



Line Fuel Service Course Syllabus

As mandated by Federal guidelines the ACE SafetyPro Training Center offers a comprehensive national training program encompassing 8 hours of study. This course exceeds the requirements set forth by the Federal Aviation Administration which mandates fueling personnel receive initial and recurrent training in fuel and fire safety from an authorized provider. It is intended to provide fuel handling personnel the knowledge to safely provide fueling services at our nation's airports and maintain a clean fuel product thereby increasing safety in our skies. When successfully completed the student will have met the classroom requirements of 14 CFR 139.321(b)(1) through (b)(7) and 14 CFR 139.321(e)(2).

Lesson 1: Orientation

- Lesson Objectives
- Course Purpose
- Expected outcomes
- Course Topics
- Course Testing and Completion
- 14 CFR part 139.321 requirements
- Additional requirements of the airport (ACM)
- Lesson Review
- Lesson Quiz

Lesson 2: National Codes, Ordinances and Documents

- Lesson Objectives
- AC 150/5230-4
- NFPA 407
- Lesson Review
- Lesson Quiz

Lesson 3: Basic Fuel Safety

- Lesson Objectives
- Categories of Aviation Fuel
- Fire Hazard Properties of Aviation Fuel
- Definitions
- Fire Tetrahedron
- Classes of Fuel
- Methods of Heat Transfer
- Stages of Fire
- Extinguishment Theory
- Lesson Review
- Lesson Quiz

Lesson 4: Fuels and Lubricants, Oxygen

- Lesson Objectives
- Safety Precautions
- Properties of Oxygen
- Proper Handling of Lubricants
- Proper Handling of Greases
- Proper Handling of Hydraulic Fluids
- Lesson Review
- Lesson Quiz

Lesson 5: Hazardous Materials

- Lesson Objectives
- Department of Transportation hazardous material definition
- Hazardous Materials Abbreviations
- Material Safety Data Sheets
- Types of Exposures
- Decontamination Terminology
- General Toxin Types
- Modes of Entry
- Emergency Response Actions
- “Hazard Communication Right to Know” Video Presentation
- Compliance Agencies
- Lesson Review
- Lesson Quiz

Lesson 6: Personal Protection

- Lesson Objectives
- Personal protection, including eyes, ears, hands and feet.
- Types of clothing, shoes/boots,
- Prohibition on carriage of smoking materials, first aid
- Personal Protection Video Presentation
- Lesson Review
- Lesson Quiz

Lesson 7: Spill and Leak Management

- Lesson Objectives
- Your Responsibilities
- Control the Leak and Spill
- Clean up of materials
- Decontamination of Personnel and Equipment
- Lesson Review
- Lesson Quiz

Lesson 8: Fuel Storage Areas

- Lesson Objectives
- Fences, gates/locks, identification of products
- Signs, emergency controls
- Low visibility and night fueling operations
- Proper procedures for fuel farm operations
- Safety awareness
- Use of emergency shutoffs,
- Communications for assistance
- Lesson Review
- Lesson Quiz

Lesson 9: Weather Effects on Fueling Operations

- Lesson Objectives
- Thunderstorms
- Winter Storms
- Lightning Hazards
- Lesson Review
- Lesson Quiz

Lesson 10: Aviation Refuelers

- Lesson Objectives
- Planning and Design
- Equipment
- Inspections
- Lesson Review
- Lesson Quiz

Lesson 11: Fuel Contaminants

- Lesson Objectives
- Water Contamination
- Particulate Contamination
- Surfactant Contamination
- Microorganism Contamination
- Cross Contamination
- FSII and DEF Hazards
- Lesson Review
- Lesson Quiz

Lesson 12: Receiving Fuel Shipments

- Lesson Objectives
- Before Loading Operations
- During Loading operations
- After Loading Operations
- Recording of Data
- Lesson Review

- Lesson Quiz

Lesson 13: Fuel Filtration

- Lesson Objectives
- Filter Separators
- Filter Monitors
- Microfilters
- Clay Treatment
- Dehydrators
- Filter Vessel Appurtenances
- Filter Vessel Data
- Filter Element Replacement Criteria
- Differential Pressure
- Lesson Review
- Lesson Quiz

Lesson 14: Fuel Storage Facilities

- Lesson Objectives
- Planning and Design
- Equipment
- Inspections
- Lesson Review
- Lesson Quiz

Lesson 15: Fuel Quality Testing

- Lesson Objectives
- API Specific Gravity Test
- Filter Membrane Test
- Free Water Test
- Fuel System Icing Inhibitor (FSII) Test
- White Bucket Test
- Lesson Review
- Lesson Quiz

Lesson 16: Operational Procedures

- Lesson Objectives
- Filter Element Replacement
- Misfueling Prevention
- Nozzle Screen Inspection
- Water Defense Systems
- Recordkeeping
- Lesson Review
- Lesson Quiz

Lesson 17: Line Fuel Service Final Assessment

- Quiz Review
- Questions and Answers
- Testing
- Testing Results and Remediation
- Finish