



## INSTRUCTOR CERTIFICATION LESS LETHAL, FLASH SOUND DIVERSIONARY DEVICE & CHEMICAL AGENTS

### COURSE OVERVIEW AND INSTRUCTIONAL GOALS

<b>COURSE LENGTH:</b>	40 Hours (5 Days)
	29 Hours (Classroom)
	11 Hours (Practical)

### COURSE OVERVIEW

**THIS INSTRUCTOR CERTIFICATION EXPIRES FOUR YEARS AFTER COMPLETION OF THE CERTIFICATION COURSE.**

The Less Lethal Impact Projectiles Instructor Course is a train-the-trainer course designed to familiarize attendees with less lethal weapons, impact munitions, and deployment tactics. Topics include instructor development techniques, less lethal force philosophy, case law, policy issues, technology overview, deployment tactics, product demonstrations, and less lethal practical scenarios.

The Chemical Agent Instructor Course is a train-the-trainer course designed to familiarize attendees with chemical munitions. Topics to be covered include history, products and characteristics, delivery systems, hazards, decontamination, gas masks, and general tactics related to chemical agent use.

The Flash Sound Diversionary Device Instructor Course is a train-the-trainer course designed to familiarize attendees with flash sound diversionary devices (FSDD). Topics to be covered include the history of diversionary devices, definitions and terminology, legal aspects, policy issues, preparation and deployment of diversionary devices, and practical application.

### NOTICE

The information necessary to present instruction regarding less lethal munitions, flash sound diversionary devices, and chemical agents is contained within the curricula of this course. The ability to teach others and correctly convey the course content is an individual skill. Completing this NTOA course of instruction is not an endorsement of any individual's teaching skill or experience. Instructors should ensure they have met the requirements to instruct the subject matter as local or state mandates require. Further, their agency head or designee should approve instructors to teach the materials.



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### CO-HOST INFORMATIONAL LETTER

On behalf of the Less Lethal Section of the National Tactical Officers Association (NTOA), thank you for being willing to host an NTOA Less Lethal/Chemical Agent/ & FSDD Instructor course. This letter will assist you in hosting a successful class.

The class is divided into classroom and range time. Obviously, each location has different requirements. The following explanation will give you an idea of when we will need classroom space and when we will be on the range.

We are normally in the classroom from Monday morning until Wednesday after lunch, on Thursday morning until after lunch, and on Friday morning until after lunch. We will be on the range Wednesday afternoon, Thursday afternoon, and Friday afternoon.

Having the range co-located with the classroom is the most desirable option as this reduces travel time; however, this is not a must. We will also send the students out for lunch, so having a list of local food options along with a basic map is helpful.

When in the classroom, we will need the following:

- PowerPoint projector
- Speakers for sound as we will review a number of videos
- Whiteboard and markers or easel and paper with markers
- A table at the front for the instructor's computer and paperwork.
- At least two tables at the front of the room to be used for display munitions, etc.
- Enough table space to comfortably fit the number of students. Since they will be in a classroom for several days, two students per table is preferred.
- A separate table at the back of the room for the assistant instructors with access to power to run a computer.

#### Range Requests:

##### **Less Lethal Munitions Day (Wednesday after lunch)**

- At least a 25-yard range
- Targets that can be struck with high-energy impact munitions
- 2) 12-gauge shotguns
- 1) 37 mm single shot launcher
- 1) 40 mm single shot launcher
- High-pressure air launchers (if available)
- Cardboard backer with a paper target
- A portable or movable table to set munitions and launchers on

##### **Chemical Agent Day (Thursday after lunch)**

- At least a 25-yard range. Since we will be launching long-range munitions, a longer range is preferable. It does not need to have ballistic capabilities; it just needs to be an open area.



