

<b>COURSE TITLE:</b>		<b>Detection and Rapid Hazard Analysis of HazMats (In-Service)</b>		<b>Course No. &amp; Version:</b>		<b>HAZ032</b>	
<b>TOPIC AREA:</b>		<b>Hazardous Materials</b>		<b>LEVEL:</b>		<b>Technician or Mission Specific</b>	
<b>SOURCE:</b>		<b>Internal</b>		<b>REVISION:</b>		<b>8/1/2022</b>	
<b>PRIMARY DOMAIN:</b>		<input type="checkbox"/> Didactic <input type="checkbox"/> Psychomotor <input checked="" type="checkbox"/> Combination					
<b>DELIVERY METHOD:</b>		30 % Lecture                  70 % In Class Hands-on					
<b>DURATION:</b>		<b>Hrs 8</b>		<b>SCHEDULING:</b>		<b>0800 – 1700</b>	
<b>PROGRAM GOAL:</b>		<p>This program is designed to provide the participants with an understanding of detection and hazard screening procedures at hazmat emergencies. Topics address the basic principles of detection equipment and wet chemistry procedures that can be applied to transportation, fixed facility or illicit situations involving potentially hazardous substances. This program addresses the selection and interpretation of radiological, multi-gas detectors, PIDs/FIDs, and basic wet chemistry screening procedures.</p>					
<b>TARGET AUDIENCE:</b>		<p>The target audience for this program includes emergency response personnel who will implement air monitoring procedures during the initial stages of a hazardous materials emergency response.</p>					
<b>COURSE DESCRIPTION:</b>		<p>The program is scheduled for 1 day of combined classroom presentations and hands-on tabletop activities. It begins with a basic review of the principles of detection instrumentation, and field screening procedures. Participants are provided with an analytical process that leads them to determine the primary hazards associated with materials found in a variety of situations. Then, through numerous workstations, they are provided an opportunity to reinforce the knowledge concerning the proper application and interpretation of the technologies. The hosting organization can also have the program tailored to discuss any special technologies they would like to have addressed.</p>					
<b>MAX STUDENTS:</b>		<b>25</b>		<b>MAX INST. RATIO:</b>		<b>1:8</b>	
<b>STANDARDS MET:</b>		<p>This program addresses related competencies of NFPA 470 Chapter 10.2 Florida SERC Competency OPS AMS 1.1 &amp; 1.2</p>					
<b>APPROVALS</b>							
<b>Organization</b>		<b>No. / Date</b>		<b>Conditions</b>			
<b>FSFC course</b>		<b>ATPC 18095 8/8/22</b>					
<b>NOTES</b>							

## EDUCATIONAL OBJECTIVES

<b>Topic</b>	<b>Objective</b>
<b>Air Monitoring Plan</b>	Identify the analysis process for identifying unknown atmospheres.
	Describe the contents of an effective detection and analysis strategy.
	Select proper equipment types depending upon hazard classifications and initial hazard risk assessment.
<b>Radiological Instruments</b>	Given radiological survey instruments, identify the capabilities, limitations, use and interpretation procedures for each instrument.
	Given simulant materials, demonstrate the ability to use and interpret readings provided by the radiological survey instruments and to apply the concepts of time, distance and shielding to determine appropriate risks and mission duration.
<b>Multi Gas and PIDs</b>	Identify the basic principles of electro-chemical, flammable gas indicators and photo-ionization detectors.
	Identify the capabilities and limitations of photo-ionization and flame ionization detectors to include lamp energy, effects of humidity, detection range, presence of mixtures and relative response.
	Given readings from a PID and FID detector responding to the sample, identify the considerations for interpretation of the results obtained.
<b>Flame Ionization Detectors (FID)</b>	Given a flame-ionization detector, the participant will be able to prepare, operate and interpret the information provided by the instrument and use the data provided in a comparison analysis with other data.
<b>Wet Chemistry Procedures</b>	Integrate basic wet chemistry procedures into the detection and hazard analysis process.
<b>Application &amp; Evaluation</b>	Provided with numerous samples in a tabletop setting, apply a systematic approach to the detection and analysis process necessary to determine the primary hazards of a substance.
<b>Summary Evaluation</b>	Given the detection instruments addressed in this training program and scenarios involving both transportation and fixed location incidents, identify the appropriate equipment and properly interpret the detection technology.