



மனோன்மணியம் சுந்தரனார் பல்கலைக்கழகம்
MANONMANIAM SUNDARANAR UNIVERSITY

**SYLLABUS FOR ADVANCED DIPLOMA IN FIRE AND SAFETY MANAGEMENT
PROGRAM OFFERED THROUGH DIRECTORATE OF VOCATIONAL
EDUCATION (COMMUNITY COLLEGES AND VOCATIONAL SKILL
DEVELOPMENT CENTRES) FROM 2019 - 2020**



கல்விசார் நிலைக்குழுக் கூட்டம்

**MEETING OF THE STANDING COMMITTEE ON
ACADEMIC AFFAIRS HELD ON WEDNESDAY
THE 22nd JANUARY 2020**

ADVANCED DIPLOMA IN FIRE AND SAFETY MANAGEMENT

மேம்பட்ட தீயணைப்பு மற்றும் பாதுகாப்பு நிர்வாகம் பட்டயம்

SCHEME OF EXAMINATION

Subject code	Title of the Course	Credit	Hours	Passing Minimum
Semester I				
C19FI11/E19FI01	Safety Management	6	90	40/100
C19FI12/E19FI02	Basics of Fire fighting and Control	6	90	40/100
C19FI13/E19FI03	First Aid	6	90	40/100
C19CE10/E19CE10	Communicative English	6	90	40/100
C19FIP1/E19FIP1	Practical I-General First aid and Fire Fighting Equipment's-Operations and Repairing	4	120	40/100
Semester II				
C19FI21/E19FI04	Management and Risk Assessment	6	90	40/100
C19FI22/E19FI05	Chemical and Oil Industries Safety Management	6	90	40/100
C19LS23/E19LS05	Life Skill	6	90	40/100
C19FI24/E19FI06	Personality Development	6	90	40/100
C19FIP2/E19FIP2	Practical II-Fire Fighting Drills - Solids and Liquids	4	120	40/100
Semester III				
C19FI31/E19FI07	House Keeping	6	90	40/100
C19FI32/E19FI08	Construction Safety Management	6	90	40/100
C19FI33/E19FI09	Marine Fire Fighting	6	90	40/100
C19FIP3/E19FIP3	Practical III-Fire Fighting Drills - Electrical and Gases	4	120	40/100
C19FIIP/E19FIIP	Internship	10	150	40/100
Semester IV				
C19FI41/E19FI10	Fire Accident Prevention	6	90	40/100
C19FI42/E19FI11	Environmental Fire Safety	6	90	40/100
C19FI43/E19FI12	Aircraft Fire Fighting	6	90	40/100
C19FIP4/E19FIP4	Practical IV-Evacuation and Rescue Procedure	4	120	40/100
C19FIPW/E19FIPW	Project	10	150	40/100

Eligibility for admission: Pass in 10thstd examination conducted by the Govt. of Tamil Nadu Board of Secondary Education, Government of Tamil Nadu or any other equivalent examination.

Examination: Passing Minimum for each Course is 40%. Classification will be done on the basis of percentage marks of the total marks obtained in all the Courses and as given below:

- | | |
|-------------------------|----------------|
| 40 % but less than 50 % | - Third class |
| 50 % but less than 60 % | - Second class |
| 60 % and above | - First class |

Theory Paper

Internal Marks-25

External Marks-75

Syllabus

Semester I

- Course I - Safety Management
- Course II - Basics of Fire fighting and Control
- Course III - First Aid
- Course IV - Communicative English
- Course V - Practical I-General First aid and Fire Fighting Equipment's - Operations and Repairing

Semester II

- Course VI - Management and Risk Assessment
- Course VII - Chemical and Oil Industries Safety Management
- Course VIII - Life Skill
- Course IX - Personality Development
- Course X - Practical II-Fire Fighting Drills - Solids and Liquids

Semester III

- Course XI - House Keeping
- Course XII - Construction Safety Management
- Course XIII - Marine Fire Fighting
- Course XIV - Practical III-Fire Fighting Drills - Electrical and Gases
- Course XV - Internship