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- We will be deploying several “live” pyrotechnic (burning) munitions. The range should be far enough away so the live agents will not affect others. Most of the munitions will be inert, but they will still produce a large volume of smoke.
- Plywood sheets or something similar to shoot gas barricade rounds into.
- A large bucket of water is needed for any munitions that do not perform as expected.
- Ability to decontaminate a person from exposure to chemical agents.
- Medical personnel (not required, just nice to have)
- 2) 12-gauge shotguns
- 1) 37 mm single shot launcher
- 1) 40 mm single shot launcher
- A portable or movable table to set munitions and launchers on

### Flash Sound Diversionary Device Day (Friday after lunch)

- A safe area to deploy FSDD's. A barrier that the student can stand behind, simulating a doorway that will protect the student from the FSDD and secondary launched debris.
- 1) 12-gauge shotgun
- A long pole, in case a FSDD does not deflagrate
- A ballistic shield, in case a FSDD does not deflagrate
- A portable or movable table to set munitions and launchers on



## **INSTRUCTOR CERTIFICATION LESS LETHAL, FLASH SOUND DIVERSIONARY DEVICE & CHEMICAL AGENTS**

### **INSTRUCTIONAL GOALS**

Upon completion of this course, the attendee will be familiar with:

1. Instructor Development Techniques
2. Less Lethal Force Philosophy
3. Case Laws, Legal Studies Training Issues
4. Less Lethal Policy
5. Use of Force Reports
6. Less Lethal Force Technology
7. Less Lethal Deployment Tactics
8. Conducting Less Lethal Practical Scenarios
9. History of Flash Sound Diversionary Devices (FSDD's)
10. Specific Definitions
11. Nomenclature
12. Legal Aspects of Diversionary Devices
13. Tactics involving Flash Sound Diversionary Devices
14. Deployment Concerns
15. FSDD Policy Issues
16. Preparation and Deployment of Diversionary Devices
17. Chemical Munitions Products and Characteristics
18. Chemical Munitions Delivery Systems
19. Potential Hazards of Chemical Munitions
20. Decontamination Issues
21. Gas Masks
22. General Tactics as They Relate to the Use of Chemical Agents

### **SPECIFIC INSTRUCTIONAL GOALS**

Upon completion of this course, the attendee will be familiar with:

1. The less lethal force philosophy, as outlined in this course of instruction
2. At least three significant less lethal force options available to law enforcement today
3. Two primary classifications of kinetic energy impact munitions



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4. The three most significant factors that must be considered when evaluating kinetic energy impact projectiles
5. At least three kinetic energy impact projectile delivery systems
6. The characteristics of the most commonly used less lethal projectiles
7. Less lethal kinetic energy impact projectiles and their placement on a "use of force" model. Students will also be able to explain some circumstances that may cause an officer to use such devices differently than the "use of force" model suggests.
8. Several situations in which the use of less lethal force projectiles would be appropriate
9. Actions that should be taken in cases where a person is struck with a kinetic energy impact projectile
10. The three most significant issues that must be addressed with end users in extended-range kinetic energy impact programs
11. Case laws as they relate to less lethal deployment
12. Sample less lethal policies and the philosophy behind less lethal policies
13. Use of force reports as they relate to the deployment of kinetic energy impact projectiles
14. Various tactics as they relate to the deployment of kinetic energy impact projectiles, as well as arrest teams, entry teams, containment teams, and civil disorder
15. The actual deployment of various kinetic energy impact projectiles. Students will observe them being deployed and discuss accuracy issues and proper application.
16. The history of the flash sound diversionary device (FSDD)
17. What a diversionary device is
18. Specific definitions as they relate to the FSDD
19. Specific terminology as it relates to a FSDD
20. The difference between a deceptive and physiological distraction and the characteristics of each
21. The effects of the FSDD on the human body
22. Three types of explosions
23. The difference between a detonating explosive and a deflagrating explosive
24. The components of a FSDD
25. The components of the M201A1 fuze
26. The combustion characteristics of a FSDD
27. Deployment concerns involved with using a FSDD
28. The "critical number" as it relates to the sound produced by a FSDD
29. Rendering safe procedures for a FSDD
30. Concerns to be addressed when developing policy for the use of a FSDD
31. Case law as it relates to the deployment of a FSDD
32. The first documented case in which a lacrimator was used by civilian law enforcement
33. The two basic concepts of chemical munitions deployment



