Simulation, Smoke Mitigation and Control, Building Structural Fire Rating, Passive Fire Rating System on L and T Rating, Façade Design, Building Separation and Setbacks, Elevator Evacuation, Public Address System and Campus Fire Strategy.

Unit II: FIRE Evacuation Modeling

Principles and Practice of Evacuation Modeling (PPEM)

- Introduction
- Scope
- Building Evacuation Models
- Theory of Occupant Behavior during Building Fires
- Explain RSET – models that are commonly used in guidelines and regulations
- Describe different theories of human behavior in fire (e.g. role-rule model, affiliation, social influence, affordances, help in emergencies, panic, etc.)
- Understand the representation of evacuation movement

- Explain the basic assumptions behind evacuation models (space representation, modeling methods, uncertainties, verification and validation) and understand their main strengths and limitations.
- Apply evacuation models for the simulation of evacuation scenarios.

Unit III: Fire Dynamic Simulation

Fundamental Processes

- Physical concepts
- Fuel and combustion processes and fundamentals
- Limits of flammability
- Heat transfer: Conduction and convection

Radiation, ignition and flame spread

- Radiation from fires
- Ignition – general, gaseous/ liquid fuels and solids
- Spread of flame
- Fire behavior and modern buildings

Pool fires, jet fires and cloud fires

- Steady burning diffusion fires
- Pool fires in the open
- Jet fires
- Radiation from flames
- Example calculations: radiation flux from flare on escape route
- Pool and jet fires, large-scale tests
- Cloud fires
- Pool and jet fires in compartments.

Compartment fires

- The growth period
- Flashover
- The post-flashover period and back draughts
- Fire performance of structures
- Smoke movement
- Fire combustion products and toxicity as a function of ventilation conditions

Compartment fire modeling

- Overview of fire models
- A zone model in detail – CFAST
- Using CFD models
- Hands on experience with a zone model

Reading List:

1. Performance – based fire safety design by Morgan J Hurley and Eric R. Rosenbaum (Published by CRC Press)
2. SFPE Engineering guide to Performance – based fire protection, 2nd Edition
3. CFAST of NIST USA
4. FDS of NIST USA

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Institutional & Legal Framework for Disaster Management

Course Code: MFIS 112 **L - 2, Credits - 2**

Course Outcomes

CO1: Understand the key components of the institutional framework for disaster management, including the roles and responsibilities of various government agencies and organizations.

CO2: Analyze the legal frameworks governing disaster management at national, state, and local levels, including relevant laws, policies, and regulations.

CO3: Evaluate the effectiveness of current disaster management practices and identify areas for improvement within the institutional and legal context.

CO4: Develop strategies for enhancing collaboration among stakeholders in disaster management, emphasizing the importance of legal compliance and institutional coordination.

Course Content

Unit I: Disaster Management Framework in India

Constitution of India, Prime Minister Agenda of 10 Points, NPDRR; Disaster Management Act 2005, Environment Protection Act, 1986, Section 135 of Company Act 2013, India – Corporate Social Responsibility, National Disaster Management Policy 2009, National Disaster Management Plan 2016. Judicial Case Studies Related to Disaster Management.

Unit II: International Framework for Disaster Management

International Initiatives by UN – UNDRR, ARISE, Yokohama Strategy, Hyogo Framework for Disaster Risk Reduction (2005-2013), Sendai Framework (2013-2030), Sustainable Development Goals, COP21 – Paris Agreement 2015, Its Scope, Utility and Initiative Taken for DRR; Human Rights and Humanitarian Laws.

Unit III: Role of National and International Agencies

National Disaster Management Authority (NDMA), Disaster Management Framework at National, State, District and Local Level, Constitution of DDMAs and Roles and Responsibilities; Armed Forces, CAPF and State Police, Medical Services, Civil Defence, Home Guards, NCC, NYK, NSS, Volunteers and Fire Services, etc. – Role of Each Stakeholder; UN Agencies, IFRC & National Red Cross Society.

Unit IV: Disaster Management Framework in Select Countries.

Institutional and Legal Framework in Certain Developed and Developing Countries, such as USA, Japan, Singapore, South Africa and Bangladesh.

Reading List:

1. Arnold, M. and Kreimer, A. (2000) Managing Disaster Risk in Emerging Economies", Disaster Risk Management Series No. 2, World Bank, Washington, D.C.
2. Collins, L. R. and Schneid, T. D. (2000) Disaster Management and Preparedness, Taylor and Francis.
3. Disaster Management Act (2005).
4. Goel, S. L. and K. Ram (2001) Disaster Management, Deep and Deep Publications.
5. Hyogo Framework for Action (2005-2015).
6. National Disaster Management Plan (2016).
7. National Disaster Management Policy (2009).
8. Parasuraman, S. (2004) India Disaster Report: Towards a Policy Initiatives, Oxford University Press.
9. Sendai Framework for DRR (2015-2030).
10. UNISDR – ARISE (2015).
11. Vision, United Nations (2004).

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MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Geoinformatics for Fire Risk Assessment

Course Code: MFIS 114 **L - 2, Credits - 2**

Course Outcome

CO1: Understand the fundamental concepts of geoinformatics and its applications in fire risk assessment, including spatial analysis and data visualization techniques.

CO2: Analyze geographic data related to fire hazards, including topography, land use, and climate factors, to identify areas at risk.

CO3: Apply geospatial tools and software to assess fire risk and develop predictive models for fire behavior and potential impact.

CO4: Evaluate the effectiveness of geoinformatics in informing fire management strategies and decision-making processes for risk reduction

Course Content

Unit I: Introduction to Remote Sensing (RS), GIS

Basic and Principles of Remote Sensing, Electromagnetic Spectrum, Resolution Types, EMR Interaction, Spectral Signatures of Different Objects, Platforms and Sensors. Digital Image Processing (DIP) Techniques. Visual Image Interpretation Tools and Techniques; Basic, Principles and Components of GIS, Spatial Information and Spatial Data Types; Geographic Phenomena, Geographic Field, Geographic Objects and Boundaries; Raster- Based GIS data Processing with Both Regular and Irregular Tessellations, Vector-Based GIS Data Processing and Topology, Spatial Relations, Spatial Analysis.

