

## 01311NC-032, AFJROTC COURSE SYLLABUS

### AEROSPACE SCIENCE III and AS III Honors: Exploring Space

The third year is a science course, which examines our Earth, the Moon and the planets, the latest advances in space technology, and continuing challenges of space and manned space flight. Issues critical to travel in the upper atmosphere such as orbits and trajectories, unmanned satellites, space probes, guidance and control systems are discussed in class. The manned space flight section covers major milestones in the endeavor to land on the Moon, and to safely orbit humans and crafts in space for temporary and prolonged periods. It also covers the development of space stations, the Space Shuttle and its future, and international laws for the use of and travel in space.

**Monday** is the Uniform Inspection Day for cadets unless changed by the SASI. Effective: Aug 2016

#### Course Objectives:

1. Know the history of astronomy and the specific characteristics of the Earth, Moon, solar system, and the planets.
2. Comprehend the big picture of space exploration, including the history of spaceflight, organizations doing work in space, and the overall space environment.
3. Comprehend the importance of entering space, characteristics of manned and unmanned spaceflight, and how humans are affected during spaceflight.
4. Comprehend the key concepts for getting from the surface of the Earth into Earth orbit and to other planets and back again.
5. Comprehend how spacecraft, rockets, and launch vehicles are designed and built.
6. Comprehend the latest advances in space technology.

#### Units Covered

1. Unit 1, Chapter 1 & 3
2. Unit 2, Chapter 5
3. Unit 3, Chapter 7, 8, & 9
4. Unit 4, Chapter 12 & 13

**Grading:** The science portion of the course counts 40% of the AFJROTC grade and will be graded by the SASI. The Leadership Education portion counts 40% and will be graded by the ASI. Wellness will be 20% of the AFJROTC grade and will be graded by both instructors.

#### **Grading Policy (current for AY 2016/2017)**

1. Academic/Leadership Tests	25%
2. Workbook assignments, Class work, Quizzes	20%
3. Uniform Inspections	35%
5. Drill/Health & Wellness	20%

**Wellness:** Health and Wellness is an official part of the Air Force Junior ROTC program. It is an exercise program focused upon individual base line improvements with the goal of achieving a national standard as calculated with age and gender. The program at NC-032 also seeks to address the mental and spiritual aspects of individual wellness through relaxation and teambuilding activities. Wellness is instrumental in developing citizens of character dedicated to serving our nation and communities. **Cadets will be given the opportunity to put into practice the wellness concepts that are taught in Leadership Education** The Wellness Program is a 18-week program modifiable to meet individual goals. Personal improvement will be rewarded. The 18-week program is comprised of several exercises which can be conducted with minimal space and with minimal climate dependency (e.g. the 1-mile run). The exercises develop all muscle groups and provide sufficient anaerobic and aerobic intensity. They require no equipment and use only body weight and common objects (e.g. chairs).

Instructors: **Capt Timothy Peedin**

**CMSgt Thomas Bridgers**