2020 - 21

INDIAN RESCUE ACADEMY

Course Curriculum

ABOUT IRA

Indian Rescue Academy is a subsidiary of ITUS Sports & Safety Pvt Ltd, a group focused towards training professionals in Search & Rescue and Special Forces Operations. We are India's foremost training institution in rescue-training courses with a focus on water-based scenarios, height rescue, confined space rescue and advanced medical life support. Our academy wing has trained over 12000 participants and trains 5000 Indian rescue operators annually. ITUS is a member of the International Maritime Rescue Federation and Mather Rescue, USA.

The training programs are NFPA 1670 & 1006 compliant, as per INSARAG guidelines and ISO 9001:2015 certified.

Our work has helped our SDRF's stand strong in the face of disaster like Cyclone's Aila, Hudhud, Phailin and floods in Nellore district. ITUS trainers and volunteers have stood shoulder to shoulder with men of the SDRF Forces and provided leadership, rescue and relief during real time operations. The Company has been felicitated with a Chief Minister's Certificate from Govt of AP for exemplary efforts and services attached herewith for your kind perusal.

This document is a proposal, which aims to find synergy to empower the men of your organisation with skills and knowledge to save lives in disasters and help a person in distress in accordance with your requirements.

IRA Training Courses

IRA conducts the following courses with respect to Waterman-ship, Lifesaving, CSSR, MFR and any other advanced specialized capsule courses on Disaster Management.

Sr	Course Name	Brief Curriculum	Abbreviation	Duration
BASIC COURSES				
i.	Basic Life Support Course (Equivalent to Medical First Response)	Basic First Aid, Evacuation management, AED, Oxygen Therapy	BLSC	18 hrs
ii.	Emergency Medical Technician Course	Advanced First Aid, Evacuation management, AED, Oxygen Therapy	EMTC	18 hrs
LAND BASED SEARCH & RESCUE COURSES				
iii.	Technical Rope Rescue Course (As per NFPA 1670 & 1006 standards)	Height Rescue, Rope Rescue, High Rise Rescue, Basic Confined Space Rescue	TRRC	36 hrs
iv.	Confined Space Search & Rescue Rescue Course (As per NFPA 1006 standards)	Rescuer safety; team evaluation; pre-planning; supplied air breathing systems; atmospheric monitoring; communications systems; personal protective equipment; patient packaging and recovery; tripods and other artificial high anchor points; lock-out, tag-out; rope systems for confined space entry and rescue, and more.	CSSRC	40 Hrs
v.	Trench Rescue Technician Course (As per NFPA 1006 standards)	Rescuer safety, understanding OSHA regulations involving trenches and excavations; preplanning; assessing soil composition/configuration; cave-in	TRTC	36 Hrs

		evaluation; stabilization and shoring using wood; mechanical, hydraulic and pneumatic shores with the use of trench rescue data sheets; victim rescue/recovery; and incident termination.		
AQUATIC SEARCH & RESCUE COURSE				
vi.	**Open Water Rescue Course**	**Sea Swimming, Basic Hydrology, Open Water Lifesaving, Surf Craft Operations, Communications, Rescue Boat Operations**	**OLC**	**60 hrs**
vii.	**Basic Flood Rescue Course**	**Basic First Aid, Swimming Techniques, Open Water Rescue & Lifesaving, Communications, Boat Operation & Navigation**	**BFRC**	**72 hrs**
viii.	**Deep Diving Course**	**SCUBA Diving, Equipment Assembly, Operation, Underwater Communication, Body Search & Retrieval & Physiology Management**	**DDC**	**60 hrs**
ix.	**Advanced Deep Diving Course**	**Night Operation, Underwater Communication, Body Search & Retrieval & Physiology Management, Dive to 70Ft, Confined Space Diving**	**DDC**	**72 hrs**
x.	**Rescue Boat Operator Course**	**Boat Assembly, Navigation, Rescue Operations, Communication, Defensive & Aggressive Driving & Basic Maintenance**	**RBOC**	**42 hrs**
xi.	**Advanced Flood Rescue Course (For QRT TASK Force) (As per NFPA 1670 & 1006 standards)**	**Basic Hydrology, Swift Water Rescue, Special Rope Rescue Ops, Communications, Rescue Boat Operations in flowing water & Body Retrieval**	**AFRC**	**96 hrs**
SPECIALISED COURSES				
xii.	**Maintenance Technician Course**	**Basics of Engineering Preventive Maintenance Emergency Maintenance Breakdown Maintenance Overhaul Maintenance**	**MTC**	**60 Hrs**
xiii.	**Dog Handlers Course**	**Types of Dogs, Temperament, Basic Veterinary First Aid, K9 Orientation, Basic Tracking and Search Skills, Advanced Tracking & Search Skills, Substance Detection etc**	**DHC**	**60 Hrs**

