

EXPANDED COURSE OUTLINE
REGULAR BASIC COURSE
LEARNING DOMAIN 19
VEHICLE OPERATIONS

Effective date of outline: February 1, 2017

I. LEARNING NEED

Peace officers need to know the importance of defensive driving principles and techniques in order to develop safe driving habits.

LEARNING OBJECTIVES

- A. Determine a safe distance when following another vehicle
 - 1. Three seconds between vehicles. This allows reaction time to sudden hazards
- B. Identify the effect of speed on a driver's peripheral vision
 - 1. Peripheral vision is everything seen laterally when eye focus straight ahead
 - 2. The average person has 180 degrees of vision when they are stationary
 - 3. With increase of speed or stress, peripheral vision can decrease
- C. Discuss how perception and reaction time affects a vehicle's total stopping distance
 - 1. The average drivers perception time is .75
 - 2. Reaction time is another .75 totaling 1.5 seconds to perceive and react
 - 3. Depending on speed the vehicle can travel a significant distance in 1.5 seconds
- D. Demonstrate appropriate actions to prevent intersection collisions
 - 1. Clear intersections (lane by lane) by looking for cross traffic and pedestrians
 - 2. Fresh green light
 - 3. Stale green light
 - 4. Right turns
 - 5. Left turns
- E. Recognize potential hazards of freeway driving and appropriate actions to prevent collisions
 - 1. Merging onto the freeway
 - 2. Re-entering freeway after a traffic stop
 - 3. Driving at high speeds for long periods
- F. Demonstrate appropriate actions to prevent collisions when operating a vehicle in reverse
 - 1. Backing at greater than 10 mph
 - 2. Backing on roadway
 - 3. Backing into traffic

- G. Demonstrate the importance and proper use of safety belts in a law enforcement vehicle
1. Seat belts have proven to be the single most effective way of protecting vehicle occupants from serious injury or death in a collision
- H. Identify psychological and physiological factors that may have an effect on a peace officer's driving
1. Psychological: Impatience, excitement, aggression, overconfidence
 2. Physiological: Rapid pulse, rapid breathing, lack of sleep illness, medication
- I. Identify hazards of various road conditions
1. Standing water or rain
 2. Loose gravel
 3. Mud
 4. Hills
 5. Construction zone
 6. Potholes
 7. Snow and ice
 8. Fog
 9. Night driving
- J. Discuss the components of a vehicle inspection
1. Tire pressure
 2. Worn or damaged tires
 3. Brake failure
 4. Engine failure
 5. Electrical system failure
- K. Demonstrate proper techniques for recognizing and coping with distractions while operating a law enforcement vehicle
1. Use of radio
 - a. Use of shuffle steering to allow for microphone control
 - b. Speak in a clear and precise manner, furnishing all pertinent data based on the circumstances
 - c. Replace microphone in its proper position
 2. Use of emergency equipment (Lights and siren)
 - a. 21055cvc
 - b. Awareness of barriers to lights and sound
 - (1) Buildings
 - (2) Geography
 - (3) Traffic Conditions
 - (4) Time of day
 3. Siren Syndrome (Siren Psychosis)
 - a. Loss of speed reference
 - b. Diminished depth of field

- c. Tunnel Vision
- d. Maintain High Visual Horizon
- 4. Prisoner Transport
 - a. Proper securing of prisoner(s)
 - b. Unruly behavior of prisoners
 - (1) Yelling
 - (2) Kicking at window, barriers, etc.

II. LEARNING NEED

Peace officers must recognize that emergency response (Code 3) driving demands and thorough understanding of the associated liability and safety issues.

