Chapter 17 AEROSPACE CAREERS AND TRAINING

Our present-day aerospace society is complex and dynamic. It will become more complex as technology advances and the population increases.

Aerospace brought about change. The advent of space exploration in 1957, coupled with the beginning of commercial jet aviation in 1958, created an environment where the quest for knowledge became one of our nation's greatest industries. Suddenly, it was not only acceptable, but actually popular to do research. This brought about what many have called the "knowledge revolution." The computer was developed and refined, enabling people to store and analyze the tremendous amount of data created by aerospace-related industries. During the first decade of the space exploration program, more new knowledge was created than in the entire past history of mankind.

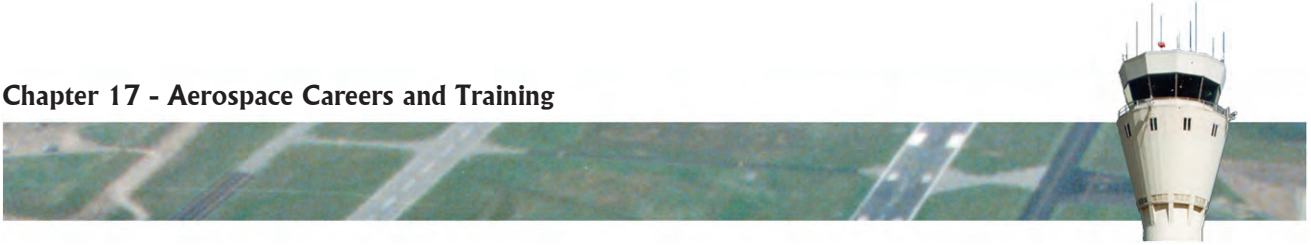
This quest for knowledge placed a great demand on our educational community. We needed, and still need, well-trained people to work in our aerospace community. The highly technical nature of aerospace demands training beyond the high school level. The special aptitudes and skills students possess and the courses they take in high school are important considerations in preparing for an aerospace career.

Objectives

OBJECTIVES:
Explain how the aerospace age has affected education and training.
Describe the relationship between aptitudes and careers.
List several reasons why junior colleges are popular and serve the educational needs of many people.
Describe the type of training available at technical/vocational schools.
Describe how institutes differ from junior colleges and technical/vocational schools.
Describe the types of aerospace courses taught in 4-year colleges and universities.
Compare the type of education received in a 4-year college with that received in a junior college, a vocational/technical school or an institute.
List four ways that the Air Force helps to train and educate their personnel.
Describe the AFROTC program.
Discuss the Air Force Academy's role in preparing officers for the US Air Force.
State what service the Community College of the Air Force provides to Air Force personnel.

Aptitudes and Aerospace Careers

The special talents and natural abilities that a person possesses are called aptitudes. The figure on page 364 shows some of these aptitudes, i.e., mechanical, verbal, numerical, social and artistic.



People with a good mechanical aptitude find it easy to repair, adjust or assemble machinery. Verbal aptitude is important in jobs related to any form of communication, such as reading, writing and speaking. Numerical aptitude makes mathematics very easy and is important to people seeking employment using calculators or computers.

There is a definite relationship between aptitudes and a person's success in certain occupations. People working in professions related to their aptitudes are usually happier in their careers. The figure on the next page shows the relationship between various aptitudes and those aerospace occupations in which they are important.

Air Force Pilots

The aerospace industries and government agencies employ aerospace personnel in many thousands of different job categories. Aptitudes in the areas listed in the chart may lead to satisfaction and success in hundreds of additional aerospace jobs requiring similar abilities.

Frequently, there are relationships between aptitudes and the school subjects you may like or dislike, those that are difficult, and those in which you may excel. The chart on the next page shows the association of selected school subjects with representative aerospace occupations in which they have primary importance.

An occupation should provide much more than a means of making a living. It should be interesting, pleasant and provide satisfaction and self-respect in addition to financial rewards. The choice of a particular occupation requires complex decisions involving such factors as general ability, special aptitudes, health, learned skills and family status, as well as the opportunities for necessary education and employment.

