

SUBBALAKSHMI LAKSHMIPATHY COLLEGE OF SCIENCE

An Autonomous Institution

(Affiliated to Madurai Kamaraj University & Re-Accredited with B+ Grade by NAAC)

T.V.R. NAGAR, ARUPPUKOTTAI ROAD, MADURAI-22



Program Outcomes, Program Specific Outcomes & Course Outcomes

B.Sc (Fire and Industrial Safety)

BATCH: 2019 -2020

Department of fire and Industrial Safety

Programme Code : FS1061

B.Sc (Fire and Industrial Safety)

Programme Code : FS1061

ACADEMIC YEAR 2019-2020

(BATCH 2019 -2022)

Programme Outcomes (PO)

Graduates of BSc Fire and Industrial Safety will be able to

- i. Knowledge Exposure** – knowledge gained in the area of Fire and Industrial Safety to identify the various Hazards and Risk in the Industries.
- ii. Preventive measures**– Apply the modern tool to reduce the hazards and prevent accidents in the industries.
- iii. Communication** – Understand and communicate effectively with the various Vendors involved in the Fire and Industrial Safety domain thereby marching towards the satisfaction of their needs.
- iv. Collaborative skills**– Examine the skills and Techniques of Individuals in the different domain combined with the team work to attain the specific task.
- v. Professional Ethics**– Apply the ethical principles and enhance the level of human values in the society.
- vi. Good citizenship** – Understand his/her roles and responsibilities as a good citizen and strive towards its fulfillment.

Programme Specific Outcomes (PSO)

The Programme Specific Outcomes of the B.Sc Fire and Industrial Safety degree are

- i. Job opportunities in various Industries as a safety officer.
- ii. Can become a safety professional and safety auditor.
- iii. Implement rules and regulations in Industries.
- iv. Create Awareness among workers and public.
- v. To follow the rules and regulations his/her became a good Citizen.

Course Outcomes (CO)

SEMESTER - I

I B.Sc(Fire and Industrial Safety)

Semester	: I	Batch	: 2019-2022
Subject code	:19UH101	Subject	: Hindi –I
Internal Marks	: 25	External Marks	: 75
Part	: I	Credits	: 3

Course Outcomes:

- CO1: Understand the letters in Hindi language
- CO2: Introducing the basic words and their meaning for the beginners
- CO3: Introducing some vocabulary for the fresher
- CO4: Know some more vocabulary
- CO5: Starting some simple phrases for conversation

I B.Sc(Fire and Industrial Safety)

Semester	: I	Batch	: 2019-2022
Subject code	:19UE201	Subject	: English I
Internal Marks	: 25	External Marks	: 75
Part	: I	Credits	: 3

Course Outcomes:

- CO1: Enable the students to have the essential knowledge about prose
- CO2: Develop the power of imagination and aesthetic sense
- CO3: Understand the basics of grammar for effective communication
- CO4: Enhance the vocabulary through the etymology of words
- CO5: Understand the usage of formal and informal language through letters and mails

I B.Sc(Fire and Industrial Safety)

Semester	: I	Batch	: 2019-2022
Subject code	:19FS103	Subject	: Safety Management System
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 4

Course Outcomes:

- CO1: To understand OHS Standards in India.
- CO2: To classify Industrial Accidents, Incidents and near miss.
- CO3: Outlines of International Safety Management System.
- CO4: To Identify the Hazards and Risk Assessments.
- CO5: To demonstrate Safety Auditing System.

I B.Sc(Fire and Industrial Safety)

Semester	: I	Batch	: 2019-2022
Subject code	:19FS104	Subject	: : Basic Electrical and Electronics Engineering
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 4

Course Outcomes:

- CO1: To understand the electric circuit and laws.
- CO2: To identify the differences of various category of wiring and AC circuit.
- CO3: To understand the operation of electrical machines.
- CO4: To generate the Knowledge of various electronics devices and circuits.
- CO5: To understand about generation and characteristics of static electricity.

