



ADVANCED HELICOPTER + RESCUE TECHNIQUES



2014 COURSE CATALOG

“ADVANCED TRAINING FOR THE PROFESSIONAL PILOT AND CREW”

Advanced Helicopter + Rescue Techniques is dedicated to provide the world's most comprehensive and contemporary specialized technical rescue, aerial firefighting training and helicopter services while maintaining safety as our foremost commitment.

YOUR MISSION IS OUR MISSION



INTRODUCTION

ADVANCED HELICOPTER + RESCUE TECHNIQUES offers the highest quality of training when it comes to wildland firefighting, helicopter rescue, NVG operations, and technical rescue training. All of our courses meet or exceed current FAA, Transport Canada, NFPA, and International Standards.

AH+RT is comprised of currently active aviation fire and rescue professionals who have dedicated their lives to providing the highest level public service. Collectively, over the past 80 years, the members of AH+RT have participated in aviation rescue, firefighting training and actual missions that span the North and South American Continents.

Throughout these years, experiences through training and actual missions have driven the staff at AH+RT to share their knowledge and insight with other aviation professionals.

AH+RT provides initial and advanced courses and offers recurrent training on an annual or biannual basis. We are able to standardize your current or future wildland firefighting and helicopter rescue operations. Our specialists will evaluate your specific needs, set training priorities, and measure your progress to help you achieve your operational goals. Along with the exceptional training you will receive, AH+RT can assist in developing and composing manuals to help institutionalize standard operating procedures.

Our training curriculum provides thorough classroom and technical ground instruction prior to all in-flight instruction. Each training session begins with a pre-flight briefing and ends with a post-flight briefing. Your progress is documented and shared to help ascertain the highest quality of success.

What differentiates AH+RT from other companies is a service that spans a continuum of rescue and aerial firefighting as well as a service that provides program development, program implementation and program management.

MISSION STATEMENT

Advanced Helicopter and Rescue Techniques is dedicated to provide the world's most comprehensive and contemporary specialized technical rescue, aerial firefighting training and helicopter services while maintaining safety as our foremost commitment.

Your mission is our mission.



ADVANCED HELICOPTER + RESCUE TECHNIQUES

DAYTIME WILDLAND AERIAL FIREFIGHTING
TRAINING



With the proper training, wildland aerial fire suppression operations can be performed safely and effectively in a variety of environments and even under night-time conditions.

WILDLAND AERIAL FIREFIGHTING TRAINING

Wildland aerial firefighting operations provide an extension to the capabilities of helicopter operations. The ability to maneuver a helicopter into a location to allow the deployment of water or suppressant has been one of many uses of helicopters for decades now. Experience, techniques and technological advancements have pushed capabilities even further now. Regardless of all these factors, humans still operate the aircraft, ultimately extinguish the fire, and ultimately are responsible for the success of any mission.

Utilizing a helicopter to provide aerial fire suppression could considerably expedite the containment and extinguishment of a fire, return crews to their operational readiness and decrease cost that involves suppression activities and support. **With the proper training**, wildland aerial fire suppression operations can be performed safely and effectively in a variety of environments and even under night-time conditions.

This course will develop and implement a helicopter-based aerial fighting program. Students will learn the basic aspects of aerial firefighting that includes tank fill operations (ground and snorkel), bucket fill operations, aerial firefighting strategies and tactics, and safety.

This course is in conformance with USFS Interagency Helicopter Operations Guide (IHOG) adherence. This course will require students to demonstrate skills, knowledge and techniques for hazard recognition, equipment use, and procedures necessary to safely and effectively coordinate, perform, supervise and evaluate aerial firefighting operations. Students will operate as an integral part of a team environment and will be directed and monitored by instructors acting as team leaders. Students are given written, individual proficiency and practical evaluations.



COURSE DESCRIPTION

Wildland/Urban Interface Firefighting – Day

- + For Pilots and Ground Crews
- + Training Modules (Ground & Flight Training):
 - + Fire Behavior
 - + Strategy & Tactical Options
 - + Target Orientation Techniques
 - + Ground Logistics & Helicopter Landing Areas
 - + Technical Equipment Operations
 - + Simplex Fire Attack System
 - + Bambi Bucket
 - + Crew Coordination & Radio Communications
 - + Pattern Work & Drop Techniques
 - + Confined Areas & Low Visibility
 - Emergency Procedures

WILDLAND/URBAN AERIAL FIREFIGHTING TRAINING (DAY)

Wildland Firefighting Training is designed to give the students basic knowledge and basic instruction in Wildland Aerial Firefighting Operations. Training consists of decision-making, weather, and performance, normal and emergency procedures in wildland firefighting conditions.

Pilots will be taught techniques and control in varying conditions and terrain. Successful trainees will be able to communicate the principles of Wildland Firefighting Operations and operate safely with a bucket or Simplex Fire Attack System and High Rise Water Cannon attached.

Ground School:

This portion is typically an eight (8) hour course taught over one (1) day.

Technical Ground Training:

This portion is typically a four (4) hour course taught over one (1) day.

Flight Training:

This portion is typically taught over three (3) days. Each Pilot will achieve a minimum of five (5) hours of flight time.

This five (5) day training program is typical. Prior crew experience, crew performance and weather can affect the length of this training. Flight hours are based on a maximum of two (2) crews of three (3). Larger programs will require additional flight training days.

Daytime Advanced Land Based Training or equivalent is required before NVG Goggle Wildland Firefighting Operation Training begins. Hours and course length will be based on crew experience and number of trainees.



ADVANCED HELICOPTER + RESCUE TECHNIQUES

NVG NIGHT-TIME WILDLAND AERIAL FIREFIGHTING
TRAINING



With the proper training, NVG wildland aerial fire suppression operations can be performed safely and effectively in a variety of environments under night-time conditions.

NVG WILDLAND AERIAL FIREFIGHTING TRAINING

NVG wildland aerial firefighting operations provide an extension to the capabilities of helicopter operations. The ability to provide helicopter support into a location at night to allow the deployment of water or suppressant has become an essential part of urban interface firefighting in the United States. Experience, techniques and technological advancements with night vision, have pushed capabilities even further. Regardless of all these factors, humans still operate the aircraft, ultimately extinguish the fire, and ultimately are responsible for the success of any mission.