Semester IV

- Course XVI - Fire Accident Prevention
- Course XVII - Environmental Fire Safety
- Course XVIII- Aircraft Fire Fighting
- Course XIX - Practical IV-Evacuation and Rescue Procedure
- Course XX - Project

***(Semester Pattern for Community College Only)**

PROGRAM OBJECTIVE

- 1- To reduce the risk to life caused by fire.
- 2- To reduce the risk of damage caused by fire and the environment.
- 3- To prevent the occurrence of fire and explosion

SEMESTER I

COURSE I

(C19FI11/E19FI01)SAFETY MANAGEMENT

OBJECTIVE:

- To know about safety management system.
- To study workplace precautions.
- To identify safety and health training.

Unit I

18 Hrs

Key elements of a safety Management, Policy & commitment, Planning, Implementation and Operation, Measuring Performance, Auditing and Reviewing performance Initial Safety Management System Review, Safety Management System - Developing a workplace Safety and Health Policy.

Unit II

18 Hrs

Safety and Health Management System records: Operational Control – Workplace Precautions, Safety And Health training and Competence Training for Safety and Health.

Unit III

18 Hrs

Identify Training Needs – Organizational Needs, job-related Needs, Individual Needs : Identify Training Objectives and Methods, Deliver Training , Evaluation and feedback, specialist Advice and Services – access to Specialist advice and services, relationships within the Organization , relationships Outside the organization , external specialist safety and safety support.

UNIT - IV

18 Hrs

Stages in plant life and unsafe condition in factories, maintenance & safety, basics safety programming, safety department, Rules and regulation of safety department.

UNIT – V

18 Hrs

Responsibility of management for safety in plant, safe is guarding the public, Responsibility of government, social organization and public authorities. Safety activities of the ILO (International Labour Organization)

OUTCOME:

- 1- Understand Responsibility of government.
- 2- Receive idea on Rules and regulation of safety department.
- 3- Learn job-related Needs.

References:-

1. Code of Practices on Safety Management by Occupational Safety and Health Branch Labour Department
2. Workplace Safety and Health Management by Health and Safety Authority

COURSE II

(C19FI12/E19FI02)BASICS OF FIRE FIGHTING AND CONTROL

OBJECTIVE:

- To find out types of detecting devices.
- To know about Hose and hose fittings.
- To study, Fire protective clothing.

Unit-I

18 Hrs

History of fires, types of detecting devices and extinguishing agents and systems, construction techniques, and fire investigation.

Unit-II

18 Hrs

Classification of fire, different fire extinguishing methods, Portable fire extinguishers, Pumps and primers, Foam and foam making equipments. Hose and hose fittings, Water relay systems, types of detecting devices and extinguishing agents.

Unit-III

18 Hrs

Breathing apparatus, Small gears, Fire protective clothing, Ladders, Ropes and lines, bends & hitches, Fire prevention, Special appliances, Fire fighting codes and standards, Electrical fire hazards, Structures under fire.

Unit-IV

18 Hrs

Safety of People in the event of Fire, Recognition of possible fire sources and emergency procedures in the event of a fire,

Unit- V

18 Hrs

Devising procedures in the event of fire, How people perceive and react to fire danger, The measures needed to overcome behavioural problems and to ensure the safe evacuation of people in the event of fire, Assisting disabled people to escape.

OUTCOME:

- 1- Receive idea on Safety of People in the event of Fire.
- 2- Understand Assisting disabled people to escape.
- 3- Learn Structures under fire.

References:-

1. Handbook on Building Fire Codes by G. B. Menon and J. N. Vakil
2. Industrial fire protection handbook by R. Craig schroll
3. Safety Management by R. K. Mishra

COURSE III

(C19FI13/E19FI03)FIRST AID

OBJECTIVE:

- To know about surface causalities
- To study synthetic fibre rope
- To understand knots for making loops

Unit I

18 Hrs

Introduction – Search and Rescue – Stages of Rescue – Surface Causalities – Searching slightly damaged buildings- Exploration of likely survival points – selected debris removal – searching methods – Physical search – canine search – Technical search – Hailing search method – Diagrammatic representation of hailing search method – Advantages of hailing search – precaution during search and rescue.