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34. The two most common chemical agents used by civilian law enforcement today
35. The most likely effects of law enforcement chemical agents on human beings
36. The differences between primary and secondary contamination
37. The most commonly used chemical munitions and the deployment concepts most applicable to those particular munitions
38. Multiple concepts of chemical munitions deployment
39. The steps in the chemical agent decontamination process
40. The process of testing a chemical agent mask for proper fit and operation

### **In addition, the student will:**

1. Take part in familiarization drills utilizing several less lethal projectile delivery systems, including the 12-gauge shotgun, 37 mm launcher, and 40 mm launcher.
2. Demonstrate in a practical examination the ability to deploy a diversionary device safely and effectively. Students will deploy at least one diversionary device.
3. Complete a written test on Less Lethal Projectiles, FSDDs, and Chemical Agents, which requires 80% to pass.



## INSTRUCTOR CERTIFICATION LESS LETHAL, FLASH SOUND DIVERSIONARY DEVICE & CHEMICAL AGENTS

### DAY TO DAY / HOUR TO HOUR AGENDA

#### DAY ONE

<b>Hours:</b>	<b>Instruction:</b>
0800-0830	Course Introduction and Administration
0830-0900	Pre-Test for Less Lethal Projectiles – <b>CLASSROOM</b>
0900-1200	Less Lethal Philosophy
1200-1300	Lunch (not provided)
1300-1400	Less Lethal Philosophy
1400-1500	Instructor Development
1500-1600	Training Safety
1600-1700	Less Lethal Discussion

#### DAY TWO

<b>Hours:</b>	<b>Instruction:</b>
0800-1200	Less Lethal Technology
1200-1300	Lunch (not provided)
1300-1430	Case Law, Legal Concepts, and Report Writing
1430-1600	Injuries
1600-1700	Response to Suicidal Subjects

#### DAY THREE

<b>Hours:</b>	<b>Instruction:</b>
0800-1200	Tactical Decision-Making
1200-1300	Lunch (not provided)
1300-1400	Less Lethal Impact Munitions Exam
1400-1500	Less Lethal Videos / Incident Debriefs
1500-1700	Product Demo / Familiarization Drills – <b>PRACTICAL</b>



## INSTRUCTOR CERTIFICATION LESS LETHAL, FLASH SOUND DIVERSIONARY DEVICE & CHEMICAL AGENTS

### DAY FOUR

Hours:	Instruction:
0800-0830	Pre-Test for Chemical Agents
0830-1200	Chemical Munitions Overview / Decontamination / Policy Considerations / Delivery Systems / Gas Masks
1200-1300	Lunch (not provided)
1300-1400	Incident Debrief
1400-1500	Chemical Agent Exam
1500-1700	Product Demo / Familiarization Drills – <b>PRACTICAL</b>

### DAY FIVE

Hours:	Instruction:
0800-0830	Pre-Test for Diversionary Devices
0830-1200	Diversionary Devices Lecture
1200-1300	Lunch (not provided)
1300-1400	Incident Debrief
1400-1500	Diversionary Devices Exam
1500-1700	Product Demo / Familiarization Drills – <b>PRACTICAL</b>





## INSTRUCTOR CERTIFICATION LESS LETHAL, FLASH SOUND DIVERSIONARY DEVICE & CHEMICAL AGENTS

### COURSE OUTLINE

- I. Preface
  - A. Course Overview
  - B. Instructional Goals
  - C. Agenda
  - D. Outline
  - E. Co-Host Logistics
  
- II. Instructor Development Techniques / Safety Lead-In
  - A. Course Presentation
  - B. Basic Teaching Technique
  - C. Lesson Plan Development
  - D. Course Preparation
  - E. Visual Aids
  - F. Testing and Qualification
  - G. Safety Concerns / Causes of Training Injuries and Deaths
  
- III. Less Lethal Force Philosophy
  - A. Force Continuum
  - B. Objectives and Criteria for Deployment
  - C. De-escalation in Deadly Force Situations
  - D. Reduction of Injury Potential
  - E. Conditions for Deployment of Less Lethal Munitions
  - F. Rules of Engagement
  
