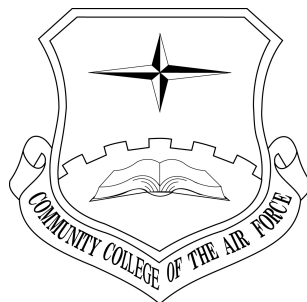


# *Community College of the Air Force*



*2002-2004 General Catalog  
Number 16*

# TABLE OF CONTENTS ...

## **The Community College of the Air Force**

is an institution of higher learning dedicated to the enlisted members of the United States Air Force. The college is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30333-4097; telephone number 404-679-4501) to award the Associate in Applied Science Degree.

<b>Telephone &amp; Staff Directory</b> .....	<i>iv</i>
THE main CCAF telephone numbers. The staff with titles and degrees.	
<b>General Information</b> .....	1
THE history. The system. The advisory bodies. The policies. The education documents. The student.	
<b>Degree Programs</b> .....	17
THE Associate in Applied Science Degree. The program codes. The master list of CCAF degree programs.	
<b>Aircraft Maintenance Technician</b> .....	93
THE CCAF role in certification of aircraft maintenance technicians.	
<b>Occupational Instructor Certificate</b> .....	95
THE certification program offered by CCAF to instructors teaching CCAF courses.	
<b>Affiliated Schools</b> .....	97
THE schools where CCAF courses are offered.	
<b>Course Descriptions</b> .....	103
THE code index. The master list of all CCAF courses.	
<b>Terms &amp; Acronyms</b> .....	189
THE definitions.	
<b>Index</b> .....	193
THE list of items by subject.	
<b>Memberships</b> .....	197
THE organizations where CCAF holds memberships.	

This catalog is available on-line at  
**[www.au.af.mil/au/ccaf/](http://www.au.af.mil/au/ccaf/)**

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Maxwell AFB, Alabama 36112-6613

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E-mail: *(first name.last name)*@maxwell.af.mil

**CCAF Homepage ... [www.au.af.mil/au/ccaf/](http://www.au.af.mil/au/ccaf/)**

<b>Office</b>	<b>Symbol</b>	<b>Extension</b>
Commander/President	CC	7847
Vice Commander/Executive Vice President	CV	7849
Academic Affairs	DF	2034
Academic Programs	DFA	2874
Institutional Effectiveness	DFI	2703
Admissions & Registrar	RR	6436
Admissions	RRA	7064
Registrar Services	RRS	2794
Campus Relations	SL	3710
Technology Support	TS	6674
Distance Learning	TSD	8428
Network & Computer Support	TSM	6675
STARS Management & Maintenance	TSS	3361

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## Command Section

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MBA, Louisiana Tech; EdD, Univ of North  
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BSME, Auburn Univ; MS, The Univ of Tennessee;  
PhD, Penn State Univ

Virginia Miller ..... Executive Secretary/Protocol

MSgt Robert Brouillard ..... Director, IM/First Sergeant  
AAS, CCAF

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TSgt Gary Kendall ..... Information Manager  
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SSgt Tanya DaCosta-Hills ..... Information Management  
AAS, CCAF

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SSgt Arthur Goodwin, Jr. .... Information Manager

SrA Crystal Carnley ..... Information Manager

SrA Latoya Gill ..... Information Manager

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Billy Parrish ..... Associate Dean, Academic Affairs  
AS, BS, MS, EdS, Troy State Univ-Montgomery

Gwen Lewis ..... Secretary

Dr. James Larkins, Jr. .... Director, Institutional  
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BA, Northwestern State Univ of Louisiana

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Florida; MS, Louisiana Tech Univ

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AAS, CCAF

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AAS, CCAF

TSgt Peter Axt ..... Program Manager  
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CCAF Occupational Instructor Certification

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AAS, CCAF

TSgt James Dinsmoore II ..... Program Manager  
AAS, CCAF; CCAF Occupational Instructor  
Certification

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TSgt Gregory Duncan ..... Program Manager  
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TSgt Christopher Robinson..... Program Manager  
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Occupational Instructor Certification

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AAS, CCAF

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Pamela Corley..... Education Technician

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Certification

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SSgt Steven Bates..... STARS Technician

SSgt Timothy Cronian..... Webmaster/Programmer

# GENERAL INFORMATION ...



As an institution of higher learning, the Community College of the Air Force has a stake in the job knowledge and performance of every enlisted person in the Air Force. The contributions made to this nation are dependent on our intellectual growth. We strongly believe in providing a student a quality education and giving the student the necessary tools to enter the workforce and to continue toward other educational pursuits.