Unit II

18 Hrs

Ropes and Knots – Ropes – Natural Fibre Rope – Synthetic Fibre Rope – Synthetic Fibre Rope – Nylon Rope – Poly Rope – Braided Synthetic Rope – Knots – Knots at the end of a ropes – knots for joining two Ropes – Knots for making Loops – Hitches.

Unit III

18 Hrs

Search and rescue methods – water rescue – Emergency rescue – Staircase Drag Method – Firemen crawl method – Search and rescue kit – Action plan for Transport of injured Person – Reporting – Action on the recommendations – Accident / Incident Report Form.

Unit IV

18 Hrs

Evacuation – Evacuation signal – Participatory Rural Appraisal – Resources – Resource Mapping – Social Mapping – Processes for Resources Mapping – Emergency Evacuation – Emergency situation

Unit V

18 Hrs

First aid – Principles and practice of first aid – Scope of first aid – The general principal of first aid – Types of Bleeding – shock – Treatment for electric shock, asphyxiation (suffocation) and drowning – Type of shock – Fracture –Burn – Transportation – Resuscitation Chart (CPR) – First Aid Kit – Basics of Backpacking First Aid – Equipment – PPE (Personal Protective Equipment) – Contents of First Aid Box.

OUTCOME:

1. Understand scope of first aid
2. Receive idea on emergency evacuation
3. Learn treatment for electric shock

References:-

1. First Aid by George Black
2. A Textbook of First Aid by Helen Mary Perdita

COURSE IV

(C19CE10/E19CE10)COMMUNICATIVE ENGLISH

1. Basic Grammar:

- a. Review of grammar
- b. Remedial study of grammar
- c. Simple sentence
- d. Word passive voice etc.

2. Bubbling Vocabulary:

- a. Synonyms
- b. Antonyms
- c. One – work Institution

3. Reading and Understanding English

- a. Comprehension passage
- b. Précis – writing
- c. Developing a story from hints.

4. Writing English

- a. Writing Business letters.
- b. Paragraph writing
- c. Essay writing
- d. Dialogue writing

5. Speaking English

- a. Expressions used under different circumstances
- b. Phonetics

Reference :

1. V.H.Baskaran – “English Made Easy”
2. V.H.Baskaran – “English Composition Made Easy”
(Shakespeare Institute of English Studies, Chennai)
3. N.Krishnaswamy – “Teaching English Grammar”
(T.R.Publication, Chennai)
4. “Life Skill” – P.Ravi, S.Prabakar and T.TamzilChelvam,
M.S.University, Tirunelveli.

COURSE V
PRACTICAL I
(C19FIP1/E19FIP1)GENERAL FIRST AID and FIRE FIGHTING
EQUIPMENTS - OPERATIONS AND REPAIRING

List of Exercises

- List of Fire fighting equipments
- Understanding and Identification of the utility of different fire fighting equipments
- Procedure for operating different fire fighting equipments
- Identifying and using the right equipment on different categories of fire
- Mechanism of functioning of the different fire fighting equipments
- Maintenance of different fire fighting equipments
- Repairing the different fire fighting equipments

SEMESTER II

COURSE VI

(C19FI21/E19FI04)MANAGEMENT AND RISK ASSESSMENT

OBJECTIVE:

- To know about managerial function
- To find out purpose of organizing
- To identify informational roles

Unit –I

18 Hrs

Introduction – Management- Definition – Nature – Scope & Functions – Significance of Management – Technical Skills –Human skill – Conceptual skills – Managerial roles – Interpersonal roles, informational roles, Decisional roles – Managerial functions- Planning – Organizing – Staffing – Leading – Controlling.