You may wonder how your aptitudes compare with those necessary in particular aerospace jobs. You are probably interested in discovering how your personal traits can be used to the best advantage. Questions may also arise concerning the educational requirements for different vocations.

Answers to these and many other questions about selecting the best vocation may be obtained in part from persons in your community. With the aid of standard inventory blanks, aptitude scales, interest surveys, and other materials for the measurement of personal traits, your teacher, principal or school counselor may give you objective information about your interests, personal aptitudes and general ability.

Vocational guidance services listed in your telephone directory and operated in your community as nonprofit organizations provide excellent assistance of this type. Local offices of your state employment commission offer vocational counseling services in addition to current occupational information.

APTITUDES AND AEROSPACE CAREERS

Aptitudes	Related Vocational Activities	Selected Aerospace Age Careers
Mechanical	Equipment Development Aircraft Maintenance Machinery Repair	Aeromechanical Engineer Astronautical Engineer Production Technician Power Plant Mechanic Instrument Repairman
Verbal	Speaking and Writing Giving Instructions Persuasive Activities	Flight Instructor Public Relations Director Air Traffic Controller Military Information Specialist Airline Sales Representative
Scientific	Research and Invention Experimentation Scientific Investigation	Aeronautical Engineer Physical Chemist Research Metallurgist Astrophysicist Aeromedical Lab Technician
Manipulative	Equipment Operation Machinery Control Instrument Supervision	Aircraft Pilot Flight Engineer Radar Specialist Machine Tool Operator Production Expediter
Numerical	Mathematical Calculations Arithmetic Reasoning Computational Activities	Data Processing Engineer Aircraft Navigator Research Mathematician Industrial Accountant Airline Statistician
Administrative	Managerial Activities Supervisory Responsibility Secretarial Duties	Research Project Director Management Engineer Airport Operator Military Administrative Officer Stenographer
Social	Service, Advice and Assistance to Individuals and Groups	Aviation Psychologist Personnel Manager Flight Nurse Training Director
Artistic	Self-expression Through Design Drawing and Other Creative Skills	Design Engineer Airline Architect Photographic Technician Technical Illustrator Scale Model Builder

Professional vocational and educational counselors and private employment agencies operated in your community as business enterprises provide similar assistance. Persons entering the military receive extensive counseling and guidance to help with their proper assignments.

Regardless of the choice you make as to the career you want to enter, you will need to receive additional education and training. Let's look at some of the advanced training available for persons interested in aerospace.

This could be your "office" in your future! Boeing 777 cockpit *(Boeing photo)*

Community Colleges

The community colleges, or junior colleges as they are also called, have become very popular in recent years and more are being built every year. Why the popularity? The community colleges are dispersed within the various states to make them more accessible to prospective students; students that can live at home and commute to school. Therefore, they are less costly. Also, the community college attendee is more likely to find a job to pay for, or help pay for, education at this level.

Community colleges offer the same courses that students take during the first 2 years at a 4-year college and, at most of them, students can specialize. For example, many provide a 2-year education that is especially tailored to the future engineer (aeronautical or otherwise) or to the future physician. Credits earned in this manner are transferred to a 4-year college or university, and the student proceeds to earn his or her degree.

In addition to the basic preparatory courses of study, which are common to further study in engineering, medicine, business, etc., the community colleges offer special terminal courses. These terminal courses will vary from college to college because they are usually established to fulfill the needs of prospective employers (industries) found within a local, state or regional area. As a result of the growth of new technologies created by aerospace developments, more and more community colleges offer courses that prepare students for vocations in the aerospace industry (air transport and aerospace

manufacturing) and related fields (government and military).

Common to most of the community colleges will be a continuation of studies in language, mathematics, history and certain other subjects that were begun in secondary school. In any event, the amount of exposure to these basic subjects will depend on which of the curricula a student chooses.