~Colonel James M. McBride

The United States Air Force (USAF) has always recognized the positive effects of education on Air Force personnel and continually established various programs to meet the needs of the Air Force, its personnel and society as a whole. One of the most notable programs is the Community College of the Air Force (CCAF). The college is one of several federally chartered degree-granting institutions; however, it is the only 2-year institution and the only one serving enlisted personnel. The college awards the associate in applied science degree after a student successfully completes a degree program designed for an Air Force specialty. The Community College of the Air Force is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS) (1866 Southern Lane, Decatur, Georgia 30033-4097; telephone number 404-679-4501) to award the associate in applied science degree.

## The History

The “Community College of the Air Force” concept evolved in the early 1970s as a means of gaining recognition for Air Force training. Led by General George B. Simler, commander of Air Training Command (ATC), Air Force visionaries recognized the need to enhance the skills of noncommissioned officers as technicians, leaders and citizens. Representatives of Air Training Command, Air University (AU) and the Air Force Academy held a series of conferences in 1971 to discuss the need for increased development of noncommissioned officers as managers of Air Force resources. The conferees recommended the founding of an Air Force community college and on 9 November 1971, General John D. Ryan, Air Force Chief of Staff, approved the establishment of the Community College of the Air Force. The Secretary of the Air Force approved the activation plan on 25 January 1972 and the college was established 1 April 1972 at Randolph AFB, Texas.

The seven major Air Force training schools—the five Air Force Schools of Applied Aerospace Sciences, the USAF School of Health Care Sciences and the USAF Security Service School—provided the technical portion of CCAF’s credential when the college was activated. The program model combined the technical education offered by Air Force schools, a core of general education from regionally accredited civilian institutions of higher education and management education from Air Force or civilian sources.

The college mailed its first official transcript on 9 November 1972 and issued its first credential, the Career Education Certificate, on 23 August 1973. As the college gained prestige, increasing numbers of enlisted people registered and more Air Force technical, special and professional schools joined the CCAF system. As a result, as many as 143 such schools have been affiliated with the college after meeting rigorous standards for participation. The SACS Commission on Occupational Education Institutions accredited the college on 12 December 1973.

## **GENERAL INFORMATION**

### **Community College of the Air Force Philosophy**

The United States Air Force requires well-trained, educated and professional noncommissioned officers prepared to meet current and future leadership, managerial and technological challenges of an increasingly sophisticated and complex Air Force. We believe enlisted members of the Air Force are entitled to personal and professional growth through collegiate programs beneficial to the Air Force and the nation.

By the mid-1970s, many civilian consultants were reporting that CCAF standards exceeded the minimum requirements of associate degree programs in civilian community colleges and the Air Force sought degree-granting authority for the college from Congress. President Gerald R. Ford signed Public Law 94-361 on 14 July 1976 authorizing the ATC commander to confer the associate degree.

A site review committee, composed of nationally recognized educators appointed by the US Office of Education (USOE), evaluated the college in October 1976. After favorable recommendations by the committee and successful public hearings in Washington DC, the Commissioner of Education certified degree-granting authority in January 1977 before the USOE. Success of the effort can mainly be attributed to the testimony given in USOE hearings by Lieutenant General John Roberts, Chief Master Sergeant of the Air Force Thomas Barnes, Dr. Jerome Lysaught (chairman of the CCAF Advisory Committee) and Colonel Lyle Kaapke. The college awarded its first associate in applied science degree in April 1977.

Since charter clarification in 1975 limited the Commission on Occupational Education Institutions to nondegree-granting institutions, the college immediately began the transition to the SACS Commission on Colleges. After CCAF underwent a rigorous self-study and met accreditation standards, the Commission of Colleges accredited the college on 12 December 1980 to award the associate in applied science degree.