Unit II

18 Hrs

Planning – nature & Purpose of planning – Objectives – Strategies – Policies – Planning premises – Decision making – Organizing – Nature and purpose of organizing – line / staff authority & decentralization – effective organizing – organization culture – staffing – general principles – importance and technique

Unit – III

18 Hrs

Leading – leadership – defining –element of leadership – leadership behaviour and styles – creativity & Innovation – motivation and motivators – special motivation techniques – communication – communication function in organization – communication process – barriers and breakdowns in communication – effective communication

Unit IV

18 Hrs

Risk assessment – Risk Assessment method – Hazard – Hazard symbols – Hazard Analysis – Hazard Ranking – Risk Management – Definitions – Functions of Risk Management – Safety Management – Need concept – Terms Related with safety Management – safety officer – supervisor – safety committees- Role of Trade union – Role of Trade union – Role of workers – safety and the law

Unit V

18 Hrs

Disaster Management – Natural disaster- Cyclone – Tremor – storm – tropical cyclone – flood – Earthquake – landslide and avalanches – Nuclear and radiation accident – bio logical hazards.

OUTCOME:

1. Understand nature disaster
2. Develop role of workers
3. Learn effective communication

References:-

1. Risk Assessment and Management by Lester B. Lave
2. Principles of Management: An analysis of Managerial Functions by Harold Koontz and Cyril O' Donnell

COURSE VII

(C19FI22/E19FI05)CHEMICAL AND OIL INDUSTRIES SAFETY

MANAGEMENT

OBJECTIVE:

- To identify major oil industry accidents
- To find out the precaution and prevention for safety management
- To study about the fire hazards.

Unit I

18 Hrs

Review of Industry Accidents:Major Oil Industry Accidents, Major Chemical Industry Accidents, the Mexico LPG Disaster, Bhopal Disaster, Phillips Disaster.

Unit II

18 Hrs

Classification of chemicals, Safety in chemical industry, Criteria for layout of chemical plants, Instrumentation for safe plant operations. Control, precautions and prevention, specific safety measures for chemical industry.

Unit III

18 Hrs

Safety Precautions for transporting hazardous / toxic / flammable /explosive/ radioactive chemicals by all modes, transfer of chemicals by pipelines within and outside installations, above and under ground

Unit IV

18 Hrs

The fire hazards, risks and controls available for safe containment of oil and hydrocarbons offshore and onshore, Outline the hazards, risks and controls relating to hydrocarbon Process Safety Management (PSM) in the oil industries,

Unit V

18 Hrs

Control measures to minimize the effects of fire and explosion in the oil and gas industries, the principles, procedures and resources for effective emergency response

OUTCOMES

1. Understand the resources for effective emergency response
2. Receive idea on safety management in oil industry
3. Learn risk and control to hydro carbon process

References:-

1. Safety and Hazards Management in Chemical Industries by MamtaVyas
2. Safety in Chemical Plants / Industry and its Management by Rao B K

COURSE VIII

(C19LS23/E19LS05)**Life Skill**

I Life Coping or adjustment

- (a) External and internal influence in one's life
- (b) Process of coping or adjustment
- (c) Coping with physical change and sexuality
- (d) Coping with stress, shyness, fear, anger far live and criticism.

II Attitude

- (a) Attitude
- (b) Self acceptance, self – esteem and self actualization
- (c) Positive thinking

III Problem Solving

- (a) Goal Setting
- (b) Decision Making
- (c) Time Management and stress Management.

IV Computers

- (a) Introduction to Computers
- (b) M.S.Office
- (c) Power Point

V Internet

- (a) Introduction to internet
- (b) E – mail
- (c) Browsing

References:

- 1) Life Skill Programme course I & II by Dr. Xavier Alphona MCRDCE Publications. R.K.Mutt Road, Chennai – 28
- 2) ஆளுமைபண்புவளர்த்தல் மற்றும் தகவல் தொடர்பு by M.Selvaraj Community College,Palayamkottai
- 3) “Life Skill” –P.Ravi, S.Prabahar&T.TamilChelvam, M.S. University, Tirunelveli

COURSE IX

(C19FI24/E19FI06)PERSONALITY DEVELOPMENT

OBJECTIVE:

- To study about personality development
- To know about theories of personality development
- To identify the personality traits of individual

Unit I

18 Hrs

Introduction to Personality Development: Personality meaning, Importance, Factors influence- Heredity, Environment and Situations, Impact of individuals personality

Unit II

18 Hrs

Basic personality types, Theories of Personality, Need and its impact in personality, Maslow's hierarchy of needs, Mcclelland theory, Two factor theory, Jung theory.

