Animal Technical Rescue Technician (2021)

Course Plan

Course Details

Description: This course provides the knowledge and skills to prepare an emergency responder to extricate animals in a safe and effective manner in accordance with AHJ policies and procedures. Topics include animal anatomy, physiology, handling, behavior, and safety; incident types; size up; hazards; planning scene management; animal manipulation and movement; rescue operations; animal care and decontamination; and incident termination. This course incorporates awareness, operations, and technician training based on NFPA 1006 (2021).

Designed For: Fire fighters with three years' full-time or six years' part-time/volunteer experience and any emergency personnel who perform animal technical rescue.

Prerequisites: Rope Rescue Technician (SFT)

IS-100, IS-200, IS-700, and IS-800 (FEMA)

Standard: Attend and participate in all course sections

Successful completion of all skills identified on the Training Record

Hours: 24 hours

(8 lecture / 16 application)

Max Class Size: 24

Instructor Level: SFT Registered Animal Technical Rescue Technician Instructor

Instructor/Student Ratio: 1:24 (lecture)

1:8 (skills/teaching demonstrations)

Restrictions: All instructors counted toward student ratios, including application components, must be SFT Registered Animal Technical Rescue Technician Instructors.

SFT Designation: FSTEP

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Required Resources

Instructor Resources

To teach this course, instructors need:

- NFPA 1006: Standard for Technical Rescue Personnel (2021) (physical or digital access to current edition)
- Full personal protective equipment per AHJ requirements (including hand, head, and eye protection)

Recommended resources:

- *Technical Large Animal Emergency Rescue* (Gimenez, Gimenez, and May, 2008, 1st edition, Wiley-Blackwell, ISBN: 978-0813819983)
- British Animal Rescue and Trauma Care Association (BARTA)
- The Horse Portal (University of Guelph)
- Large Animal Sedation & Anesthesia Field Guide (Loops Rescue)

Online Instructor Resources

The following instructor resources are available online at https://osfm.fire.ca.gov/divisions/state-fire-training/fstep-curriculum/

- None

Student Resources

To participate in this course, students need:

- Full personal protective equipment per AHJ requirements (including hand, head, and eye protection)

Facilities, Equipment, and Personnel

Facilities

The following facilities are required to deliver this course:

- Standard learning environment or facility, which may include:
  - Writing board or paper easel chart
  - Markers, erasers
  - Amplification devices
  - Projector and screen
  - Laptop or tablet with presentation or other viewing software
  - Internet access with appropriate broadband capabilities
- An Animal Technical Rescue Technician training site with the NFPA 1006 required facilities, structures, work areas, materials, props, tools, and equipment of adequate size, type, and quantity to fully and safely support the cognitive and psychomotor training required to deliver the curriculum

Equipment

Student safety is of paramount importance when conducting the type of high-risk training associated with this Animal Technical Rescue Technician (2021) course.

- The equipment listed below is the minimum for the delivery of this course.
- The student is responsible for providing all PPE and ensuring that all PPE meets AHJ and site requirements.
- For all tools and equipment, ensure that you have the power source, operating supplies (blades, fuel, etc.), cleaning supplies, and appropriate PPE.

The following equipment is required to deliver this course:

Quantity Per 8-person Squad	Equipment
Self-Extrication	
Determined by scenario	Rescue straps
Determined by scenario	Rescue strap application tool (J-hook, shepherds crook, pike pole, etc.)
Determined by scenario	Improvised/commercial halters (must have at least one of the following) • Webbing, 1” minimum, various lengths • Cordage, various lengths
Determined by scenario	Rope*, various lengths
1	Flex guide (i.e., Connell flex guide)
1	Representative animal (live or manikin)
Stranded/Impaled	
1	Rescue straps
1	Rescue strap application tool (J-hook, shepherds crook, pike pole, etc.)
1	Improvised/commercial halters (must have at least one of the following) • Webbing, 1” minimum, various lengths • Cordage, various lengths
1	Head padding (recovery hood, life vest, etc.)
Determined by scenario	Rope*, various lengths
Determined by scenario	Fire hose, single jacket, 1½”, 50’ minimum
1	Rescue glide
2	HDP (high-density plastic) slip sheets
1	Flex guide (i.e., Connell flex guide)
1	Cargo netting, 6’x8’x6” (military-spec)
Determined by scenario	Animal first aid supplies (i.e., bandages)
1	Haul rope cache**

Determined by scenario	Hobbles, front and rear
1	Representative animal (live or manikin)
Recumbent/Anesthetized	
1	Rescue straps
1	Rescue strap application tool (J-hook, shepherds crook, pike pole, etc.)
1	Improvised/commercial halters (must have at least one of the following) • Webbing, 1" minimum, various lengths • Cordage, various lengths
1	Head padding (recovery hood, life vest, etc.)
Determined by scenario	Rope*, various lengths
Determined by scenario	Fire hose, single jacket, 1½", 50' minimum
1	Rescue glide
2	HDP (high-density plastic) slip sheets
1	Flex guide (i.e., Connell flex guide)
1	Cargo netting, 6'x8'x6" (military-spec)
Determined by scenario	Animal first aid supplies (i.e., bandages)
1	Haul rope cache**
Determined by scenario	Hobbles, front and rear
1	A-frame (improvised or commercial)
2	Slings (one improvised and one commercial) • Anderson Sling, or • Two-strap sling system (Becker), or • Large animal lift (LAL)
1	Ladder, folding or other
1	Representative animal (live or manikin)
Mud/Water	**(May be simulated in dry environment)**
1	Rescue straps
1	Rescue strap application tool (J-hook, shepherds crook, pike pole, etc.)
1	Improvised/commercial halters (must have at least one of the following) • Webbing, 1" minimum, various lengths • Cordage, various lengths
1	Head padding (recovery hood, life vest, etc.)
Determined by scenario	Rope*, various lengths
Determined by scenario	Fire hose, single jacket, 1½", 50' minimum
1	Rescue glide