- IV. Case Laws, Legal Concepts, Use of Force Reports
  - A. Specific Cases Involving Less Lethal Deployment
  - B. Liability Reduction as it applies to Case Laws
  - C. Legal Justification for Less Lethal Munitions Use
  - D. Critique Several Actual Less Lethal Incidents
  - E. Requirements / Recommendations
  - F. Sample Reports



## INSTRUCTOR CERTIFICATION LESS LETHAL, FLASH SOUND DIVERSIONARY DEVICE & CHEMICAL AGENTS

- V. Less Lethal Policy
  - A. Requirements / Recommendations
  - B. Sample Policies
  
- VI. Less Lethal Force Technology
  - A. Available Products
    - a. Kinetic Energy Projectile (Primary Course Focus)
    - b. Non-Flexible Single – 12 gauge / 37 MM / 40 MM
    - c. Non-Flexible Multi – 12 gauge / 37 MM / 40 MM
    - d. Flexible Single – 12 gauge / 37 MM / 40 MM
    - e. Flexible Multi – 37 MM / 40 MM
    - f. Taser, Pepper Ball, Others
  
  - B. Delivery Systems
    - a. Smooth Bore – 12 gauge / 37 MM
    - b. Rifled Bore – 12 gauge / 37 MM / 40MM
    - c. Single Shot
    - d. Multi-Shot
  
  - C. Evaluation – Product Selection Criteria
    - a. Accuracy
    - b. Effectiveness
    - c. Potential for causing death or serious injury
  
- VII. Injury Photos Impact Projectile Deaths
  
- VIII. Less Lethal Tactics / Decision-Making
  - A. Entry Tactics
  - B. Containment
  - C. Civil Disorder
  - D. Arrest Teams
  
- IX. Less Lethal Written Review and Exam



## INSTRUCTOR CERTIFICATION LESS LETHAL, FLASH SOUND DIVERSIONARY DEVICE & CHEMICAL AGENTS

- X. Less Lethal Videos / Incident Debriefs
  
- XI. Product Demo and Familiarization
  - A. Test and Evaluate Available Products
  
- XII. Less Lethal Scenario-Based Training
  
- XIII. Diversionary Devices
  - A. History
  - B. Types
  - C. Definitions
  - D. Nomenclature
  
- XIV. Diversionary Devices
  - A. Characteristics
  - B. Tactics
  
- XV. Diversionary Devices
  - A. Legal Aspects
  - B. Policy Considerations
  - C. Deployment Concerns
  
- XVI. Diversionary Devices
  - A. Demonstration of Proper Deployment Techniques
  - B. Demonstration of Proper Handling and Grips
  - C. Demonstration of Proper Control of the Safety Pin
  - D. Demonstration of Proper Render Safe Procedures
  - E. Demonstration of Re-Inserting the Safety Pin
  
- XVII. Diversionary Devices
  - A. Demonstration of Proper Cleaning
  - B. Demonstration of Proper Preparation



## INSTRUCTOR CERTIFICATION LESS LETHAL, FLASH SOUND DIVERSIONARY DEVICE & CHEMICAL AGENTS

- XVIII. Chemical Munitions Overview / Decontamination / Policy Considerations
  - A. History
  - B. CN / CS / OC
  - C. Effects
  - D. Primary / Secondary Contamination
  - E. Relative Toxicity
  - F. Decontamination
  - G. Sample Policy
  
- XIX. Chemical Agent Delivery Systems
  - A. Pyrotechnic / Combustion
  - B. Blast Dispersion
  - C. Liquid
  - D. Aerosol Liquid
  - E. Dust
  - F. Fog
  
- XX. Gas Masks
  
- XXI. Chemical Munitions Incident Debriefs
  
- XXII. Exposure
  - A. Product Demonstration
  - B. Practical Demonstration of 12 Gauge and 37 MM Chemical Projectiles
  - C. Gas Mask Clearance Demonstration
  - D. Decontamination for Exposure
  