Welding is utilized in many construction and manufacturing businesses.

Technical/Vocational Schools

Curricula designed to prepare students for studies beyond community college level place more emphasis on basic subjects. On the other hand, curricula that are highly specialized and terminal (non-degree) place more emphasis on the subjects students will study.

Technical/vocational schools provide the majority of the formal technical educational courses. In this type of school, many people learn the special trades and skills that are applicable to the aerospace industry. A person planning to become an aircraft welder, an electronics technician or an aircraft power plant mechanic should seek the nearest technical/vocational school and obtain details on what the school has to offer. Let's take a quick look at what you would study if you were to decide to specialize as an aircraft airframe and power plant mechanic:

- Aircraft basic science
- Covering and finishing
- Aircraft sheet metal
- Assembly and rigging
- Aircraft wood work
- Auxiliary systems
- Aircraft welding
- Radio, electricity and instruments
- Aircraft electricity
- Rocket engines
- Aircraft power plants (introduction)
- Power-plant installation and test
- Induction, fuel and oil systems
- Repair stations (organization, management and operation)
- Aircraft propellers
- Aircraft hydraulics and pneumatics
- Turbine engines (operation, maintenance overhaul)

How long does it take to complete one of the courses of study described above? Like Community Colleges, it takes about 2 years. This time can be shortened to perhaps 15 calendar months if the student continues studies without a vacation break.

People who graduate from this type of school go directly into the work force of private industry or government. Usually there is a short period of further training sponsored by the employer. This is necessary because no two companies use the exact same manufacturing or work procedures and the new employee's skills must be adjusted to the employer's methods of doing things.

Institutes

At various locations across the country, special schools offer only those courses and degrees that are designed specifically for careers found in the aerospace field. This type of school probably uses the title of institute, but may be called school, college or university.

Institutes like the technical/vocational schools and community colleges (terminal courses), place more emphasis on subjects that are essential to doing the job for which the student is preparing. However, there will be several courses in the humanities (rather than subjects in science) that will help give the student a well-rounded education. Also, unlike community colleges and technical schools, students enrolled in institutes will earn a bachelor's degree.

Students attending an institute may concentrate in aerospace engineering, electronic engineering, mechanical engineering, aeronautical engineering, aircraft maintenance engineering technology, aviation management and mathematics.

Aerospace engineering is a curriculum that has evolved because of space developments. This type of engineering education prepares a person to work on either aircraft or spacecraft design and production programs—hence, the title "aerospace." Listed on the next page are the subjects to be mastered over a 4-year period by the aspiring aerospace engineer.

Engineering education prepares a person to work in many areas of the aerospace field.

Freshman and Sophomore Years:

English composition and literature
Economics
US History
Oral communication
Political science
Technical report writing
Chemistry
Electronic engineering—introduction
Engineering: orientation, drafting
Engineering mechanics: dynamics, statics
Mathematics: calculus, analytic geometry, computer programming, advanced engineering mathematics
Mechanical engineering: engineering materials and design
Physics: mechanics, thermodynamics and electrostatics, atomic physics and quantum mechanics

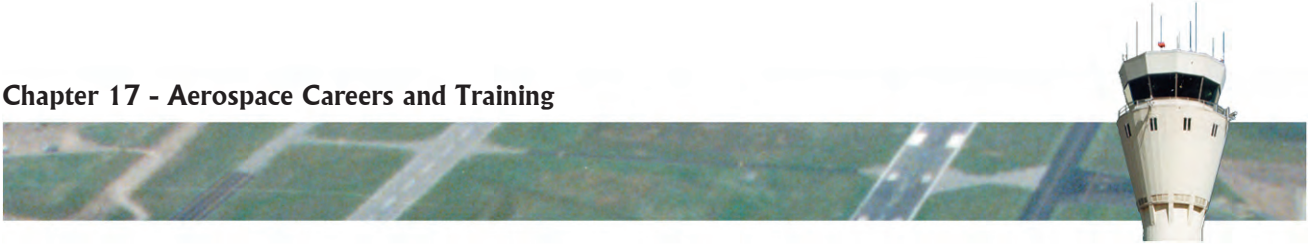
Junior and Senior Years:

