



UNMANNED AERIAL SYSTEMS

Curriculum Framework Revised 2018

UAS LEVEL ONE: *Designed for 135-180 hours of instructional time*

RBT	Weight	Objectives / Indicators
HISTORY AND TYPES OF UAS		
B2	10%	101. Understand the Basics of UAS.
A1	3%	101.01 Define and categorize types of UAS.
B2	5%	101.02 Describe the development of UAS technology.
B2	2%	101.03 Explain the role of UAS communities and networks.
SAFETY AND REGULATIONS		
B2	9%	102. Understand Why Safety Considerations and Regulations are Necessary.
B2	2%	102.01 Explain what personal harm and property damage could result from inappropriate use.
B2	5%	102.02 Demonstrate basic understanding of restrictions on UAS flights.
B2	2%	102.03 Describe appropriate and inappropriate locations and conditions.
BASIC AVIATION / AERONAUTICS		
B2	11%	103. Understand Principles of Flight.
A1	4%	103.01 Identify the structure of an aircraft.
B2	3%	103.02 Explain the four forces of flight.
B2	4%	103.03 Explain the characteristics of roll, pitch and yaw.
B2	10%	104. Understand Propulsion and Power.
B2	3%	104.01 Compare the two types of propulsion.
B2	5%	104.02 Describe the function and types of common batteries used in UAS.
B2	2%	104.03 Describe the properties and functions of propellers.
B2	6%	105. Understand Types of Control.
B2	2%	105.01 Classify the various levels of operator vs. computer control.
B2	4%	105.02 Classify communication methods.
ASSEMBLY AND STRUCTURE		
B2	9%	106. Understand Materials Science.
B2	3%	106.01 Compare and contrast the different materials used in airframe construction.
B2	6%	106.02 Describe and demonstrate soldering methods.
RBT	Weight	Objectives / Indicators
B2	8%	107. Understand Core Components.
A1	4%	107.01 Identify the core components used in UAS.
B2	4%	107.02 Select appropriate UAS components.



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UAS LEVEL ONE (continued)

C3	20%	108. Perform UAS Assembly.
A1	4%	108.01 Identify tools and equipment for assembly.
C3	10%	108.02 Build and configure a quadcopter.
C3	6%	108.03 Test system functionality.
BASIC OPERATIONS		
C3	8%	109. Execute Pre- and Post-Flight Operations.
A1	3%	109.01 Identify the components of a pre-flight and post-flight checklist.
C3	5%	109.02 Execute a pre-flight and post-flight check.
C3	9%	110. Execute In-Flight Operations.
B2	2%	110.01 Describe the roles of a UAS flight team.
B2	2%	110.02 Understand the stages of flight: takeoff, flight, and landing.
C3	5%	110.03 Execute appropriate responses to specific in-flight scenarios.