

Air Force JROTC III

AF7918 36 weeks

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Course Description

Suggested Grade Level: 9 or 10 or 11 or 12

Students explore the Air Force JROTC program, with instruction focusing on aerospace science, including astronomy, space exploration, the development of air power, aerospace vehicles, and rocketry; life skills, career opportunities, and personal wellness. Aerospace science acquaints students with the elements of aerospace and the aerospace environment and introduces them to the history and development of air power. Leadership education develops leadership skills and acquaints students with the practical applications of life skills and includes a drill and ceremonies component. Instruction on effective communication and management techniques, human relations skills, and postsecondary education and career opportunities is also included. Personal wellness studies encourage cadets to lead healthy, active lifestyles into adulthood.

Instructors are asked to continue relying heavily on their branch-specific curriculum guides to complement this core set of competencies.

Per the 2017 Air Force Junior Reserve Officer Training Corps Curriculum Document (p.12), “Course Offerings: All units have the option to determine which [courses] to offer to first-, second-, third-, and fourth-year cadets.”

Task/Competency List

For the indicated course(s):

- Tasks/competencies designated by plus icons (+) in the left-hand column(s) are essential
- Tasks/competencies designated by empty-circle icons (○) are optional
- Tasks/competencies designated by minus icons (−) are omitted
- Tasks marked with an asterisk (*) are sensitive.

Task Number	AF7918	Tasks/Competencies
Exploring Aerospace Science: Space Exploration		
39	+	Explain the history of astronomy.

40	+	List specific characteristics of the Earth, Moon, solar system, and other planets.
41	+	Describe the history of space exploration and the effects on human physiology.
42	+	Explain how spacecraft, rockets, and launch vehicles are designed and built.
43	+	Explain orbits and trajectories.
Exploring Leadership: Life Skills and Career Opportunities		
44	+	Apply the principles and procedures of drill and ceremonies.
45	+	Plan a community service opportunity.
46	+	Identify personal short-, mid-, and long-term career goals.
47	+	Describe the elements of personal budgeting and financial planning.
48	+	Explain the requirements for applying to a college or university and financing a postsecondary education.
49	+	Investigate career options.
50	+	Identify methods for developing career skills.
51	+	Identify barriers to effective collaboration and teamwork.
52	+	Identify qualifications for serving in the U.S. military.
53	+	Evaluate the positive aspects of civic responsibility.
54	○	Complete the Armed Services Vocational Aptitude Battery (ASVAB).
55	+	Comply with procedures in the cadet guide or handbook.
Maintaining Personal Wellness, Health, and Fitness		
56	+	Maintain a physical fitness program.
57	+	Improve physical performance over time.

Legend: + Essential ○ Non-essential ⊖ Omitted

Curriculum Framework

Exploring Aerospace Science: Space Exploration

Task Number 39

Explain the history of astronomy.

Definition

Explanation should include information regarding

- the celestial sphere
- the Greek Earth-centered model
- Ptolemy's model
- Copernicus and the sun-centered model
- Kepler's laws of planetary motion
- Galileo and the telescope
- Newton's laws of motion and gravity
- Einstein's theory of relativity.

Process/Skill Questions

- What is Ptolemy's model?
- What are Kepler's laws of planetary motion?
- What is the celestial sphere?
- Where is Earth located?

Task Number 40

List specific characteristics of the Earth, Moon, solar system, and other planets.

Definition

List should include

- Earth's atmosphere, interior, magnetic field, and its relationship to the Moon
- Sun's atmosphere, core, energy, and sunspots
- Moon's size and distance from Earth
- solar system's structure
- asteroids, comets, etc.

Process/Skill Questions

- Which planets are considered gas giants?
- What is the distance between the Moon and the Earth?
- Where is the Kuiper Belt?

Task Number 41

Describe the history of space exploration and the effects on human physiology.