Aerospace engineering: guidance and control systems
Electronic engineering: electrical network analysis, electronic circuits, linear systems analysis
Engineering: engineering design, engineering economy, systems engineering
Engineering mechanics: strength of materials, fluid mechanics, aircraft structures
Mathematics: complex variables, probability and statistics
Mechanical engineering: thermodynamics, engineering metallurgy, heat transfer

The curriculum shown above is an example taken from one institute. A comparable curriculum for the aerospace engineering degree may be slightly different at other institutes. Language studies in composition, technical report writing and oral communication prepare the aerospace engineer to communicate with fellow engineers and the public. Of course, the several courses in mathematics are essential to physics and engineering studies.

Four-year Colleges/Universities

Entry into a college or university is recommended for those who intend to earn a degree, and either do or do not know how they will use their education. The college or university offers a much broader education to its students than they can get in a junior college, a vocational/technical school or an institute because they can choose from more electives in both humanities and science areas. The person who wants to specialize immediately upon beginning the freshman year can do so in somewhat the same manner as in the institute, but they will have to take more courses in humanities. Aspiring engineers, for example, begin introductory engineering courses as freshmen. For the person who hasn't decided on a specialized course of study when entering a college or university, the final decision on the area of major study can be postponed until the beginning of the sophomore or junior year. There is only one drawback



to this approach for those who decide on an engineering major. It will take additional study to complete the engineering requirements if the prerequisite subjects were not taken during the first 1 or 2 years. This means that if one doesn't plan ahead, the total time involved for the basic engineering degree could be as long as 6 years.

Curricula vary in colleges and universities. This is particularly true with the elective courses. Today's forward-looking educators have taken steps to help students understand the aerospace world and the changes brought about by aerospace developments. Many colleges and universities now offer courses especially tailored for this purpose. Some colleges provide flight training as an elective for the entire student body and as a required course for certain major fields of study.

Several universities developed curricula which are especially designed for aerospace careers. These particular institutions now afford an aerospace minor for students who are majoring in some other subject. They also provide a special 2-year program for students who want to become professional pilots, but also want to expand their education beyond what is needed to master the art of powered flight. The institution also gives credit for pilot certificates earned. In addition to these special courses, a person can receive a bachelor of science degree in either aerospace administration or aerospace technology, and a master of education degree in aerospace education.

The curriculum for aerospace technology was designed for students who intend to become professional pilots or who want to work within the various technical fields found in the aerospace industry. It contains a mixture of courses from engineering and other curricula.

Of particular interest is the curriculum for the degree in aerospace administration because it is relatively new and was designed to prepare a person for an administrative or managerial position in the aerospace field. Let's see what kinds of courses are given in this curriculum:

Freshman Year:

Theory of flight
FAA regulations
English composition
College algebra
Plane trigonometry
Science
Technical drawing
General metals

Sophomore Year:

Meteorology
Science
Navigation
American people
Flight instruction
History
Prose fiction
General psychology

Junior Year:

Propulsion fundamentals
Aircraft operation & performance
Principles of economics
Statistical methods
Basic electrical fundamentals (plus electives)
Alternating current theory
Principles of accounting
Principles of management
Data processing

Senior Year:

Aerospace vehicle systems
Aerospace internship
Management
(plus a certain number of electives and the courses needed to complete the requirement for a minor.)

Note that this curriculum gives the student a very broad but in-depth sampling of courses that pertain to specialized areas in the aerospace field. At the same time, it provides a good background in those subjects that a person needs to know to become an administrator or manager.