Utilizing a helicopter to provide NVG aerial fire suppression could considerably expedite the containment and extinguishment of a fire, return crews to their operational readiness and decrease cost that involves suppression activities and support. **With the proper training**, NVG wildland aerial fire suppression operations can be performed safely and effectively in a variety of environments under night-time conditions.

This course is intended for the students who will perform NVG aerial firefighting operations at night. The course will compile the necessary instructed courses that include fire behavior, tactics, aerial firefighting, etc., and provide the service under the capability of utilizing night vision goggles. Advanced Helicopter+Rescue Techniques will require students to demonstrate skills, knowledge and techniques for hazard recognition, equipment use, and procedures necessary to safely and effectively coordinate, perform, supervise and evaluate NVG aerial firefighting operations. Students will operate as an integral part of a team environment and will be directed and monitored by instructors acting as team leaders. Students are given written, individual proficiency and practical evaluations.



COURSE DESCRIPTION

NVG Wildland/Urban Interface Firefighting – Night

- + For Pilots and Ground Crews
- + Training Modules (Ground & Flight Training):
 - + Night-time Fire Behavior
 - + Strategy & Tactical Options
 - + Night-time Target Orientation Techniques
 - + NVG Ground Logistics & Helicopter NVG Landing Areas
 - + Technical NVG Equipment Operations
 - + Simplex Fire Attack System
 - + NVG Cockpit Orientation
 - + NVG Goggle Operations & Systems
 - + FLIR
 - + Light Management
 - + Crew Coordination & Radio Communications
 - + Pattern Work & Drop Techniques
 - + Confined Areas & Low Visibility
 - + Emergency Procedures

NVG WILDLAND/URBAN AERIAL FIREFIGHTING TRAINING (NIGHT)

Advanced Helicopter + Rescue Techniques, Team Specialists are all experienced NVG wildland firefighters. All team members are presently working as professional fire pilots, helicopter crew chiefs, and helicopter rescue medics assigned to initial attack, fire-rescue helicopters in Southern California. Our team of specialists will customize a lesson plan using years of NVG wildland firefighting experience to enhance your Air Operations wildland plan of attack. AH+RT will provide NVG Night-Time Wildland Firefighting Training to flight crews in order to operate the helicopter in a safe and efficient manner during preflight, operational and post flight Aerial Firefighting Operations.

Ground School:

This portion is typically an eight (8) hour course taught over one (1) day.

Technical Ground Training:

This portion is typically a six (6) hour course taught over one (1) day.

Flight Training:

This portion is typically taught over three (3) days. Each Pilot will achieve a minimum of five (5) hours of flight time.

This five (5) day training program is typical. Prior crew experience, crew performance and weather can affect the length of this training. Flight hours are based on a maximum of two (2) crews of three (3). Larger programs will require additional flight training days.

Daytime Wildland Aerial Firefighting Training or equivalent is required before NVG Night-Time Wildland Firefighting Operation Training begins. Hours and course length will be based on crew experience and number of trainees.



ADVANCED HELICOPTER + RESCUE TECHNIQUES

DAYTIME AND NIGHT-TIME SEARCH & RESCUE
TRAINING (land and water)



With the proper training, search & rescue helicopter operations can be performed safely and effectively in a variety of environments and conditions.

SEARCH & RESCUE TRAINING

Conducting helicopter search & rescue operations can be performed safely from different flight profiles. The most important factor is to determine which profile would be the safest and most efficient for the individual agency. Many of the determining factors relating to the safety and efficiency are derived from the aircraft, crew, topography and mission needs.

Utilizing proper search & rescue techniques could considerably expedite the insertion of a rescuer and the extraction of an injured/stranded victim.

With the proper training, search & rescue operations can be performed in a variety of environments and even under night-time conditions.

This course will develop and implement a helicopter-based search & rescue program. Students will learn the basic aspects of search & rescue that includes:

1. High-rise Insertion/Extraction Operations
2. Short Haul Operations
3. Hoist Operations (Day/Night)

4. Rappel Operations
5. Vertical Reference
6. Water Egress Training
7. Hoist Operations (Water)
8. Short Haul Operations (Water)

This course will require students to demonstrate skills, knowledge and techniques for hazard recognition, equipment use, and procedures necessary to safely and effectively coordinate, perform, supervise and evaluate search & rescue operations. Students will operate as an integral part of a team environment and will be directed and monitored by instructors acting as team leaders. Students are given written, individual proficiency and practical evaluations.



COURSE DESCRIPTION

Search & Rescue – Day & Night (land & water)

- + For Pilots, Winch Operator, and Rescue Personnel
- + Training Modules (Ground & Flight Training):
 - + Initial & Advanced Hoist Operations
 - + Vertical Reference
 - + Still Water Rescue (Lake & Ocean)
 - + Swift Water Rescue (Rivers & Floods)
 - + Short Haul
 - + Rappel & Fast Rope
 - + Water Egress and HEEDS Training
 - + Technical Equipment Operations
 - + Hoist
 - + Infra-Red Camera
 - + Searchlight
 - + Night Vision Goggle Operations
 - + Crew Coordination & Radio Communications
 - + Pattern Work
 - + Confined Areas & Low Visibility
 - + Emergency Procedures

DAYTIME AND NIGHT-TIME SEARCH & RESCUE TRAINING (LAND AND WATER)

Daytime and Night-time Search & Rescue Training is designed to give the students basic knowledge and basic instruction in Search & Rescue Helicopter Operations. Helicopter Search & Rescue Training consists of multiple training modules. Each module can be trained individually or combined to meet the needs of the organization.

Some training modules have prerequisites that must be met before initial training begins. Certain training modules not shown will be compiled from other AH+RT training courses and taught as individual training sessions or combined for your specific course.

Pilots and crews will be taught techniques and control in varying conditions and terrain. Successful trainees will be able to communicate the principles of Search & Rescue Operations and operate safely in all intended course selections.

COURSE MODULES DESCRIPTIONS

HOIST TRAINING / INITIAL LAND BASED TRAINING

Initial Land Based Training is an introductory training program for crews to familiarize themselves with Basic Hoist Operations. Training consists of decision-making, weather, and performance, normal and emergency procedures in unobstructed flat terrain.