Unit II: Global Positioning Systems (GPS)

Basic Principles of GPS, Functions and Positioning Services. Map Projections and Coordinate Systems. Types of Survey of India (SOI) Topographical Maps. Numbering Systems and Interpretation of SOI Topographical Maps.

Unit III: Spatial Information Technologies and Disaster Management

Concepts of Spatial Information and Data; Spatial Data Platforms for Disaster Information: Government, Private & Community Sourced; Spatial Digital Data Collection and Processing: Pre-Disaster, During Disaster and Post-Disaster Phase; Spatial Information Accessibility and Authorization Issues in Disaster Management; Real time Spatial Data Availability: Requirments for Emergencies.

Unit IV: Applications

Geospatial Urban Planning and Fire Risk Resilience; GIS based Fire Response Planning, Remote Sensing for Fire Risk Potential Mapping; Unmanned Aerial Vehicle (UAV) for 3-D based Fire Detection and Monitoring. Spatial Decision Support System (SDSS) for Fire Risk Assessment and Management; Fire Risk Modeling. GIS based On-Site and Off-Site Plans. Map creation for action plan identification of risk and planning needs.

Reading List:

1. Jenssen, Lucas L.F. and Grrit C. H. (2001) Principle of Remote Sensing. ITC Educational Text Book series 2. International Institute of Geo information Science and Earth Observation (ITC). Enschede.
2. Jensen, J. R. (2004) Introductory Digital Image Processing: A Remote Sensing Perspective Prentice Hall.
3. Jensen, J. R. (2009) Remote Sensing of the Environment: An Earth Resource Perspective, 2nd Edition, Dorling Kindersley.
4. Joseph and George. (2005) Fundamentals of Remote Sensing, 2nd Edition. University press India.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

MOOC/Open Elective

Course Code: MFIS 116 **L - 2, Credits - 2**

To remove rigid boundaries and facilitate new possibilities for learners in education system, study webs of active learning for young aspiring minds is India's Nation Massive Open Online Course (MOOC) platform. Massive Open Online Courses (MOOCs) are online courses which are designed to achieve the three cardinal principles of India's education policy: Access, Equity and Quality. MOOCs provide an affordable and flexible way to learn new skills, career development, changing careers, supplemental learning, lifelong learning, corporate eLearning & and deliver quality educational experiences at scale and more.

A student is required to earn 3 credits by completing quality –assured MOOC programme offered on the SWAYAM portal or any other online educational platform approved by the UGC/ Regulatory body from time to time at PG level. Successful Completion Certificate should be submitted to respective institute for earning the course credit.

Alternatively, student can pursue any course offered in the campus by any USS/College at PG level with due intimation to the Program Coordinator/Dean /Director of the School/College

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Field Visits / Presentation

Course Code: MFIS 152 **L -0, Credits - 6**

The field visit and presentation should focus on the practical application of management concepts, theories, or techniques learned throughout the MBA program. Students will visit organizations or institutions relevant to their area of study to observe real-world management practices and gather insights on specific organizational or social issues. During the presentation, students will summarize their field visit experiences, highlighting key observations and connecting them to theoretical frameworks. Students are expected to demonstrate critical thinking and practical understanding by articulating their findings and reflections. Upon completion, a detailed report summarizing the visit, methodology, observations, and conclusions will be submitted.

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Dissertation

Course Code: MFIS 154 **L - 0, Credits - 6**

The dissertation should focus on the application of management concepts, theories, or techniques acquired throughout the program to explore and address a specific organizational or social issue or challenge. Students may utilize either primary or secondary data sources for their research. Upon completion of the dissertation, students are required to submit a comprehensive report detailing their methodology, findings, and conclusions.

SEMESTER III

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
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Summer Training Report

Course Code: MFIS 201 **L - 0, Credits - 6**

All the students will submit their Summer Training Project (in duplicate) within a period of one month from the date of completion of their Summer Training to the concerned Institute/School. The supervisor in the organization under whose guidance the summer training is carried out will be required to grade the student's performance in the format prescribed by the university. Each student will be attached to one internal faculty guide, with whom he/ she shall be in continuous touch during the training period. The internal faculty guide will be required to evaluate the report (out of 40 marks) based on the assessment report provided by the organization where the Summer Training has been completed and his/her own assessment of the work done by the student. The evaluation for the remaining 60 marks shall be made by an external examiner appointed by the University who shall evaluate the report based on a presentation and the assessment report received from the organization where the student has undergone Summer Training.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
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Supply Chain Management

Course Code: MFIS 203 **L - 2, Credits - 2**

Course Outcomes: With the growth of e-business, Supply Chain Management has become essential part of business. After completion of the course the students will able to learn the concepts of materials management, inventory management and their integration of Supply Chain Management.

Course Contents

Unit I:
Materials Management: Objectives and importance, Materials planning and control. Material Classification, Need and usage of classification, Single-dimensional classification, Multidimensional classifications; Materials Codification, Usage of codification, Codification types; Purchase Management: Objectives, functions, policies, Outsourcing: make or buy decisions, vendor development and rating.

Unit II:
Storage and warehousing concepts, Receipt, Warehouse type, Layout, issue of materials and updation of records; Manpower and equipment. Inventory Management: Various costs in inventory management and need: Deterministic models and discounts, Probabilistic inventory management. Role of inventory management in SCM.

Unit III:
Introduction to supply chain: Definition, Structure, complexity, key issues, Centralized vs. decentralized systems, Strategic Decisions. Value of information and supply chain integration: Bullwhip effect, Push-based, pull based systems.

Unit IV:
Transportation decision: Drivers of the decision, Network design decisions, Cross-docking, transshipment. Distribution and logistics in supply chains: Direct shipment /intermediate storage policies, Vehicle routing models, Third-party logistics; Information technology in supply chain: Enabling supply chain through IT, ERP vendor platforms, Service oriented architecture (SOA), RFID, Global perspectives. Supply Chain Performance Management.