During this accreditation process, the administrative offices relocated to their present site at Maxwell AFB effective 1 April 1979. The SACS Commission on Colleges reaffirmed CCAF's accreditation on 9 December 1986.

On 1 July 1993 the Community College of the Air Force realigned under Air University, which became the educational component of the redesignated Air Education and Training Command. However, the commander of Air Education and Training Command remained the degree-granting authority for the college.

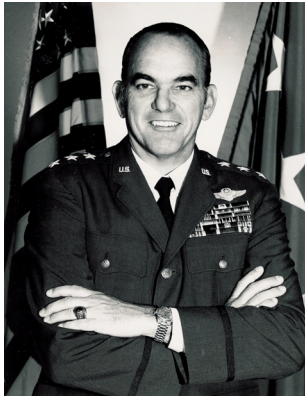
The college again underwent an extensive self-study and visits from SACS reaffirmation teams during 1993-1996. Subsequently, on 25 June 1997 the Southern Association of Colleges and Schools reaffirmed CCAF's accreditation until the year 2006.

Over the years the college has grown both in numbers and recognition. With more than 373,000 registered students, the college is the largest multicampus community college in the world. Its affiliated schools are located in 34 states, the District of Columbia, 6 foreign locations and 1 territory. Nearly 6,500 CCAF faculty members provide quality instruction for the personal and professional development of enlisted personnel. More than 1 million transcripts have been issued in the last 10 years and in 2000-2001 CCAF students earned 1.41 million hours of college credit.

Since issuing its first degree in 1977, the college has awarded more than 215,000 associate in applied science degrees.

## **The System**

The Air Education and Training Command (AETC) commander confers the CCAF degree and co-chairs the CCAF Board of Visitors, CCAF's governing board. Board members include select civilians from business, industry and higher education; the AETC and AU commanders; the president of the college; and the CMSAF and AETC command chief. Administrators, instructors, classrooms, laboratories, counselors and students are located throughout the world. What is often perceived as nontraditional about the college is its organization and administration that provide instruction at numerous locations because of the geographic dispersion of the students pursuing their Air Force occupations. Civilian collegiate institutions provide the course work to satisfy the general education requirement (GER) of the degree programs and also provide course work to satisfy technical education, and leadership, management and military studies (LMMS) requirements not completed at CCAF schools. Although this broad geographical separation is unusual, the college is organized into a single, highly effective educational system.



### **General Simler**

General George B. Simler, who died in September 1972, believed Air Force enlisted personnel would need improved educational programs to meet future technological and leadership challenges.

## **Administrative Center**

The administrative staff, located at Maxwell AFB, Alabama, brings together all elements of the system under the matrix authority of Air Force Instruction 36-2304, *Community College of the Air Force*. The Community College of the Air Force was located at Randolph AFB, Texas, during 1 April 1972-15 January 1977, and Lackland AFB, Texas, during 16 January 1977-31 March 1979; and has resided at Maxwell AFB, Alabama, since 1 April 1979.



**Simler Hall, CCAF Administrative Center  
Oldest building on Maxwell AFB—constructed in 1928**



## GENERAL INFORMATION

### Commander & President

The CCAF commander/president—chief executive officer with command authority—accomplishes the CCAF mission. The administrative staff translates system schools’ curricula into semester-hour credit, develops course descriptors, designs and manages degree programs, maintains records of student achievement and progress toward degree completion, ensures system schools maintain standards required for accreditation, distributes official catalogs and other publications, and provides guidance to the worldwide network of counselors. The following have served as CCAF commanders/presidents:

#### Air Force Vision

America’s Air Force: Global Vigilance, Reach and Power.

Col John L. Phipps.....	1 April 1972
Col Lyle D. Kaapke.....	1 September 1975
Col Lyle E. Darrow.....	9 June 1980
Lt Col William E. Flinn, Jr. ....	16 August 1982
Col Rodney V. Cox, Jr. ....	19 October 1982
Col Russell A. Gregory.....	24 May 1988
Lt Col James L. Antenen.....	2 April 1992
Col Paul A. Reid.....	19 June 1992
Col Tamzy J. House.....	3 July 1996
Col James M. McBride.....	4 March 1999

### Affiliated Schools

Air Force schools that provide technical, and leadership, management and military studies education may voluntarily affiliate and become part of the CCAF system. Course work offered by these affiliated schools may satisfy part or all of the technical education; leadership, management and military studies; and/or program elective requirements.

