

# Driver Operator for Fire Equipment

## Course Design

### 2002-2003

#### Course Information

<b>Organization:</b>	EASTERN ARIZONA COLLEGE
<b>Division:</b>	ITE
<b>Course Number:</b>	FSC 125
<b>Title:</b>	Driver Operator for Fire Equipment
<b>Credits:</b>	3
<b>Developed by:</b>	Dr. Barbara Ganz
<b>Lecture/Lab Ratio:</b>	3Lec 0Lab
<b>Transfer Status:</b>	Transferable to ASU East-BAS; Non-Transferable to UofA and NAU
<b>Extended Registration</b>	
<b>Class:</b>	No
<b>CIP Code:</b>	43.0203
<b>Assessment Mode:</b>	Pre-Post Test with a total of 10 possible points
<b>Semester Taught:</b>	Offered upon request.
<b>Gen. Ed. Area:</b>	None
<b>Separate Lab:</b>	No
<b>Awareness Course:</b>	NO
<b>Intensive Writing</b>	
<b>Course:</b>	NO
<b>Prerequisites:</b>	1. None
<b>Educational Value:</b>	This course is designed for fire department personnel and students interested in driving or operating fire vehicles.
<b>Goals:</b>	1. Fire fighters will be able to safely operate and handle fire vehicles and associated equipment.
<b>Description:</b>	This course will teach the techniques for driving and handling fire vehicles. Includes safe operating procedures, defensive driving, apparatus inspection, training in emergency maneuvers, and the key components of the driving system.
<b>Textbooks:</b>	None
<b>Supplies:</b>	None

## Competencies and Performance Standards

<b>1. Describe the major consideration in preparing to drive a fire vehicle.</b>			
<i>Domain--Cognitive</i>	<i>Level--Evaluation</i>	<i>Importance--Important</i>	<i>Difficulty--Medium</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner can discuss how to correctly position the seat.</li> <li>• learner can describe the proper hand position on the steering wheel.</li> <li>• learner can describe how to properly adjust mirrors.</li> <li>• learner can discuss how to read and interpret the instrument panel.</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• on a written test.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Discuss how to correctly position the seat.</li> <li>Describe the proper hand position on the steering wheel.</li> <li>Describe how to properly adjust mirrors.</li> <li>Discuss how to read and interpret the instrument panel.</li> </ol>	
<b>2. Describe the major critical driving situations.</b>			
<i>Domain--Cognitive</i>	<i>Level--Evaluation</i>	<i>Importance--Important</i>	<i>Difficulty--Medium</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner can describe 2 major critical driving situations.</li> <li>• learner can discuss five techniques that can be employed in critical driving situations.</li> <li>• learner can discuss how to safely handle 2 critical driving situations.</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• on a written test.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Describe 2 major critical driving situations.</li> <li>Discuss five techniques that can be employed in critical driving situations.</li> <li>Discuss how to safely handle 2 critical driving situations.</li> </ol>	
<b>3. Demonstrate safe operating procedures, including driver preparation and types of vehicular maneuvers.</b>			
<i>Domain--Psychomotor</i>	<i>Level--Practice</i>	<i>Importance--Essential</i>	<i>Difficulty--High</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner can describe safe operating practices and procedures.</li> <li>• learner can demonstrate safe operating practices on a controlled course.</li> <li>• learner can demonstrate proper driver preparation procedures.</li> <li>• learner can demonstrate various vehicular maneuvers on a controlled course.</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• in a simulated exercise.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Describe safe operating practices and procedures.</li> <li>Demonstrate safe operating practices on a controlled course.</li> <li>Demonstrate proper driver preparation procedures.</li> <li>Demonstrate various vehicular maneuvers on a controlled course.</li> </ol>	