Unit III

18 Hrs

Basic Personality Traits, Values, Beliefs, Interactions, Experiences, Environmental influences, The big five dimensions

Unit IV

18 Hrs

Developing the Personality, stages of development, Freudian stages of development, Erik Erickson's stages of development, Knowing own personality strengths and weaknesses, Being able to identify other people's personality traits, Using at home, career and relationships

Unit V

18 Hrs

Personality and Career Choice: Matching career and personality, Changing the Personality, Being yourself, being adaptable, Positive attitude, Individuality, Controlling emotions

OUTCOME:

1. Understand positive attitude of individual
2. Learn Freudian stages of development
3. Receive idea on personality and career choice

References:-

1. Organizational Behaviour by Stephen P. Robbins

COURSE X

PRACTICAL II

(C19FIP2/E19FIP2)FIRE FIGHTING DRILLS - SOLIDS AND LIQUIDS

List of Exercises

- To be conducted under strict supervision of the expert
- Conduct table talk drill initially by explain the pros and cons of each category of fire
- Ask for the suitable fire fighting equipments for the fire to be created and discuss on the operation procedure
- Identify a safe location for conduction Fire drill
- Create different category of fire at different time zone
- Make the participant involve in the process of fire fighting
- Reflect on the performance of the fire fighter
- Document the process and its outcome.

SEMESTER III

COURSE XI

(C19FI31/E19FI07)HOUSE KEEPING

OBJECTIVE:

- To know about role and responsibility of house keeping
- To find out housekeeping procedure
- To study work in housekeeping department

Unit I

18 Hrs

Housekeeping its need and importance in maintaining a safe environment, Relationship between Safety and Housekeeping, Housekeeping department and its role and responsibility, Housekeeping organization chart, Positions and job descriptions in housekeeping department.

Unit II

18 Hrs

Housekeeping Procedures, Briefing and Debriefing, Indenting from stores, Inventory of Housekeeping Items, House keeping control desk, Importance, Role, Co-ordination, check list, key control, Handling Lost and Found

Unit III

18 Hrs

Planning the work in housekeeping department, Maintenance of security safety and caring out first and fire fighting methods, Area inventory, Frequency schedule, Performance standard, Productivity standard, Supply and equipment inventory level.

Unit IV

18 Hrs

Housekeeping standard building, Various standard set up, Staffing and training employees, Motivating employees.

Unit V

18 Hrs

Maintenance of records and stocks, ability to maintain and fill all records and stocks, Deviation identification, new work design. Ensure security and safety environment in the institutions

OUTCOME:

1. Understand new work design in housekeeping
2. Receive idea on motivating employees
3. Learn frequency schedule in housekeeping

References:-

1. Housekeeping by PoonamSinha
2. Housekeeping by Ariele Huff

COURSE XII

(C19FI32/E19FI08)CONSTRUCTION SAFETY MANAGEMENT

OBJECTIVE:

- To study about classification of building
- To understand the material handling equipment
- To find out pilling operation

Unit I

18 Hrs

Civil – Civil work drawing – building drawing – Mechanical – Electrical works – construction material – concrete – concrete form and shoring – Classification of buildings – National Building Code (NBC) – Road work – pilling operation – Demolition – Asbestos and other fibers – Paints & Coating.

Unit II

18 Hrs

Hand tools and power tools – Environment and working places – Safety nets – Welding – Cutting and brazing- Material Handling equipment – Electrical and Compressed gas operations- Confined spaces- Hydrostatic pressure testing.

