

Program of Instruction

Course Syllabus

Course Title: Ethanol Awareness

Course Duration: 3 hours

Program: Hazardous Materials Program

Course Prerequisites:

Must be a member of a fire department or a 1st responder organization

Course Description: The goal of this course is to give the student a basic understanding of the emerging ethanol industry. Chances are you have volumes of ethanol moving through your community on any given day. Fire departments with ethanol plants in neighboring communities may be called to assist in ethanol plant emergencies. Ethanol has significantly different characteristics than petroleum based motor fuels. You must prepare to handle ethanol type incidents. Finally, this course provides a foundation to prepare you to take future ethanol courses.

The Awareness course covers topics relating to E-85 such as chemical and physical properties, terminology, production, transportation, distribution, fire and health hazards, spills and the ramifications, sources of additional information and firefighting considerations and procedures.

Course Requirements and/or Recommendations: These can be divided into three categories: those completed prior to arriving in class (Pre-Course Work), those completed during class, such as homework assignments and quizzes (Course Work), and requirements completed after class but prior to receiving a certificate of completion. (Post-Course Work)

Summary of Directions

Pre-Course Work: None

Course Work: Attend and participate in all lectures and practicals.

Post-Course Work: None

Course Policies:

Safety Policy: Students shall understand and follow all instructions pertaining to operational safety, as stated by instructors or as written in course materials. Instructors and students shall be mindful of safety at all times. Conduct judged to be unsafe shall be grounds for dismissal from the course.

Academic Integrity Policy: IFSI has the responsibility for maintaining academic integrity so as to protect the quality of the education provided through its courses,

and to protect those who depend upon our integrity. It is the responsibility of the student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions. Any violation of the code of conduct is grounds for immediate dismissal from the course.

Course Content:

Module 1: Properties

Terminal Learning Objective:

At the conclusion of this module, the student will summarize the chemical properties and behaviors of ethanol.

Module 2: Terminology

Terminal Learning Objective:

At the conclusion of this module, the student will define common terms used when discussing ethanol and ethanol firefighting.

Module 3: Production

Terminal Learning Objective:

At the conclusion of this module, the student will describe the ethanol production process.

Module 4: Transportation

Terminal Learning Objective:

At the conclusion of this module, the student will summarize the means used to transport ethanol and the markings used to identify the container's contents during transit.

Module 5: Distribution

Terminal Learning Objective:

At the conclusion of this module, the student will summarize the means and methods used to distribute E-85 to filling stations.

Module 6: Hazards

Terminal Learning Objective:

At the conclusion of this module, the student will describe the dangers of ethanol production, transportation and distribution.

Module 7: Firefighting Considerations

Terminal Learning Objective:

At the conclusion of this module, the student will describe basic firefighting considerations and procedures for ethanol fires.

Module 8: Basic Foam OperationsTerminal Learning Objective:

At the conclusion of this module, the student will explain foam production methods and their proper usage on the fireground.

Module 9: SpillsTerminal Learning Objective:

At the conclusion of this module, the student will describe the proper precautions to take when handling an ethanol spill.

Course Schedule

<u>Event</u>	<u>Duration</u>
Module 1: Properties	15 minutes
Module 2: Terminology	15 minutes
Module 3: Production	15 minutes
Module 4: Transportation	15 minutes
Module 5: Distribution	15 minutes
Module 6: Hazards	15 minutes
Module 7: Firefighting Considerations	15 minutes
Drill 7.1 - Ethanol Fire Foam Demo	15 minutes
Module 8: Basic Foam Operations	15 minutes
Drill 8.1 – Foam Line Set-Up & Operations	30 minutes
Module 9: Spills	15 minutes