Instructional programs are conducted in both distance learning and traditional learning environments. Each affiliated school is a component of a worldwide educational system.

## **Education Services**

The Air Force provides academic advice and offers financial assistance to airmen in planning and pursuing their educational goals. Education services offices are composed of professional educational administrators, guidance counselors, education technicians and test examiners.

### **Air Education & Training Command Vision**

The first Command ...  
Building quality airmen for  
the world's most respected  
aerospace force.

Education services personnel supporting active Air Force installations, CCAF advisors working with the Air National Guard (ANG) and training technicians assigned to the Air Force Reserve Command (AFRC) counsel students and serve as the direct link between students and the administrative center. These counselors guide students toward degree completion and work with civilian collegiate institutions to arrange for course offerings needed to satisfy CCAF degree requirements.

Education services personnel also administer the College-Level Examination Program (CLEP), Defense Activity for Non-Traditional Education Support (DANTES) Subject Standardized Tests and Excelsior College Examinations.

CCAF advisors and training technicians coordinate education services for ANG and AFRC personnel. The point of contact for ANG and AFRC affairs is CCAF/DFAC, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613; (334) 953-7730 or DSN 493-7730.

## **GENERAL INFORMATION**

### **Community College of the Air Force Vision**

CCAF: The foremost occupational education institution—preparing the world's best air and space enlisted leaders.

## **The Advisory Bodies**

The college uses several advisory bodies with members from the CCAF system and appointed members from the civilian sector.

### **Affiliated Schools Advisory Panel**

The panel provides a forum for addressing issues of mutual concern to both the Community College of the Air Force and the affiliated schools. The panel meets at least annually to review and recommend actions concerning CCAF affiliated school policies, administrative procedures and affiliation requirements; and encourages participation in the CCAF system. The panel consists of representatives from technical and specialized training, enlisted professional military education, command-sponsored schools, AFRC, ANG and Headquarters AETC staff. The panel serves the best interests of CCAF students and protects the CCAF system by ensuring schools support affiliation requirements.

### **Education Services Advisory Panel**

The panel is comprised of the CCAF dean of academic affairs; education services advisor, Headquarters USAF and major command personnel; base-level education services personnel; and ANG and AFRC components. It provides a forum for addressing issues of mutual concern to both the Community College of the Air Force and the education services community; its primary focus is on the student body when making recommendations. The panel advises the CCAF president on issues of concern to students, education services and AFRC and ANG training personnel; reviews CCAF academic policies and administrative procedures that affect off-campus education centers; and advises the CCAF president on marketing methods that will encourage participation in the college.

### **Policy Council**

Academic policies are developed by the Policy Council and endorsed by the Board of Visitors. The Policy Council is composed of representatives from all elements of the CCAF system. Chaired by the dean of academic affairs, the Policy Council submits recommendations concerning academic policies, degree programs, award of credit, academic standards, affiliation of Air Force schools and other policy matters to the president and Board of Visitors for guidance and concurrence. Students, faculty members, counselors, administrators and other interested personnel may submit suggestions to the Policy Council by writing to CCAF/DF, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613.

### **Board of Visitors**

The Board of Visitors—consisting of civilian authorities appointed from education, industry and the professions by the Secretary of Defense—represents the public interest and serves jointly with the AETC commander as the CCAF governing board. The AETC commander, an ex officio member of the board, acts as co-chairman of the BOV, degree-granting

**Community College  
of the Air Force  
homepage**

[www.au.af.mil/au/ccaf/](http://www.au.af.mil/au/ccaf/)

authority and commander of the majority of the technical and military training throughout the Air Force. Other ex officio members are the AU commander, who hosts the college's administrative center and provides guidance as both the commander of AU and the director of Air Force education, who represents the interests of the command; CCAF commander/president, who represents the interests of the institution; and the Chief Master Sergeant of the Air Force and the AETC Command Chief Master Sergeant, who represent the student body. Collectively the board reviews policies and operations at least twice a year. The Board of Visitors' recommendations are forwarded to the Secretary of the Defense through the AETC commander and guide all CCAF actions.