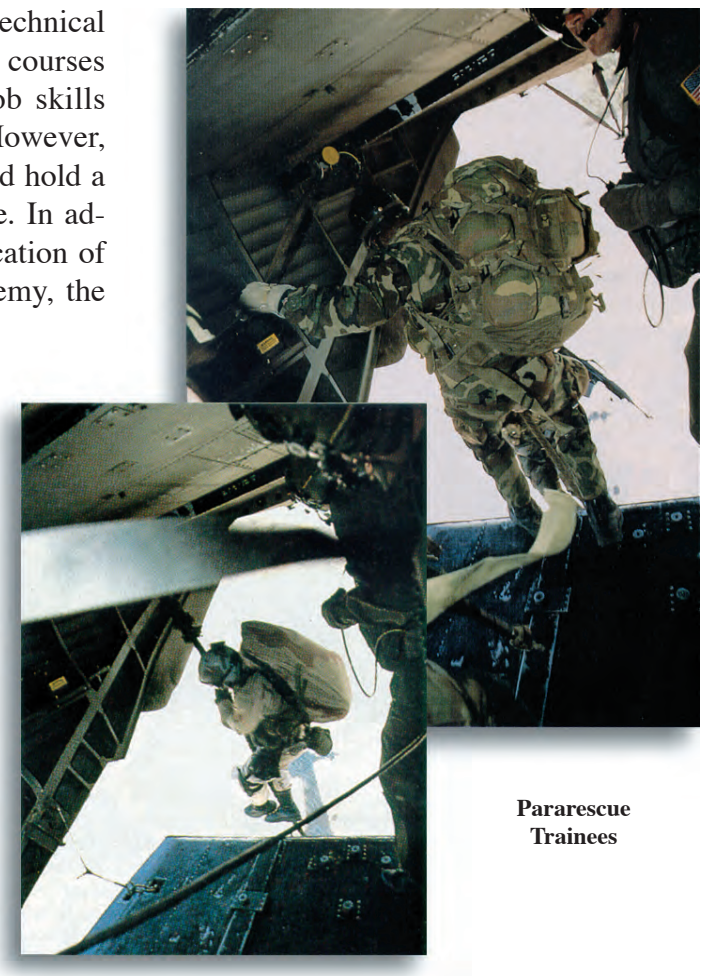
Air Force Schools

The serious, determined student will find it possible to get the education wanted and needed from civilian schools. If funds are low or nonexistent, the student can work while going to school, borrow the needed funds (to be repaid after graduation), win scholarships, obtain federal assistance or enter a co-op plan with an industry (student alternates full-time work periods with full-time school periods).

What many people have done and continue to do is enter the United States Air Force, or one of the other branches of the armed forces, and continue their education while serving their country. For those who are undaunted by the prospect of leading a military life for 4 or 5 years, this is a very sensible route to take. After all, the individual's personal and financial needs are satisfied while gaining further education and training.

Education has always played an important role in the Air Force, but today that role is more important than it has ever been. A broad range of courses are open to airmen and officers to develop the skills and knowledge that will further their service careers or prepare them for employment in their chosen fields, if they elect to return to civilian life.

The Air Force conducts nearly 4,000 technical training courses. These technical training courses prepare the Air Force person with the job skills needed to be successful in the Air Force. However, these same job skills can be used to get and hold a good job after getting out of the Air Force. In addition, the Air Force provides for the education of their officers through the Air Force Academy, the professional military schools of the Air University, the Air Force Reserve Officer Training Corps Program and the Air Force Institute of Technology. Also, thousands of Air Force personnel further their education on a part-time basis at colleges and schools on or adjacent to many Air Force bases. Others enroll in correspondence courses. The Community College of the Air Force was established by the Air Training Command in 1972 for the purpose of obtaining broader recognition for Air Force training programs in civilian educational institutions and in the employment field.



Pararescue Trainees

Air Force Reserve Officer Training Corps

The Air Force Reserve Officer Training Corps (AFROTC) is the primary source of commissioned officers for the Air Force. The program is offered on the campuses of most colleges and universities. Two commissioning programs are available through AFROTC for college students. Freshmen may enroll in the 4-year program, and students with at least 2 years of undergraduate or graduate work remaining may apply for the 2-year program. The two programs are open to both men and women.