Definition

Description should include

- Soviet space program
- U.S. space program (e.g., Mercury, Gemini, Apollo)
- the space shuttle
- the space station
- unmanned space probes
- benefits of space exploration
- space suits
- selection and training of astronauts.

Process/Skill Questions

- Who was the first American astronaut to orbit the Earth?
- What was the purpose of each Gemini mission?
- How are astronauts selected?

Task Number 42

Explain how spacecraft, rockets, and launch vehicles are designed and built.

Definition

Explanation should include

- both military and civilian spacecraft
- advances in technology
- future space travel.

Process/Skill Questions

- What technological innovations have influenced space travel?
- What was unique about the space shuttle?
- Who builds rocket engines?

Task Number 43

Explain orbits and trajectories.

Definition

Explanation should include

- how orbits work
- the different types of orbits
- purposes of orbits
- trajectories in space travel
- maneuvering in space
- navigational data.

Process/Skill Questions

- How do objects stay in orbit?
- How are trajectories used in space travel?
- What are the purposes of orbits?
- What is an object called that is in orbit?

Exploring Leadership: Life Skills and Career Opportunities

Task Number 44

Apply the principles and procedures of drill and ceremonies.

Definition

Application could include

- identification of different types of ceremonies and parades
- definition of reveille and retreat
- pass and review
- drill of the flight
- change of command.

Process/Skill Questions

- What is the role of the guidon in the change of command?
- What bugle calls may be played for reveille and retreat?
- What is the position of the color guard in a parade?

Task Number 45

Plan a community service opportunity.

Definition

Planning should include

- coordinating with community partners
- collaborating with community leaders
- securing resources
- assigning roles to team members
- predicting tasks and time required to perform the community service
- evaluating benefits of the community service.

Process/Skill Questions

- What local organizations provide service opportunities?
- How can one contribute to national opportunities for service?
- What are some national service organizations?

Task Number 46

Identify personal short-, mid-, and long-term career goals.

Definition

Identification should include

- adjusting immediate goals and strengthening or adding to them
- adjusting those goals to be met by the end of the school year and by the end of the Air Force JROTC program, or upon graduation from secondary education
- adjusting those goals to be met during postsecondary education and beyond.

Process/Skill Questions

- What is the importance of establishing goals?
- What is a SMART goal?
- How can one track progress toward a goal?

Task Number 47

Describe the elements of personal budgeting and financial planning.

Definition

Description should include

- creating and balancing a budget
- managing savings, checking, and retirement accounts
- real-life issues in buying and selling homes and vehicles
- managing credit
- utilizing types of insurance to protect resources.

Process/Skill Questions

- Why is it important to maintain a budget?
- Why is good credit important?
- What is an APR?
- What are the major types of insurance available to protect resources?

Task Number 48

Explain the requirements for applying to a college or university and financing a postsecondary education.

Definition

Explanation should include

- completing necessary testing (e.g., SAT, ACT)
- selecting a college and major
- securing financing (e.g., filling out the free application for federal student aid [FAFSA] fafsa.ed.gov, researching scholarships, grant opportunities, student loans)
- writing essays
- visiting colleges/universities
- preparing for interviews.

Teacher Resource:

fafsa.ed.gov

Process/Skill Questions

- When should one start preparing for college admission?
- What are some factors to consider in selecting a major?
- When are Air Force ROTC scholarship applications due?

Task Number 49

Investigate career options.

Definition

Investigation should include

- the job search process
- preparing the résumé
- building interview skills
- assessing strengths and weaknesses
- careers in public service
- careers in the aerospace industry
- military careers.

Process/Skill Questions

- What is appropriate dress for a job interview?
- What information should one include in a résumé?
- What are some types of résumés?

Task Number 50

Identify methods for developing career skills.

Definition

Identification could include

- analyzing personal values that contribute to career success
- creating and implementing a plan for professional development.

Process/Skill Questions

- How can one's personal values contribute to career success?
- What is professional development, and why is it important?