Text Books:

1. Bedi, K., (2016) Production and Operations Management, 3rd Edition, Oxford University Press.

2. Krajewski, L.J., Ritzman, L.P., Srivastava, S.K., Malhotra, M.K., Operations Management; Process and Supply Chains, 13 edition, Pearson Education

Reference Books:

1. Chopra, S.. Meindl, P., Supply Chain Management, 7th edition, Pearson Education.

2. Chandrasekaran, N. (2010), Supply Chain Management: Process, System and Practice, 1st edition, Oxford University Press.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Entrepreneur Development

Course Code: MFIS 205 **L - 2, Credits - 2**

Objective:
The course aims at inculcating entrepreneurial skills in the students by giving an overview of who entrepreneurs are and what competencies are needed to become an entrepreneur. The course aims to inspire students to establish and manage their own firms.

Course Outcomes:

CO1: Demonstrate an understanding of and appreciation for the characteristics of successful entrepreneurs and their role in the economic development of a nation
CO2: Analyse the industry and competitors of any firm and creatively write an effective business plan
CO3: Understand essential knowledge of how to start one's own business by assessing business viability on various parameters including support from the government
CO4: Identify key drivers of growth in a venture and determine how to strategize and run a start- up in the long run

Course Content

Unit I
Introduction to Entrepreneurship: Evolution, Types of Entrepreneurs; Entrepreneurial Competencies; Factors Affecting Entrepreneurial Growth – Economic, Non-Economic Factors; Entrepreneurship and Economic Development; Women Entrepreneurship, Rural Entrepreneurship, EDP Programmes

Unit II
Developing successful Business Ideas: Recognizing Opportunities and Generating Ideas, Feasibility Analysis; Developing an Effective Business Model; Industry and Competitor Analysis; Writing a Business Plan.

Unit III
Moving from an Idea to an Entrepreneurial Firm: Assessing a New Venture's Financial Strength and Viability; Building a New-Venture Team; Getting Financing or Funding; Role of Support Institutions in India.

Unit IV

Managing and Growing an Entrepreneurial Firm: Unique Marketing Issues, preparing for and evaluating the Challenges of Growth; Strategies for Firm Growth, Export Marketing.

Suggested Readings: (Latest Editions)

1. Bruce R. Barringer & R. Duane Ireland. Entrepreneurship: Successfully launching new ventures. Pearson
2. Kuratko, D.F. & Hodgetts, R.M. Entrepreneurship: Theory, Process and Practice. Thomson Press
3. Charantimath, P. Entrepreneurship Development: Small Business Enterprises. Pearson
4. Ali J. Ahmed, Punita Bhatt & Iain Acton. Entrepreneurship in Developing and Emerging Economies. Sage
5. Robert D Hisrich& Michael P. Peters. Entrepreneurship. McGraw Hill

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Operations Management

Course Code: MFIS 207 **L - 2, Credits - 2**

Objectives:

The course will enable students appreciate the strategic significance of operations management in a highly competitive global economy and to introduce various principles, concepts, tools and techniques in the area of operations management. Students are expected to gain a conceptual understanding of the subject and relate them to practical application in real life situation.

Course Outcomes (COs)

CO1: Define operations management and discuss its scope and its strategic significance for the organizations to achieve competitive advantage as well as the nation to enhance its productive efficiency.

CO2: Explain the major milestones and trajectory of evolution of operations management as a field of study, discuss the contribution of various individuals and organizations to the field of operations management.

CO3: Identify the major decision areas included in operations management and explain the principles, concepts, tools and techniques employed for decision making in each of the decision areas.

CO4: Identify the processes of product design and development, analyse various approaches
• to product development, compare and classify manufacturing and service delivery processes and analyse the factors determining process selection.

CO5: Apply various tools and techniques and use operations analyticsfor operations planning and control and managing supply chains.

CO6: Design and implement quality management systems applying both traditional and Japanese management philosophies for sustainable operations management.

Course Content

Unit I

Introduction to Operations Management: Nature and Scope of Operations Management, Historical Evolution of Operations Management, System Perspectives of Operations Management, and Relation of Operations Management with other functional areas, Operations Strategy, Recent Trends in the field of Operations Management, Sustainability in operations, Ecological Considerations by manufacturing and services firms

Unit II

Product Development & Process Selection: Product Development Process, Concurrent Engineering, Tools and Approaches in Product Development, Quality Function Deployment, Design for Manufacturability , Quality Function Deployment , Design for Manufacturability, Design for Assembly, Design for Quality , Mass Customization , Process Selection, Facilities Layout , Determinant of Process Selection , Process Product Matrix , Types of Layout , Line Balancing , Facilities Location, Work Measurement and Job Design , Impact of IT on Productivity.

Unit III

Operation Planning & Control: Capacity & Resource Planning, Aggregate Production Planning, Material Requirement Planning, Scheduling, Theory of Constraints and Synchronous Manufacturing, Lean Management, Just in time production, Sustainable Supply Chain Management, Inventory Planning and Control

Unit IV

Quality Management: Quality- Definition, Dimension and Costs of quality, Continuous Improvement (Kaizen), ISO (9000 & 14000 Series), Quality Awards, Statistical Quality Control, Process Control, Control Chart (X, R, p, np and C Chart), Acceptance Sampling, Operating Characteristics Curve (AQL, LTPD, α & β risk), Total Quality Management, Japanese 5 S Concept, Business Process Reengineering, Introduction to Operation Analytics.

Suggested Readings: (All Latest Editions)

1. Jay Heizer& Barry Rende. Operations Management, Pearson Education.
2. Mahadevan B. Operations Management: Theory and Practice, Pearson Education.
3. Bedi, K.Production and Operations Management. Oxford University Press, New Delhi.
4. Russell, R. S. and Taylor, B.W. Operations and Supply Chain Management, Wiley, NewDelhi.
5. Stevenson W. J. Operations Management, McGraw Hill Education
6. Gaither Norman and Frazier G, Operations Management, Cengage Learning India Pvt Ltd.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
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State Fire Service Acts, Rules & Byelaws

Course Code: MFIS 209 **L - 2, Credits - 2**

Course Outcomes

CO1: Understand and interpret the key provisions of State Fire Service Acts, rules, and byelaws relevant to fire safety and prevention.