Both 4-year and 2-year cadets attend the Professional Officer Course (the last 2 years of the AFROTC program). The 4-year cadets also take the General Military Course (the first 2 years), which consists of 1 hour each week in the classroom and 1 hour of leadership laboratory (military training and leadership). Classroom instruction time for the Professional Officer Course is 3 hours weekly, plus 1 hour of leadership laboratory. Four-year cadets must complete a 4-week field training course during the summer between their sophomore and junior years. Two-year cadets complete a 6-week field training course (which makes up for the General Military Course) before entering the program.

ROTC Cadets

Scholarships are available to qualified cadets in both the 4- and the 2-year AFROTC programs. Each scholarship provides full tuition, laboratory expenses, incidental fees and a reimbursement for textbooks. While all cadets receive a monthly, nontaxable subsistence allowance of $100 in their junior and senior years, scholarship cadets receive this allowance for the duration of the scholarship.

In either program, there are certain commissioning requirements. The cadet must successfully complete the Professional Officer Course and field training, must earn at least a baccalaureate degree, must agree to accept a commission in the United States Air Force if it is offered and must agree to serve for a period of not less than 4 years on active duty after being commissioned. Pilot candidates must serve several more additional years after completion of pilot training than do non-flying officers. Navigator candidates must also serve several more years after completion of navigator training than non-flying officers.

AFROTC cadets who volunteer and are qualified for Air Force pilot training take their first step toward winning their wings through the Flight Instruction Program (FIP), which is provided at no cost to the cadets. The program is conducted during the 24 months prior to the commissioning. It serves as a test of the cadets' aptitude and interest in flying before attending undergraduate pilot training as an officer.

High school students who have successfully completed at least 2 years of the Air Force Junior ROTC program (AFJROTC) may receive credit for a portion of the General Military Course, if they elect to enroll in the 4-year college ROTC program.

The US Air Force Academy

Located near Colorado Springs, Colorado, on an 18,800-acre site, the Air Force Academy ranks among the nation's finest colleges and universities. Appointees to the Academy receive a 4-year college education in addition to military and physical training. The academic curriculum consists of studies in both the humanities and the sciences. Successful completion of the prescribed courses leads to a bachelor of science degree and a commission as a second lieutenant in the Air Force or one of the other armed services.

By authorization of Congress, the Air Force Academy maintains a strength of 4,500 cadets. This equalizes the student strength of the Air Force, Army and Navy academies.

US senators and representatives make most of the yearly appointments to the Air Force Academy. The nominees are selected by members of Congress from eligible young people in their states or districts who have applied for an appointment. Application for appointment to the Academy must normally be made during the year before the applicant wants the appointment—in other words, during their junior year in high school.

Of special interest to AFJROTC students is the fact that five students from each high school may be nominated to compete for authorized vacancies in the Academy. To be eligible, the student must have successfully completed the AFJROTC program at his or her school and be awarded a certificate of completion and a high school diploma. The aerospace education instructor recommends the best-qualified applicants to the high school principal, who in turn, submits the nomination to the Academy.

A prospective appointee, male or female, to the Air Force Academy must meet the following requirements:

1. Be at least 17-years-old and not have passed his or her 22nd birthday on July 1 of the year of admission.
2. Be a citizen of the United States. (This does not apply to allied students).
3. Be of good moral character.
4. Be unmarried and have no dependent children. Any cadet who marries while at the Academy will be discharged.
5. Be in good physical condition.
6. Have a good scholastic record.
7. Have demonstrated a potential for leadership in extracurricular activities.
8. Have a strong desire to become a cadet and have an interest in serving as an Air Force officer.