2	HDP (high-density plastic) slip sheets
1	Flex guide (i.e., Connell flex guide)
1	Cargo netting, 6'x8'x6" (military-spec)
Determined by scenario	Animal first aid supplies (i.e., bandages)
1	Haul rope cache**
Determined by scenario	Hobbles, front and rear
1	A-frame (improvised or commercial)
2	Slings (one improvised and one commercial) • Anderson Sling, or • Two-strap sling system (Becker), or • Large animal lift (LAL)
1	Ladder, folding or other
1	Representative animal (live or manikin)
Transport Accident	
1	Rescue straps
1	Rescue strap application tool (J-hook, shepherds crook, pike pole, etc.)
1	Improvised/commercial halters (must have at least one of the following) • Webbing, 1" minimum, various lengths • Cordage, various lengths
1	Head padding (recovery hood, life vest, etc.)
Determined by scenario	Rope*, various lengths
Determined by scenario	Fire hose, single jacket, 1½", 50' minimum
1	Rescue glide
2	HDP (high-density plastic) slip sheets
1	Flex guide (i.e., Connell flex guide)
1	Cargo netting, 6'x8'x6" (military-spec)
Determined by scenario	Animal first aid supplies (i.e., bandages)
1	Haul rope cache**
Determined by scenario	Hobbles, front and rear
1	Remote carabiner application device
Determined by scenario	Cribbing (size dependent on load)
1	Ladder, folding or other
Determined by scenario	Edge pads for trailer rescues
Determined by scenario	Chains or additional webbing for trailer accidents (optional)
Determined by scenario	Mechanical winch (Capstan) (optional)
Determined by scenario	Wire rope haul device (Griphoist®) (optional)
1	Animal trailer (or equivalent prop)

1	Representative animal (live or manikin)
****Haul Rope Cache**	
4	Webbing to cradle animal (tow straps, etc. - minimum width based on animal used)
1	Spreader bar
12	Carabiner (general use)
2	Static kernmantle (general use, w/ rope bag, long enough to complete operation)
6	2” pulleys (prusik minding)
2	Anchor strap
As needed	Edge pad
1	Collection plate
6	Prusik loops (short, 8 mm)
6	Prusik loops (long, 8 mm)
1	Gear bag
2	Descent control device (rigger rack recommended)
Consumables	
Determined by scenario	Determined by scenario and AHJ requirements
Personnel	
1	Veterinarian or animal control professional

***** *Any rescue equipment (hardware and software) used during a large animal technical rescue can never again be used for a human rescue. General use hardware and software that exceeds life safety requirements can continue to be used for non-life safety purposes.*

The provider or agency assumes all responsibility, liability, and maintenance for the engineering design, strength, stability, and adequacy of all props. The provider or agency further assumes all responsibility, liability, and maintenance for all tools, equipment, and supplies used at the site for the delivery of an Animal Technical Rescue Technician class.

Personnel

The following personnel are required to deliver this course:

- Any instructor counted toward student ratios must be an SFT Registered Animal Technical Rescue Technician (2021) Instructor.

Time Table

Segment	Lecture	Application	Unit Total
Unit 1: Introduction			
Topic 1-1: Orientation and Administration	0.5	0.0	
Unit 1 Totals	**0.5**	**0.0**	**0.5**
Unit 2: Working with Animals			
Topic 2-1: Introduction to Animal Technical Rescue	0.5	0.0	
Topic 2-2: Animal Anatomy and Physiology	0.5	0.0	
Topic 2-3: Animal Handling and Behavior Principles	0.5	0.0	
Topic 2-4: Rescuer Safety and Approach	0.25	0.0	
Topic 2-5: Interacting with a Person on Scene Experiencing a Crisis	0.25	0.25	
Unit 2 Totals	**2.0**	**0.25**	**2.25**
Unit 3: Scene Management			
Topic 3-1: Common Animal Technical Rescue Incidents	0.25	0.0	
Topic 3-2: Sizing Up an Animal Technical Rescue Incident	0.5	0.25	
Topic 3-3: Recognizing Incident Hazards and Initiating Isolation Procedures	0.5	0.25	
Topic 3-4: Developing an Animal Technical Rescue Plan	0.25	0.25	
Unit 3 Totals	**1.5**	**0.75**	**2.25**
Unit 4: Animal Manipulation and Movement			
Topic 4-1: Constructing Improvised Restraint Devices	0.5	1.0	
Topic 4-2: Animal Manipulation and Movement	0.5	1.0	
Topic 4-3: Animal Packaging and Immobilization	0.5	1.0	
Unit 4 Totals	**1.5**	**3.0**	**4.5**
Unit 5: Operations			
Topic 5-1: Constructing a Rope Mechanical Advantage System	0.5	2.0	
Topic 5-2: Conducting Low-Angle Operations	0.5	2.0	
Topic 5-3: Conducting High-Angle Operations	0.5	3.0	
Topic 5-4: Conducting Helicopter Operations	0.5	2.5	
Topic 5-5: Conducting Trailer Operations	0.5	2.0	
Unit 5 Totals	**2.5**	**11.5**	**14.0**
Unit 6: Incident Termination			
Topic 6-1: Animal Care and Decontamination	0.25	0.25	
Topic 6-2: Terminating an Incident	0.25	0.25	
Topic 6-3: Maintaining Rescue Equipment	0.25	0.0	
Unit 6 Totals	**0.75**	**0.5**	**1.25**
Formative Assessments			

Segment	Lecture	Application	Unit Total
Determined by AHJ or educational institution	0.0	0.0	0.0
Summative Assessment			
Determined by AHJ or educational institution	0.0	0.0	0.0
Course Totals	**8.0**	**16.0**	**24.0**

Time Table Key

1. The Time Table documents the amount of time required to deliver the content included in the course plan.

2. Time is documented using the quarter system: 15 min. = .25 / 30 min. = .50 / 45 min. = .75 / 60 min. = 1.0.

3. The Course Totals do not reflect time for lunch (1 hour) or breaks (10 minutes per each 50 minutes of instruction or assessment). It is the instructor's responsibility to add this time based on the course delivery schedule.

4. Application (activities, skills exercises, and formative testing) time will vary depending on the number of students enrolled. The Application time documented is based on the maximum class size identified in the Course Details section.

5. Summative Assessments are determined and scheduled by the authority having jurisdiction. These are not the written or psychomotor State Fire Training certification exams. These are in-class assessments to evaluate student progress and calculate course grades.

Unit 1: Introduction

Topic 1-1: Orientation and Administration

Terminal Learning Objective

At the end of this topic, a student will be able to identify facility and classroom requirements and identify course objectives, events, requirements, assignments, activities, skills exercises, resources, evaluation methods, and participation requirements in the course syllabus.

Enabling Learning Objectives

1. Identify facility requirements
    - Restroom locations
    - Food locations
    - Smoking locations
    - Emergency procedures
2. Identify classroom requirements
    - Start and end times
    - Breaks
    - Electronic device policies
    - Special needs and accommodations
    - Other requirements as applicable
3. Review course syllabus
    - Course objectives
    - Calendar of events
    - Course requirements
    - Student evaluation process
    - Assignments
    - Activities
    - Required student resources
    - Class participation requirements

Discussion Questions

1. Determined by instructor

Application

1. Have students complete all required registration forms.

Unit 2: Working with Animals

Topic 2-1: Introduction to Animal Technical Rescue

Terminal Learning Objective

At the end of this topic a student, given definitions and AHJ data, will be able to describe animal technical rescue.