CO2: Analyse the legal framework governing fire services, including the roles and responsibilities of fire safety officers and agencies.

CO3: Evaluate the implementation and compliance of fire service regulations in various organizational contexts and emergency situations.

CO4: Develop strategies for effective communication and training programs based on fire safety laws and regulations to enhance organizational preparedness.

Course Content

Unit I:

Importance of Fire Service Act, Model Fire Force Bill and Rules, Indian Constitution Provisions on Subject "Fire".

Unit II:

Fire and Life Safety Act and Rules of Delhi, Maharashtra, Gujarat, Karnataka, Odisha and Best Bengal.

Unit III:

Local Bye-Laws of Delhi, Maharashtra, Gujarat, Karnataka, Odisha and West Bengal

Reading List:

1. Model Fire Service Bill & Rules of 1958 and as amended from time to time, Published by DG FS CD & HG, MHA, GOI
2. Fire and Life Safety Acts, Rules, Local Building Bye Laws published by Government of Delhi, Maharashtra, Gujarat, Karnataka, Odisha and West Bengal.
3. Provision of Indian Constitution on Subject Fire, Indian Constitution

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

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(FIRE AND INDUSTRIAL SAFETY)

Disaster: Causes Impacts and Management

Course Code: MFIS 211 **L - 2, Credits - 2**

Course Outcomes

CO1: Identify and analyse the various causes of disasters, including natural, technological, and human-made factors.

CO2: Assess the impacts of disasters on communities, economies, and the environment, understanding the social and psychological dimensions.

CO3: Develop comprehensive disaster management plans that include preparedness, response, recovery, and mitigation strategies.

CO4: Evaluate and apply best practices and frameworks for disaster management, including risk assessment and the role of government and NGOs.

Course Content

Unit I:

Concepts of Disasters, Hazard, Vulnerability, Risk Capacity, Resilience, Natural and Human Induced Disasters; Disaster Profile of India; Types of Disasters; Incidents of Mega Disasters in India.

Unit II: Causes and Impacts of Natural Disasters

Earthquakes

Causes and Effects of Earthquakes, Seismic Zones, Seismic Waves, Epi-Centre, Magnitude, Richter Scale, Intensity, Vulnerability and Damage Potential, Quake Resistant Buildings & Infrastructure.

Volcano

Causes, Impacts and Distribution of Volcanoes.

Climate Change & Disasters

Floods

Causes and Impact of Flood; River and Coastal Floods, Flash Floods, Lake Outburst; Cloud Burst; Urban Floods; Major Flood Incidents in India; Flood Mitigation and Management.

Landslides & Avalanches

Landslides: Types & Causes, Landslide Prevention, Mitigation and Management.
Avalanches: Formulation, Types and Hazard Mitigation.

Cyclones and Tsunami: Differences Between Cyclone, Typhoon, Hurricanes, Tsunami: Causes and Impact; Mitigation of Cyclone & Tsunami.

Drought

Causes, Impact, Affected Areas, Drought Monitoring and Management

Heatwave
Concept of Climate Change and Heatwave; Urban Heat Island; Major Incidents related to Heatwave.

Coldwave
Concept of Cold wave, Formation and Impact, Major incidents related to Coldwave.

Unit III: Technological Disasters
Chemical, Biological, Radiological and Nuclear (CBRN) Disasters, Cyber Disaster.

Unit IV: Causes & Impact of Other Disasters
Industrial Hazards; Road, Rail, Air and Boat Capsize, Urban Fires, Forest Fires, Coal Mine Fires, Oil Spills, Building Collapse and Stampede.

Lightning: Causes and Impact; Safety Measures for human beings and buildings.

Unit V: Guidelines
Guidelines on State Disaster Management Plan, Management of Cyclone, Drought, Earthquake, Flood, Land Slide, Avalanches, Urban Flooding and Heat Wave.

Reading List:

1. Murk, B. W., Skinner, B.J. and Porter, S.C. (1996) Environmental Geology. Wiley, New York.
2. Bohle, H. G., Downing, T. E. and Watts, M. J. (1994) Climate change and social vulnerability: Towards a sociology and geography of food insecurity, Global Environmental Change. No. 4, 37-48.
3. Bocker, E. And Grondille, R. V. (1999) Environmental Physics, John Wiley & Sons Ltd.
4. Khanna, B. K. (2005) All you wanted to learn about disasters, New India Publishing Agencies, New Delhi.
5. Khanna, B. K. (2014) Perils of under preparedness in Sikkim earthquake, IDSA, New Delhi.
6. Wallace, J. M. and Hobbs, P. V. (1977) Atmospheric Science: An Introductory Survey, Academic Press, New York.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Fire Forensics

Course Code: MFIS 213 **L - 2, Credits - 2**

Course Outcomes

CO1: Understand the fundamental principles of fire dynamics and the scientific methods used in fire investigation.

CO2: Analyze fire scene evidence and apply forensic techniques to determine the origin and cause of fires.

CO3: Evaluate legal and regulatory frameworks related to fire safety and forensic investigations, including the roles of various stakeholders.

CO4: Develop skills in reporting and documenting findings from fire investigations, ensuring clarity and compliance with legal standards.

Course Content

Unit I:

Introduction to Fire Forensic Science, Terminologies, Fire and Arson Investigation etc.

Unit II:

Understanding physics and Chemistry of Fire, Fire Ignition and Fire Dynamics, Types of Fires, Methods of Heat Transfer, Premixed and diffusion flames, Properties of building construction Materials

Unit III:

Fire Development, Factors Affecting Fire Growth, Compartment Fires, fire Spread, Human Behaviour in fire

Unit IV:

Fire Analysis and Investigation, Evidence Collection and Preservation, Fundamentals of Fire Investigation, Examining and Securing the Fire Scene, Safety at fire scene.

Unit V:

Electrical Fire Investigation, Motor Vehicle Fire Investigation, Modern Laboratory Techniques Involved in the Analysis of Fire Debris Samples, Reporting, Reconstructions.

Unit VI:

Fire Investigation methodology, Role of Fire Investigator, Arson Motives and Pathology, Fire Problems and Precautions, Determining Origin and Cause, Eliminating Accidental Causes, Documenting the Fire/ Scene, Surveillance.