LEARNING OBJECTIVES

- A. Identify the objectives of emergency response driving
 - 1. Life threatening emergency
 - 2. Serious crimes in progress
 - 3. Officer needs assistance
 - 4. Traffic Collision involving major injuries
- B. Recognize the statute(s) governing peace officers when operating law enforcement vehicles in the line of duty
 - 1. Rules of the road
 - 2. Liability
- C. Explain the importance of agency-specific policies and guidelines regarding emergency response driving
 - 1. Policies differ from agency to agency
 - 2. Protects from civil and criminal liability
 - 3. Sets standards from officers not acting within scope of their duties
- D. Identify the statutory responsibilities of non-law enforcement vehicle drivers when driving in the presence of emergency vehicles operated under emergency response conditions
 - 1. Yield the right-of-way
 - 2. By immediately driving to right hand edge or curb of the roadway and stop
- E. Demonstrate the use of emergency warning devices available on law enforcement vehicles
 - 1. Light bar
 - 2. Wig Wag Lights
 - 3. Siren
- F. Identify factors that can limit the effectiveness of a vehicle's emergency warning devices
 - 1. Traffic noise
 - 2. High speed
 - 3. Other driver's inattention: Loud music, cell phone usage.

- G. Demonstrate the use of communication equipment
 - 1. Stay calm and speak clearly
 - 2. Use radio on straight stretches of road when possible
 - 3. Roll windows up to reduce outside noise
 - 4. Not use computer when driving

- H. Identify the effects of siren syndrome
 - 1. Increased adrenalin
 - 2. Tunnel vision
 - 3. Loss of speed reference

- I. Recognize guidelines for entering an intersection when driving under emergency response conditions
 - 1. Slow down
 - 2. Fluctuate siren to get attention of others
 - 3. Stop if necessary
 - 4. Clear lane by land
 - 5. Keep looking left right left.

III. LEARNING NEED

All peace officers who operate law enforcement emergency vehicles must recognize that even though the purpose of pursuit driving is the apprehension of a suspect who is using a vehicle to flee, the vehicle pursuit is never more important than the safety of peace officers and the public.

LEARNING OBJECTIVES

- A. Discuss the requirements of penal code section 13519.8
 - 1. When to initiate pursuit
 - 2. Number of units involved
 - 3. Responsibility of primary and secondary units
 - 4. Blocking, ramming, boxing, and roadblock procedures

- B. Discuss the requirements of Vehicle Code Section 17004.7
 - 1. Departments obligation to implement and maintain a pursuit policy

IV. LEARNING NEED

Peace officers must be proficient in the operation of the vehicle and know the dynamic forces at work. Proper steering control, throttle control, speed judgment, and brake use enhances driving expertise.

LEARNING OBJECTIVES

- A. Distinguish between longitudinal and lateral weight transfer
 - 1. Lateral weight transfer-side to-side weight transfer caused by turning
 - 2. Longitudinal weight transfer-front-to-back weight transfer caused by braking and acceleration.
- B. Demonstrate the ability to mitigate the effects of spring loading
 - 1. Stay off the brakes
 - 2. Stay off the throttle
 - 3. Maintain a focal point of where you want to go
 - 4. Counter steer quickly until control is achieved
- C. Demonstrate proper techniques for two-handed shuffle steering
 - 1. Drivers hand are kept at 9 o'clock and 3 o'clock or 10 o'clock and 2 o'clock on the wheel as much as possible. The hands shuffle up and down on the wheel never crossing the 12 o'clock position as the driver executes a turn.
- D. Demonstrate proper throttle control
 - 1. The throttle or gas pedal regulate the speed of the vehicle. The operation of the throttle has a definite and immediate effect on weight transfer. Smooth operation of the throttle is critical for maximum vehicle control.
- E. Demonstrate proper roadway position and the three essential reference points of a turning maneuver
 - 1. Road way position will give the most efficient driving line through corners. The most efficient route may include multiple lanes, but should not include the opposing lane of traffic.
 - 2. Entry
 - 3. Apex
 - 4. Exit
- F. Explain the primary effects speed has on a vehicle in a turning maneuver
 - 1. Turning radius
 - 2. Traction limits
 - 3. Weight transfer
- G. Demonstrate proper braking methods
 - 1. Braking in the shortest practical time and distance necessary to reduce speed or stop is called threshold braking. It is called this because the vehicle is on the threshold of engaging the ABS system or entering a locked wheel skid. This type of braking is used to control speed prior to cornering
- H. Distinguish between and describe the causes of the following types of vehicle skids:
 - 1. Understeer skid: Loss of traction to front wheel causing vehicle to travel straight
 - 2. Oversteer skid: Loss of traction to rear wheels causing skid towards outside.
 - 3. Locked-wheel skid: Wheels have stopped turning and are skidding over roadway
 - 4. Acceleration skid: Torque of the drive wheels exceeds the traction limits and wheels spin.
 - 5. Centrifugal skid