Unit III

18 Hrs

Safety in scaffoldings- overview – Terminology of scaffold – Scaffolding components – Scaffolds construction material

Unit IV

18 Hrs

Type of Scaffolds – design Scaffold – Scaffold erection & dismantling – diagrams of Scaffolds – ladders – Scaffold inspection – Lockout / Tagout – Scaffold tag – material handling – Investigation of Scaffold accident – safety while working on fragile roofs.

Unit V

18 Hrs

Fundamentals of safety – job safety analysis – safety audit – safety survey – Accident Investigation – Work permit system – Emergency planning – industrial lighting and ventilation – personal protective equipment – Safety and fire hazard in chemical industries – petroleum industries – Oil refinery – Fires in petrol filling station and garages – Motor vehicle fir – Explosives act 1884 – Fire Insurance

OUTCOME:

1. Understand job safety analysis
2. Learn investigation of scaffold accident
3. Understand through types of scaffold\

References:-

1. Construction Safety Management by Ramond Elliot Levitt and Nancy Morse Samelson
2. Construction Safety Management by Tim Howarth

COURSE XIII
(C19FI33/E19FI09) MARINE FIRE FIGHTING

OBJECTIVE:

- To study about classification of building
- To understand the material handling equipment
- To find out pilling operation

Unit I

18 Hrs

Marine Environment: Tides, Currents, Weather, Vessel Traffic, Channels & Navigation, Mooring Lines, Bottom Conditions, Piers & Wharves and Magnitude.

Unit II

18 Hrs

Problems Associated with Marine Fire fighting: Hazardous Materials, Hazards, Confined Space, Pollution Considerations, Language Problems, Vessel Movement, Limited Access, Personnel Safety, and Access and Egress.

Unit III

18 Hrs

Vessel Familiarization Personnel, Shipboard Documentation: Ship Arrangement Diagrams; Fire Plan, Dangerous Cargo, Cargo Loading Manual, and Crew/Passenger List,

Unit IV

18 Hrs

General ship Systems and procedures of the ship, Construction Materials of ship, General Vessel Layout, Doors and hatches, Escape tunnels, Ventilation systems, Mechanical operations

Unit V

18 Hrs

Safety system of the vessel: Fire Detection Systems, Suppression Systems, and Gas Detection Systems. Protection of Dangerous Cargo, Protection of Cargo, Protection of non-affected areas

OUTCOME:

1. Understand about the general ship system and procedure of the ship
2. Knowledge about the fire detection system
3. Learn about the suppression system

References:-

1. Marine Fire Fighting by Barbara Adams, John F. Lewis and David Merk

**COURSE XIV
PRACTICAL III**

(C19FIP3/E19FIP3)**FIRE FIGHTING DRILLS - ELECTRICAL AND GASES**

**COURSE XV
(C19FIIP/E19FIIP)INTERNSHIP**

- The students of this course are required to take up Internship training during the third semester and submit a report at the end of the semester but before the commencement of the end semester examination.

- The Objective of the internship is to understand the day to day activities of the organization in which the internship is undertaken and intensive training should be provided in all the departments of the organization.

- The period of the internship can be decided the centres concerned according to the availability of the training opportunities available. The choices could be either the internship can be on a daily basis in the afternoon or evening throughout the semester or for a period of one month after completion of the classes, before the examinations

SEMESTER IV

COURSE XVI

(C19FI41/E19FI10)FIRE ACCIDENT PREVENTION

OBJECTIVES

- To understand the fire protective clothing
- To know about the fire prevention
- To find out the fire protection system

Unit I

18 Hrs

Fire Protective clothing – breathing apparatus – Small gears and lighting – Safety devices and special tools – Rubber gloves – Safety belts – Leather protective gloves – Hand lines – ladders – Ropes – Hand Tools.

Unit II

18 Hrs

Fire Prevention – Activities of National Fire Protection Association (NFPA) – International Fire Marshals Association (IFMA) –Fire administration and organization.

Unit III

18 Hrs

Fire protection system design: Hydrant system – Sprinkler system – water spray – drencher system – riser system – foam system – non water based system – automatic fire detection system.