Reading List:

1. NFPA 921 Guide for Fire and Explosion Investigation 2014, Published by National Fire Protection Association, USA.
2. Fire Investigation published by HMSO publication UK
3. Kirks Fire Investigation
4. Forensic Fire Science Reconstruction, By David J Icove, John D DeHaan, Gerald a Haynes Published by Pearson/ Prentice Hall
5. Principal of Fire Behavior by James G Quintiere, Published by Delmer

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Industrial Security, Safety and Disaster Risk Reduction

Course Code: MFIS 215 **L - 2, Credits - 2**

Course Outcome

This course aims to enhance students' learning to reduce the damage caused by natural hazards like earthquakes, floods, droughts and cyclones, through an ethic of prevention.

Course Content

Unit I

Principles of Industrial Security Management, National Security Scenario and threat perception, industrial risk assessment (Principles of Management in Industrial Risk/ Crisis situation, behavioral and motivational issues in industrial crisis management, Security operations management, Security basics and principles of security design.

Unit II

Physical Security Measures- Perimeter barriers, security walls, fencing gates, watch towers, buildings access control: Manual/ Electronic, issue of ID cards, visitors Pass, Material gate pass, security lighting, building security- locks and key management, security of parking areas, Security personnel – Selection, training, deployment, motivation, security surveillance CCTV, intrusion, detection, use of dogs; security gadgets; security control room.

Unit III

Industrial Security and law, Relevant Sections of Indian Penal Code, Evidence Act, Private Security Agencies (Regulation) Act, Labor Act, Factory Act, Employees Standing Order Act, Explosives act, Arms Act, Contract Labor Act, Minimum wages Act, Laws of Contract, Official Secrets Act, ERDMP Regulations 2010, Safety Audits as per BIS 14489 (1998), HIRA 2006.

Unit IV

Emergency Management Protocol, Anti sabotage check, security review & up-gradation, kidnap and hostage situation; Bomb Threats & Search Procedures, bomb explosives& IEDs, search procedure; Executive Protection – Threat perception and special protective measures

References

1. NDMA Guidelines on Management of Nuclear Radiological Emergencies
2. NDMA Guidelines on Management of Chemical (Terrorism) Disasters
3. NDMA Guidelines on School Safety Policy
4. Walter Laqueur, No end to war: Terrorism in the Twenty First Century, New York: Continuum, 2003
5. Managerial Guide for Handling Cyber-Terrorism and Information Warfare

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Crisis Management

Course Code: MFIS 217 **L - 2, Credits - 2**

Course Outcome

The students will get a thorough knowledge about crisis management. The objective of the course is to eliminate the potential harm and allow the organization to resume execution of its strategy. A good crisis management strategy aims to balance and protect all of a company's interests.

Course Content

Unit I:

Crisis: Definition, Difference between crisis, disasters and catastrophe. Crisis and emergency, Standard Operating Procedure. Types of crisis. Strategic perspective of crisis management, Cases related to major international and national crisis.

Unit II

Crisis Management Plan: Components of crisis management plan, Types of plan, Budget allocation, Preparation of crisis management plans. Global best practices. Business continuity plan.

Unit III

Implementation of Crisis Management Plan: Team management, briefing, debriefing and crisis management problem solving approaches. Monitoring and Control approaches. Major cases related to crisis management plan implementation.

Unit IV

Crisis Management Communication: emergence of new mode of communication, Importance of integrated crisis management communication, Media planning, Traditional (Print, TV, Radio) and Social media. Media management. Choice and effectiveness of media (pre, during and post crisis)

References:

1. Harvard Business Essential (2004) Crisis Management: Master the Skill to prevent Disasters. Harvard Business School Press
2. Mukhopadhyay (2005) Crisis and Disaster Management Turbulence and Aftermath. New Age International Publisher.
3. Fink (2000) Crisis Management: Planning for the inevitable, iUniverse.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Incident Response System

Course Code: MFIS 219 **L - 2, Credits - 2**

Course Outcome

This course will enhance the knowledge about different organization that detect and response to after disaster. The goal of incident response is to enable an organization to quickly detect and halt attacks, minimizing damage and preventing future attacks of the same type.

Course Content

Unit I

Model A: Principles and features of Incident Response System
Model B: IRS Organization and Staffing

Unit II

Model C – Incident Facilities
Model D – Response Management

Unit III

Model E – Organizing for Incident or Event
Model F – Incident and Event Planning

Unit IV

NDMA Guidelines on Incident Response System: July 2010.

References

1. NDMA Guidelines on Incident Response System: July 2010.

SEMESTER IV

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MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Project Dissertation

Course Code: MFIS 202 **L - 0, Credits - 6**

The student shall be required to submit progress reports as per the schedule to be announced by the School/Institutions for assessment by the internal project guide. The total marks will be 100 out of which 60 marks will be given by the external examiner and 40 marks to be given by the internal Project Guide. The internal assessment shall be done on the basis of a presentation by the student as per the assessment schedule to be decided and announced by the School/Institution. The external assessment shall be done on the basis of a Viva-Voce and the report by an examiner to be appointed by the University.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Strategic Management

Course Code: MFIS 204 **L - 2, Credits - 2**

Course Outcomes:
CO1: Understand the integrative model of strategic management process along with role of corporate governance in strategic management.
CO2: Demonstrate the knowledge in formulating strategies along with identifying the resource endowments specific to the firm & industry.
CO3: Implement a strategic plan that takes into account the functional areas of business along with procedures in order to achieve organizational goals.
CO4: Evaluate challenges faced by managers in implementing and evaluating strategies based on the nature of business. industry, and cultural differences.

Course Content

Unit I
Introduction to Strategic Management: Definition of Strategic Management, Nature of Strategic Management, Dimensions of Strategic Management, Need for Strategic Management, Strategic Management - Process, Vision, Mission and Business Definition Models of Strategic Management: Mintzberg, Ansoff, Porter, Prahalad and Gary Hammel, McKinsey's 7'S Framework: A Tool to Evaluate and Control an organization.