- XXIII. Flash Sound Diversionary Device and Chemical Agents Review and Exam
  
- XXIV. Course Evaluation and Closeout



## INSTRUCTOR CERTIFICATION LESS LETHAL, FLASH SOUND DIVERSIONARY DEVICE & CHEMICAL AGENTS

### CO-HOST LOGISTIC REQUIREMENTS

#### CLASSROOM

- Adequate seating for up to 34 students with tables, good ventilation
- Markerboard & markers
- Flip chart with paper

#### AUDIOVISUAL

- LCD Projector for computer presentation
- Large projection screen (minimum of 6'x6' screen size)
- Speaker system to connect to laptop for audio
- Extension cord and power strip
- AV table or cart

#### OTHER

- Range or tactical area where less lethal weapons and diversionary devices can be deployed
- 12 gauge shotgun
- 37mm weapon system, if available
- Sage or Arwen weapon system, if available
- 40mm weapon system, if available
- Pepperball System, if available
- Target stands
- Targets – full body targets such as “Numb John” is best
- Shoot house or building for scenarios is recommended
- Extra ear protection for students
- Extra eye protection for students
- Range area or house where 12 gauge or 37 mm chemical agent projectiles can be deployed, and chemical agents exposure can be conducted
- Shovel, bucket, and water at range area (water should be available for potential fire hazards and decontamination purposes)
- Tactical Emergency Medic or EMS Available at the Range for Demonstration
- **\*\*NO LIVE FIRE\*\***



## INSTRUCTOR CERTIFICATION LESS LETHAL, FLASH SOUND DIVERSIONARY DEVICE & CHEMICAL AGENTS

### STUDENT EQUIPMENT LIST

#### INDIVIDUAL

- Law Enforcement I. D.
- Eye protection
- Ear protection
- Gas mask
- Nomex gloves
- Clothing such as BDUs that are suitable for physical activity (students will be outside at times and will take part in range activities and be exposed to the weather)
- A change of clothes to wear after chemical contamination
- Agency-approved chemical agent mask (APR)
- Students who have yet to receive an approved level 1, 2, or 3 chemical agent exposure to CS or OC will be required to have an exposure to complete this course.

*NOTE: A waiver is available to students who have already been exposed. Students who complete the waiver will be exempt from the level 1,2 and 3 exposure requirements. The NTOA recognizes that many students participating in this course have already been exposed to CS or OC.*

- All students will be exposed to pyrotechnic CS to fit and evaluate their masks.



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### NTOA PROVIDED INSTRUCTOR ITEMS

#### INSTRUCTOR PACKET

- Extra registration forms for walk-ins (QR Code)
- Course roster
- Student name tents
- Instructor agreements
- Student liability waiver forms
- Injury report form
- Chemical agent waiver
- **Pre-Test – one per student (per certification)**
- **Final Exam – one per student (per certification)**
- **Score sheet**
- **Answer keys**
- Dropbox link for student notebook and resource materials
- **Less lethal munitions**

#### TRAVEL INFORMATION (emailed in advance)

- Directions to training site and hotel information
- Contact numbers for co-host point of contact

#### COURSE PRESENTATION MATERIALS

- PowerPoint presentations are available on Basecamp for download

#### INSTRUCTOR EQUIPMENT

- Laptop computer



## INSTRUCTOR CERTIFICATION LESS LETHAL, FLASH SOUND DIVERSIONARY DEVICE & CHEMICAL AGENTS

### STUDENT NOTEBOOK CONTENTS

<b>TAB</b>	<b>DESCRIPTION</b>
Preface	Overview, Instructional Goals, Agenda, Outline, Student & Co-host Logistic Requirements
1.	Less Lethal Introduction
2.	Less Lethal Philosophy
3.	Less Lethal Instructor Development
4.	Training Safety
5.	Less Lethal Definitions
6.	12 Gauge Systems
7.	37mm and 40mm Systems
8.	High-Pressure Air Delivery Systems
9.	Other Technology
10.	Less Lethal Injuries
11.	Less Lethal Legal Considerations
12.	Tactical Decision-Making
13.	Chemical Agents
14.	Flash Sound Diversionary Devices





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