CURRICULLUM

Basic Life Support Course
(BLSC)

Aim:

To train participants in the skills of CPR and Emergencies that require Basic First Aid and commonly occurring during disasters.

Expected Outcome:

Participants shall be able be to manage incidents and demonstrate the provision of Basic Life Support Techniques during training and simulation exercises.

Duration:

3 days

6 Hrs/Day = 18 Hours

Course Curriculum:

1. Anatomy & Physiology of Human Body
2. Priority of Emergencies
3. Aid to Emergency Medical Services
4. Awareness, Assessment, Action, Aftercare
5. DRSABCD prioritisation
6. Cardio Pulmonary Resuscitation
7. Shock Management
8. Bleeding Management
9. Burns Treatment
10. Angina, Cardiac Arrest, Stroke
11. Other Emergencies like fractures, head injuries, concussion, sprains/strains;
12. Heat exhaustion & stroke; Hypothermia & Frostbite;
13. Snake, Insect & Animal Bites;
14. Management of Emergency Labour Delivery

Emergency Medical Technician (EMTC)

Aim:

To train participants in the advanced skills of Life Support using Emergency Medical Techniques and provide pre-hospital care to victims of variety of Medical Conditions & Traumatic Injuries

Expected Outcome:

Participants shall be able be to demonstrate the use of Emergency Medical Techniques during victim management

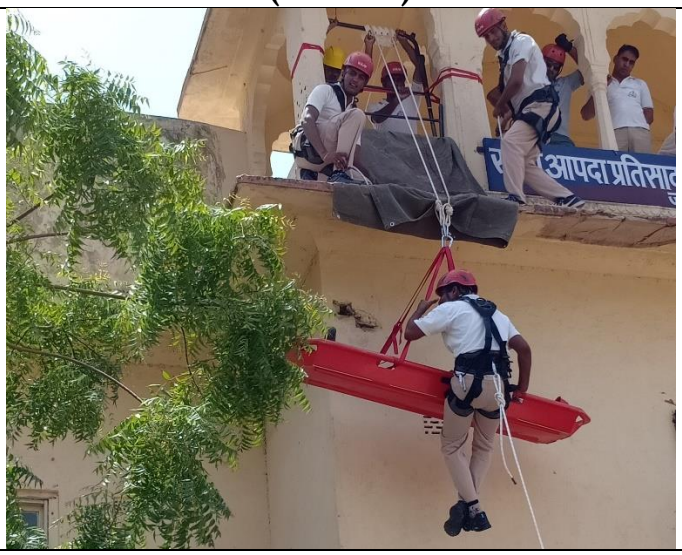
Duration:

3 days
6 Hrs/Day = 18 Hours

Course Curriculum:

1. Explain the Role of EMT in the Chain of Survival
2. Anatomy & Physiology of Human Body
3. Scene Size Up
4. Medical Triage
5. DRSABCD
6. Cardio Pulmonary Resuscitation
7. AED Operation
8. Oxygen Therapy
9. Multi System Trauma Management
10. Use of Oropharyngeal Airways
11. Emergency Neo Natal Care
12. Simulation Management