Unit II
Strategic Management in Global Environment: Need for Globalization, Different Types of International Companies, Development of a Global Corporation, Complexity of Global Environment, International Culture, Implementing Global Strategies. Competitive Analysis: Competitor Analysis Framework, Rivalry Analysis, Competitive Dynamics, Competitive Rivalry Industry Analysis: Formulation of Strategy, Five Competitive Forces that Shape Strategy, PESTLE Analysis, Competition and Value, Technology Lifecycle, Industry Analysis in Practice, Strategic Management Process: Purposes of Strategic Management Process, Steps involved in the Strategic Management Process, Strategic Management Process, Strategy Formulation, Constraints and Strategic Choice, Strategy Implementation, Strategic Control and Assessment.

Unit III
Formulating Corporate-Level Strategy: Balanced Score Card: A Balanced Approach, Grand Strategies: Strategic Alternatives, Growth/Expansion Strategy, Diversification Strategy, Stability Strategy, Retrenchment Strategy, Turnaround Strategies, Combination Strategies, Formulating Business Level Strategy: Porter's Competitive Strategies, Competitive Advantage, Competitive Advantage Factors, How to Build or Acquire Competitive Advantage? Acquiring Core Competence, Low-Cost Strategies, Differentiation Strategies, Focus Strategies.

Unit IV
Analyzing Resources and Capabilities: Factors affecting the Internal Environment, Resources and Capabilities as Sources of Profit, Resources of the Firm, Organizational Capabilities, Appraising Resources and Capabilities, Putting Resource and Capability Analysis to Work, Developing Resources and Capabilities Formulating Functional Level Strategy: Putting Strategy into Action, Structural Design, Information and Control System, Human Resources Corporate Goals and Strategic Gap: Corporate Goals, Strategic Gap, Porter's Generic Strategies, Managing Internal Organization for Strategy Implementation:

Issues in Strategy Implementation, Strategy-Structure Relationship, Divisionalisation: Product and Geographic Forms, Diversification, Strategic Business Units (SBUs), Project Organisation, Matrix Organisation Structure, New Design Options, Factors Influencing Organisation Structure, Structure and Strategy Implementation.

Suggested Readings (Latest Edition)

1. Strategic Management Concepts: A Competitive Advantage Approach, Fred R. David, Pearson Education
2. Strategic Management: An Integrated approach, Hill W.L. Charles & Jones R. Gareth Business Policy and Strategic Management, Azhar Kazmi, Tata McGraw
3. Strategic Management and Business Policy: Globalization, Innovation and Sustainability, Thomas L. Wheelen, J. David Hunger and Krish Rangarajan,Pearson Education,
4. Hill Strategic Management -The Indian Context, R.Srinivasan, Prentice Hall of India Business Strategy: Managing Uncertainty, Opportunity, and Entreprise, J.C.Splender, Oxford University Press

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Corporate Social Responsibility and Indian Knowledge System

Course Code: MFIS 206 **L - 2, Credits - 2**

Objective:

The objective of this course is to develop an understanding and appreciation of the importance of value system, ethical conduct in business and role and responsibilities of corporate in social systems. It aims at applying the moral values and ethics to the real challenges of the organizations.

Course Outcomes (COs)

CO1: Understanding of Corporate Social Responsibility (CSR) Frameworks, students will develop a comprehensive understanding of the concept of CSR, its importance in the industrial sector, and its legal and ethical implications, particularly in relation to fire and industrial safety practices.

CO2: Application of CSR in Management, students will gain the ability to design and implement CSR strategies that focus on improving fire safety, reducing environmental impact, and promoting sustainable industrial practices in alignment with global and national safety standards.

CO3: Integration of Indian Knowledge Systems (IKS), students will learn to incorporate traditional Indian knowledge systems and practices into modern management, using ancient principles for sustainability.

CO4: Analyze and apply concepts from traditional Indian knowledge systems to enhance modern business practices and CSR initiatives.

Course Contents

Unit I

Moral Values and Ethics: Values - Concepts, Types and Formation of Values, Values of Indian Managers; Business Ethics; Schools of Ethics; Ethical Decision Making, Business Ethics Values and ethics as drivers of Corporate Social responsibility (CSR). Ethical Dilemma, Implications of failed corporate responsibilities: Worker rights and health, Technology and Privacy in the workplace, Human rights, Stockholders Right and Corporate Governance; Consumerism

Unit II

Corporate Social Responsibility: Current CSR Practices of the Firms in India and Abroad, International Frameworks of CSR. Sustainable Development: Challenges of Sustainable Development, Environmental Challenges as Business Opportunity, Kyoto Protocol and Clean Development Mechanism (CDM), managing environmental Quality, Green IT initiatives, emerging trends in Corporate Social Responsibility

Unit III

Overview of Indian Knowledge: Philosophy: The Vedic Tradition, Upanishad and Classical Indian Darshanas, Indian Culture & Civilization, Integrating Indian Knowledge System into Commerce: Introduction to Arthashastra by Kautilya, Traditional Knowledge Digital Library (TKDL), Geographical Indications of Goods and Dance.

Unit IV

Spirituality: Spirituality vis-à-vis religion, Concept of Maya (Illusion) – Advaita Vedanta, Meaning, scope and implications at work, Concept of Dharma: varna ashram dharma, svadharma, Concept of karma – meaning and importance to managers, corporate karma. Concept of Science, Engineering and Technology in IKS: Mathematics, Health and Wellbeing, Astronomy, Engineering and Technology:

Text Books

1. Lawrence, A. T., and Weber, J. (2016), Business and society: Stakeholders, Ethics, Public Policy. McGraw-Hill Education.
2. Blowfield, M., & Murray, A. (2014), Corporate Responsibility. Oxford University Press.
Reference Books
3. Hartman, L. P. and DesJardins J. (2013), Business Ethics: Decision-Making For Personal Integrity And Social Responsibility, Mc Graw-Hill Education.
4. Carroll, A., & Buchholtz, A. (2014), Business and Society: Ethics, Sustainability, and Stakeholder Management, Cengage Learning
5. Textbook on IKS by Prof. B Mahadevan, IIM Bengaluru
6. Kapur K and Singh A.K. Indian Knowledge Systems, Vol. 1. Indian Institute of Advanced Study, Shimla.
7. The Cultural Heritage of India. Vol.I. Kolkata:Ramakrishna Mission Publication.
8. Nair, Shantha N. Echoes of Ancient Indian Wisdom. New DELHI: Hindology Books.
9. Dr. R. C. Majumdar, H. C. Raychaudhuri and Kalikinkar Datta: An Advanced History of India (Second Edition) Macmillan & Co.,Limited, London.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Fire Risk and Hazard Analysis of Cities

