Glendale Unified School District School

High School

November 5, 2018

Department:	Career Technical Education
Course Title:	Aviation Ground School Honors
Course Code:	4269V/4270V
Grade Level(s):	11-12
School(s) Course Offered:	Crescenta Valley High School
UC/CSU Approved (Y/N, Subject):	Y; "g" General Elective, Honors Designation
Course Credits:	10
Recommended Prerequisite:	AFJROTC 2, AFJROTC 1
Recommended Textbook:	Guided Flight Discovery, Private Pilot ISBN 978-0-88487-112-5, published 2015, by Jeppesen

Course Overview: Aviation Honors Ground School is a capstone course for the Transportation industry sector, Operations Pathway-Air Force JROTC program. The purpose of the Aviation Honors Ground School is to support and foster the developing cadets growing knowledge and interest in aviation, upon successful completion the cadets will receive a formal certification from the Federal Aviation Administration (FAA) ground school certificate enabling Cadets to pursue private pilot training. The mission of the AFJROTC Program is to "Develop citizens of character dedicated to serving their nation and community." The objectives of JROTC are to educate and train high school cadets in citizenship, promote community service, instill responsibility, character, and self-discipline, and provide instruction in air and space fundamentals. The AFJROTC program is grounded in the Air

Force core values of integrity first, service before self, and excellence in all we do.

Course Content – First Semester

Unit 1: Fundamentals of Flight *(4 weeks)*

STANDARDS
Transportation Anchor Standards: 1.0, 3.0, 3.6
Operations Pathway Standards: A1.0, A2.0, A5.0
Common Core Standards: CCSS SEP, PS2, PS3, LS1.D, ETS1

A. Introduction to the training process, aircraft systems and aerodynamic principles.

Assessment tools will consist of closed book testing at the end of each chapter as well as guided small group discussion to ensure understanding. During this unit the students will build on the basic fundamental knowledge required of a pilot throughout training and execution. Students will primarily use lecture and online resources to in addition to the issued textbook. Upon completion of this unit the students will be tested on the aerodynamic principles of aviation, the process to becoming a private pilot, and aircraft systems thru closed book tests.

B. Key Assignments: Verbal and written tests regarding aircraft systems. Students will demonstrate flight characteristics and function of aircraft system.

Unit 2: Flight Operations *(5 Weeks)*

STANDARDS
Transportation Anchor Standards: 2.0, 4.0, 6.6, 10.0, 11.0
Operations Pathway Standards: A1.0, A2.0, A3.0, A6.0
Common Core Standards: CCSS SEP, PS2, PS3, LS1.D, ETS1

A. This unit will continue to reinforce the knowledge from the previous unit while developing knowledge and understanding of the flight environment to include safety airspace understanding, aeronautical charts and communication standards Assessment tools will consist of closed book testing at the end of each chapter as well as guided small group discussion to ensure understanding. This unit will begin the introduction and proper use of the flight simulators to apply unit information. During this unit students will demonstrate an understanding of the standards of communication in aviation to include proper formatting and use of

radios. Students will also demonstrate proper interpretation of aeronautical charts and sources of information valuable to a pilot.

B. Key Assignments: Verbal and written tests regarding communication standards. Students will interpret aeronautical charts and plan flights.

Unit 3: Aviation Weather *(4 Weeks)*

STANDARDS
Transportation Anchor Standards: 2.0, 4.0, 5.0, 7.3, 10.0
Operations Pathway Standards: A2.0, A3.0, A6.0
Common Core Standards: CCSS SEP, PS2, PS3, LS1.D, ETS1

A. This unit will focus heavily on weather and the impact it has on aviation. Assessment tools will consist of closed book testing at the end of each chapter as well as guided small group discussion to ensure understanding. During this unit students will demonstrate an understanding of basic weather theory, weather patterns and hazards. Additionally students will demonstrate through application the proper interpretation of weather information and how to obtain the relevant information from specific sources with regard to the mission.

B. Key Assignments: students will research using appropriate source the impact weather has on aviation. Students will continue to be graded on previous lessons.

Unit 4: Simulator Application *(5 Weeks)*

STANDARDS
Transportation Anchor Standards: 2.0, 4.0, 5.0,10.0, 11.0
Operations Pathway Standards: A1.0, A2.0, A3.0, A6.0
Common Core Standards: CCSS SEP, PS2, PS3, LS1.D, ETS1

A. This unit will provide demonstration of learned concepts through the use of the simulator to reinforce students knowledge. Assessments will consist of hands on application through the use of the simulator to demonstrate understanding. End of unit tests will also be used. During this unit students will demonstrate an understanding of all previous lesson material through realistic training scenarios. Students will continue to sharpen their knowledge of aviation.

B. Key activities: students will fly pre-planned missions utilizing the flight simulators to demonstrate understanding of previous lessons.

Course Content – Second Semester

Unit 5: Performance and Navigation *(9 Weeks)*

STANDARDS
Transportation Anchor Standards: 2.0, 4.0, 5.0, 10.0
Operations Pathway Standards: A2.0, A3.0, A6.0
Common Core Standards: CCSS SEP, PS2, PS3, LS1.D, ETS1

A. This unit will introduce advanced concepts of predicting aircraft performance and advanced navigation. Assessment tools will consist of closed book testing at the end of each chapter as well as guided small group discussion to ensure understanding

B. During this unit students will demonstrate an understanding of weight and balance in aviation, the use of flight planning tools and advanced navigation techniques. Students will continue to hone previous skills and knowledge during this unit. Students will utilize the simulator to apply these concepts.

Unit 6: Integrating Pilot Knowledge and Skills *(9 Weeks)*

STANDARDS
Transportation Anchor Standards: 1.0, 2.0,4.0, 5.0, 6.0, 10.0, 11.0
Operations Pathway Standards: A1.0, A2.0, A3.0, A5.0, A6.0
Common Core Standards: CCSS SEP, PS2, PS3, LS1.D, ETS1

A. This unit will cover the application of aeronautical decision making principles and flight related physiological factors. Assessment tools will consist of closed book testing at the end of each chapter as well as guided small group discussion to ensure understanding

B. During this unit students will apply previously learned knowledge in scenarios and situation designed to stress the student in real world situations through the use of the simulator and realistic planning limitations Students will continue to hone previous skills and knowledge during this unit.

Honors Final Exam Details:
Students take and pass the Federal Aviation Administration (FAA) written examination per requirement of the Federal Aviation Regulations CFR 61-102, Sections 61.103 & 61.105. The written examination will be administered by qualified FAA testing center in the area. The written examination covers all knowledge areas of flight to include fundamentals, radio communication, safety of flight, recognition of critical weather factors to flight, aeronautical decision making, usage of charts, and accident reporting procedures. Successful completion of this exam enables students to pursue a private pilot rating in the future.