Enabling Learning Objectives

1. Define animal technical rescue
    - Rescuing of an animal requiring technical skills, not to be confused with "animal rescue" which typically refers to abuse or neglect (NFPA 2500)
    - To extricate or manipulate an animal from a location that is dangerous to a place of safety by the most humane method with regard to the safety of all involved
2. Describe the purpose of animal technical rescue
3. Identify transferable technical rescue skills and how they can complement animal technical rescue efforts
4. Identify types of animal technical rescue incidents common to the AHJ

Discussion Question

1. What types of animals are common in, or unique to, your AHJ?
2. What types of animal technical rescue incidents are common in your AHJ?
3. What technical rescue skills do you already have that could be applied to animal technical rescue?

Application

1. Determined by instructor

Instructor Notes

1. None

CTS Guide Reference: None

Topic 2-2: Animal Anatomy and Physiology

Terminal Learning Objective

At the end of this topic a student, given animal anatomy and physiology information, will be able to identify vulnerable areas and systems of the animal skeletal structure so that anatomical features and purchase points can be used for equipment placement, extrication, and lifting to assist with moving an animal in need of technical rescue.

Enabling Learning Objectives

1. Identify animals common to the AHJ
   - Small (generally less than 300 lbs.)
   - Large (generally over 300 lbs.)
2. Identify the skeletal structure of an animal
   - Front leg system
   - Hind leg system
   - Equipment access and locations
3. Describe physiological systems of an animal
   - Circulatory system and vascular areas
   - Respiratory system
   - Nervous system
4. Describe how to monitor animal condition throughout a rescue
   - Physical, auditory, visible signs, vital signs, position of patient
   - Identify rescue timeframe (“golden hour”)
   - Determine viability and potential need to euthanize
     - Heartbeat
     - Brain stem response (corneal reflex test)

Discussion Question

1. How would you determine normal or baseline vital signs for an animal in need of technical rescue?
2. What is anatomically unique about a horse’s hind leg that will impact rescue efforts?
3. What are some other members of the equine family impacted by the “golden hour”?

Application

1. Determined by instructor

Instructor Notes

1. While animal technical rescue applies to many types of animals, this course predominantly focuses on horses.

CTS Guide Reference: None

Topic 2-3: Animal Handling and Behavior Principles

Terminal Learning Objective

At the end of this topic a student, given a representative animal, will be able to recognize basic animal handling and behavior principles so that the incident is managed, risks to rescuers are minimized, and risks to the animal are minimized.

Enabling Learning Objectives

1. Describe, select, and use hazard-specific PPE
    - Determined by AHJ
2. Describe the fight/flight animal behavior principle
3. Identify an animal's natural defensive behaviors
    - Biting
    - Kicking
    - Scratching
    - Trampling
    - Goring
    - Spitting
4. Identify species-specific behavioral cues
5. Describe species-specific containment methods and devices
    - Animal handling skills
    - Physical restraints
    - Chemical restraints
        - Sedation vs. anesthesia
6. Describe how to apply species-specific handling principles

Discussion Question

1. What are some non-invasive ways to calm an animal in need of technical rescue?
2. What PPE does your agency use during animal technical rescue?
3. How could you contain an animal in need of technical rescue?
4. What are some behavioral indicators that an animal is in distress and may become a hazard to the rescuer?

Application

1. Determined by instructor

Instructor Notes

1. For any objective that includes "Determined by AHJ", teach the content specific to the AHJ hosting the course but note that other jurisdictions may have different requirements.

CTS Guide Reference: CTS 2-1

Topic 2-4: Rescuer Safety and Approach

Terminal Learning Objective

At the end of this topic a student, given a representative animal, will be able to safely approach an animal in need of technical rescue so that the incident is managed, risks to rescuers are minimized, and risks to the animal are minimized.

Enabling Learning Objectives

1. Describe general considerations for approach
    - Scene arrival (minimize stress to animal)
    - Mechanism of incident
    - Hazards to rescuer and animal
    - Animal position (standing vs. recumbent)
    - Animal disposition
2. Describe how to approach an animal in need of technical rescue
    - Approach a standing animal from its left side shoulder (when possible)
    - Approach a recumbent animal from the side opposite its legs
    - Avoid kick zones
    - Maintain visual, verbal, or physical contact with animal
    - Approach slowly and quietly
    - When kneeling, stay on one foot and one knee (avoid two knees)

Discussion Question

1. How can you minimize stress to the animal while arriving and operating at an incident?
2. How can animal defense systems put rescuers at risk?
3. How do you prioritize rescuer safety around a distressed animal?

Application

1. Determined by instructor

Instructor Notes: None

CTS Guide Reference: None

Topic 2-5: Interacting with a Person on Scene Experiencing a Crisis

Terminal Learning Objective

At the end of this topic a student, given an animal emergency situation consistent with the mission of the agency, the policies and procedures of the organization, and a person in a crisis scenario, will be able to interact with a person on scene who is in an emotional or psychological crisis so that the condition is recognized and communicated to the team, the rescuer is prevented from harm, and the rescuer's actions do not escalate the incident.

Enabling Learning Objectives

1. Identify individuals who might be experiencing an emotional or psychological crisis at an animal technical rescue incident
    - Animal owner
    - Bystander
    - Animal control/local government
    - Veterinarian
    - Other
2. Describe indicators of a person in emotional crisis
3. Describe typical triggers that can cause individuals to become agitated or anxious
4. Describe methods of interacting to prevent harm to the rescuer and the person in crisis
5. Describe best practices to de-escalate incidents involving persons in crisis
6. Employ methods of approach that minimize risk to the rescuer from persons whose psychological or emotional state is unknown
7. Use interview techniques that provide insight to the motives and state of mind of the person in crisis
8. Communicate and interact with the person in crisis in a manner that does not escalate the incident

Discussion Question

1. Who on scene might be experiencing an emotional or psychological crisis?
2. What are some positive ways to redirect or use those individuals to support the rescue?

Application

1. Students will practice this skill on the drill ground and perform it once for evaluation.

Instructor Notes: None

CTS Guide Reference: CTS 2-13

Unit 3: Scene Management

Topic 3-1: Common Animal Technical Rescue Incidents

Terminal Learning Objective

At the end of this topic a student, given historical and AHJ incident data, will be able to describe common types of animal technical rescue incidents so that incidents are managed and risks to rescuers and the animal are minimized.