Course Code: MFIS 208 **L - 2, Credits - 2**

Course Outcomes (COs)

CO1: Understanding Urban Fire Risks Students will develop a comprehensive understanding of the unique fire risks associated with urban environments, including high-rise buildings, densely populated areas, transportation hubs, and critical infrastructure.
CO2: Ability to Conduct Fire Hazard Assessments in Urban Area, Students will gain the skills to perform fire hazard assessments for cities, identifying potential ignition sources, fire-prone zones, vulnerable populations, and evaluating the impact of urban planning on fire safety.
CO3: Proficiency in Urban Fire Risk Management and Mitigation, Students will be able to design and implement fire risk management strategies tailored to urban settings, including fire prevention programs, emergency response planning, and the integration of fire safety into city infrastructure development.
CO4: Knowledge of Legal Frameworks and Urban Fire Safety Regulations, Students will understand the legal and regulatory frameworks that govern fire safety in urban areas, including building codes, municipal fire safety regulations, and international standards for urban fire risk management.

Course Contents

Unit I:
Fire Hazard and Risk Analysis, Methods and Procedures for conducting Fire Hazard and Risk Analysis of the City

Unit II:
The recommended guidelines and scale for setting up fire services in India as per SFAC

Unit III:
Requirements of Number of Fire Stations, Firemen, Fire Fighting Equipment and Appliances as per guidelines of SFAC

Unit IV:
Hazard Mapping of Cities Based on SFAC Scale and Other Standards

Unit V:
Use of GIS in Establishing the Requirement of Fire Services i.e. Fire Station etc.

Reading List:

1. Compendium of Instruction of Standing Fire Advisory Council (SFAC) and Minutes for SFAC, Published by DG FS CD & HG, MHA, GOI.
2. RMSI report on Fire Hazards and Risk Analysis conducted by GOI and published by GOI, MHA, DG FS CD & HG.
3. British Standard BS: IEC61882: 2002 Hazard and operability studies (HAZOP studies) – Application Guide British Standards Institution.
4. Swann, C. D., & Preston, M. L., (1995) Journal of Loss Prevention in the Process Industries, vol 8, no 6, pp 349-353 “Twenty-five years of HAZOPs.

5. Kietz, T. A., (1983) HAZOP & HAZAN Notes on the Identification and Assessment of Hazards IChemeE Rugby
6. Kietz, T., (2000) By Accident – a life preventing them in industry PVF Publications ISBN 0-9538440-0-5.
7. Kietz, Trevor (2006). Hazop and Hazan (45h ed.). Taylor & Francis. ISBN 0852955065.
8. Gould, J., (2000) Review of Hazard Identification Techniques, HSE
9. Hazard and Operability Studies Explanation by a software supplier

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Fire Risk and Hazard Analysis of Industry

Course Code: MFIS 210 **L - 2, Credits - 2**

Course Outcome

CO1: Understanding of Fire Risks in Industrial Environments. students will develop an in-depth understanding of the various fire risks specific to different industrial sectors, including manufacturing, chemical, power plants, and construction industries.

CO2: Ability to Conduct Comprehensive Fire Hazard Assessments, students will acquire the skills to assess potential fire hazards in industrial settings, identify sources of ignition, flammable materials, and vulnerable areas, and implement preventive measures.

CO3: Proficiency in Fire Risk Management and Mitigation Strategies, students will be able to design and implement fire risk management systems, applying techniques such as hazard identification, risk assessment, and fire safety audits to ensure industry-wide compliance with fire safety regulations.

CO4: Knowledge of Fire Protection Systems and Technology, students will gain proficiency in evaluating and selecting appropriate fire protection systems, such as fire detection, alarm systems, fire suppression methods, and personal protective equipment (PPE) suited to industrial needs.

Course Contents

Unit I:
Fire Risk and Hazard Analysis of Industries.

Unit II:
Provisions under the Various Statutory Acts and Rules

Unit III:
Fire Risk and Hazard Analysis of Industries Using Latest Software

Unit IV:
Audit of Industries, Methodology, Report Preparation and Implementations.

Unit V:
Calculation of Fire Fighting Equipments, Extinguishing Media, Manpower and Response Time in the Industries.

Reading List:

1. Compendium of Instruction of Standing Fire Advisory Council (SFAC) and Minutes for SFAC, Published by DG FS CD & HG, MHA, GOI.
2. RMSI report on Fire Hazards and Risk Analysis conducted by GOI and published by GOI, MHA, DG FS CD & HG.
3. British Standard BS: IEC61882: 2002 Hazard and operability studies (HAZOP studies) – Application Guide British Standards Institution.
4. Swann, C. D., & Preston, M. L., (1995) Journal of Loss Prevention in the Process Industries, vol 8, no 6, pp 349-353 “Twenty-five years of HAZOPs.

5. Nolan, D. P. (1994) Application of HAZOP and What-If Safety Reviews to the Petroleum, Petrochemical and Chemical Industries.
6. Kietz, T. A., (1983) HAZOP & HAZAN Notes on the Identification and Assessment of Hazards IChemeE Rugby
7. Kietz, T., (2000) By Accident – a life preventing them in industry PVF Publications ISBN 0-9538440-0-5.
8. Chemical Industries Association (1977) A Guide to Hazard and Operability Studies.
9. Kietz, Trevor (2006). Hazop and Hazan (45h ed.). Taylor & Francis. ISBN 0852955065.
10. Gould, J., (2000) Review of Hazard Identification Techniques, HSE
11. Hazard and Operability Studies Explanation by a software supplier
12. OISD Standards Published by OISD, Ministry of Petroleum
13. Factory Act Published by GOI
14. PESSO Acts and Rules, Published by Ministry of Petroleum.