Ground School:

This portion is typically a twelve (12) hour course taught over two (2) days.

Technical Ground Training:

This portion is typically an eight (8) hour course taught over one (1) day.

Flight Training:

This portion is typically taught over four to five (4-5) days. Each crewmember will perform a minimum of 30-50 hoist cycles. Hoist flight training can begin on the same day as the Technical Ground Training if time and weather permit.

This seven to eight (7-8) day training program is typical. Prior crew experience, crew performance and weather can affect the length of this training. Flight hours are based on a maximum of two (2) crews of three (3). Larger programs will require additional flight training days.

HOIST TRAINING / ADVANCED LAND BASED TRAINING

Advanced Land Based Training is an additional training program for crews who have already received Initial Land Based Training course. Training consists of decision-making, weather, performance, normal and emergency procedures in advanced land based terrain.

Training is available for:

- + Confined Areas
- + Cliff Faces
- + Mountains
- + Pinnacles
- + Forests
- + Night Vision Goggle Hoist Ops

Ground School:

This portion is typically a six (6) hour course taught over one (1) day.

Flight Training:

This portion is typically taught over three to five (3-5) days. Each crewmember will perform a minimum of 20-40 hoist cycles. Hoist flight training can begin on the same day as the Technical Ground Training if time and weather permit.

- + In addition to providing Advanced Land Based Training, Advanced Helicopter Rescue Techniques can also provide **Night Vision Goggle Hoist Training**. This training is designed for those Operators who are currently using Night Vision Goggles and are looking to add NVG Hoist to their operations. **Day Advanced Land Based Training or equivalent is required before NVG Goggle Hoist Operation Training begins.** Hours and course length will be based on crew experience and number of trainees.

This six (6) day training program is typical. Prior crew experience, crew performance and weather can affect the length of this training. Flight hours are based on a maximum of two (2) crews of three (3). Larger programs will require additional flight training days.

COURSE MODULES DESCRIPTIONS

HOIST TRAINING / ADVANCED STILL AND SWIFT WATER TRAINING

Advanced Water Based Training is an additional training program for crews who have already received Advanced Land Based Training courses. Training consists of decision-making, weather, and performance, normal and emergency procedures in still and swift water conditions.

Training is available for:

- + Open Still Water Rescues (Lake, Ocean)
- + Swift Water Rescues (Rivers, Floods, Fast Water)
- + Skid Deployment

Ground School:

This portion is typically a six (6) hour course taught over one (1) day.

Flight Training:

This portion is typically taught over two (2) days. Each crewmember will perform a minimum of 20-40 hoist cycles. Hoist flight training can begin on the same day as the Ground Training if time and weather permit.

This three (3) day training program is typical. Prior crew experience, crew performance and weather can affect the length of this training. Flight hours are based on a maximum of two (2) crews of three (3). Larger programs will require additional flight training days.

Day Advanced Hoist Land Based Training or equivalent is required before Advanced Still and Swift Water Hoist Training begins.

EXTERNAL LOAD / VERTICAL REFERENCE TRAINING

External Load Training is designed to give the student basic knowledge and basic instruction in Vertical Reference Operations. Training consists of: decision making, weather, and performance, normal and emergency procedures in vertical reference conditions. Pilots will be taught proper techniques and control in varying conditions and terrain. Successful trainees will be able to communicate the principles of Vertical Reference Operations and operate safely with an external load attached.

Ground School:

This portion is typically a six (6) hour course taught over one (1) day.

Flight Training:

This portion is typically taught over one (2) day. Each Pilot will achieve a minimum of five (5) hours of flight time.

This two (2) day training program is typical. Prior crew experience, crew performance and weather can affect the length of this training. Flight hours are based on a maximum of two (2) pilots. Larger programs will require additional flight training days.

COURSE MODULES DESCRIPTIONS

SHORT HAUL RESCUE TRAINING

The following training program is based on the assumption that the pilot has vertical reference experience and is willing to accept direction from his crewmember on the skids. Training consists of decision-making, weather, performance, normal and emergency procedures in short haul rescue conditions.

Short Haul Rescue Training is an additional training program for crews who have already received the External Load / Vertical Reference Training Course.

Short Haul Training is designed to give the student basic knowledge and basic instruction in Short Haul Rescue Operations.

Ground School:

This portion is typically an eight (8) hour course taught over one (1) day.

Flight Training:

This portion is typically taught over two (2) days. Each crewmember will perform a minimum of 10-20 Short Haul cycles.

This three (3) day training program is typical. Prior crew experience, crew performance and weather can affect the length of this training. Flight hours are based on a maximum of two (2) crews of three (3). Larger programs will require additional flight training days.

RAPPEL / FAST ROPE TRAINING

Rappel/Fast Rope Training is designed to give the student basic knowledge and basic instruction in Human Load Rappel and/or Fast Rope Operations. Training consists of decision-making, weather, and performance, normal and emergency procedures in vertical reference conditions. Pilots will be taught proper techniques and control in varying conditions and terrain. Successful trainees will be able to communicate the principles of Rappel and/or Fast Rope Operations and operate safely with a human external load attached.

Ground School:

This portion is typically an eight (8) hour course taught over one (1) day.

Technical Ground School:

This portion is typically an eight (8) hour course taught over one (1) day.

Flight Training:

This portion is typically taught over one (1) day. Each Pilot will achieve a minimum of five (5) hours of flight time and each Spotter and Rappeller will receive a minimum of five (5) sticks. This two (3) day training program is typical. Prior crew experience, crew performance and weather can affect the length of this training. Flight hours are based on a maximum of two (2) pilots. Larger programs will require additional flight training days.



ADVANCED HELICOPTER + RESCUE TECHNIQUES

HIGH RISE AERIAL FIREFIGHTING - PILOT AND
OPERATOR TRAINING



With the proper training, high-rise aerial fire suppression operations can be performed safely and effectively in a variety of environments and even under night-time conditions.

HIGH RISE AERIAL FIREFIGHTING TRAINING

High-rise aerial firefighting operations provide an extension to the capabilities of helicopter operations. The ability to maneuver a helicopter into an urban or metropolitan environment to allow the direct deployment of water or suppressant directly to the fire above the reach of ground forces will ultimately save structures and lives. Experience, techniques and technological advancements have pushed capabilities even further now. Regardless of all these factors, humans still operate the aircraft, ultimately extinguish the fire, and ultimately are responsible for the success of any mission.