I B.Sc(Fire and Industrial Safety)

Semester	: I	Batch	: 2019-2022
Subject code	:19FS105	Subject	: Basic Civil & Mechanical Engineering
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 4

Course Outcomes:

- CO1: To understand the scope of Mechanical & Civil Engineering.
- CO2: To classify Surveying techniques & Civil Engineering materials.
- CO3: Capable to explain the building components and structure of Civil Engineering.
- CO4: Understand the various Laws of Mechanics and Motion of particles.
- CO5: To identify various types of mechanical power plants & IC Engines.

I B.Sc(Fire and Industrial Safety)

Semester	: I	Batch	: 2019-2022
Subject code	:19FS106	Subject	: Probability and Statistics
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 5

Course Outcomes:

- CO1: Remember the concepts related to basic introduction on statistics.
- CO2: Understand the measures of central tendency.
- CO3: Understand the measures of dispersion.
- CO4: Remember the concepts related to basic introduction on Probability Theory.
- CO5: Understand the various types of Random Variables.

I B.Sc(Fire and Industrial Safety)

Semester	: I	Batch	: 2019-2022
Subject code	:19VE109	Subject	: Value Education
Internal Marks	: 25	External Marks	: 75
Part	: IV	Credits	: 2

Course Outcomes:

- CO1: Inculcate significance of value education
- CO2: Infer value education for nation building
- CO3: Understand human rights with Indian constitution
- CO4: Learn moral values, ethics and good manners
- CO5: Realize religious values and yoga

I B.Sc (Fire and Industrial Safety)

Semester	: I	Batch	: 2019-2022
Subject code	:19PE110	Subject	: Physical Education
Internal Marks	: 25	External Marks	: 75
Part	: V	Credits	: 1

Course Outcomes:

- CO1: Recall the rules and regulation of track events
- CO2: Memorize the rules and regulations of jump events
- CO3: Remember the rules and regulations of throw events
- CO4: Demonstrate the play skills of outdoor games
- CO5: Demonstrate the play skills of Indian origin games

Course Outcomes (CO)

SEMESTER - II

I B.Sc(Fire and Industrial Safety)

Semester	: II	Batch	: 2019-2022
Subject code	:19UH201	Subject	: Hindi II
Internal Marks	: 25	External Marks	: 75
Part	: I	Credits	: 3

Course Outcomes:

- CO1: To familiarize the students with the various elements/aspects of prose.
CO2: To enhance and develop the language, confidence level and some moral values.
CO3: To upgrade their writing and spoken skills and ethics.
CO4: To develop the student's ability to outline few letters for communication.
CO5: To define the basic terms of Administrative Hindi.

I B.Sc(Fire and Industrial Safety)

Semester	: II	Batch	: 2019-2022
Subject code	:19UGE202	Subject	: General English II
Internal Marks	: 25	External Marks	: 75
Part	: II	Credits	: 3

Course Outcomes:

- CO1: To understand the hazardous chemical classification.
CO2: Outline of safety operating and maintenance of chemical Industries.
CO3: Applying the procedure for storage and handling of chemical.
CO4: To understand the different types of emergency preparedness following in chemical Industries.
CO5: To understand the Basics concepts of safety in Nuclear Power plant.

I B.Sc(Fire and Industrial Safety)

Semester	: II	Batch	: 2019-2022
Subject code	: 19FS204	Subject	: Fundamentals of Fire Technology
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 4

Course Outcomes:

- CO1: To understand about the in depth of knowledge about science of Fire.
- CO2: To understand the causes & effects of Fire.
- CO3: To understands the various fire prevention techniques to be followed in a building.
- CO4: To know about the various Fire Prevention System & Protective Equipment.
- CO5: To understand about the Industries Emergency Plan and applications of Extinguishers as well as Breathing Apparatus.

I B.Sc(Fire and Industrial Safety)

Semester	: II	Batch	: 2019-2022
Subject code	: 19FS205	Subject	: Construction Safety
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 4

Course Outcomes:

- CO1: To visualize the safety issues in construction activities and management system
- CO2: To understand the hazards during construction of power plant, road works, high rise buildings constructions
- CO3: To understand the safety procedure for working at height during construction.
- CO4: To impart knowledge about hazards of construction Machinery and their prevention methods.
- CO5: To List out construction regulation & Indian standards in Demolition work and their prevention methods.