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MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

INDUSTRIAL SAFETY

Course Code: MFIS 212 **L - 2, Credits - 2**

Course outcomes:

1. To be able to draft a safety manual for different processes and tools.
2. To be able to maintain a processing equipment to its full usable life with maximum safety.

Course Content

Unit 1: Industrial Safety

Accident, causes, types, results and control, mechanical and electrical hazards, types, causes and preventive steps/procedure, describe salient points of factories act 1948 for health and safety, wash rooms, drinking water layouts, light, cleanliness, fire, guarding, pressure vessels, etc, Safety color codes. Fire prevention and firefighting, equipment and methods.

Unit 2: Fundamentals of Maintenance Engineering

Definition and aim of maintenance engineering, Primary and secondary functions and responsibility of maintenance department, Types of maintenance, Types and applications of tools used for maintenance, Maintenance cost & its relation with replacement economy, Service life of equipment.

Unit 3: Wear and Corrosion and Their Prevention

Wear- types, causes, effects, wear reduction methods, lubricants-types and applications, Lubrication methods, general sketch, working and applications, i. Screw down grease cup, ii. Pressure grease gun, iii. Splash lubrication, iv. Gravity lubrication, v. Wick feed lubrication vi. Side feed lubrication, vii. Ring lubrication, Definition, principle and factors affecting the corrosion. Types of corrosion, corrosion prevention methods.

Unit 4: Fault Tracing

Fault tracing-concept and importance, decision tree concept, need and applications, sequence of fault-finding activities, show as decision tree, draw decision tree for problems in machine tools, hydraulic, pneumatic, automotive, thermal and electrical equipment's like, I. Any one machine tool. ii. Pump iii. Air compressor, iv. Internal combustion engine, v. Boiler, vi. Electrical motors, Types of faults in machine tools and their general causes.

Unit 5: Periodic and Preventive Maintenance

Periodic inspection-concept and need, degreasing, cleaning and repairing schemes, overhauling of mechanical components, overhauling of electrical motor, common troubles and remedies of electric motor, repair complexities and its use, definition, need, steps and advantages of preventive maintenance. Steps/procedure for periodic and preventive maintenance of: 1. Machine tools, ii. Pumps, iii. Air compressors, iv. Diesel generating (DG) sets, Program and schedule of preventive maintenance of mechanical and electrical equipment, advantages of. preventive maintenance. Repair cycle concept and importance.

Books/References:

1. Maintenance Engineering Handbook, Higgins & Morrow, Da Information Services.
2. Maintenance Engineering, H. P. Garg. S. Chand and Company.
3. Pump-hydraulic Compressors, Audels, Mcgrew Hill Publication.
4. Foundation Engineering Handbook, Winterkorn, Hans, Chapman & Hall London.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)

Occupational Safety

Course Code: MFIS 214 **L - 2, Credits - 2**

Course Outcomes (COs)

CO1: Students will gain a comprehensive understanding of the fundamentals of Occupational Safety and Health, focusing on the importance of OSH in preventing workplace hazards, ensuring employee well-being, and promoting safe work environments.

CO2: Students will be able to understand and apply relevant safety legislation, workers' compensation laws, and regulatory requirements, ensuring compliance with national and international occupational safety standards.

CO3: Students will develop the ability to analyze accident causation theories and apply investigation techniques to identify root causes of workplace incidents, enabling them to implement corrective actions and improve workplace safety practices.

CO4: Students will learn to integrate ergonomic principles into safety management systems, enhancing workplace design to reduce risks and prevent injuries, while fostering a proactive safety culture in industrial settings.

Course Contents

Unit 1: Introduction to Occupational Safety and Health

- Overview of OSH: Key definitions, concepts, and importance.
- Historical development of occupational safety.
- Roles of employers and employees in safety management.
- Common workplace hazards: Physical, chemical, biological, and ergonomic.
- Occupational Safety and Health Administration (OSHA) and International Standards (ISO, OHSAS).
- Overview of Indian and international safety legislation.
- The Factories Act, 1948, and Mines Act, 1952.
- Environment Protection Act, 1986, and other relevant regulations.
- Worker’s rights and responsibilities under safety laws.

Unit 2: Accident Causation, Investigation, and Ergonomics

- Theories of accident causation (Domino theory, Human factor theory, Systems theory).
- Steps in accident investigation and analysis.
- Tools for accident investigation: Root cause analysis, fault tree analysis.
- Ergonomic hazards in the workplace.
- Principles of ergonomic design.
- Reducing risks through ergonomic interventions.
- Implementing ergonomic programs in industrial safety.

Unit 3: Fire Prevention, Protection, and System Safety

- Fire hazards in industrial settings.
- Fire safety management systems.
- Fire detection, alarm systems, and firefighting equipment.
- Fire evacuation procedures and emergency response planning.
- Introduction to system safety engineering.
- Hazard identification and risk assessment methods (HAZOP, FMEA).
- Developing and implementing safety protocols.

Unit 4: Managing Safety and Addressing Emerging Threats

- Roles and responsibilities of safety managers.
- Safety audits and compliance monitoring.
- Safety culture and leadership.
- Behavior-Based Safety (BBS) and improving safety performance.
- Handling hazardous materials: Regulations and best practices.
- Personal protective equipment (PPE) and emergency response systems.

Books/References:

1. "Occupational Safety and Health for Technologists, Engineers, and Managers" by David L. Goetsch
2. "Fire Safety Management Handbook" by Daniel E. Della-Giustina
3. "Principles of Occupational Health & Safety" by Allan St. John Holt
4. Relevant Indian legislation: Factories Act, Mines Act, Environment Protection Act

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION
(FIRE AND INDUSTRIAL SAFETY)
Research seminar

Course Code: MFIS 252 **L - 0, Credits - 8**

The research seminar should focus on the application of management concepts, theories, or techniques learned during the first and second semesters to explore and address a specific organizational or social issue or challenge. The seminar may be based on primary or secondary research. Upon completion, students are required to present their research findings and submit a detailed report, demonstrating the relevance of the management theories or techniques applied