Enabling Learning Objectives

1. Describe common types of animal technical rescue incidents
   - Stranded animal able to self-extricate
   - Stranded or entangled animal
   - Anesthetized or recumbent animal
   - Animal trapped in soil, mud, water, or ice
   - Animal involved in a transport incident
2. Describe what it means to self-extricate a stranded animal
   - Criteria for self-extrication
     - Physical and mental condition of animal
     - Animal history and capacity (if known)
     - Ability to stabilize footing
     - Ability to eliminate and/or control hazards and obstacles
     - Ability to contain animal after extrication
3. Describe what it means to assist with movement/extrication for a stranded or entangled animal
   - Removing an object from an animal
     - Best progression for removal
     - Appropriate equipment and tools for spreading, cutting, or dismantling
     - Potential barriers for animal and rescuers
   - Removing an animal from an object
     - Appropriate equipment for extrication
   - Scenario will transition to self-extrication or rescuing a recumbent or anesthetized animal
4. Describe what it means to extricate a recumbent or anesthetized animal
   - Animals can still move and create risk
   - Animal considerations escalate (circulation, breathing, muscle damage, etc.)
   - Resource needs increase
   - Larger workspace needed for animal recovery
5. Describe what it means to extricate an animal trapped in soil, mud, water, or ice
   - Types of conditions
     - Mud
     - Standing water
     - Moving water
     - Pools

        - Ice/cold
    - Rescuer safety and approach carry more risk
    - Environmental impact on rescuer and animals
        - Temperature
        - Wind
        - Contaminates in water
    - Resource needs increase
        - Need to break suction on animal's legs
        - Specialty water rescue resources
            - Personnel
            - Equipment (flotation, breaking suction, etc.)
    - May be more difficult to position and apply equipment
    - May increase decontamination needs
6. Describe what it means to extricate an animal from a transport accident
    - Types of transport vehicles common to the AHJ
    - Animal hauler vehicle anatomy
    - Vehicle hazards to animal and rescuers
    - Multiple animals may be involved
    - Animal entrapment
    - Restricted space considerations
    - Animal containment needs
    - Scene safety (traffic, hazardous materials, etc.)
    - Resource needs increase
        - Specialty vehicle extrication resources
            - Personnel
            - Equipment
7. Describe how rescuers can support animal technical rescue incidents
    - Staffing placement
    - Operational zones
    - Safe sheltering
    - Safe routes for animal and rescuers
    - Equipment and staffing resources

Discussion Question

1. How will your rescue efforts change if a person is trapped by an animal in need of technical rescue?
2. What resources are available in your AHJ to deal with righting a transport vehicle to assist with an animal technical rescue?
3. What other types of rescue incidents have you encountered and how were they resolved?

Application

1. Students will practice these rescue scenarios on the drill ground and perform each scenario once for evaluation.

Instructor Notes: None
CTS Guide Reference: None

Topic 3-2: Sizing Up an Animal Technical Rescue Incident

Terminal Learning Objective

At the end of this topic, a student given background information and applicable reference materials, will be able to size up an animal technical rescue incident so that the scope of the rescue is determined, the number of animals is identified, the last reported location of all animals is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, primary search parameters are identified, and information required to develop an initial incident action plan is obtained.

Enabling Learning Objectives

1. Identify size-up considerations
    - Potential human victims
    - Type of animal(s)
    - Number of animals
    - Specific problem to address
    - Agencies having jurisdiction
    - Environment
        - Access and egress
        - Weather
        - Terrain
        - Time of day
    - Threat/hazard assessment
    - Triage
        - Determine rescue vs. recovery
            - Body recovery
                - Determined by AHJ
                - Drug residue in bodies
        - Assess injury severity
        - Determine animal care and rescue priorities
        - Align with resource capabilities
        - Use AHJ protocols and triage tags/markers
    - Resource needs
        - Personnel
        - Equipment (including mechanized)
        - Workspaces
    - Chance for secondary disaster
    - Transfer of care
2. Describe risk/benefit analysis methods and practices
3. Describe types of reference materials and their uses
    - AHJ standard operating procedures
4. Describe availability and capability of the resources
    - Types of resources
        - Personnel
            - Animal handler

        - Animal control
        - Public Information Officer
        - Veterinarian (could have associated costs)
        - Law enforcement
    - Equipment
        - Containment
        - Transport
        - Technical rescue
        - Specialized equipment (could have associated costs)
- Process
    - Identify need
    - Request resources
    - Secure scene and render safe until additional resources arrive
    - Incorporate awareness-level personnel into operational plan
        - Traffic/perimeter control
        - Tool cache
        - Runners
        - Haul team
        - Communications (with animal owner, others)
        - Radio/operations relay
        - General scene support
- Operational protocols
- Planning forms

5. Describe elements of an incident action plan and related information
6. Describe relationship of size up to the incident management system
7. Describe information gathering techniques and how that information is used in the size-up process
8. Describe basic search criteria for animal technical rescue incidents
9. Read technical rescue reference material
10. Gather information
11. Use interview techniques
12. Relay information
13. Use information-gathering sources

Discussion Question

1. What additional factors should be considered as part of size up?
2. What additional resources would you need if you were dealing with a herd of animals?
3. If an animal owner is not present,
    - Who is responsible for animal welfare and associated costs on scene?
    - Who has the authority to euthanize the animal?

Application

1. Students will practice this skill on the drill ground and perform it once for evaluation.

Instructor Notes: None

CTS Guide Reference: CTS 1-1, CTS 1-3, CTS 1-4, CTS 2-3

Topic 3-3: Recognizing Incident Hazards and Initiating Isolation Procedures

Terminal Learning Objective

At the end of this topic a student, given scene control barriers, personal protective equipment (PPE), requisite equipment, and available specialized resources, will be able to recognize incident hazards and initiate isolation procedures so that all hazards are identified; resource application fits the operational requirements; hazard isolation is considered; risks to rescuers, bystanders, and animals are minimized; and rescue time constraints are considered.

Enabling Learning Objectives

1. Describe types and nature of incident hazards
    - Traffic
    - Terrain
    - Utilities
    - Weather
    - Hazardous materials
    - Zoonotic diseases
    - Transport vehicle hazards
    - Others
2. Describe how to mitigate on-scene hazards by:
    - Recognizing hazards
    - Identifying rescuer, animal, and bystander risks
    - Identifying necessary resources
        - Availability
        - Capabilities
        - Limitations
        - Cost
    - Consulting appropriate technical references
    - Selecting and using appropriate mitigation tools and equipment
    - Addressing operational requirement concerns
    - Conducting isolation procedures
    - Controlling access to the scene

Discussion Question

1. How can you provide adequate scene control to protect bystanders and the animal in need of technical rescue?
2. What is an acceptable level of residual risk after mitigation efforts? Who makes that determination?
3. What types of hazards have you encountered on rescue incidents? How would those impact an animal technical rescue?