I. Identify the causes and contributing factors of vehicle hydroplaning

1. Road conditions
2. Road characteristics
3. Speed
4. Water depth
5. Tire condition

V. REQUIRED TESTS

VEHICLE OPERATIONS SAFETY

All vehicle operations exercise testing must be conducted under written academy/presenter safety procedures and or protocols established in accordance with the POST safety guidelines. Students are required to comply with every aspect of presenter safety procedures and or protocols during vehicle operations training and testing.

- A. An exercise test that requires the student drive a law enforcement vehicle not equipped with Electronic Stability Control (ESC) and demonstrate the ability to control the vehicle during understeer and oversteer conditions or drive a law enforcement vehicle equipped with ESC and demonstrate the ability to control the vehicle during understeer conditions.

The student will demonstrate competency in the following performance dimensions:

1. Safety
2. Situational Awareness
3. Braking Technique(s)
4. Steering Technique(s)
5. Throttle Control
6. Control of Weight Transfer
7. Skid Control
8. Rate of Performance
9. Fluency of Performance
10. Level of Response

Presenters must use the POST-developed Vehicle Operations Competency Exercise Test Form or a presenter-developed form approved by POST, which minimally includes the performance dimensions used for this exercise test.

- B. An exercise test that requires the student to drive a law enforcement vehicle and demonstrate the ability to safely drive and control the vehicle while operating under emergency response (Code 3) conditions to include interacting with an interference vehicle driven by a qualified Driver Training Instructor (as defined in Regulation 1070).

The student will demonstrate competency in the following performance dimensions:

1. Safety
2. Situational Awareness
3. Braking Technique(s)
4. Steering Technique(s)
5. Throttle Control

6. Roadway Positioning
7. Operating Associated Equipment
8. Rate of Performance
9. Fluency of Performance
10. Level of Performance

Presenters must use the POST-developed Vehicle Operations Competency Exercise Test Form or a presenter-developed form approved by POST, which minimally includes the performance dimensions used for this exercise test.

- C. An exercise test that requires the student to drive a law enforcement vehicle and demonstrate the ability to safely drive and control the vehicle while operating under vehicle pursuit situations to include interacting with an interference vehicle driven by a qualified Driver Training Instructor (as defined in Regulation 1070).

The student will demonstrate competency in the following performance dimensions:

1. Safety
2. Situational Awareness
3. Braking Technique(s)
4. Steering Technique(s)
5. Throttle Control
6. Roadway Positioning
7. Operating Associated Equipment
8. Rate of Performance
9. Fluency of Performance
10. Level of Performance

Presenters must use the POST-developed Vehicle operations Competency Exercise Test Form or a presenter-developed form approved by POST, which minimally includes the performance dimensions used for this exercise test.

- D. An exercise test that requires the student to drive a law enforcement vehicle and successfully demonstrate in four out of five attempts the collision avoidance exercise as described in the Emergency Vehicle Operations Course Instructor Manual. The test will include a light indicator for lane selection and a minimum of 35 mph entry speed in dry surface conditions and a minimum of 30 mph entry speed in wet surface conditions. If the light indicator malfunctions, an alternate visual indicator shall be utilized.

The student will demonstrate competency in the following performance dimensions:

1. Safety
2. Situational Awareness
3. Braking Technique(s)
4. Steering Technique(s)
5. Throttle Control

Presenters must use the POST-developed Vehicle Operations Competency Exercise Test Form or a presenter-developed form approved by POST, which minimally includes the performance dimensions used for this exercise test.

