🔥 **COEVTA 2026 – Academy Class Descriptions**

CLS1: Pump It Up
PUMP MAINTENANCE & REPAIR – 4 Day Course

Class Overview:
If the pump fails, nothing else matters.

This course provides a comprehensive understanding of fire pump systems, including theory, operation, maintenance, and performance testing. Students will learn how pumps function under real-world conditions and how to identify issues before they become failures.

Instruction includes pump components, pressure control devices, and system accessories, along with current NFPA 1901 and 1911 standards. Students will perform drafting, flowing, and hands-on pump testing, including tank-to-pump and intake relief valve evaluations.

Through classroom and practical exercises, students will develop the skills to diagnose performance issues, conduct accurate testing, and maintain pumps with confidence in the field.

CLS2: I Like Big Trucks
AERIAL MAINTENANCE – 4 Day Course

Class Overview:
Big trucks come with big responsibilities.

This course covers the inspection, maintenance, and operation of aerial apparatus with a focus on safety, reliability, and compliance. Students will gain the knowledge required to properly maintain aerial devices and understand the consequences of failure.

Instruction includes NFPA 1901 and 1911 standards, routine inspections, preventative maintenance, and operational considerations. A dedicated segment examines real-world aerial failures and how they have shaped current design and safety standards.

Hands-on training will reinforce proper inspection techniques and maintenance practices, preparing students to keep aerial apparatus operating safely and effectively.

CLS3: Watt Could Go Wrong
APPARATUS ELECTRICAL – 4 Day Course

Class Overview:
Electricity doesn't forgive shortcuts.

This course prepares students to understand, diagnose, and repair fire apparatus electrical systems. Topics include electron theory, AC/DC circuits, and critical diagnostic strategies used in modern apparatus.

Students will work with industry tools including digital meters, test lights, scan tools, lab scopes, and thermal imaging equipment. Training includes circuit testing, voltage drop analysis, relay and component testing, and troubleshooting multiplexed systems.

Hands-on exercises using configurable test boards allow students to apply concepts in real-world scenarios, building confidence in diagnosing and correcting electrical issues.

CLS4: Shift Happens
ALLISON TRANSMISSION MAINTENANCE & REPAIR – 4 Day Course

Class Overview:
When it won't shift, nothing moves.

This course covers the theory, operation, maintenance, and diagnostics of Allison transmissions used in fire apparatus. Students will gain a working understanding of how these systems function and how to identify and resolve common issues.

Instruction includes transmission components, fluid systems, electronic controls, and diagnostic procedures. Students will learn proper maintenance practices and how to interpret data for accurate troubleshooting.

By the end of the course, students will be better equipped to maintain and diagnose transmission systems to keep apparatus in service and operating reliably.

CLS5: Glue Gun for Grown-Ups
BASIC WELDING (MIG/TIG) – 4 Day Course

Class Overview:
Good welds hold. Bad welds fail when it matters most.

This introductory welding course provides hands-on training in MIG and TIG welding processes. Students will spend dedicated time developing fundamental skills in both methods under instructor guidance.

Training includes equipment setup, material preparation, welding techniques, and safety practices. Students will complete practical exercises designed to build confidence and consistency in weld quality.

All materials and PPE are provided. By the end of the course, students will have a solid foundation in welding and the ability to perform basic repairs and fabrication tasks.

CLS6: Sirens, Lights, & Bad Decisions
UPFITTING BASICS – 4 Day Course

Class Overview:
From clean installs to electrical nightmares, this class covers what separates the two.

This hands-on course dives into the fundamentals and real-world challenges of upfitting fire apparatus. Whether building from scratch or fixing someone else's work, students will learn how to produce clean, reliable installations and recognize common failures.

The course begins with foundational concepts, materials, and circuit protection, with hands-on exercises focused on building and evaluating electrical connections. From there, students will explore multiplex and intelligent control systems, including their capabilities, limitations, and real-world applications. The class wraps up with installation best practices and troubleshooting, including drilling and sealing, harness management, and component installation. Hands-on labs focus on diagnosing and repairing faults.

Students will leave with the skills to perform safe, functional installs—and avoid the kind that come back.

CLS7: Diesel Therapy
CUMMINS ISL9/X12 – 4 Day Course

Class Overview:
Power is useless if you can't keep it running.

This course, led by Cummins instructors, provides in-depth training on the ISL9 and X12 engines used in fire apparatus. Students will learn engine operation, maintenance requirements, and diagnostic procedures.

Instruction includes system components, performance characteristics, and troubleshooting strategies for common faults. Hands-on and classroom training reinforce proper diagnostic approaches and service practices.

Students will gain the knowledge needed to maintain engine reliability and efficiently diagnose issues in the field.

CLS8: Know Your Rig
DRIVER OPERATOR PUMPER – 4 Day Course

Class Overview:
Anyone can drive it—knowing it is what keeps it in service.

This course focuses on developing a thorough understanding of fire apparatus from the driver/operator perspective, with emphasis on inspection, system familiarity, and operational readiness.

Students will learn how to perform detailed apparatus inspections, identify developing issues, and understand how vehicle systems function together. Topics include pump systems, electrical components, braking systems, and other critical apparatus features that impact performance and safety.

Instruction will also cover proper documentation, preventative maintenance awareness, and recognizing early signs of failure before they lead to downtime.

Hands-on training will reinforce inspection techniques and system identification, giving students practical experience evaluating apparatus condition and readiness.

Students will leave with the knowledge and confidence to properly inspect, understand, and operate their apparatus. Pre-reading IFSTA's *Pumping Apparatus Driver/Operator Handbook (3rd Edition)* is recommended for those who want to get the most out of the class.