A successful candidate for admission must assume certain obligations and sign an agreement to that effect. The candidate must agree to complete the course of instruction unless disenrolled by competent authority. The candidate must accept an appointment as a commissioned officer upon graduation, and serve in one of the armed services for at least 6 years. If authorized to resign before the sixth anniversary of his or her graduation, the candidate must serve as a commissioned officer in the Reserve component of the service until such sixth anniversary is reached. If disenrolled from the Academy, the candidate will be subject to the separation policies employed by all service academies.

The Air Force offers a comprehensive range of academic courses, in addition to leadership and military training, physical education and athletics. Cadets may select their major from numerous courses offered within the fields of science and engineering, or social studies and humanities.

The academic program of the Academy includes graduate-level courses, which may be applied toward a master's degree under a cooperative arrangement between the Academy and various civilian universities in less than 1 year after graduation. Graduate programs include both science and engineering fields, and social sciences and humanities.

In conjunction with the Academy, the Air Force conducts the Air Force Academy Preparatory School. It is for selected members of the regular and reserve components of the Air Force and for unsuccessful candidates for the Academy whose records indicate that they could improve their chances of receiving an appointment by additional academic preparation. The Preparatory School provides an 11-month course of intensive instruction in English and mathematics to assist students in preparing for the entrance examinations. It also prepares the students for the academic, military and physical training programs of the Academy.

Community College of the Air Force

Since 1972, enlisted men and women in the Air Force have had their own community college. The Community College of the Air Force helps airmen and noncommissioned officers by translating what they have learned in Air Force technical training and on-the job training into college-level semester hours. Air Force enlisted members can then credit those hours toward an associate degree related to their Air Force job.

The Community College of the Air Force is a worldwide multi-campus college. The seven major technical schools, the professional military education system and the field training detachments are affiliated with the Community College of the Air Force. Enrollment in the college is voluntary, but many enlisted people enroll because they know that planning for the future includes the need to document the technical education they receive in the Air Force.

When an enlisted person enrolls in the Community College of the Air Force, he or she receives a transcript with the credits granted for Air Force courses completed. For example, by completing Basic Military Training airmen earn 4 semester hours of Physical Education. The Community College of the Air Force maintains a computerized record of each student's educational progress. This record will automatically pick up all applicable Air Force courses and translate them into semester hours and into civilian educational terminology.

Students are able to add civilian courses, which may then be applied toward an associate degree. Degree programs include a minimum of 64 semester hours of Air Force and civilian instruction including:

- 24 semester hours in technical education directly related to the student's Air Force career area.
- 21 semester hours in the area of general education (courses include humanities, math, natural sciences, physical education and communication skills) and 6 semester hours in management education.

The remaining hours are technical or general education hours and are usually elective options.

The Community College of the Air Force offers associate degrees in more than 70 programs. Some are in career areas such as aircraft and missile maintenance, electronic and telecommunications, health care sciences, management and logistics, and public and support services.

When a Community College of the Air Force student leaves the Air Force, he or she can take the transcript or can write for one later. It's a document easily understood by potential employers, trade unions and college officials. The transcript is valuable whether or not the individual completes an associate degree.

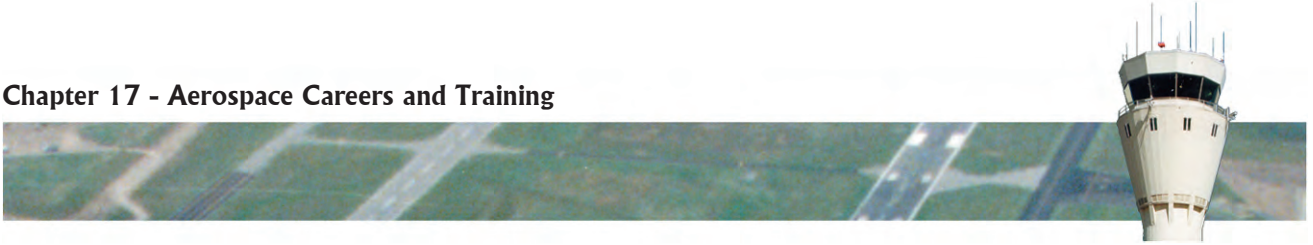
Key Terms and Concepts

- aptitude
- curricula
- community colleges
- technical/vocational schools
- institutes
- four-year colleges & universities
- Air Force Reserve Officer Training Corps (AFROTC)
- Flight Instruction Program (FIP)
- Air Force Junior Reserve Officer Training Corps (AFJROTC)
- Air University Professional Military Education Courses
- Air Force Academy
- Air Force Academy Preparatory School
- Community College of the Air Force