**BOV Appointed Members**

- Mr. William C. Cramer, Jr., Chair  
President, Tommy Thomas Chevrolet, Inc  
Panama City, Florida
- Dr. Marilyn C. Beck, Vice Chair  
President, Lord Fairfax Community College  
Middletown, Virginia
- Maj Gen (Ret) Lucius Theus  
President, The US Associates  
Southfield, Michigan
- CMSAF (Ret) James M. McCoy  
Bellevue, Nebraska
- Dr. James R. Anderson  
Chancellor, Central Texas College  
Killeen, Texas
- Dr. Jacquelyn M. Belcher  
President, Georgia Perimeter College  
Decatur, Georgia
- Dr. Deborah M. DiCroce  
President, Tidewater Community College  
Norfolk, Virginia
- Lt Col (Ret) John R. Fergus  
Dean, Instructional Affairs  
Wallace Community College  
Dothan, Alabama
- Dr. Susan A. Graham  
President, Aiken Technical College  
Aiken, South Carolina
- Dr. David W. Sink, Jr.  
President, Blue Ridge Community College  
Flat Rock, North Carolina
- Dr. Paul A. Whelan  
Associate, Aviation Associates, Inc  
Springfield, Illinois
- Mr. Robert K. Wood  
Senior Vice President, LMI  
McLean, Virginia

**BOV Ex Officio Members**

- Gen Hal M. Hornburg  
AETC Commander  
Randolph AFB, Texas
- Lt Gen Donald A. Lamontagne  
AU Commander  
Maxwell AFB, Alabama
- Col James M. McBride  
CCAF Commander/President  
Maxwell AFB, Alabama
- CMSAF Frederick J. Finch  
Chief Master Sergeant of the Air Force  
Washington, District of Columbia
- CMSgt William Milligan  
AETC Command Chief Master Sergeant  
Randolph AFB, Texas

**Air Education &  
Training Command  
Mission**

Recruit, train and educate quality people for our aerospace force and the nation.

**The Policies**

**Entrance Requirements**

Before enlisting in the Air Force, an individual completes the Armed Services Vocational Aptitude Battery (ASVAB) and meets the standards in AETC Instruction 36-2002, *Recruiting Procedures for the Air Force*. Composite scores of the ASVAB indicate academic and career field aptitude. These scores help match the individual's aptitudes and abilities with Air Force career areas during initial assignment to a career field. The Air Force uses these scores as an indicator of the student's potential to make satisfactory progress in a career-related degree program.

**Admission & Registration**

When assigned to an Air Force career field, active duty, ANG and AFRC enlisted members are admitted to the college and registered in the degree program designed for their Air Force specialty. This status does not change until the college receives formal academic notice or receives an official transcript showing completion of civilian college course work or national tests applicable to their degree program from an accredited institution. The student declares all institutions attended for course credit to be accepted in transfer if it applies to a degree program. Once a civilian college course or national test is recorded, the student is identified as a participant.

An individual with an Air Force reporting identifier and/or special duty identifier not in the DEGREE PROGRAMS section starting on page 17 may register in programs related to his or her second or other Air Force specialty code (AFSC) reflected on the report on individual personnel (RIP).

**Degree Time Limit**

Registration in all degree programs, except Instructor of Technology and Military Science, is limited to 6 years from date of registration. The student who is pursuing a first degree and does not complete it in the allotted time will automatically be moved to the primary occupational specialty degree program in the most current catalog. The student who is pursuing a subsequent CCAF degree will be disenrolled at the end of the allotted time. A student desiring registration in another subsequent degree program may do so by submitting an Air Force Form 968, Community College of the Air Force Action Request, through the education services office or ANG/AFRC CCAF advisor.

A student enrolled in the Instructor of Technology and Military Science degree program has 2 years from the registration date to complete requirements. A student who does not complete the degree in the allotted time will be disenrolled. Any student wishing to reenroll may follow the procedures outlined above provided the student is still performing duty as a full-time CCAF instructor and meets all other requirements for registration.