Unit IV

18 Hrs

Principals of safety in storage – safety in the transfer of chemical – Solids – Liquids – Gases –safety tips in liquid unloading –Storage and handling of chemicals – Fire safety plan – Personal Safety.

Unit V

18 Hrs

Allocating responsibility and authority, Rehabilitation after an incident, Workplace inspections, Measuring and reporting, Developing and effective safety culture, Building an incident free workplace, Removing obstacles to safety, Safety and accountability, Developing safety habits in the workplace.

OUTCOME:

1. Understand the responsibilities and authority of allocating
2. Learn about the measuring and reporting
3. Understand about safety principles of transfer the chemical

References:-

- Guide to safety analysis for accident prevention by Lars Harms – Ringdahl

COURSE XVII

(C19FI42/E19FI11)ENVIRONMENTAL FIRE SAFETY

OBJECTIVES

- To understand the environmental fire risk
- To know about the environmental hazards classification and assessment
- To find out the building fire causes

Unit I

18 Hrs

Environmental fire Risk and Vulnerability Analysis, Risk : Its concept and analysis, Risk Reduction, Vulnerability : Its concept and analysis, Strategic Development for Vulnerability Reduction

Unit II

18 Hrs

Environmental Hazard classification and assessment, Environmental Hazard evaluation and control

Unit III

18 Hrs

Building fire Causes, effects and practical examples, coal fire Causes, effects and practical examples, forest fire Causes, effects and practical examples, oil fire Causes, effects and practical examples.

Unit IV

18 Hrs

The sources of pollution in the event of fire, preplanning to minimise the environmental impact of fire, pollution incident response plan.

Unit V

18 Hrs

The legal obligations related to environmental protection in the event of fire, the procedures for management, practical examples/video files.

OUTCOME:

1. Understand the legal obligation related to environmental protection
2. Learn about fire protection
3. Understand the pollution incident response plan

References:-

1. Environment, Health & Safety Handbook by David Jordan

COURSE XVIII

(C19FI43/E19FI12)AIRCRAFT FIRE FIGHTING

OBJECTIVES

- To understand the qualification of aircraft rescue
- To know about the fire fighter safety
- To knowledge about the communicating critical incident information to an airport

Unit I

18 Hrs

Introductions, Qualifications for Aircraft Rescue and Fire Fighting Personnel (ARFF), Airport Familiarization, Aircraft Familiarization, Airport Layouts.

Unit II

18 Hrs

ARFF Fire Fighter Safety, Aircraft Hazards, ARFF Communications: Communicating critical incident information to an adjacent airport, communicating with applicable air traffic control facilities.

Unit III

18 Hrs

Apparatus Rescue Tools and Equipment, Driver/Operator safety, Strategic and Tactical Operations, ARFF Fire Fighting/Pit Fire, Fuelage Fire & Wheel Fire

Unit IV

18 Hrs

Fire management on the interior of an aircraft, Ventilating an aircraft through available doors and hatches, evacuation process,

Unit V

18 Hrs

Locating and disentangling an entrapped victim from an aircraft Airport Emergency Plans, Helicopter Familiarization (Air E Vac), JPR Skills Testing.

OUTCOME:

1. Understand the fire management
2. Learn about the ventilating an aircraft through available doors and hatches
3. Understand about locating and helicopter familiarization

References:-

1. Aircraft Rescue and Fire Fighting by IFSTA
2. Aircraft Rescue Fire Fighting by Ronald Dom

COURSE XIX

PRACTICAL IV

(C19FIP4/E19FIP4)EVACUATION AND RESCUE PROCEDURE

COURSE XX

(C19FIPW/E19FIPW)PROJECT

- The students of this course are required to undertake a project work individually on a specific topic during the fourth semester and submit a report at the end of the semester but before the commencement of the end semester examination.
- The objective of the Project work is to understand the problems faced by the organization and offer specific suggestions to solve those problems.
- The period of the project work can be decided the centres concerned according to the availability of the opportunities available. The choices could be either the student can take up the work on a daily basis in the afternoon or evening throughout the semester or for a period of one month after completion of the classes, before the examinations.