? Test Your Knowledge ?

SELECT THE CORRECT ANSWER

1. *There* **(is / is not)** *a correlation between your aptitudes and school subjects you like or dislike, and those that are easy or difficult.*
2. **(Universities / Institutes)** *offer only those courses and degrees designed for a specific career field.*
3. *Community colleges and vocational schools both take about* **(2 / 4)** *years to complete.*
4. *Technical/vocational schools provide the majority of* **(formal technical education courses / associate degrees).**
5. *Enrollment in the Community College of the Air Force is* ***(voluntary / automatic).***
6. *After attending a technical school, there is usually a short period of* **(adjustment to the working world / further training sponsored by the employer).**



MULTIPLE CHOICE

7. *Which is not true of the impact aerospace has had on education and training?*
   a. *It actually made it popular to do research.*
   b. *Its highly technical nature demands training beyond high school.*
   c. *It caused change leading to the so-called knowledge revolution.*
   d. *It caused only a temporary need for better-trained people.*
8. *Which is not a reason for the surge in junior or community college enrollment?*
   a. *Limited locations make them less accessible.*
   b. *Students can live at home and commute to school.*
   c. *They are generally less costly.*
   d. *Students can find employment to help pay tuition.*
9. *Which is not a course likely to be found at a technical/vocational school?*
   a. *Aircraft basic science*
   b. *Rocket engines*
   c. *Science*
   d. *Auxiliary systems*
10. *Which is not true of the Air Force Academy?*
    a. *It provides a four-year college education.*
    b. *You are commissioned as 2nd Lieutenant upon graduation.*
    c. *You must be between 17 and 22 to be admitted.*
    d. *The Fighting Falcons always beat Army and Navy teams.*
    e. *You must be unmarried and have no dependent children*
11. *Which of the following is not true of the AFROTC program?*
    a. *It has two and four year programs.*
    b. *The monthly stipend is only available to the four-year cadets.*
    c. *It incurs a four-year commitment to serve on active duty upon completion.*
    d. *Both programs require a field-training course.*

FILL IN THE BLANKS

12. *The special talents and natural abilities that a person possesses are called _____.*
13. *Selecting an _____ based on your _____ may help you to _____ in it.*
14. *Aircraft welding is probably a course at a _____ _____ .*
15. *_____ _____ are those designed to fill the needs of local employers and are part of a non-degree program offered at community colleges.*
16. *_____ _____ _____ _____ _____ _____ is the primary source of commissioned officers.*
17. *In AFROTC, both 2- and 4-year cadets attend the _____ while the 4-year cadets also attend the _____.*

18. *The _____ _____ _____ serves as a test of the cadet's aptitude and interest in flying before they attend Specialized Undergraduate Flying Training as an officer.*

TRUE OR FALSE

19. *During the first decade of the space exploration program, more knowledge was created than in the entire past history of the world.*
20. *Standard inventory blanks, aptitude scales, interest surveys and other materials can be used to determine your interests, special talents and general ability.*
21. *Junior colleges are declining in popularity because they no longer fill a need in the education of their students.*
22. *Credits earned at a community college are not transferable to 4-year schools.*
23. *The Air Force Academy Preparatory School is a mandatory, 11-week course for all in-bound freshmen.*

SHORT ANSWER

24. *What is the relationship between aptitudes and success in certain occupations?*
25. *Discuss what expectations you should have about an occupation.*