**Community College  
of the Air Force Mission**

Offer and award job-related associate in applied science degrees and other academic credentials that enhance mission readiness, contribute to recruiting, assist in retention and support the career transitions of Air Force enlisted members.

**Subsequent Degree**

An airman may register in a subsequent degree program in his or her primary, secondary, tertiary or fourth AFSC (not duty/control) provided the airman has not been awarded a degree in a program designed for that AFSC. A student registered in a subsequent degree program must earn and apply a minimum of 24 semester hours of unique (different) technical credit—at least 12 semester hours must be CCAF credit.

**Grading Policy**

Academic performance is determined and reported by using a pass or fail system. A student successfully completing a course is reported to the registrar who records a grade of “S” (satisfactory) on the transcript. This equates to a grade of “C” or better.

All courses are taught at the collegiate level. Affiliated schools employ a variety of instructional methods and assessment techniques designed to ensure successful achievement and attainment of desired learning outcomes. Course completion requirements, including grading standards, are provided to the student at the beginning of each course.

**Transfer Credit**

The college accepts “in transfer” courses that meet the criteria in the DEGREE PROGRAMS section. Credit earned at accredited colleges and universities may be accepted in transfer. Courses completed at foreign institutions are considered on an individual basis when submitted with a course-by-course evaluation from a National Association of Credential Evaluation Services member.

**Department of Defense & Other Service Schools**

Many Air Force enlisted members attend Army, Navy and/or Department of Defense initial or advanced technical training courses instead of Air Force technical training courses. The college does not award resident credit for these courses since these schools are not part of the CCAF system. However, the college awards proficiency (P) credit to Air Force enlisted members completing these courses. Proficiency credit is applied to a student’s program after attaining the journeyman, five skill-level.

If the Department of Defense (DoD) and other service schools are accredited and issue a transcript, the college will consider accepting the credit in transfer. See the *Guide to the Evaluation of Educational Experiences in the Armed Services* (American Council on Education Guide) for courses that may apply to a CCAF degree.

**Credit by Examination**

A maximum of 30 semester hours of degree-applicable examination credit may be applied to satisfy degree requirements. Credit may be applied for examinations offered by DANTES, CLEP, Excelsior College and the Defense Language Proficiency Test.

## **GENERAL INFORMATION**

### **Air Force Core Values**

INTEGRITY FIRST

SERVICE BEFORE SELF

EXCELLENCE IN ALL WE DO

## **Certification, Licensure & Registry Credit**

Degree requirements may be satisfied after verifying degree-relevant governmental and/or professional certification, licensure and/or registry. A student holding a degree-relevant certification, licensure and/or registry should contact the sponsoring agency, association or society to request official written verification be sent to CCAF/RR, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613. Additional information on the Federal Aviation Administration airframe and powerplant certification is available on page 93.

## **Degree Program & Catalog Change**

The college encourages a student to complete the program of initial registration; however, the student may request a change to another program when eligible. The associate dean of academic programs authorizes degree program changes. A student may also elect to move from the catalog of registration to the current catalog. In either case, the student is obligated to abide by all policies and program requirements of the catalog current on the date of the change.

## **Advanced Standing**

A student attains advanced standing (registration status code 2) after completing 45 semester hours of degree-applicable course work and applying civilian course or test credit. At this point a counselor provides special guidance to complete degree requirements.

## **Waiver Process**

A student desiring a waiver of academic policy and/or a degree program requirement contacts the education services office or the ANG/AFRC CCAF advisor for guidance on how to submit a waiver request to the dean of academic affairs. Waivers are considered only if approval of the waiver will make the student a degree candidate.

## **Candidacy Status & Graduation**

The Academic Programs Division or the student's counselor or advisor recommends candidacy status. Education services counselors, advisors or training technicians notify the student of candidacy status. After a student meets all requirements, the college notifies the student's current education services office, or nominating training or education service office of degree completion. All degree requirements must be satisfied before separation, retirement or commissioning. The college has two graduating classes each year—April and October. Diplomas are mailed to the education services offices about 1 week before graduation.

## **“No Fault” Exception**

Ordinarily, to participate and graduate, a student must possess the required Air Force specialty code. There is an exception when a student’s specialty code is removed from his or her record because of mandatory retraining, career field consolidations or transition of a career field. To qualify for this exception ...