Utilizing a helicopter to provide high-rise aerial fire suppression could considerably expedite the containment and extinguishment of a fire, allow ground forces time to fight the fire internally and occupants to vacate the building. **With the proper training**, high-rise aerial fire suppression operations can be performed safely and effectively in a variety of environments and even under night-time conditions.

The helicopter provides extra time for the ground forces to reach the fire and save lives. **The helicopter assists firefighters it does not replace them.** The helicopter can assist the ground firefighters by; slowing the growth of the fire preventing the fire from jumping from floor to floor outside the building, provides

firefighters time to enter building and attack fire internally and provides time for building residents to evacuate.

This course will develop and implement a helicopter-based high-rise aerial fighting program. Students will learn the basic aspects of high-rise aerial firefighting that includes cannon operations, crew coordination, high-rise aerial firefighting strategies and tactics, and safety.

This course will require students to demonstrate skills, knowledge and techniques for hazard recognition, equipment use, and procedures necessary to safely and effectively coordinate, perform, supervise and evaluate high-rise aerial firefighting operations.

Students will operate as an integral part of a team environment and will be directed and monitored by instructors acting as team leaders. Students are given written, individual proficiency and practical evaluations.



COURSE DESCRIPTION

High Rise Aerial Firefighting

- + For Pilots, Cannon Operators and Ground Crews
- + Training Modules (Ground & Flight Training):
 - + High Rise Fire Behavior
 - + Strategy & Tactical Options
 - + Hazard Identification
 - + Target Orientation Techniques
 - + Ground Logistics & Helicopter Landing Areas
 - + Technical Equipment Operations
 - + Simplex SkyCannon System
 - + Simplex SkyCannon Equipment
 - + Crew Coordination & Radio Communications
 - + Pattern Work & Cannon Spray Techniques
 - + Confined Areas & Low Visibility
 - Emergency Procedures

HIGH RISE AERIAL FIREFIGHTING TRAINING

High Rise Aerial Firefighting Training is designed to give the students basic knowledge and basic instruction in High Rise Aerial Firefighting Operations. Training consists of decision-making, weather, and performance, normal and emergency procedures in urban and metropolitan firefighting conditions.

Pilots will be taught techniques and control in varying conditions and environments. Successful trainees will be able to communicate the principles of High Rise Aerial Firefighting Operations and operate safely with a Simplex SkyCannon Fire Attack System.

Ground School:

This portion is typically an eight (8) hour course taught over one (1) day.

Technical Ground Training:

This portion is typically a four (4) hour course taught over one (1) day.

Flight Training:

This portion is typically taught over two (2) days. Each Pilot will achieve a minimum of five (5) hours of flight time.

This four (4) day training program is typical. Prior crew experience, crew performance and weather can affect the length of this training. Flight hours are based on a maximum of two (2) crews of three (3). Larger programs will require additional flight training days.

Daytime Advanced Land Based Training or equivalent is required before NVG Goggle Wildland Firefighting Operation Training begins. Hours and course length will be based on crew experience and number of trainees.



ADVANCED HELICOPTER + RESCUE TECHNIQUES

SPECIALIZED TECHNICAL RESCUE TRAINING



Your safety personnel and responders will develop knowledge and techniques that will carry them into real time incidents with the experience and confidence to move forward with issues that are encountered every day.

SPECIALIZED TECHNICAL RESCUE TRAINING

AH+RT would like to invite you to participate in a variety of specialized technical rescue programs. AH+RT is an American company with some of the most skillful personnel in North America when it comes to dealing with specialized rescue operations and the training required for them.

AH+RT currently sits on International Fire Service Training Standards including the N.F.P.A. (National Fire Protection Association-1670 Standard). Our manuals have been Pro Board accredited in Canada. AH+RT, influences emergency services and industrial services throughout North America. We have many associates around North America that assist us in providing these services that you may require. All are full time professionals in their specific field and maintain the highest of skill levels in each of their disciplines.

It would be our pleasure to provide your personnel with practical hands on training, as well as classroom based technical expertise. Your safety personnel and responders will develop

knowledge and techniques that will carry them into real time incidents with the experience and confidence to move forward with issues that are encountered every day.

All of our programs meet and exceed Work Safe and N.F.P.A. standards. All students are expected to pass a written, proficiency and a practical evaluation at each level. We can also provide on going proficiency and yearly recertification training.



COURSE DESCRIPTION

TECHNICAL RESCUE CREW TRAINING PROGRAMS

For emergency responders & rescuers (fire & police, military):

- + Helicopter Awareness
- + Technical Water & Shore Rescue
- + Technical Rope Rescue
- + Fall Protection
- + Lead Climbing & Industrial Tower/Crane Rescue
- + Tower Ascending & Rescue
- + Confined Space
- + Rope Rescue & Confined Space
- + Trench Rescue
- + Tunnel & Mine Rescue
- + Structural Collapse Rescue
- + Fire Rapid Intervention Teams
- + Vehicle Extrication
- + Machinery Extrication

ROPE RESCUE TRAINING

LOW TO STEEP ANGLE ROPE RESCUE AWARENESS & OPERATIONS (32 HOURS-4 DAYS)

This course standardizes embankment rescue and provides the foundation skills for students who would like to move into the high angle operations and technician level courses. The course includes: N.F.P.A. standards, rescue site overview & safety, ropes (knots, bends & hitches), equipment familiarization, anchoring and rigging systems, patient packaging, simple mechanical advantage systems and low to steep angle embankment rescue scenarios. The course consists of both classroom and field instruction. Students will be given a written, individual proficiency and team practical evaluation. Successful candidates will be certified to low to steep angle rope rescue. This course is in conformance with NFPA 1006 and 1670 and meets and exceeds all "Work Safe" standards for Evacuation & Rescue.

