**COURSE NAME**: AFJROTC/Aerospace Science 300 Exploring Space

**CREDIT HOURS:** 1 elective hour.

**INSTRUCTOR’S NAMES:** Lt Col Nelson and MSgt Garcia

School WEBSITE: [gbhsafjrotc.weebly.com](mailto:gbhsafjrotc@weebly.com) (has the Cadet Guides on the site)

**REQUIRED TEXTS:** *Aerospace Science:* *Exploring Space: The High Frontier* &*Leadership Education III: Life Skills* *& Career Opportunities.* Texts are property of the US Air Force and will be issued when needed. We will also use parts of AF Manual 36-2203, Personnel Drill and Ceremonies, V-2627, Student Workbooks, Selected Video Tapes/DVDs, and the Cadet Guide and Operations Supplement 1&2

**COURSE DESCRIPTION**: In accordance with Air Force policy, Aerospace Science 300 is composed of three separate, integrated curriculums—40% aerospace science, 40% leadership, & 20% physical training/wellness.

**Aerospace Science Curriculum:** This is a science course that includes the latest information available in space science and space exploration. The course will cover units 1-4 of the text. It begins with the study of the space environment from the earliest days of interest in astronomy and early ideas of the heavens, through the Renaissance, and on into modern astronomy. It provides an in-depth study of the Earth, Sun, stars, Moon, and solar system, including the terrestrial and the outer planets. It discusses issues critical to travel in the upper atmosphere such as orbits and trajectories unmanned satellites, and space probes. It investigates the importance of entering space and discusses manned and unmanned space flights, focusing on concepts surrounding spaceflight, space vehicles, launch systems, and space missions. The section on manned spaceflight focuses on the Space Shuttle, space stations and beyond, covering milestones in the endeavor to land on the Moon and to safely orbit humans and crafts for temporary and prolonged periods. The course covers the human aspect of spaceflight, focusing on the human experience in space. It also examines the latest advances in space technology, including robotics in space, the Mars Rover, and commercial uses of space.

**Objectives:**

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

# Know the latest advances in space technology.

# Leadership Curriculum: The course will cover chapters 1-8 of the textbook. It will be helpful to students deciding which path to take after high school. Information on how to apply for admission to college or to a vocational or technical school is included. Information on how to begin the job search is available to students who decide not to go to college or vocational school. Available also is information about financial planning & how to save, invest, & spend money wisely, as well as how not to get caught in the credit trap. Students are informed about real life issues such as understanding contracts, leases, wills, warranties, legal notices, & personal bills. Citizen responsibilities such as registering to vote, jury duty, & draft registration will be helpful too. For those students who may be moving into an apartment of their own, information is presented on apartment shopping & grocery shopping skills. There is information on how to prepare a résumé & the importance of good interviewing skills. If there are students who are interested in a career in the military, with the federal government, or an aerospace career, information is also provided for them.

**Objectives:** Know …

* specific career options to pursue.
* elements of a personal budget and financial plan.
* the requirements for applying to a college or university.
* the essential process for pursuing a career.

**Physical Training/Wellness Program:** The Physical Training Program is an exercise program developed to help you lead a healthier active lifestyle & to create an individualized training program based on national standards by age & gender. This program is conducted during the 36 weeks of the school year & can be modified to meet your personal goals. It will help you identify areas where you need improvement & to incorporate needed physical training to achieve desired goals.

**Objective:**

* Motivate JROTC cadets to lead active, healthy lifestyles beyond program requirements

**Additional Course information:**

1. **Uniform Day**: **Monday is uniform and drill day.** You will wear the uniform to school & wear it all day for a grade. You will be inspected during your assigned class & monitored periodically during the day for proper wear & care of the uniform. **It is very important to note** that wearing the uniform once a week and complying with Air Force appearance standards while in uniform is a requirement for this course. **Failure to wear the uniform will result in a grade of zero. The uniform inspection grade may be made up by wearing the uniform any of the three school days following uniform day. Habitual failures to wear the uniform will be considered indifference to training and will be recommended for dismissal from the program.** Until a uniform has been issued to you will wear your JROTC polo shirt and khaki pants/shorts and be graded on how you comply with Air Force grooming standards (i.e. haircut for the boys) and school clothing requirements as detailed in the Student Code of Conduct. If you miss Monday’s uniform inspection with an unexcused absence, you have three school days to make up the grade. The first day after the absence the highest inspection grade will be an 89; two days 79, three days 69. If the absence is excused you must wear the uniform the next school day.
2. **Academic lessons** will be presented on Tuesdays and Thursday. **Leadership Lessons** will be presented on Wednesdays.
3. **PT/Wellness Day:** **Friday** will be PT/Wellness day. **PT shirt and shoes appropriate for athletics are required**. You will receive a PT grade for wearing the PT shirt, black shorts/pants, gym shoes and for participating.
4. **Notebooks:** You are required to have a notebook or folder where you will keep your notes and all handouts. You must bring your notebook to class every day. Notebooks will be checked for completeness periodically for a grade.
5. **Grading Procedures:** There are three categories of grades in this course: aerospace science (AS), leadership (LE), & Physical Training/Wellness (PT). Grades carry equal weight within each category. The three categories are combined at the end of the grading period for your final grade. AS grades are weighted 40% of the final, LE grades are weighted 40 %, & PT grades are weighted 20 %. As mandated by the school district, there is a final exam worth 10% of your total/final grade each semester. Grades are the traditional 90 and above for an A; 80 and above is a B; 70 and above is a C; and 60 and above is a D. Please use the internet to track grades.
6. **Drill** is an integral portion of this course & you can expect to drill outside a few times a week. Proper foot wear must be on-hand for drill performance**--please wear or bring to school, shoes for drill throughout the week**. Sandals, Crocs, flip-flops, heels, etc., are not appropriate for marching. You will receive an LE grade for wearing the appropriate shoes and participation.
7. **Classroom Procedures:**

* Be standing quietly beside your desk at parade rest prior to the bell.
* No homework will be accepted late without parent explanation attached.
* Follow the instructions of your cadet chain of command and instructors without quibbling.
* Follow all district and school rules regarding conduct; and follow the Cadet Code
* **Only bottled water is allowed in the classroom**.
* Bathroom pass will only be used for emergencies…try to use facilities between classes.
* Always be ready to learn. Do not lay down on the desks.
* No cell phones in class.

1. **$30 Activity Fee**—you will receive two Air Force shirts (1 embroidered Polo Shirt $17, 1 PT shirt $9, & a ticket to our annual dinner party called “Dining In”, in September). Please speak privately with an instructor to resolve any financial problems.

9. **Instructor Contact Information:**

* Email: You can email Lt Col Nelson at [Nelsonk@santarosa.k12.fl.us](mailto:Nelsonk@santarosa.k12.fl.us) and MSgt Garcia at [Garciar@santarosa.k12.fl.us](mailto:Garciar@santarosa.k12.fl.us)

10**. Grade information:** GBHS has a method available for students & parents to see student's progress.  Please see the school’s website: <http://www.santarosa.k12.fl.us/gbh> - click on “Dolphin Grade Online” and follow

the screen prompts.