Task Number 51

Identify barriers to effective collaboration and teamwork.

Definition

Identification should include the influence of ineffective communication skills, including written, verbal, and non-verbal.

Process/Skill Questions

- What are barriers to effective communication?
- Why is it important to identify barriers to effective communication?

Task Number 52

Identify qualifications for serving in the U.S. military.

Definition

Identification should include knowledge of

- age requirement
- Armed Services Vocational Aptitude Battery (ASVAB) requirements
- educational requirements and academic performance standards
- physical and mental health expectations.

Additional items may or may not affect admission into the military, including

- number of dependents under 18 years of age
- criminal record
- U.S. citizenship status.

Process/Skill Questions

- How old does one have to be to serve in the military?
- What health problems might prevent enlistment?
- What legal issues might prevent enlistment?

Task Number 53

Evaluate the positive aspects of civic responsibility.

Definition

Evaluation should include the importance of

- civic responsibility
- voting
- jury duty
- community involvement.

Process/Skill Questions

- Why is it important to become involved in one's community?
- What are the procedures and requirements for registering to vote?
- Why is jury duty mandatory?

Task Number 54

Complete the Armed Services Vocational Aptitude Battery (ASVAB).

Definition

Completion could identify potentially satisfying careers.

Process/Skill Questions

- How can the ASVAB help one identify career opportunities?
- What is the minimum score to get in the Air Force?
- What are the components of the ASVAB?

Task Number 55

Comply with procedures in the cadet guide or handbook.

Definition

Compliance should include identification of and adherence to branch-specific curriculum expectations that coincide with performance evaluation.

Process/Skill Questions

- Who is responsible for producing the cadet guide?
- What are some consequences for non-compliance?
- What is the proper way to wear one's uniform?

Maintaining Personal Wellness, Health, and Fitness

Task Number 56

Maintain a physical fitness program.

Definition

Maintenance should include:

- Education
- Participation
- Evaluation

Process/Skill Questions

- What are the benefits of regular exercise?
- What is the difference between cardiovascular and strength training?

Task Number 57

Improve physical performance over time.

Definition

Improvement could be based on striving for better performance and documenting those achievements over time in the following categories:

- Shuttle run
- One-mile run
- V sit-and-reach
- Push-ups
- Curl-ups.

Process/Skill Questions

- How can a person decrease his or her run time?
- What is the importance of flexibility in a regular exercise program?
- What are the dangers of a sedentary lifestyle?

SOL Correlation by Task

39	Explain the history of astronomy.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WHII.4 Science: ES.13
40	List specific characteristics of the Earth, Moon, solar system, and other planets.	English: 9.6, 9.7, 10.6, 10.7, 11.6, 11.7, 12.6, 12.7 History and Social Science: WG.1, WG.2, WG.3, WG.6, WG.7, WG.18 Science: ES.3
41	Describe the history of space exploration and the effects on human physiology.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: VUS.13 Science: ES.13
42	Explain how spacecraft, rockets, and launch vehicles are designed and built.	English: 9.5, 10.5, 11.5, 12.5
43	Explain orbits and trajectories.	English: 9.5, 10.5, 11.5, 12.5