**This course can be combined with the Operations Level program to accommodate industry-based training. It would dispense with the steep slope portion of the awareness program. (Not usually required for industry)

HIGH ANGLE OPERATIONS /LEVEL 1 (32 HOURS-4 DAYS)

The operations level includes team-building roles and responsibilities; ascending and descending, pick offs & line transfers, patient packaging, multiple lowering & raising systems, compound mechanical advantage systems and team scenarios. Students will operate as an integral part of a team environment and will be directed and monitored by instructors acting as team leaders. Students are given written, individual proficiency and practical evaluations. This course is in conformance with NFPA 1006 and 1670 and meets and exceeds all "Work Safe" standards for rescue at heights.

**This program can be combined with the Awareness program to meet the needs of industry. This would encompass a five-day "Awareness/Operations" for Industry.

HIGH ANGLE TECHNICIAN/LEVEL 2 (32 HOURS-4 DAYS)

The technician level requires students to demonstrate skills, knowledge and techniques for hazard recognition, equipment use, and procedures necessary to safely and effectively coordinate, perform and supervise a technical rescue incident in the high angle environment. The course consists mainly of field instruction and includes advanced anchoring systems, compound/complex mechanical advantage systems, advanced line transfers, knot passing, high lines, litter attendants, attendant transition and a variety of technical scenarios. Students are given a written, individual proficiency and practical evaluations. This course is in conformance with NFPA 1006 and 1670 and meets and exceeds all "Work Safe" standards for rescue at heights.

FALL PROTECTION TRAINING

ONE-DAY FALL PROTECTION

DURATION: 8 HOURS, 1 DAY

This course provides an overview of the potential hazards associated with working at heights and precautions, which should be taken to prevent injuries associated with falls from heights. The program provides an overview of the types of fall protection devices that are available and their intended use. Topics to be covered include:

- + Overview of why fall protection is necessary
- + Identification, prioritization and control of fall hazards
- + Hierarchy of fall protection
- + Components of personal fall arrest systems
- + Critical concepts of fall protection
- + Inspection and maintenance of fall protection equipment
- + Fall rescue protocols
- + Provisions for establishing a rescue plan
- + Development of a written fall protection plan
- + Self rescue techniques
- + Small team assisted rescue
- + Wearing of harnesses and equipment

TWO DAY FALL PROTECTION TRAINING

DURATION: 16 HOURS 2 DAYS

CLASSROOM

This course provides an overview of the potential hazards associated with working at heights and precautions, which should be taken to prevent injuries associated with falls from heights. The program provides an overview of the types of fall protection devices that are available and their intended use. This program will meet the requirements of Work Safe BC section 11 Fall Protection and Part 32 **Evacuation and Rescue.**

Topics to be covered in the course include:

- + Overview of why fall protection is necessary
- + Identification, prioritization and control of fall hazards
- + Hierarchy of fall protection
- + Components of personal fall arrest systems
- + Critical concepts of fall protection
- + Inspection and maintenance of fall protection equipment
- + Record keeping maintenance and training
- + Proper donning and doffing of fall protection equipment

DAY 1

FIELD BASED

Fall rescue protocols
Provisions for establishing a rescue plan
Development of a written fall protection plan
Self rescue techniques
Small team assisted rescue
Wearing of harnesses and equipment

DAY 2

WCB regulations for rescue Section 32.1 – 32.9 - Evacuation and Rescue:
Best practices for rescue
Bill C 45
Rescue equipment identification Inspection and Maintenance-32.5,32.6
Equipment Specifications for Work safe BC
Ropes: Knots, Bends & Hitches
Anchoring and rigging
Mechanical advantage systems
Tied web harness
Practical rescue evolutions in rescue environment
Working line transfer to a lowering line
Examination

FALL PROTECTION, LEAD CLIMBING & INDUSTRIAL TOWER CRANE RESCUE

ADVANCED TECHNICIAN (32 HOURS-4 DAYS)

This hands-on course provides the student with the skills and knowledge to act as a rescuer at a site where a tower crane is in use. Students must have advanced skills prior to being accepted for this course. The course will cover Tower crane components, specialized technical rescue systems, Work Safe regulations on "Lock Out". Training occurs mostly in the field and consists of a variety of scenarios upon which proficiency evaluations are based.

This course is in conformance with NFPA 1006 and 1670 and meets and exceeds all "Work Safe" standards for rescue at heights.

TWO DAY TOWER ASCENDING AND RESCUE TRAINING

DURATION: 16 HOURS 2 DAYS

CLASSROOM

This course provides an overview of the potential hazards associated with tower climbers working at heights and the precautions, which should be taken to prevent injuries associated with falls from heights. The program provides an overview of the types of fall protection devices that are available and their intended use. This program will meet the requirements of Work Safe BC section 11 Fall Protection and Part 32 Evacuation and Rescue.

CLASSROOM

- + WCB regulations for rescue Section 11 Fall Protection
- + WCB regulations for rescue Section 32.1 – 32.9 - Evacuation and Rescue
- + Overview of why fall protection is necessary
- + Identification, prioritization and control of fall hazards
- + Components of personal fall arrest systems
- + Critical concepts of fall protection
- + Inspection and maintenance of fall protection equipment
- + Record keeping maintenance and training
- + Harness Hang Syndrome
- + Ropes: Knots, Bends & Hitches
- + Fall rescue protocols
- + Provisions for establishing a rescue plan
- + Rescue equipment identification Inspection and Maintenance-32.5,32.6

FIELD BASED

- + Anchoring and rigging
- + Tied web harness
- + Mechanical advantage systems
- + Lowering Systems
- + Safety Belay Systems
- + Ground and Tower controlled systems
- + Rappelling
- + Self rescue techniques
- + Small team assisted rescue
- + Patient line transfer
- + Ground Systems
- + Written & Practical Examination

CONFINED SPACE ENTRY & RESCUE OPERATIONS

CONFINED SPACE AWARENESS (1 DAY, 8 HOUR DAYS)

This course provides the foundation skills for students who would like to move into the confined space world. It can be a one day classroom based program or a two day class with a combination of classroom and practical hands on applications. The course includes: N.F.P.A. standards, Work Safe BC Standards, rescue site overview & safety, ropes (knots, bends & hitches), equipment familiarization, simple anchoring and rigging systems, patient packaging, and simple mechanical advantage systems. Participants will develop the ability to, initiate and conduct non-entry confined space rescue. They will gain insight into hazard identification, assessment and control for entry and rescue. They will recognize the first responders' roles and responsibilities given the limitations of standard confined space equipment. Students will be given a written, individual proficiency and team practical evaluation. Successful candidates will be certified to Confined Space Rescue Awareness. This course meets and exceeds NFPA 1006 and 1670 and is in conformance with CSA and Work Safe BC Standards.