Technical Rope Rescue Course
(TRRC)



Aim:
To train participants in the skills of Rope Rescue to manage incidents of Fire, Height, SAR, Mountain Rescue, Air Operations, Swift Water Rescue etc

Expected Outcome:
Participants shall be able be to rig and setup rope systems to conduct rescue operations

Duration:
6 days
6 Hrs/Day = 36 Hours

Course Curriculum:

1. Updates on the latest equipment,
2. systems testing,
3. belay techniques and other research;
4. equipment and systems demonstration tests;
5. manufactured and improvised artificial high anchor points;
6. high lines;
7. guiding lines;
8. advanced litter handling techniques;
9. numerous challenging real-life rescue scenarios.

Confined Space Search & Rescue Course (CSSRC)

Aim:

Confined Space Entry & Rescue class covers NFPA 1006 technician level skills. Realistic hands-on scenarios allow the student to gain confidence in this dangerous environment

Expected Outcome:

Demonstrate Confined Space Entry and Rescue Techniques during realistic scenarios.

Duration:

7 days

6 Hrs/Day = 42 Hours

Course Curriculum:

1. Rescuer safety;
2. team evaluation;
3. pre-planning;
4. supplied air breathing systems;
5. atmospheric monitoring;
6. communications systems;
7. personal protective equipment;
8. patient packaging and recovery;
9. tripods and other artificial high anchor points;
10. lock-out, tag-out;
11. rope systems for confined space entry and rescue

Trench Rescue Technician Course (TRTC)

Aim:
This intensive 24-hour hands-on course covers Technician Level Trench Rescue Shoring & Evacuation Rescue Skills in NFPA 1006.

Expected Outcome:
Undertake Trench Rescue and demonstrate effective techniques to be used

Duration:
6 days
6 Hrs/Day = 36 Hours

Course Curriculum:

1. Rescuer safety, understanding OSHA regulations involving trenches and excavations;
2. preplanning; assessing soil composition/configuration;
3. cave-in evaluation;
4. stabilization and shoring using wood;
5. mechanical, hydraulic and pneumatic shores with the use of trench rescue data sheets;
6. victim rescue/recovery;
7. incident termination.

Open Water Rescue Course
(OLC)

Aim:
This course has been developed in order to train lifeguards, civil defence and other ancillary emergency services in the skills of rescue in an environment like a lake, beach or waterfront

Expected Outcome:
Demonstrate self survival skills and a judgement of adapting a rescue technique in order to suit the type of victim condition.

Duration:
10 days
6 Hrs/Day = 60 Hours

Course Curriculum:

1. Physical Fitness
2. Personal Safety and Well Being
3. Aquatic Awareness
4. Swimming Skills
5. Anatomy and Physiology of Human Body
6. First Aid and CPR
7. Hydrology of different water environments
8. Rescue Techniques
9. Carriages, Support and Evacuations
10. Communications and Patrols

Practical Assessment

1. Resuscitation: Demonstrate effective CPR
2. Swim: Swim 400 metres continuously within 12 minutes. 100m freestyle, 100m breaststroke, 100m survival backstroke, 100m sidestroke.
3. Timed Tow: Swim 50 metres, then tow a patient 50m within 3 min 15 sec.
4. Survival and Rescue Skills: Demonstrate a range of survival techniques and appropriate rescues for a range of different aquatic environments and scenarios.
5. Spinal Injuries: Basic management of a suspected spinal injury in shallow water.
6. Rescue Initiative: Demonstrate initiative in effecting a rescue of two people who are in difficulty up to 15 metres from safety.

Basic Flood Rescue Course
(BFRC)

Aim:
This course is designed to provide students with both a theoretical and practical knowledge of the basics of Swift water rescue.