		Mathematics: A.7, AFDA.1, AII.7, MA.6
44	Apply the principles and procedures of drill and ceremonies.	English: 9.5, 10.5, 11.5, 12.5
45	Plan a community service opportunity.	English: 9.1, 10.1, 11.1, 12.1
46	Identify personal short-, mid-, and long-term career goals.	English: 9.5, 10.5, 11.5, 12.5
47	Describe the elements of personal budgeting and financial planning.	English: 9.5, 10.5, 11.5, 12.5
48	Explain the requirements for applying to a college or university and financing a postsecondary education.	English: 9.5, 10.5, 11.5, 12.5
49	Investigate career options.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: GOVT.1, GOVT.16, VUS.1, WG.1, WHII.1
50	Identify methods for developing career skills.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: GOVT.1, GOVT.16, VUS.1, WG.1, WHII.1
51	Identify barriers to effective collaboration and teamwork.	English: 9.5, 9.6, 9.7, 10.5, 10.6, 10.7, 11.5, 11.6, 11.7, 12.5, 12.6, 12.7 History and Social Science: GOVT.1, VUS.1, WG.1, WHII.1
52	Identify qualifications for serving in the U.S. military.	English: 9.5, 10.5, 11.5, 12.5
53	Evaluate the positive aspects of civic responsibility.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: GOVT.1, GOVT.16
54	Complete the Armed Services Vocational Aptitude Battery (ASVAB).	English: 9.5, 10.5, 11.5, 12.5
55	Comply with procedures in the cadet guide or handbook.	English: 9.5, 10.5, 11.5, 12.5
56	Maintain a physical fitness program.	English: 9.5, 10.5, 11.5, 12.5
57	Improve physical performance over time.	English: 9.5, 9.6, 9.7, 10.5, 10.6, 10.7, 11.5, 11.6, 11.7, 12.5, 12.6, 12.7

Appendix: Credentials, Course Sequences, and Career Cluster Information

Industry Credentials: Only apply to 36-week courses

- Armed Services Vocational Aptitude Battery Examination
- College and Work Readiness Assessment (CWRA+)
- National Career Readiness Certificate Assessment
- Workplace Readiness Skills for the Commonwealth Examination

Concentration sequences: *A combination of this course and those below, equivalent to two 36-week courses, is a concentration sequence. Students wishing to complete a specialization may take additional courses based on their career pathways. A program completer is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program.*

- Air Force JROTC I (AF7913/36 weeks)
- Air Force JROTC II (AF7916/36 weeks)
- Air Force JROTC IV (AF7919/36 weeks)

Career Cluster: Education and Training	
Pathway	Occupations
Administration and Administrative Support	Instructional Coordinator Training and Development Manager
Professional Support Services	Instructional Developer
Teaching and Training	Coach, Secondary Level Instructional Coordinator Training Consultant/Training Specialist

Career Cluster: Government and Public Administration	
Pathway	Occupations
Foreign Service	Diplomatic Courier Foreign Service Worker Interpreter/Translator
Governance	Legislative Aide Legislator
National Security	Combat Specialty Officer Military Enlisted Personnel Military Intelligence Specialist Military Officer Special Forces Personnel
Planning	Economic Development Coordinator Urban and Regional Planner

Career Cluster: Government and Public Administration	
Pathway	Occupations
Public Management and Administration	Court Clerk Government Accountant/Auditor Postal Service Clerk Postmaster/Mail Superintendent
Regulation	Compliance Officer Environmental Compliance Inspector Private Detective, Investigator
Revenue and Taxation	Compliance Officer

Career Cluster: Law, Public Safety, Corrections and Security	
Pathway	Occupations
Correction Services	Corrections Officer Probation, Parole Officer
Emergency and Fire Management Services	Emergency Medical Technician, Paramedic Firefighter
Law Enforcement Services	Police Officer
Legal Services	Records Processing Assistant
Security and Protective Services	Private Detective, Investigator Security Officer

Career Cluster: Transportation, Distribution and Logistics	
Pathway	Occupations
Facility and Mobile Equipment Maintenance	Diesel Service Technician Service Technician Small Engine Mechanic
Health, Safety and Environmental Management	Health, Safety, and Environment Manager
Logistics Planning and Management Services	Logistics Analyst Logistics Engineer Logistics Manager
Sales and Service	Dispatcher
Transportation Operations	Transportation Manager
Transportation Systems/Infrastructure Planning, Management and Regulation	Civil Engineer Civil Engineering Technician Transportation Manager
Warehousing and Distribution Center Operations	Traffic Engineer Transportation Manager