I B.Sc(Fire and Industrial Safety)

Semester	: II	Batch	: 2019-2022
Subject code	: 19FS206	Subject	: Work Study and Ergonomics
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 5

Course Outcomes:

- CO1: To understand the work procedure and the relationship between the workers and working environments
- CO2: To gain the Knowledge about the applications of ergonomic principles and physiology of workers
- CO3: To Know the concepts of personal protective equipment and its usages
- CO4: To identify the difference between process design and Equipment design in the industries
- CO5: To understand the man-machine systems, measurement characteristics and controls

I B.Sc(Fire and Industrial Safety)

Semester	: II	Batch	: 2019-2022
Subject code	: 19ES210	Subject	: Environmental Studies
Internal Marks	: 25	External Marks	: 75
Part	: IV	Credits	: 2

Course Outcomes:

- CO1: Understand the significances of Multidisciplinary nature of environmental studies
- CO2: Inculcate the concept of Natural resources and its associated problems
- CO3: Understand the concept of Environmental Pollution and its preventive measures
- CO4: Relate the Social Issues
- CO5: Build the Legal Awareness

I B.Sc. (Fire and Industrial Safety)

Semester	: II	Batch	: 2019-2022
Subject code	: 19FS207	Subject	: Fire fighting and Field Training
Internal Marks	: 25	External Marks	: 75
Part	: IV	Credits	: 2

Course Outcomes:

- CO1: To understand about Fire Fighting Equipments.
- CO2: Experiment with all types of Fire.
- CO3: To understand about all Breathing Apparatus.
- CO4: To know about Maintenance of Fire Fighting Appliances.
- CO5: To know about all type of knots & fire man carry & drag methods.

FOLLOW THE SAME FOR ALL THE COURSES IN SEMESTER- II

Course Outcomes (CO)

SEMESTER - III

II B.Sc (Fire and Industrial Safety)

Semester	: III	Batch	: 2019-2022
Subject code	:19UH301	Subject	: Hindi - III
Internal Marks	: 25	External Marks	: 75
Part	: I	Credits	: 3

Course Outcomes:

- CO1: Develop the language and various elements of one act play.
- CO2: Emphasise the values in the minds of students through ancient poetry.
- CO3: Acquaint grammar for effective communication.
- CO4: Apply the language in our daily life activities.
- CO5: Establish the quality of patriotism.

II B.Sc. (Fire and Industrial Safety)

Semester	: III	Batch	: 2019-2022
Subject code	:19UGE302	Subject	: General English III
Internal Marks	: 25	External Marks	: 75
Part	: II	Credits	: 3

Course Outcomes:

- CO1: Appraise themselves.
- CO2: Develop purposeful reading and inculcate ethics through Prose.
- CO3: Imbibe the basics of grammar for effective communication.
- CO4: Enhance vocabulary by learning Synonyms, Antonyms, Idioms & Phrases and One Word Substitutes.
- CO5: Facilitate the application of grammar rules applicable in Verbal Aptitude.

II B.Sc.(Fire and Industrial Safety)

Semester	: III	Batch	: 2019-2022
Subject code	: 19FS303	Subject	: Fire Prevention and Protection Systems
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 4

Course Outcomes:

- CO1: Interpret the details about Fire Protection in Industries.
- CO2: Explain the concept of Fire Dynamics.
- CO3: Examine the accessories of hydrant system.
- CO4: Determine the various types of sprinkler systems and operation
- CO5: Evaluate the various types of special hazards in Industries.

II B.Sc(Fire and Industrial Safety)

Semester	: III	Batch	: 2019-2022
Subject code	:19FS304	Subject	: Electrical Safety
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 4

Course Outcomes:

- CO1** Explain about the basic concepts of electrical fire and statutory requirement for electrical safety and also first aid for electrical shock.
- CO2** Understand the causes of electrical hazards and standards for electrical safety.
- CO3** Identify about the various protection system in industrial for electrical hazards.
- CO4** Organize various safety aspects to be carried while working.
- CO5** Solve the various hazardous Zones and applicable fire proof electrical devices and also the certifying agencies.

II B.Sc Fire and Industrial Safety

Semester	: III	No. of Hours	: 5
Course code	: 19FS305	Course	: Food Hygiene and Sanitation
CIA	: 25	External Marks	: 75
Part	: III	Credits	: 4

Course Outcomes:

CO1: Understand the importance food safety.