Expected Outcome:
After completing this course, personnel will also be able to be in the support role for technician level rescuers in higher risk technical water rescues.

Duration:
12 days
6 Hrs/Day = 72 Hours

Course Curriculum:

1. Operations Standards
2. Hydrology and Water Hazards
3. Flood Theory/Flood Water Dynamics & Hazards
4. Equipment (Personal and Team)
5. Pre Planning & Scene Size Up
6. Risk Assessment Matrix
7. Medical & Decontamination Standards
8. Mud, Ice and Unstable Surface Considerations
9. Communications
10. Swift Water Swimming Techniques
11. Rescue Prioritisation
12. Throw Bag Techniques
13. Shallow Water Operations
14. Strainer Operations
15. People and Vehicle Entrapment
16. Tensioned Diagonals and use of M/A Systems during Operations
17. Knots and Anchor Systems
18. Scenarios

Basic Deep Diving Course (BDDC)

Aim:
The Deep Diving Course Programme is designed to cultivate the essential skills required for sound diving practice, irrespective of level or environment.

Expected Outcome:
It performs a three-fold function: It provides the basic diver, who does not desire further diver training, with an opportunity to advance his/her basic diving skills, thereby developing more comfort, confidence, and competence in the water. It provides the diver with aspirations of more advanced diver training with the tools that will contribute to a greater likelihood of success.

Duration:
10 days
6 Hrs/Day = 60 Hours

Course Curriculum

1. Demonstrate proficiency in safe diving techniques; this would include pre-dive preparations, in water activity, and post-dive assessment.
2. Demonstrate awareness of team-member location and a concern for safety, responding quickly to visual cues and dive-partner needs.
3. Efficiently and comfortably demonstrate how to donate gas to an out-of-gas diver.
4. Comfortably demonstrate at least three propulsion techniques that would be appropriate in delicate and/or silty environments; students should demonstrate comprehension of the components necessary for a successful backward kick.
5. Demonstrate a safe and responsible demeanour throughout all training.
6. Demonstrate proficiency in the ability to deploy a surface marker buoy without making contact with the bottom, while using a spool
7. Demonstrate proficiency in underwater communication.
8. Demonstrate basic equipment proficiency
9. Demonstrate a comfortable demeanour while swimming without a mask
10. Demonstrate good buoyancy and trim, especially during the open water skills/exercises.
11. Demonstrate aptitude in the following open-water skills: mask clearing, mask removal
12. Replacement, regulator removal and exchange, long-hose deployment.
13. Demonstrate safe ascent and descent procedures.
14. Demonstrate proficiency in executing a valve drill.

Advanced Deep Diving Course (ADDC)

Aim:

The Advanced Deep Diving Course Programme is designed to upgrade the essential skills required for sound diving practice, irrespective of level or environment.

Expected Outcome:

The Advanced Deep Diving Course is meant to further the diving skills and capabilities of Rescue Divers and in this respect, IRA specifically teaches and nurtures the skills required to be able to confidently and successfully face situations faced by the Disaster Response Teams.

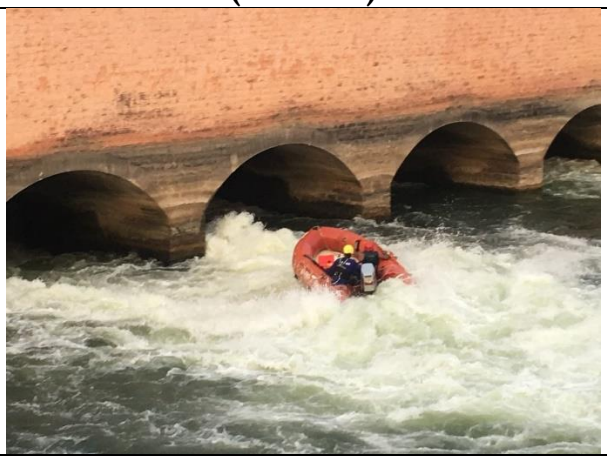
Duration:

