

LUCY RAGSDALE HIGH SCHOOL AFJROTC
AEROSPACE SCIENCE I (1st YEAR CADETS)
2nd Semester

COURSE NAME: Aerospace Science I

CREDIT TYPE: One General Elective Credit

INSTRUCTORS: Chief Michael McMillan (ret), Senior Instructor mcmillm@gcsnc.com
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Office Hours 8am - 5pm \ Contact # 336-454-7400

AIR FORCE JUNIOR RESERVE OFFICER TRAINING CORPS (AFJROTC) MISSION:

Our mission is to develop citizens of character.

TEXT & MATERIALS (provided):

1. GCS Issued Chromebook
2. AS 100 - Milestones in Aviation History
3. LE 100 - Traditions, Wellness, and Foundations of Citizenship
4. L2L AFJROTC Cadet Drill Guide
5. DAF Pamphlet 34-1203
6. RHS AFJROTC Cadet Guide

**This class is for 1st year Cadets. The curriculum is broken out as follows: Leadership Education (50%), Aerospace Science (30%), and Wellness/Physical Fitness (20%).

Leadership Education 100: Traditions, Wellness and Foundations of Citizenship

Leadership Education 100 introduces the student to the Air Force Junior Reserve Officer Training Corps (AFJROTC) program, while instilling elements of good citizenship, strengthens and develops character; wear of the Air Force uniform and Air Force customs and courtesies. Cadets will gain an understanding of self-discipline and teamwork by way of military drill, which focuses on individual and group sequences, and attention to detail.

Course Outcomes:

1. Chapter 1: Intro to JROTC Programs (Lessons 1 - 5)

- a. Identify the purpose and structure of the JROTC Programs
- b. Determine proper wear of the military uniform
- c. Apply customs and courtesies in the Junior ROTC environment
- d. Demonstrate ethical concepts

2. Chapter 3: Be Health Smart (Lesson 3)

- a. Evaluate the importance of physical fitness

3. Drill and Ceremonies (Lesson 1 - 4 and 7)

- a. Know the importance of drill and ceremonies
- b. Know basic command and characteristics of the command voice
- c. Perform basic drill positions and movements
- d. Perform parade movements as a flight

Aerospace Science 100: Milestones in Aviation History

Aerospace Science 100 is an aviation history course focusing on the development of flight throughout the centuries. In chapter one we discuss early contributions to ancient flight. This chapter covers the discovery of how to fly using hot air balloons, early engines to propel dirigibles and early flight experiments with gliders. While exploring this chapter we will learn about the significant contributions of the Wright brothers.

Course Outcomes

1. Chapter 1: Exploring Flight (Lessons 1 - 2)

- a. Examine the contributions that early civilization had on heavier than-air flight
- b. Analyze the significant contributions in early development of flight

Aerospace Science 610: Rockets

Aerospace Science 610 is an exploration of rockets. This STEM based lesson will focus on the principles of how rockets work. Cadets will build and launch several rocket models.

Course Outcomes

1. NASA Rocketry: (Lessons 2-4)

- a. Know the basic principles of how rockets work
- b. Understand fundamental principles of model rocketry, including components, assembly, and safe launch procedures.
- c. Analyze and assess rocket performance

Leadership Education 600: Drill Leadership Development Requirement (LDR)

Drill LDR is a block of study designed to give cadets the same experience as those who participate in the afterschool drill team. The intent is to identify cadets who want to learn drill at a competitive level but are not able to attend drill practice. During this course cadets will be handpicked to participate in drill competitions.

Course Outcomes

1. Drill and Ceremonies (Lesson 1 - 4 and 7)

- d. Know the importance of drill and ceremonies
- e. Know basic command and characteristics of the command voice
- f. Perform basic drill positions and movements
- g. Perform parade movements as a flight

Wellness/Physical Fitness

This part of the program is designed to motivate cadets to lead active, healthy lifestyles beyond program requirements. Cadets will learn proper exercise, stretching techniques, and teamwork. A Physical Fitness Test (PFT) consisting of 3 areas: push-ups, sit-ups and 1 mile run/walk is accomplished during the semester.

Course Outcomes

1. Wellness/Physical Fitness Program

- a. Motivate cadets to lead active, healthy lifestyles beyond program requirements and into their adult lives
- b. Identify areas of improvement for each cadet
- c. Incorporate a physical training plan to assist cadets with reaching improvement goals

Uniform Days: Cadets WILL wear the issued Air Force JROTC uniform on Wednesday and the issued PT uniform on Friday unless otherwise announced.

Grading

Dress & Appearance (40% of grade): Required to wear uniform on scheduled uniform days

Quizzes & Exams (20% of grade):

Leadership/Followership/Assignments (20% of grade) Weekly grade includes Class Participation & Assignments

Physical Training (20% of grade): Wear of Issued shorts/shirt & athletic shoes mandatory.

Grading Scale

A - 90% and above

B - 80% - 89%

C - 70% - 79%

D - 60% - 69%

F - 59% and below

***Participation**

Attendance is taken daily, and all cadets are expected to attend class every day. Each day cadets will earn a minimum of 20 Leadership/Followership points when they participate in class. Cadets can lose or earn additional points according to graded items outlined on the daily attendance sheet.

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