Application

1. Students will practice this skill on the drill ground and perform it once for evaluation.

Instructor Notes: None
CTS Guide Reference: CTS 1-2

Topic 3-4: Developing an Animal Technical Rescue Plan

Terminal Learning Objective

At the end of this topic a student, given an incident, agency guidelines, and planning forms, will be able to develop a plan for an animal technical rescue incident so that size up is conducted and continued throughout the incident; a standard approach is used during training and operational scenarios; hazards are identified; isolation methods and scene security measures are considered; animal stabilization needs are evaluated; and resource needs, including veterinary personnel, are identified.

Enabling Learning Objectives

1. Describe common types of animal technical rescue incidents
    - Stranded animal able to self-extricate
    - Stranded or entangled animal
    - Anesthetized or recumbent animal
    - Animal trapped in soil, mud, water, or ice
    - Animal involved in a transport incident
2. Identify components included in an animal technical rescue plan
    - Size up information
    - Hazard assessment
    - Risk/benefit analysis
    - Animal approach and manipulation
    - Animal packaging and immobilization
    - Operations (low angle, high angle, helicopter)
    - Operational protocols
    - Resources (personnel and tools/equipment)
    - Timeframes
    - Termination
3. Describe, select, and use appropriate planning forms

Discussion Question

1. How do potential rescue costs impact the planning process?
2. What factors impact operational decisions during the planning process?

Application

1. Students will practice this skill on the drill ground and perform it once for evaluation.

Instructor Notes: None

CTS Guide Reference: CTS 2-9, CTS 2-10

Unit 4: Animal Manipulation and Movement

Topic 4-1: Constructing Improvised Restraint Devices

Terminal Learning Objective

At the end of this topic a student, given available rope, webbing, or accessory cord, will be able to construct an improvised restraint device so that the device includes a long enough standing end to ensure rescuer control and the representative animal is able to be maneuvered to a safe area.

Enabling Learning Objectives

1. Describe, select, and use hazard-specific PPE
   - Determined by AHJ
2. Describe how to apply knots
   - Hitches and bights
   - Quick release
   - Leashes and muzzles
3. Describe animal halter pressure principles
   - Place pressure behind ears
   - Don't restrict nose (horse)
   - Avoid positioning knots between animal and a hard surface
4. Describe how to select rope or webbing material
   - Determined by animal and incident
   - Anything used on a load that exceeds 600 lbs. can't be used as "life safety" for a human in the future
5. Describe device positioning techniques on animals
   - Small animals
   - Large animals
6. Describe access points, equipment placement, and proper pulling techniques for a horse tail tie
   - Tail tie knot required
   - Steady pull
   - Angle of pull
   - Maximum force restrictions
7. Tie knots
8. Construct and rig animal halters
9. Evaluate correct placement

Discussion Question

1. What PPE would you use to work with:
   - A small animal (cat or dog)?
   - A large animal (horse or llama)?
2. Why must life safety line go out of service if it's used for a load that exceeds 600 lbs.?
3. When is it appropriate to use a tail tie method on a horse?

Application

1. Students will practice this skill on the drill ground and perform it once for evaluation.

Instructor Notes: None

CTS Guide Reference: CTS 2-4

Topic 4-2: Animal Manipulation and Movement

Terminal Learning Objective

At the end of this topic a student, given webbing, rescue/lifting strap, J-hook, lunge whip, flex guide, rope, and a full-size manikin or live animal, will be able to apply equipment and perform basic animal manipulation operations so that incidents are managed and risks to rescuers and the animal are minimized.

Enabling Learning Objectives

1. Describe the purpose of animal manipulation
    - Potentially extends rescue timeframe for animal
    - Prepare animal for movement
        - Forward
        - Backward
        - Sideways
        - Up
        - Down
2. Describe how to use animal manipulation tools and equipment
    - Webbing or strap
        - Girth hitch/lark's foot
        - Improvised sling
        - Forward/rear assist
    - J-hook or flex guide
        - Assists with equipment placement from a distance
        - Manipulate under a downed animal
        - Move animal's feet
    - Sling
        - Vertical lift
        - Commercial sling
        - Improvised sling (fire hose, tow straps, webbing, etc.)
    - Reach/grab tool
        - Assists with equipment placement from a distance
        - Keeps rescuer out of animal danger zone
    - Rope and associated hardware
        - Movement and packaging
        - Physical restraint
    - Hobbles
        - Restricting foot movement
        - Vertical lift (upside-down)
3. Describe proper approach and positioning
    - Rescuer safety
        - Approach a standing animal from its left side shoulder (when possible)
        - Approach a recumbent animal from the side opposite its legs
        - Avoid kick, bite, and scratch zones
        - Maintain visual, verbal, or physical contact with animal

        - Approach slowly and quietly
        - When kneeling, stay on one foot and one knee (avoid two knees)
    - Animal position
        - Standing
        - Recumbent
        - Trapped (limited access)
    - Animal safety
        - Secure and pad head
        - Protect eyes from debris
        - Extend head and neck to facilitate breathing
        - Pull downed front leg (groundside leg) forward
        - Reduce friction on skeletal features
4. Describe how animal access points impact movement options
    - Standing animal
    - Recumbent animal
        - Sternal
        - Side
        - Back
    - Trapped animal
5. Describe how and where to place manipulation equipment
    - Support axial skeleton
    - Utilize natural body contours
6. Describe proper pulling techniques for:
    - Rolls
    - Sternal rolls
    - Side drags (animal on side)
    - Front drag/forward assist
    - Rear drag/rear assist
    - Lifts

Discussion Question

1. What common engine-based tools and equipment can be used to manipulate animals in need of technical rescue?
2. How might manipulation equipment and/or methods differ when working with large vs. small animals?

Application

1. Students will practice this skill on the drill ground and perform it once for evaluation.

Instructor Notes: None

CTS Guide Reference: None

Topic 4-3: Animal Packaging and Immobilization

Terminal Learning Objective

At the end of this topic a student, given a representative animal, animal packaging tools and equipment, and AHJ policies and procedures, will be able to package and immobilize an animal for rescue so that incidents are managed and risks to rescuers and the animal are minimized.

