



UNMANNED AERIAL SYSTEMS

Curriculum Framework

UAS Flex Course: Designed for 135-180 hours of instructional time

Hours	Weight	Objectives / Indicators
INTRODUCTION TO UAS		
19.8	11%	101. Introduce UAS and UAS Regulations.
3.6	2%	101.01 Define and categorize types of UAS.
3.6	2%	101.02 Explain what personal harm and property damage could result from inappropriate use.
7.2	4%	101.03 Demonstrate basic understanding of restrictions on UAS flights.
5.4	3%	101.04 Describe appropriate and inappropriate locations and conditions.
UAS COMPONENTS AND TROUBLESHOOTING		
10.8	6%	102. Understand Propulsion and Power.
5.4	3%	102.01 Compare the two types of propulsion.
5.4	3%	102.02 Describe the function and types of common batteries used in UAS.
9.0	5%	103. Understand Types of Control.
5.4	3%	103.01 Classify the various levels of operator vs. computer control.
3.6	2%	103.02 Classify communication methods.
18	10%	104. Understand Core Components.
7.2	4%	104.01 Identify the core components used in UAS.
10.8	6%	104.02 Select appropriate UAS components.
18	10%	105. Execute Troubleshooting.
3.6	2%	105.01 Establish a troubleshooting theory.
3.6	2%	105.02 Identify tools and equipment for maintenance and repair.
10.8	6%	105.03 Apply a theory to solve common UAS hardware, software and communication problems.
UAS FLIGHT OPERATIONS		
12.6	7%	106. Execute Pre- and Post-Flight Operations.
5.4	3%	106.01 Identify the components of a pre-flight and post-flight checklist.
7.2	4%	106.02 Execute a pre-flight and post-flight check.
18	10%	107. Execute In-Flight Operations.
5.4	3%	107.01 Describe the roles of a UAS flight team.
5.4	3%	107.02 Understand the stages of flight: takeoff, flight, and landing.
7.2	4%	107.03 Execute appropriate responses to specific in-flight scenarios.



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INDUSTRY-SPECIFIC APPLICATIONS		
73.8	41%	108. Apply Industry-Specific UAS Applications.
16.2	9%	108.01 Research current applications of UAS operations.
27	15%	108.02 Develop a UAS solution for a given industry-specific scenario.
5.4	3%	108.03 Select appropriate platform for a specific mission.
10.8	6%	108.04 Configure flight plan using appropriate software.
14.4	8%	108.05 Select and execute appropriate flight modes.