<b>4. Discuss vehicle dynamics including kinetic energy, centrifugal forces, inertia, coefficient of friction, and tires.</b>			
<i>Domain--Cognitive</i>	<i>Level--Evaluation</i>	<i>Importance--Important</i>	<i>Difficulty--Medium</i>
<p><b>Criteria</b>--Performance will be satisfactory when:</p> <ul style="list-style-type: none"> <li>• learner can discuss the principles of vehicle dynamics.</li> <li>• learner can define kinetic energy and its effect on vehicles in motion.</li> <li>• learner can define centrifugal force and its effect on vehicles in motion, especially turning maneuvers.</li> <li>• learner can define inertia and its effect on vehicles in motion and stopping distance.</li> <li>• learner can define the coefficient of friction and its effect on vehicles in motion.</li> <li>• learner can discuss how tire pressure, tread, and general characteristics effect vehicle operation.</li> </ul>	<p><b>Conditions</b>--Competence will be demonstrated:</p> <ul style="list-style-type: none"> <li>• on a written test.</li> </ul>	<p><b>Learning Objectives:</b></p> <ol style="list-style-type: none"> <li>Discuss the principles of vehicle dynamics.</li> <li>Define kinetic energy and its effect on vehicles in motion.</li> <li>Define centrifugal force and its effect on vehicles in motion, especially turning maneuvers.</li> <li>Define inertia and its effect on vehicles in motion and stopping distance.</li> <li>Define the coefficient of friction and its effect on vehicles in motion.</li> <li>Discuss how tire pressure, tread, and general characteristics effect vehicle operation.</li> </ol>	
<b>5. Demonstrate the use of emergency maneuvers.</b>			
<i>Domain--Psychomotor</i>	<i>Level--Practice</i>	<i>Importance--Essential</i>	<i>Difficulty--High</i>
<p><b>Criteria</b>--Performance will be satisfactory when:</p> <ul style="list-style-type: none"> <li>• learner can discuss the application of vehicle dynamics.</li> <li>• learner can discuss when to use a serpentine maneuver.</li> <li>• learner can discuss how to properly employ evasive procedures.</li> <li>• learner can demonstrate controlled braking.</li> <li>• learner can recover from a controlled skid.</li> <li>• learner can demonstrate proper off-road recovery procedures.</li> <li>• learner can demonstrate the proper technique to use in case of a blowout.</li> </ul>	<p><b>Conditions</b>--Competence will be demonstrated:</p> <ul style="list-style-type: none"> <li>• in a simulated exercise.</li> </ul>	<p><b>Learning Objectives:</b></p> <ol style="list-style-type: none"> <li>Discuss the application of vehicle dynamics.</li> <li>Discuss when to use a serpentine maneuver.</li> <li>Discuss how to properly employ evasive procedures.</li> <li>Demonstrate controlled braking.</li> <li>Recover from a controlled skid.</li> <li>Demonstrate proper off-road recovery procedures.</li> <li>Demonstrate the proper technique to use in case of a blowout.</li> </ol>	

<b>6. List the key components of the driving system.</b>		
<i>Domain--Affective</i>	<i>Level--Organizing</i>	<i>Importance--Useful</i>
<i>Difficulty--Medium</i>		
<b>Criteria</b> --Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner can list key components of the driving system.</li> <li>• learner can discuss the importance of understanding the relationship between driving system components.</li> </ul>	<b>Conditions</b> --Competence will be demonstrated: <ul style="list-style-type: none"> <li>• by a written test.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>List key components of the driving system.</li> <li>Discuss the importance of understanding the relationship between driving system components.</li> </ol>
<b>7. Discuss the facilities and equipment that are required for creating and maintaining a driving course.</b>		
<i>Domain--Cognitive</i>	<i>Level--Evaluation</i>	<i>Importance--Useful</i>
<i>Difficulty--Low</i>		
<b>Criteria</b> --Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner can discuss the layout of a driving course.</li> <li>• learner can describe the safety aspects of a driving course.</li> <li>• learner can describe how to properly prepare a vehicle for driving.</li> </ul>	<b>Conditions</b> --Competence will be demonstrated: <ul style="list-style-type: none"> <li>• by a written test.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Discuss the layout of a driving course.</li> <li>Describe the safety aspects of a driving course.</li> <li>Describe how to properly prepare a vehicle for driving.</li> </ol>

## Types of Instruction

Classroom Presentation

## Grading Policy

**Evaluation Methods:** Grades will be based on performance on a simulated exercise, class participation, and written tests. The Post-Test will count as 10% of the final grade.

**Grading Scale:**

Grade	Requirement
A	100-90%
B	89-80%
C	79-70%
D	69-60%
F	Below 60%

# Learning Plans

## Learning Plan 1-- Learning Plan 1

**Overview:** The student will be able to describe the major considerations in preparing to drive an emergency vehicle.

**Competency:** 1. Describe the major consideration in preparing to drive a fire vehicle.

**Learning Activities:**

- \_\_\_\_\_ 1. READ and study assignments.
- \_\_\_\_\_ 2. ASK/ANSWER questions about lecture material.
- \_\_\_\_\_ 3. DISCUSS concepts, ideas, and issues with classmates.
- \_\_\_\_\_ 4. DEFINE concepts

**Performance Assessment Activities:**

- \_\_\_\_\_ 1. Complete homework assignments.
- \_\_\_\_\_ 2. Complete quiz.
- \_\_\_\_\_ 3. Participate in class.