Enabling Learning Objectives

1. Describe the purpose of animal packaging
    - To support animal safety and injury prevention
    - To expedite removal
    - To prepare an animal for movement
2. Describe how to use animal packaging and immobilization tools and equipment
    - Ropes and hardware
    - Rescue glides
    - Slip sheets
    - Cargo netting
    - Webbing
    - Slings
    - Hobbles
    - Head protection
    - Restraint devices
3. Describe how to use immobilization devices
4. Describe immobilization techniques
    - Behavioral
    - Physical
    - Chemical
5. Describe when to use animal packaging tools and equipment
    - Ground level
    - Low angle
    - High angle
    - Helicopter
    - Trailer
6. Describe additional animal packaging considerations
    - Rope systems may be subjected to a sudden shock load
    - Create “cut aways” into a system
    - Account for load transfers
    - Use quick release knots/systems to quickly remove equipment from distressed animals
    - Consider how packaging time impacts:
        - Resource arrival/delivery times
        - Animal welfare/condition
    - Duration in high-angle environment

    - Methods to reduce or prevent further injury
    - Sling selection
    - Ways to establish and maintain animal securement (physical and chemical)
7. Use immobilization, packaging, and transfer devices for specific situations
8. Use immobilization techniques, including chemical with the assistance of AHJ designated personnel
9. Apply medical protocols and safety features to immobilize, package, and transfer

Discussion Question

1. What considerations need to be made when packaging an animal?
2. What is the function of a cut away in a rescue system?
3. How does the amount of time it takes to package an animal impact other aspects of a technical rescue operation?
4. How does the amount of time an animal will be suspended during a lifting operation impact animal welfare? How can you prepare for that?

Application

1. Students will practice this skill on the drill ground and perform it once for evaluation.

Instructor Notes

1. Students will practice immobilizing animals using physical techniques in this course but are only required to discuss behavioral and chemical techniques.

CTS Guide Reference: CTS 2-11

Unit 5: Operations

Topic 5-1: Constructing a Rope Mechanical Advantage System

Terminal Learning Objective

At the end of this topic a student, given an incident, a representative animal load, an anchor system, general use rope, carabiners, pulleys, rope grab devices, and rope rescue equipment, will be able to construct a mechanical advantage system so that the system constructed accommodates the load and reduces the force required to lift the load; operational interference is factored and minimized; the system is efficient; a system safety check is completed; and the system is connected to an anchor system and the load.

Enabling Learning Objectives

1. Identify the equipment used to construct a rope mechanical advantage system
    - All equipment should be rated for the load being moved
    - Rope (cable, rope)
    - Hardware
    - Software
2. Describe when to use:
    - A simple mechanical advantage system
    - A compound mechanical advantage system
3. Identify the benefits of a rope mechanical advantage system
    - Can be used in multiple planes
    - Reduces stress/impact to the animal
        - Try to use devices/equipment that allow you to feel resistance in the system
    - Reduces forces on rescue teams
    - Decreases the number of personnel needed
4. Identify the hazards, risks, or limitations of a rope mechanical advantage system
    - Potential to overload the system
    - Equipment can no longer be used for human rescue
    - Availability of equipment on scene
    - Interference concerns
5. Describe rope commands
6. Describe rigging principles
7. Describe methods for reducing excessive force to system components
8. Describe system safety check procedures
9. Describe methods of evaluating system components for compromised integrity
10. Determine incident needs as related to choosing simple rope systems
11. Select and use effective knots
12. Calculate expected loads
13. Perform a system safety check
14. Evaluate system components for compromised integrity

Discussion Question

1. What specialized equipment do you have in your AHJ to assist with rope rescue

applications?

Application

1. Students will practice constructing both simple and compound systems on the drill ground and perform each once for evaluation.

Instructor Notes

1. ELOs 5 and 6 are covered in the prerequisites for this course. They just need a quick refresh here.

CTS Guide Reference: CTS 2-14, CTS 2-15

Topic 5-2: Conducting Low-Angle Operations

Terminal Learning Objective

At the end of this topic a student, given an incident action plan, animal transfer device(s), a designated egress route, an animal removal systems specific to the rescue environment, and personal protective equipment, will be able to move a representative animal in a low-angle environment as a member of a team, so that hazards are identified, effort is coordinated, the designated egress routes are used, risks to rescuers are minimized from both the hazard and the representative animal, the integrity of a representative animal's securement within the transfer device is established and maintained, the means of attachment to the rope rescue system is maintained, and the representative animal is removed from the hazard.

Enabling Learning Objectives

1. Describe a low-angle operation
    - Majority of the load is on the ground versus on the system
2. Describe how to apply a low-angle operation for animal technical rescue
    - Front drag/forward assist
    - Rear drag/rear assist
    - Side drag
    - Packaged animal
        - Consider attaching to both animal and glide
3. Identify the benefits of a low-angle operation
    - Reduces injury to animals and rescue personnel
    - Potential incident time savings
    - Potential to avoid anesthesia
4. Identify the hazards, risks, or limitations of a low-angle operation
    - Potential for rescuer falls
    - Can overload system
    - Equipment can no longer be used for human rescue
    - Availability of equipment on scene
    - Animal falls out of back of packaging
5. Describe types of basic animal transport equipment and removal systems
6. Assemble and operate environment- or hazard-specific animal removal systems
7. Use techniques for moving the animal to a designated safe area

Discussion Question

1. Determined by instructor

Application

1. Students will practice this skill on the drill ground and perform it once for evaluation.

Instructor Notes: None

CTS Guide Reference: CTS 2-11, CTS 2-5, CTS 2-6

Topic 5-3: Conducting High-Angle Operations

Terminal Learning Objective

At the end of this topic a student, given an incident, multiple rope rescue systems incorporating a compound rope mechanical advantage system, a representative animal load to be moved, and a specified minimum travel distance for the load, will be able to manage a highpoint anchor and multiple compound rope mechanical advantage systems in a high-angle environment, as a member of a team so that a system safety check is performed; a reset is accomplished, and the movement is controlled; the load can be held in place when needed; operating methods do not stress the system to the point of failure; operational commands are clearly communicated; and potential problems are identified, communicated, and managed.