12 days
6 Hrs/Day = 72 Hours

Course Curriculum

1. Limits of Deep Diving
2. Specialized Equipment for Deep Diving
3. Deep Dive planning, Buddy Contact Procedures and Buoyancy Control
4. Gas Supply management and processes
5. Responding to Gar Narcosis
6. Deep Diving Safety
7. Navigation cues, natural formations and Compass
8. Methods to estimate underwater distances
9. Object marking and locating from the surface
10. Underwater Mapping
11. Navigation Fine Tuning
12. Victim Recovery Procedures and documentation
13. Specialized Equipment
14. Scene handling and communications
15. Compass Navigation
16. Knot tying
17. Arc Search technique
18. Rope Pull Communications
19. Rescue Techniques
20. Search swimming patterns using compass and natural navigation
21. Locating Small and Large objects using various search patterns
22. Recovery Methods including Life Bags for Larger items
23. Search Planning and Operations

Rescue Boat Operator Course (RBOC)



Aim:

Rescue Boat Operator is a course designed to train rescue personnel in handling motorized boats during flood operations. Students are exposed to a number of topics including types of motorized boats suitable for water rescue, boat handling on still or slowly moving water, crew roles, boat safety and problem solving.

Expected Outcome:

Techniques are then put to work doing searches in flood environments, stranded victim and in-water retrieval, and rescue of conscious and unconscious persons.

Duration:

7 days

6 Hrs/Day = 42 Hours

Course Curriculum

1. Operational Risk Assessment
2. Crew Positions and Responsibilities
3. Boat Handling Theory
4. Navigation Rules
5. Swift Water Dynamics
6. Inter Agency Operations and Large Scale Incident Management
7. Search Techniques
8. Daily Pre Operations and Post Operations Checks
9. Boat Rigging
10. Station Holding
11. Mid Stream Object Touches
12. Motor Failure Procedures
13. Close Quarter Manoeuvring
14. On Plane Manoeuvring
15. Person in Water Recovery
16. Rescue Swimmer Deployment
17. Capsize Recovery
18. Towing
19. Pacing
20. Search Scenario

Advanced Flood Rescue Course (AFRC)

Aim:

This course builds on the skills learned in the Open Water Rescue & Basic Food Rescue Course, taking the students beyond the emphasis on self-rescue to concentrate on victim rescue. Students are exposed to more complex water rescue situations including a mock

night river rescue scenario. This is considered India's toughest rescue course includes hours of classroom instruction, followed by extensive days of hands-on skill development.

Expected Outcome:

Students must demonstrate the role and utilization of various skills in river and flood rescue, including:

- watermanship
- different water scenarios
- rescue boat operations
- rope systems
- management of litter & patient raising systems
- highline systems
- advanced river search concepts
- performing rescues at night or in low visibility
- basic flood disaster management
- and deep diving skills for search and recovery of bodies

Duration:

16 days
6 Hrs/Day = 96 Hours

Course Curriculum

Basic

1. Training Standards
2. Dynamic Risk Assessment
3. Advancd Incident Management & Site Control
4. Advanced Hydrology
5. Weir (low head dam assessment and pre planning
6. Aqueduct Hazards and techniques

Watermanship

1. Advanced Swift Water Swimming Techniques
2. Advanced conditional rescue – talk, reach, throw, row, go-tow
3. Advanced true rescue – tethered
4. Advanced entrapment techniques
5. Rescue platforms – rafts and sleds

Ropes in Water Environment

1. Technical Rope Rescue Review
2. Belay – Self/Team
3. Hauling and Lowering Techniques
4. Line Crossing Methods
5. Highline Rope Systems
6. Tethered Boats in high energy water