CONFINED SPACE OPERATIONS /LEVEL 1 (32 HOURS - 4 DAYS)

The operations level includes team-building working towards a systematic approach to Confined Space Rescue. Participants will gain the skills and knowledge to conduct rope based rescue operations in a variety of confined space environments. Rope based rescue systems will be utilized emphasizing the selection, construction, and proper use of these systems in the industrial environment. Students will gain practical experience in the use of communication systems, resource material, patient packaging devices, atmospheric monitoring equipment, air sampling strategies, and strategies/tactics for successful emergency entry operations. Students will operate as an integral part of a team environment and will be directed and monitored by instructors acting as team leaders. Students are given written, individual proficiency and practical evaluations. This course meets and exceeds NFPA 1006 and 1670 and is in conformance with CSA and Work Safe BC Standards.

CONFINED SPACE TECHNICIAN/LEVEL 2 (32 HOURS—4 DAYS)

The technician level requires students to demonstrate skills, knowledge and techniques for hazard recognition, equipment use, and procedures necessary to safely and effectively coordinate, perform and supervise a technical rescue incident in a Confined Space. Advanced concepts will be employed in rescue strategies, site management, team leadership, hazard mitigation, equipment and resource management and, information gathering. Technical rescue pre-planning and rescue scene management and termination will be explored and developed by the end of this course. The course consists mainly of field instruction. Students are given a written, and individual proficiency and practical evaluations. This course meets and exceeds NFPA 1006 and 1670 and is in conformance with CSA and Work Safe BC Standards.

ROPE RESCUE & CONFINED SPACE RESCUE OPERATIONS/LEVEL 1

COMPRESSED COURSE (50 HOURS—5 DAYS)

This course offers the ability to combine the skills needed to emerge with qualifications in Rope Rescue and Confined Space rescue at the Operations Level. The operations level requires students to demonstrate skills, knowledge and techniques for hazard recognition, equipment use, and procedures necessary to safely and effectively participate in a technical rescue incident in a Confined Space or at height. Participants will gain the skills and knowledge to conduct rope based rescue operations in a variety of confined space and high angle environments. Rope based rescue systems will be utilized emphasizing the selection, construction, and proper use of these systems in the industrial environment. Students will gain practical experience in the use of communication systems, resource material, patient packaging devices, atmospheric monitoring equipment, air sampling strategies, and strategies/tactics for successful emergency entry operations. Students will operate as an integral part of a team environment and will be directed and monitored by instructors acting as team leaders. Students are given written, individual proficiency and practical evaluations. This course meets and exceeds NFPA 1006 and 1670 and is in conformance with CSA and Work Safe BC Standards. **(Prerequisites-Students must come in with awareness level skills in Rope Rescue)**

ROPE RESCUE & CONFINED SPACE RESCUE TECHNICIAN/LEVEL 2

COMPRESSED COURSE (50 HOURS—5 DAYS)

This course offers the ability to combine the skills needed to emerge with qualifications in Rope Rescue and Confined Space rescue at the Technician Level. The Technician level requires students to demonstrate skills, knowledge and techniques in advanced concepts. Time will be spent on rescue strategies, site management, team leadership, hazard mitigation, equipment and resource management and, information gathering. Technical rescue pre-planning, rescue scene management, termination, hazard recognition, equipment use, and procedures necessary to safely and effectively participate in a technical rescue incident in a Confined Space or at height. Students will expand the ability to use communication systems, resource material, patient packaging devices, atmospheric monitoring, air sampling strategies, and strategies/tactics for successful emergency entry operations. Students will operate as an integral part of a team environment and will be directed and monitored by instructors acting as team leaders. Students are given written, individual proficiency and practical evaluations. This course meets and exceeds NFPA 1006 and 1670 and is in conformance with CSA and Work Safe BC Standards. **(Prerequisites-Students must come in with operations level skills in Rope Rescue & Confined Space)**

TECHNICAL WATER RESCUE

TECHNICAL WATER AWARENESS & SHORE BASED RESCUE OPERATIONS (8 HOUR DAYS-1 DAY)

This course provides the foundation skills for students who would like to move into the Swift Water world. For personnel who operate along the shore of moving water environments classified as low risk and may enter the water under safe conditions, but not directly involved in the water rescue.

The Awareness Program covers all related Standards & Regulations, from:

- + NFPA 1670, 1006, 1983 & 1500. Work Safe B.C. Sect 32 Evacuation & Rescue, P.E.P.
- + Lifesaving & Canoeing & guiding standards.
- + Introduction to Water Dynamics, Hydrology, River Hazards & Accident Review.
- + Ropes: Knots, Bends & Hitches.
- + Panic, Survival & Cold water Drowning
- + Duty, Responsibility & Bill C45
- + Equipment: Software & Hardware
- + Shore Based Rescues (Reach & Throwing Techniques)
- + Proficiency Evaluations
- + Written Quiz

TECHNICAL WATER RESCUE OPERATIONS/LEVEL 1 (32 HOURS - 4 DAYS)

The operations level includes team-building, working towards a systematic approach to Swift Water Rescue. Participants will gain the skills and knowledge to conduct water based rescue operations in a variety of Swift Water environments. This course is for personnel who operate and search in moving water environments, classified as low to medium risk, and are involved in a support function to a swift water/flood rescue technician or team. This course meets and exceeds NFPA 1006 and 1670 and is in conformance with CSA and Work Safe BC Standards.