Enabling Learning Objectives

1. Describe a high-angle operation
    - Majority of the load is on the system versus the ground
    - Utilizes high directionals capable of supporting anticipated loads
    - Site evaluation needed to identify interference concerns and obstacle negotiation
    - Safe operating limits of the portable highpoint anchor
2. Describe how to apply a high-angle operation for animal technical rescue
    - Front lift/forward assist
    - Rear lift/rear assist
    - Side drag
    - Packaged animal
        - Consider attaching to both animal and glide
        - Center of gravity for animal
    - Lift from a vertical depth, across a horizontal path, and lower animal to a designated point
3. Identify the benefits of a high-angle operation
    - Reduces injury to animals and rescue personnel
    - Potential incident time savings
    - Can get the animal to a standing position
    - Can use when helicopter access is limited/unavailable
4. Identify the hazards, risks, or limitations of a high-angle operation
    - Potential for rescuer falls
    - Catastrophic system failure
    - Animal reaction once standing
    - Rope system/hardware/software can no longer be used for human rescue
    - Availability of equipment on scene
    - Height/load limitations of artificial high points
    - Animal falls out of back of packaging
    - System stress during operations
    - Animal stress during movement

5. Describe considerations for completing an animal technical rescue while suspended from a rope rescue system in a high-angle environment
    - Task-specific selection criteria for life safety harnesses
    - PPE selection criteria
    - Variations in litter design and intended purpose
    - Rigging principles
    - Techniques and practices for high-angle environments
    - Common hazards posed by improper maneuvering and harnessing
6. Describe system safety check protocol
7. Describe procedures to evaluate system components for compromised integrity
8. Describe common personnel assignments and duties
9. Determine incident needs
10. Assemble and operate environment-specific animal removal systems
11. Complete a system safety check
12. Evaluate system components for compromised integrity
13. Communicate with personnel effectively
14. Secure an animal to transport equipment
15. Manage load movement
16. Operate multiple mechanical advantage systems in balance
17. Evaluate for any potential problems

Discussion Question

1. Determined by instructor

Application

1. Students will practice this skill on the drill ground and perform it once for evaluation.

Instructor Notes

1. Students are not required to complete an animal technical rescue while suspended from a rope rescue system in a high-angle environment as part of this course. Operating while suspended is covered in Rope Rescue Technician, which is a course prerequisite.

CTS Guide Reference: CTS 2-8, CTS 2-16, CTS 3-1, CTS 3-2, CTS 3-3

Topic 5-4: Conducting Helicopter Operations

Terminal Learning Objective

At the end of this topic a student, given an incident, a representative animal load to be moved, appropriate tools and equipment, and a helicopter, will be able to use a helicopter to move an animal in need of technical rescue, as a member of a team, so that a system safety check is performed; a reset is accomplished, and the movement is controlled; the load can be held in place when needed; operating methods do not stress the system to the point of failure; operational commands are clearly communicated; and potential problems are identified, communicated, and managed.

Enabling Learning Objectives

1. Describe when to consider a helicopter operation
    - Remote location/long distance to travel
    - Inaccessible terrain
    - Equipment limitations
2. Describe how to apply a helicopter operation for animal technical rescue
    - Lifts
    - Used in conjunction with commercial slings (AHJ dependent)
    - Configured to jettison loads (AHJ dependent)
    - Properly trained flight and ground crews
        - Packaging team (vet on site)
        - Receiving team (vet on site)
    - Designate a landing zone based on:
        - Availability and anesthesia limitation
        - Transport modalities
        - Other factors
3. Identify the benefits of a helicopter operation
    - Reduces injury to animals and rescue personnel
    - Potential incident time savings
    - Can get the animal to a standing position
    - Extrication from extreme terrain
4. Identify the hazards, risks, or limitations of a helicopter operation
    - Catastrophic system failure
    - Helicopter incapable of carrying anticipated loads
    - Weather conditions
        - Altitude/temperatures/density altitude
    - Man-made/environmental obstruction
    - Need a landing zone large enough to receive animal and additional equipment
        - No bystanders
        - Clear overhead obstructions
        - Safe for animal/crew
    - Heightened risk to flight and ground crews
    - Rescuer fall potential may exist

- Animal reaction once standing
- Requires anesthesia for flight
    - Sedation-to-anesthesia conversion when helicopter arriving
    - Short acting anesthesia may dictate flight time
- Availability of equipment on scene
- Potential associated costs

5. Describe system safety check protocol
6. Describe procedures to evaluate system components for compromised integrity
7. Describe personnel assignments and duties

Discussion Question

1. Determined by instructor

Application

1. Determined by instructor

Instructor Notes

1. All cognitive aspects of this topic are required content even if the AHJ is unable to provide a helicopter for the course. SFT strongly recommends using a helicopter to demonstrate these operations whenever possible.

CTS Guide Reference: CTS 3-4

Topic 5-5: Conducting Trailer Operations

Terminal Learning Objective

At the end of this topic a student, given an incident, webbing, rescue straps, a flex guide, ropes, slip sheets, a rescue glide, a representative animal, and a trailer, will be able to extricate an animal in need of technical rescue from a trailer, as a member of a team, so that hazards to rescuers and the animal are minimized operational commands are clearly communicated; and potential problems are identified, communicated, and managed.

Enabling Learning Objectives

1. Describe vehicle anatomy
2. Describe fire suppression and safety measures
3. Describe the dynamics of a trailer incident
4. Identify the best access points for equipment application
5. Describe how to release the dividers from the exterior of the trailer
6. Describe how to handle an animal tethered in a transport vehicle
   - Tethering methods
   - When to cut a tethered animal down and the consequences
7. Describe how to attach a long lead line
8. Describe when removal of the animal is and is not appropriate
   - Terminally injured animal
   - Medically impaired animal
   - Damaged trailer
9. Describe how to apply a rescue strap without entering the trailer
   - Equipment placement
   - Proper pulling techniques

Discussion Question

1. What equipment available on a fire engine could you substitute for equipment listed above?
2. What are the additional uses of lunge whips?
3. When is “tethering” the rescuer appropriate?

Application

1. Students will practice this skill on the drill ground and must perform it once for evaluation.

Instructor Notes

1. None

CTS Guide Reference: CTS 3-5

Unit 6: Incident Termination

Topic 6-1: Animal Care and Decontamination

Terminal Learning Objective

At the end of this topic a student, given a first aid kit and an actual or simulated EMS agency, will be able to stabilize a representative animal so that rescuers and a representative animal are protected from hazards, the representative animal's injuries or illnesses are assessed and managed, and the representative animal is delivered to the appropriate EMS provider with information regarding the history of the rescue activity and the representative animal's condition with the assistance of local-policy-determined personnel, when available.

Enabling Learning Objectives

1. Describe animal and scene assessment methods
2. Describe animal treatment methods
    - Heating or cooling
    - Hydration
    - Bleeding control
3. Identify medical resource availability
4. Describe medical information management and communication methods
5. Identify situations where decontamination may be needed
    - Mud/water conditions
    - Chemical exposures
        - HazMat team considerations
    - Disease situations
6. Identify situations where decontamination is not advised
7. Describe technique, tools, and equipment for animal decontamination
    - Small animal
    - Large animal
8. Describe safety considerations associated with stabilization and decontamination
9. Use animal care methods appropriate to the situation
10. Provide animal transfer reports, both verbally and in writing

Discussion Question

1. Who is available for animal technical rescue medical care in your AHJ?
2. What type of animal care does your AHJ allow you to perform?
3. What are some situations where decontamination is not advised?