## Learning Plan 2-- Learning Plan 2

**Overview:** The student will be able to describe the major critical driving situations encountered in firefighting.

**Competency:** 2. Describe the major critical driving situations.

**Learning Activities:**

- \_\_\_\_\_ 1. READ and study assignments.
- \_\_\_\_\_ 2. ASK/ANSWER questions about lecture material.
- \_\_\_\_\_ 3. DISCUSS concepts, ideas, and issues with classmates.
- \_\_\_\_\_ 4. DEFINE concepts.
- \_\_\_\_\_ 5. APPLY principles to the solution a case study.

**Performance Assessment Activities:**

- \_\_\_\_\_ 1. Complete homework assignments.
- \_\_\_\_\_ 2. Complete quiz.
- \_\_\_\_\_ 3. Participate in class.

**Learning Plan 3-- Learning Plan 3**

**Overview:** The student will demonstrate safe operating procedures, including driver preparation and various types of vehicular maneuvers on a practice course.

**Competency:** 3. **Demonstrate safe operating procedures, including driver preparation and types of vehicular maneuvers.**

**Learning Activities:**

\_\_\_\_\_ 1. PARTICIPATE in a simulated exercise on the driving course.

**Performance Assessment Activities:** \_\_\_\_\_ 1. Demonstrate proficiency on driving course.

**Learning Plan 4-- Learning Plan 4**

**Overview:** The student will participate in a small group discussion of material presented by the instructor and then give examples to the larger group of how these forces operate.

**Competency:** 4. **Discuss vehicle dynamics including kinetic energy, centrifugal forces, inertia, coefficient of friction, and tires.**

**Learning Activities:**

\_\_\_\_\_ 1. READ and study assignments.

\_\_\_\_\_ 2. ASK/ANSWER questions about lecture material.

\_\_\_\_\_ 3. DISCUSS concepts, ideas, and issues with classmates.

\_\_\_\_\_ 4. DEFINE concepts in your own words.

\_\_\_\_\_ 5. BREAK into a small group discussion and then report back in detail to larger group on one of the elements discussed in lecture.

**Performance Assessment Activities:** \_\_\_\_\_ 1. Complete homework assignments.

\_\_\_\_\_ 2. Complete quiz.

\_\_\_\_\_ 3. Participate in class.

**Learning Plan 5-- Learning Plan 5**

**Overview:** The student will demonstrate emergency maneuvers on the driving course.

**Competency:** 5. **Demonstrate the use of emergency maneuvers.**

**Learning Activities:**

\_\_\_\_\_1. PARTICIPATE in a simulated emergency exercise on the driving course.

**Performance Assessment Activities:** \_\_\_\_\_1. Demonstrate proficiency on driving course.

### **Learning Plan 6-- Learning Plan 6**

**Overview:** The student will be able to list the key components of the driving system.

**Competency:** 6. **List the key components of the driving system.**

**Learning Activities:**

\_\_\_\_\_1. CONTRIBUTE to large group discussion.

\_\_\_\_\_2. CREATE lists.

\_\_\_\_\_3. LISTEN to a lecture.

\_\_\_\_\_4. REVIEW fact statements.

**Performance Assessment Activities:** \_\_\_\_\_1. Complete homework assignments.  
 \_\_\_\_\_2. Complete quiz.  
 \_\_\_\_\_3. Participate in class.

### **Learning Plan 7-- Learning Plan 7**

**Overview:** The student will be able to discuss the facilities and equipment that are required for creating and maintaining a driving course.

**Competency:** 7. **Discuss the facilities and equipment that are required for creating and maintaining a driving course.**

**Learning Activities:**

\_\_\_\_\_1. READ and study assignments.

\_\_\_\_\_2. ASK/ANSWER questions about lecture material.

\_\_\_\_\_3. SUMMARIZE ideas or issues.

\_\_\_\_\_ 4. TAKE notes.

**Performance  
Assessment Activities:**

\_\_\_\_\_ 1. Complete homework assignments.

\_\_\_\_\_ 2. Complete quiz.

\_\_\_\_\_ 3. Participate in class.