The Operations Program Covers:

- + Shallow water crossings
- + Self Rescue
- + Defensive & Combat Swimming
- + Ferry Angles
- + Log Jam & Strainers entrapment
- + Medical considerations (Hypothermia, C-Spine & Patient Packaging)
- + Mechanical Advantage (Simple & Compound)
- + Anchoring & Rigging in the Swift water environment
- + Team Positions & Incident Management
- + Risk Assessment & Site Evaluations
- + Rescue Pre Planning & Management
- + Continuous Loop crossing
- + Victim tow swim
- + Live Bait Contact Rescues
- + Rescue Board rescues
- + Inflated Fire Hose rescue
- + Tensioned Diagonals
- + Team Scenarios
- + Proficiency Evaluations
- + Team Evaluations
- + Written Quiz

TECHNICAL WATER RESCUE TECHNICIAN/LEVEL 2 (32 HOURS—4 DAYS)

The technician level requires students to demonstrate skills, knowledge and techniques for hazard recognition, equipment use, and procedures necessary to safely and effectively coordinate, perform and supervise a technical Swift Water incidents. Advanced concepts will be employed in rescue strategies, site management, team leadership, hazard mitigation, equipment and resource management, high lines in the Swift water environment, Swift water rescue boat applications, and information gathering. Technical rescue pre-planning and rescue scene management and termination will be explored and developed by the end of this course .The course consists mainly of field instruction. Students are given a written and individual proficiency and practical evaluations.

This course meets and exceeds NFPA 1006 and 1670 and is in conformance with CSA and Work Safe BC Standards.

OTHER COURSES INCLUDE:

- + TRENCH RESCUE AWARENESS
- + TRENCH RESCUE OPERATIONS/LEVEL 1
- + TRENCH RESCUE TECHNICIAN/LEVEL 2

- + TUNNEL & MINE RESCUE AWARENESS
- + TUNNEL & MINE RESCUE OPERATIONS/LEVEL 1
- + TUNNEL & MINE RESCUE TECHNICIAN/LEVEL 2

- + STRUCTURAL COLLAPSE AWARENESS
- + STRUCTURAL COLLAPSE OPERATIONS/LEVEL 1
- + STRUCTURAL COLLAPSE TECHNICIAN/LEVEL 2

- + FIRE RAPID INTERVENTION TEAM AWARENESS
- + FIRE RAPID INTERVENTION TEAM OPERATIONS/LEVEL 1
- + FIRE RAPID INTERVENTION TEAM TECHNICIAN/LEVEL2

- + VEHICLE EXTRICATION AWARENESS
- + VEHICLE EXTRICATION OPERATIONS/LEVEL 1
- + VEHICLE EXTRICATION TECHNICIAN/LEVEL 2

- + MACHINERY EXTRICATION AWARENESS
- + MACHINERY EXTRICATION OPERATIONS/LEVEL 1
- + MACHINERY EXTRICATION TECHNICIAN/LEVEL 2



ADVANCED HELICOPTER + RESCUE TECHNIQUES

AERIAL POWER LINE TRAINING FOR PILOTS
AND LINEMAN



Utilizing a helicopter to provide aerial power line solutions will considerably expedite emergency repairs and construction, providing a broader range of service for power companies and a decrease in cost in power line construction, repair and support.

AERIAL POWER LINE TRAINING

Aerial power line operations provide a valuable extension to the capabilities of conventional ground based power line tasks. The ability to maneuver a helicopter into a location to allow the deployment of personnel and equipment on or near power lines has been one of the many uses of helicopters for decades now. Experience, techniques and technological advancements have pushed capabilities even further.

With the aging infrastructure, environmental and terrain issues, the versatile helicopter is increasingly being used for many new creative power line maintenance tasks.

Utilizing a helicopter to provide aerial power line solutions, considerably expedites emergency repairs and general line support. Thereby expanding the range of services available to power companies, with a subsequent decrease in cost for most power line construction, repair and support operations.

With properly structured training, aerial power line operations can be performed safely and

effectively in a variety of environments.

This course will develop and implement helicopter specific aerial power line training, suitable for contractors and power company personnel.

Students will learn the basic aspects of aerial line work that includes tower transfer operations, short haul operations, aerial power line strategies and tactics, and general safety.

This course is for pilots, linemen and ground personnel. This course will require students to demonstrate skills, knowledge and techniques for hazard recognition, equipment use, and procedures. And to safely and effectively coordinate, perform and evaluate aerial power line operations. Students will operate as an integral part of a cooperative team. Students will be directed and monitored by instructors acting as team leaders. Students are given written, individual proficiency and practical evaluations.



COURSE DESCRIPTION

BASIC AERIAL POWERLINE TRAINING

- + For Pilots and Linemen [PLT]. Ground and support crew if applicable.
- + Training modules: Ground and Flight Training.
 - + Basic helicopter safety.
 - + Electrical principles and law, pertaining to flight operations.
 - + General discussion of tower construction types as it impacts aerial line work.
 - + Radio communications, crew coordination and resource management.
 - + Discuss and instill the principle of the "Tailboard" or pre job discussion.
 - + Ground logistics.
 - + Selection of helicopter landing sites.
 - + Ground crew training.
 - + Setting up sling loads.
 - + Receiving sling loads on a tower.
 - + Fuelling equipment, grounding and aircraft ground support.
 - + Industry standard operating procedures [SOP] for every task.
 - + Working near or over rivers and large bodies of water.
 - + Weather- "go no go" decision making.
 - + HETS or SHORT HAUL.
 - + Applications and risk assessment.

BASIC AERIAL POWERLINE TRAINING

Aerial line work is a specialized part of aviation and power line work. This section of the course will provide safe and basic instruction for both trades, making each crewmember aware of the knowledge and skills needed to perform professional, safe, mutually supportive power line work. This course will ensure the students are familiar with:

- + Decision-making
- + Risk and crew resource management
- + Using the proper tools for the job.
- + Being aware of the electrical law at play on both energized and de-energized systems. Including insulated shield wire.
- + Weather
- + Tower transfers. Rescue.

Ground School:

This portion is typically an eight (8) hour course taught over one (1) day.

Technical Ground Training:

This portion is typically an eight (8) hour course taught over one (1) day.

Flight Training for Pilots:

This portion of the course is taught over 3 days. Each pilot will receive a minimum of 3 hours flight time. Flight hours are based on two [2] crews of three [3]. Larger and more specialized programs will require additional time. This specialized training program can be tailored to fit customers direct needs.

BASIC TECHNICAL AERIAL TRAINING, FOR PILOTS AND LINEMAN:

This portion is typically an eight [8] hour course taught over one [1] day. With up to 4 hours of flight time per crew. This section brings pilots and linemen to the helicopter. Giving both trades an opportunity to train together in a controlled situation.

Flight hours are based on two [2] crews of three [3]. In depth or specialized programs will require additional time, as will larger groups.