- E. An exercise test that requires the student to drive a law enforcement vehicle and demonstrate a series of slow speed precision driving maneuvers. The slow speed precision driving maneuvers must include at least three (3) maneuvers contained in the Emergency Vehicle Operations Course Instructor Manual. The instructor manual slow speed maneuvers are listed as follows:

Turn around	Angled driveway
Off set lane	“T” Driveway
Steering Course (forward and reverse)	Vehicle Control
“Y” driveway	Parallel parking
Bootleg Turn	

The student will demonstrate competency in the following performance dimensions:

1. Safety
2. Situational Awareness
3. Braking Technique(s)
4. Steering Technique(s)
5. Throttle Control
6. Speed Judgment
7. Vehicle Placement
8. Backing
9. Tactical Seatbelt Removal (TSR)
10. Rate of Performance
11. Fluency of Performance

Presenters must use the POST-developed Vehicle Operations Competency Exercise Test Form or a presenter-developed form approved by POST, which minimally includes the performance dimensions used for this exercise test.

- F. An exercise test that requires the student to drive a law enforcement vehicle during which the student must reach a speed of at least 65 mph prior to entering a turn of sufficient radius to require a minimum 30 mph deceleration. This exercise test may be tested concurrent with emergency response or pursuit tests.

The student will demonstrate competency in the following performance dimensions:

1. Safety
2. Situational Awareness
3. Braking Technique(s)
4. Steering Technique(s)
5. Throttle Control
6. Speed of Judgment
7. Roadway Positioning
8. Fluency of Performance
9. Level of Response

Presenters must use the POST-developed Vehicle Operations Competency Exercise Test Form or a presenter-developed form approved by POST, which minimally includes the performance dimensions used for this exercise test.

VI. REQUIRED LEARNING ACTIVITIES

- A. The student will participate in a learning activity that requires the student to participate in the use of a Law Enforcement Driving Simulator (LEDS) and after acclimation participate in at least two (2) different emergency responses and two (2) different pursuits
- B. The student will participate in a learning activity that requires the student to brake suddenly and engage the Anti-lock Braking System (ABS)
- C. The student will participate in a learning activity that requires the student to drive a law enforcement vehicle during the hours of darkness (as defined in Vehicle Code Section 280) utilizing headlights. The activity must include emergency response and/or pursuit
- D. The student will participate in a learning activity that requires the student to drive a law enforcement vehicle, during which the student will demonstrate the ability to accurately steer and control the vehicle under high performance cornering conditions, including but not limited to:
 - 1. Safety
 - 2. Situational Awareness
 - 3. Braking Technique(s)
 - 4. Steering Technique(s)
 - 5. Throttle Control
 - 6. Speed Judgment
 - 7. Roadway Positioning
 - 8. Control of Weight Transfer
- E. The student will participate in one or more learning activities from the POST-developed Instructor's Guide to *Learning Activities for Leadership, Ethics and Community Policing (December 2005)* or other comparable sources regarding vehicle operations. At a minimum, each activity, or combination of activities must address the following topics:
 - 1. Use of critical thinking and decision making to balance the apprehension of violators against the obligation to drive safely, tactically and responsibly
 - 2. Effects of personal attitudes on emergency or pursuit driving and the interests of public safety
 - 3. Community expectations that officers should be exemplary drivers
 - 4. Accountability as it relates to officer actions during vehicle operation
 - 5. Universal concepts of *Penal Code Section 13519.8 and Vehicle Code Section 17004.7*

VII. HOURLY REQUIREMENTS

Students shall be provided with minimum number of instructional hours on vehicle operations. This instruction is designed to satisfy the requirements for law enforcement high-speed vehicle pursuit training as required in Penal Code section 13519.8.

<u>Description</u>	<u>Hours</u>
POST Minimum Required Hours	<u>40</u>
Agency Specific Hours	<u> </u>
Total Instructional Hours	<u>40</u>