Application

1. Determined by instructor

Instructor Notes: None

CTS Guide Reference: CTS 2-2

Topic 6-2: Terminating an Incident

Terminal Learning Objective

At the end of this topic a student, given personal protective equipment specific to the incident, isolation barriers, and a tool cache, will be able to terminate an incident so that rescuers and bystanders are protected and accounted for during termination operations; the party responsible is notified of any modification or damage created during the operational period; documentation of loss or material use is accounted for; scene documentation is performed; scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing and post-incident analysis and critique are considered; and command is terminated.

Enabling Learning Objectives

1. Describe PPE characteristics
    - Decontamination requirements
2. Describe hazard and risk identification
    - Reevaluate mitigated and ongoing hazards
    - Resources in transition
    - Complacency
    - Normalized deviance
    - Fatigue
3. Describe tool recovery procedures
4. Describe isolation techniques
5. Describe statutory requirements identifying responsible parties
    - Determined by AHJ
6. Describe accountability system use
7. Describe reporting methods
8. Describe post-incident analysis techniques
    - Determined by AHJ
    - Critical incident stress debriefing
9. Select and use hazard-specific PPE
10. Use barrier protection techniques
11. Use data collection and record keeping/reporting protocols
12. Conduct post-incident analysis activities

Discussion Question

1. Determined by instructor

Application

1. Students will practice this skill on the drill ground and perform it once for evaluation.

Instructor Notes: None

CTS Guide Reference: CTS 2-12

Topic 6-3: Maintaining Rescue Equipment

Terminal Learning Objective

At the end of this topic a student, given maintenance logs and records, tools, resources, manufacturer's guidelines, and organizational standard operating procedures, which should include keeping the large animal technical rescue cache subjected to greater than 600 lb. (272 kg) loads separate from the regular cache, will be able to maintain rescue equipment so that the operational status of equipment is verified and documented, components are checked for operation, deficiencies are repaired or reported as indicated by standard operating procedure, and items subject to replacement protocol are correctly disposed of and changed.

Enabling Learning Objectives

1. Describe functions and operations of rescue equipment
2. Describe how to use record-keeping systems
3. Describe manufacturer and organizational care and maintenance requirements
4. Describe how to select and use maintenance tools
5. Describe replacement protocol and procedures
6. Describe disposal methods
7. Describe organizational standard operating procedures
8. Identify wear and damage indicators for rescue equipment
9. Evaluate operation readiness of equipment
10. Complete logs and records
11. Select and use maintenance tools

Discussion Question

1. When does rope used for animal technical rescue need to be removed from life safety service?

Application

1. Determined by instructor

Instructor Notes

1. Students will not be completing the psychomotor components of this topic as part of this course.

CTS Guide Reference: CTS 2-7

Drill Ground Activities and Evolutions

The following components must be covered in the drill ground activities and/or evolutions but can be combined and completed in the order that best suites the props available and AHJ policies and procedures.

Drill ground activities must incorporate the following animal movements:

- Roll
- Sternal role
- Front drag/assist
- Back drag/assist
- Side drag
- Lift

Drill ground activities must incorporate the following learning objectives:

- Interact with a person on the scene who is in an emotional or psychological crisis
- Size up an animal technical rescue incident
- Recognize incident hazards and initiate isolation procedures
- Develop a plan for an animal technical rescue incident
- Construct an improvised restraint device
- Apply equipment and perform basic animal manipulation operations
- Package and immobilize an animal for rescue
- Terminate an incident

Drill ground activities must address the following operations:

- Simple mechanical advantage system
- Compound mechanical advantage system
- Low-angle rescue
- High-angle rescue
- Lift, transport horizontally, and lower
- Helicopter operations (strongly recommended but not required)

Drill ground activities must incorporate the following rescue scenarios:

- Animal is able to self-extricate
- Animal is stranded or entangled
- Animal is recumbent or anesthetized
- Animal is trapped in mud or water
- Animal is involved in a transport vehicle incident

How to Read a Course Plan

A course plan identifies the details, logistics, resources, and training and education content for an individual course. Whenever possible, course content is directly tied to a national or state standard. SFT uses the course plan as the training and education standard for an individual course. Individuals at fire agencies, academies, and community colleges use course plans to obtain their institution's consent to offer course and provide credit for their completion. Instructors use course plans to develop syllabi and lesson plans for course delivery.

Course Details
The Course Details segment identifies the logistical information required for planning, scheduling, and delivering a course.

Required Resources
The Required Resources segment identifies the resources, equipment, facilities, and personnel required to deliver the course.

Unit
Each Unit represents a collection of aligned topics. Unit 1 is the same for all SFT courses. An instructor is not required to repeat Unit 1 when teaching multiple courses within a single instructional period or academy.

Topics
Each Topic documents a single Terminal Learning Objective and the instructional activities that support it.

Terminal Learning Objective
A Terminal Learning Objective (TLO) states the instructor's expectations of student performance at the end of a specific lesson or unit. Each TLO includes a task (what the student must be able to do), a condition (the setting and supplies needed), and a standard (how well or to whose specifications the task must be performed). TLOs target the performance required when students are evaluated, not what they will do as part of the course.

Enabling Learning Objectives
The Enabling Learning Objectives (ELO) specify a detailed sequence of student activities that make up the instructional content of a lesson plan. ELOs cover the cognitive, affective, and psychomotor skills students must master to complete the TLO.

Discussion Questions
The Discussion Questions are designed to guide students into a topic or to enhance their understanding of a topic. Instructors may add to or adjust the questions to suit their students.

Application
The Application segment documents experiences that enable students to apply lecture content through cognitive and psychomotor activities, skills exercises, and formative testing. Application experiences included in the course plan are required. Instructors may add additional application experiences to suit their student population if time permits.

Instructor Notes
The Instructor Notes segment documents suggestions and resources to enhance an instructor's ability to teach a specific topic.

CTS Guide Reference
The CTS Guide Reference segment documents the standard(s) from the corresponding Certification Training Standard Guide upon which each topic within the course is based. This segment is eliminated if the course is not based on a standard.

Skill Sheet
The Skill Sheet segment documents the skill sheet that tests the content contained within the topic. This segment is eliminated if the course does not have skill sheets.