CO2: Understand the concepts Food microbiology and to know about Food Bore Diseases.

CO3: Explain about the Safety in storage of food.

CO4: Interpret the procedure for Safety in construction of food processing plant

CO5: Understand the procedure for cleaning and pest Control in food process Industries.

II B.Sc Fire and Industrial Safety

Semester	: III	No. of Hours	:2
Course code	: 19FS307	Course	: Basics of Fire Safety (Non major Elective-I)
Internal Marks	: 25	External Marks	: 75
Part	: IV	Credits	: 2

Course Outcomes:

CO1: Illustrate the basic principles of Fire Extinguishing.

CO2: Extend a complete Knowledge about different Industrial fire protection system.

CO3: Interpret about the various types of PPE systems.

CO4: Interpret about the safe design of a building.

CO5: Summarize the various accidents happened in Industries.

II B.Sc Fire and Industrial Safety

பருவம்	: III	மதிப்பீட்டு அலகுகள்	: 2
பாடக்குறியீடு	: 19FS30 7	பாடம்	: அடிப்படைத்தமிழ் -I
அகமதிப்பீட்டுமதிப்பெண்	: 25	புறமதிப்பீட்டுமதிப்பெண்	: 75
Part	: IV	Credits	: 2

Course Outcomes:

CO 1: அடிப்படைத்தமிழ்எழுத்துகள் அறியச்செய்தல்நோக்கமாகும்.

CO 2: உறவுப்பெயர்கள், உடற்பாகங்கள், உடைவகைகள் குறித்த சொற்களைப்பேச, எழுதப்பழக்குதல்.

CO 3:

கணிதம் குறித்த அடிப்படை சொற்களையும் காலம் மற்றும் பணத்தைக் கணக்கிடும் முறைகளையும் பயிற்றுவித்தல்

CO 4: மொழியை இலக்கணப்பிழையின்றி பேசவும் எழுதவும் கற்பித்தல்.

CO 5: சொற்களைத் தொடர் அமைப்பில் வாசிக்கவும் எழுதவும் செய்தல் நோக்கமாகும்.

II B.Sc Fire and Industrial Safety

பருவம்	: III	மதிப்பீட்டு அலகுகள்	: 2
பாடக்குறியீடு	: 19ருடி30 9	பாடம்	: சிறப்புத்தமிழ் -I
அகமதிப்பீட்டுமதிப்பெண்	: 25	புறமதிப்பீட்டுமதிப்பெண்	: 75
Part	: IV	Credits	: 2

Course Outcomes:

CO 1: இக்கால இலக்கியங்களின் மூலம் சொல்வளம், பொருள்வளங்களை அறியச் செய்தல்.

CO 2:

இக்கால இலக்கியங்களின் மூலம் இயற்கை எழிலையும் உலகியல் நடப்புகளையும் அறிந்துகொள்ளச் செய்தல்.

CO 3: அற இலக்கியங்கள் மூலம் எக்காலத்திற்கும் ஏற்படைய அறக்கருத்துகளை அறிவித்தல்.

CO 4: இலக்கணங்கள் கூறும் விதிகளின் அடிப்படையில் பிழைகளைச் சரிசெய்யப்பயிற்றுவித்தல்.

CO 5: படைப்பிலக்கிய சிந்தனையையும், கற்பனை ஆற்றலையும் வளர்த்தல்

II B. Sc Fire and Industrial Safety

Semester	: III	No. of Hours	: 4
Course code	: 19FS306	Course	: First Aid Offshore and Sea Survival Techniques
Internal Marks	: 25	External Marks	: 75
Part	: IV	Credits	: 2

Course Outcomes

- CO1:** Experiment with study about Principles of Sea survival.
- CO2:** Experiment with handling the rescue operation during emergency and precaution against fire.
- CO3:** To Explain about Emergency signal and to prevent panic in Emergency satiation.
- CO4:** Experiment with usage of survival techniques.

CO5: Experiment with usage of lifebuoys and life jackets and Best use of survival craft facilities.

FOLLOW THE SAME FOR ALL THE COURSES IN SEMESTER- III