External Load/Vertical Reference Training or equivalent is required before Aerial Power line Training begins. Hours and course length will be based on crew experience and number of trainees.



ADVANCED HELICOPTER + RESCUE TECHNIQUES

POLICE-TACTICAL FLIGHT TRAINING

Proudly partnered with





Tactical Flying can help your agency better understand how to integrate its aviation unit with the parent agency, helping to create a unit that operates safely and effectively.

POLICE TACTICAL FLIGHT TRAINING

Advanced Helicopter+Rescue Techniques is proud to introduce our strategic training partnership with Tactical Flying.

The capabilities of law enforcement aircraft and the technology available to aircrews have changed significantly over the years. Thermal imagers, night vision goggles, moving maps and other hi-tech equipment now enable crewmembers to perform tactical missions much safer and far more effectively than in years past. The use of that technology, however, and the tactics that enable crewmembers to work safely and effectively while using it are not necessarily intuitive.

Tactical Flying specializes in providing airborne law enforcement units with the most advanced thermal imaging and aircrew tactical training available. These training programs were created from within the industry, took years to develop and are now taught worldwide. Aviation and officer safety, crew coordination and technical proficiency are emphasized throughout the training process. Aviation legal training for Public Aircraft operations, civil liability and Fourth Amendment issues is also available. Police chiefs, sheriffs and the aviation unit's entire chain of command should consider this training mandatory.

Tactical Flying uses state of the art 3-D motion graphics and actual videos from real incidents to help students visualize and understand many of the key issues that will affect the outcome of their missions – missions that can expose them to significant risk. Airspeeds, altitudes, search angles, the use of appropriate technology, crew coordination, air unit/ground unit coordination and other factors are discussed at length and presented in an easy to understand format. One common misconception is that tactical training is for **Tactical Flight** Officers only. The fact is no tactical training program would be effective if all crewmembers weren't on the same sheet of music. Tactical Flying's courses are for pilots, Tactical Flight Officers and management personnel. They emphasize how aviation safety and tactical effectiveness go hand-in-hand, and why good crew coordination is necessary to enhance the safety and effectiveness of air and ground units.

Tactical Flying instructors are airborne law enforcement professionals with decades of experience in the airborne law enforcement industry. They include graduates of airframe manufacturer helicopter training programs and U.C. Hastings College of the Law.



COURSE DESCRIPTION

Tactical Flying offers one, two, and three day courses of instruction including classroom and flight training. Tactical flight training in the customer's aircraft is available on request to demonstrate/practice the material learned in the classroom.

AIRBORNE LAW ENFORCEMENT TACTICS & THERMAL IMAGING TRAINING

Tactical Flying specializes in providing fundamental and advanced training to agencies that provide helicopter patrol support to ground units. Aviation and officer safety are prioritized at all times. Much of the training also applies to fixed-wing operations that use thermal imagers in support of ground units. Ground units rely on aircrews to provide them with officer-safety and tactical information. When aircrews fail to provide this information, ground units can be exposed to unnecessary and increased risks, and suspects are more likely to escape. A less effective air unit is less valuable to ground units, and in these days of tight budgets, air units must be safe and effective.

How aircrews perform their missions is just as important as the type of missions they perform. For example, some tactical missions that were historically flown low level can now be flown much higher and faster, with a higher degree of success. The tactics and technology that make this possible not only increase the aircrew's effectiveness, it simultaneously improves aviation safety while reducing aircrew workload and aircraft flyover noise. Noise complaints are reduced while aviation safety and tactical effectiveness are increased.

LEGAL TRAINING

Many pilots and Tactical Flight Officers never receive any formal training in Public Aircraft Operations; yet most airborne law enforcement units in the United States are Public Aircraft operators. Airborne law enforcement managers often have little or no aviation experience, which can cause inefficiencies within the unit. Nothing in the traditional training background of a law enforcement supervisor prepares them for what they'll encounter in the aviation industry. This doesn't mean that they can't become good air unit supervisors, but they do need to have a good understanding of aviation related legal issues, including Public Aircraft Operations and civil liability. These issues are addressed in the legal section of the classroom training.

CONSULTING SERVICES

Is your agency new to airborne law enforcement? Are you preparing to acquire new aircraft, or equip new or existing aircraft with new technology? What technology do you need to perform your missions? How should it be installed? Where do you start?

The alternatives in aircraft and equipment selection, and cockpit configurations can be daunting, not to mention expensive – especially if the wrong choices are made. Agencies sometimes make the mistake of acquiring aircraft or technology that doesn't best suit their mission requirements, or technology gets installed in a manner that makes its use problematic. This can negatively impact a unit's safety and effectiveness.

CLASSROOM TRAINING

- + **Full 3-Day Course** – Three days of aviation safety, tactics, crew coordination, thermal imaging training, indoor marijuana grow missions and legal training (*two instructors*).
- + **Two-Day Course** – An abbreviated version of the 3-day course. Includes no legal training or indoor-marijuana grow training (*One instructor*).
- + **One-Day Refresher Course** – This course is generally limited to agencies requiring refresher training and consists of a review of tactics and thermal imaging missions. It assumes that missions are already being performed with the tactics and technology discussed in the 3-day or 2 day courses (*One instructor*).
- + **One Day Indoor Marijuana-Grow Course** – FLIR scan tactics and legal training. (*Two instructors – Legal training is required for this course*).

FLIGHT TRAINING

- + Tactical flight training in the customer's aircraft is available on request to demonstrate/practice the material learned in the classroom. Flight time is limited to a maximum of five hours in one eight hour period (*One instructor – large aviation units may require two instructors*). Flight training is only available to agencies that have received classroom training.

Tactical Flying realizes that some agencies will have unique training requests, and the courses listed above may need to be tailored to suit their specific needs.

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AH+RT

Advanced Helicopter + Rescue Techniques (AH+RT) is dedicated to provide the world's most comprehensive and contemporary specialized technical rescue, aerial firefighting training and helicopter services while maintaining safety as our foremost commitment.

SERVICES

- + Training Programs
- + Turn-Key Operations
- + Contract Crews
- + "Train-the-Trainer" Programs
- + Operating Manual Creation & Development



ADVANCED HELICOPTER +RESCUE TECHNIQUES

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