Stretcher management

1. Boat based litter management
2. In water litter management

Boat Operations

1. Introduction to boat handling

2. Boat Unwrapping
3. Flips and rights
4. Crew Operations
5. Driver Operations
6. Victim Recovery
7. Search Management & Exercise
8. Considerations in night/poor visibility operations
9. Night poor visibility operations

Basic Deep Diving

1. Demonstrate proficiency in safe diving techniques; this would include pre-dive preparations, in water activity, and post-dive assessment.
2. Demonstrate awareness of team-member location and a concern for safety, responding quickly to visual cues and dive-partner needs.
3. Efficiently and comfortably demonstrate how to donate gas to an out-of-gas diver.
4. Comfortably demonstrate at least three propulsion techniques that would be appropriate in delicate and/or silty environments; students should demonstrate comprehension of the components necessary for a successful backward kick.
5. Demonstrate a safe and responsible demeanour throughout all training.

Maintenance Technician Course (MTC)

Aim:

The Maintenance Technician (MT) Course is one the only courses of its kind available to professional forces in India. Having worked successfully in operations during Cyclones in South & North India, this course has been developed with sound technical knowledge and on ground experiences.

Expected Outcome:

Therefore, as also outlined also by the National Disaster Response Force that the training and deployment of maintenance technicians as part of a dedicted Service & Logisitcs Corps is extremely important to the success of Disaster Rescue Coys working in the field.

Duration:
10 days
6 Hrs/Day = 60 Hours

Course Curriculum

Review of Fundamentals of Disaster Rescue & Overall Management

1. What is Disaster Rescue?
    a. Hardware (Equipment), Software (Systems & Protocols), Human-ware (Skills & motivation)
2. Basic Education
    a. Basics of Physics and Measurements
    b. Basics of Electrical and Electronics and Working principles
    c. 5 'S' System and Kaizen methodoly
    d. Non Conforming Equipment (Deviation) Acceptance, Authority and log of deviation
    e. Correction Action Plan
    f. Equipment Rejection, Recording & Reporting protocol
3. Boats
    a. Basics of Boats, Inflatables, RIB, Rigid Hulls and Terminologies
    b. Assembly, Disassembly, Storage and Packing Methodology
    c. Leak Detection and Repair including various types of leakages
    d. Puncture Kits and Repair Methodology
    e. Valve Repair, End Cone Repair and Transom Repair
4. Out Board Motors
    a. OBM Types, Working Principles and Terminologies
    b. Storage, Carrying and Setup
    c. Preventive Maintenance
    d. Service Maintenance
    e. Overhaul Maintenance
    f. Breakdown Maintenance
    g. Troubleshooting

5. Fibre-Glassing
    a. Basic Principles of Fibreglass
    b. Chemicals, Chemistry and Ratios
    c. Application methods
    d. Fundamentals of Materials used and Applications
    e. Checking and Reinforcement
    f. Different Types of Resins, Enforcements and Coats
6. Generators
    a. Theory on Generator working principles and types
    b. Basic Maintenance and Servicing
    c. Breakdown Maintenance
    d. Trouble Shooting
7. Maintenance Facilities & Tools
    a. Maintenance Facilities Required
    b. Maintenance Tools Required
    c. Maintenance Inspection Equipment Required
    d. Maintenance Record Keeping

Dog Handlers Course (DHC)

Aim:
This course has been developed to cater to the specific needs of Canine Search & Rescue squads in order to meet the specific needs of the current scenarion

Expected Outcome:

Canines and their Handlers shall be able to demonstrate the various skills learnt during the period of the course
Duration: 10 days 6 Hrs/Day = 60 Hours
Course Curriculum 1. Breed Focus; a. Belgian Malinois b. German Shepherd c. Labrador d. Cocker Spaniel 2. Training Focus; a. Search & Rescue b. Water Rescue c. Security 3. Types of Dogs, Temperament 4. Basic Veterinary First Aid, 5. K9 Orientation, 6. Basic Tracking and Search Skills, 7. Advanced Tracking & Search Skills, 8. Substance Detection etc