### **Community College of the Air Force Core Value**

As an added value,  
the Community College  
of the Air Force believes  
in ...

GROWTH THROUGH  
EDUCATION

- ◆ Conditions or circumstances must be beyond the student’s control.
- ◆ The “no fault” exception request must be submitted to the CCAF administrative center within 1 year of removal of specialty code.
- ◆ Degree requirements must be completed within 1 year.

The “no fault” exception request must clearly explain conditions and/or circumstances that led to the removal of the specialty code. Acceptable documents include:

- ◆ Official Air Force Form 2096, Classification/On-The-Job Training Action, showing specialty code was once held and date subsequently removed.
- ◆ Medical documents—physician’s memo or diagnosis, stating the exact disqualifying medical reasons—or a memo from the student’s commander explaining why disqualified or removed from the specialty code.
- ◆ Memo from the student, explaining the situation and requesting consideration of “no fault” exception.

Mail the “no fault” exception request to CCAF/DFA, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613.

## **Washback Policy**

Every effort is made to ensure the student successfully completes CCAF courses by carefully designed teaching and learning activities, appropriate assessment and evaluation processes, and personal assistance. If all avenues are exhausted and academic achievement continues below acceptable limits, the student may, under some circumstances, repeat a portion or the entire course—this is *washback*. A washback is reported to the registrar as a course graduate only after successfully completing the entire course. A student can withdraw from CCAF courses after getting permission from the affiliated school commander or designated representative.

## **Degree Program Withdrawal**

An admitted and registered student who has separated, retired or commission shall be withdrawn. Since participating in a degree program is voluntary, a student may formally request withdrawal from the degree program in which the student is registered. To request this action a student completes, signs and puts a statement in Remarks of an Air Force Form 968, Community College of the Air Force Action Request, through a local base education office or ANG/AFRC CCAF advisor.



**The Community College of the Air Force**, along with the United States Air Force Academy, is a federally chartered degree-granting institution.

### The Educational Documents

A student submits an Air Force Form 968, Community College of the Air Force Action Request, through the education services office or ANG/AFRC CCAF advisor. This form should list all civilian postsecondary institutions attended. To progress in a degree program, a student submits educational documents reflecting course completion. The issuing institution or agency mails these documents to the appropriate education services center or ANG/AFRC CCAF advisor, or to CCAF/RR, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613.

Appropriate documents may include:

- ◆ Official transcript of applicable course work completed at accredited postsecondary institutions.
- ◆ Official transcript from the Educational Testing Service reflecting CLEP or DANTES tests taken at a certified DANTES testing site.
- ◆ Air Force Institute for Advanced Distributed Learning (formerly ECI) official transcript, showing semester-hour credits.
- ◆ Foreign transcript with an external course-by-course evaluation from a National Association of Credential Evaluation Services member. Foreign transcripts must be in English or accompanied by an English translation from the evaluation service.
- ◆ Certificate or diploma from a CCAF course.
- ◆ Request for Verification of Course Completion of an affiliated school course that was not added to the academic record.
- ◆ Official verification of professional certification, licensure or registry.
- ◆ Official verification of successfully completing a course conducted by or for US Government agencies for which the American Council on Education recommends credit.

### Fraudulent Documents

The Admissions & Registrar Directorate and Academic Programs Division ensure the authenticity of each document. All fraudulent documents are given to the registrar for appropriate action that can include disenrollment and/or legal action. A student disenrolled for fraud will have his or her transcript annotated with “student was disenrolled for submitting fraudulent documents.”

### Document Process

When documents arrive at the administrative center, program managers assess progress toward degree requirements. After assessing the educational documents, they generate a progress report—a worksheet that is not an official record or transcript—reflecting credits applied toward degree program completion.

## **Document Update**

The college updates student records from educational documents submitted by the student. A student needs to update records no more than once a year unless applying for an Air Force commission, before separation or retirement, or when it may result in degree completion.

**Community College  
of the Air Force  
Homepage**

[www.au.af.mil/au/ccaf/](http://www.au.af.mil/au/ccaf/)

## **Information Release**

A student may release information pertaining to his or her educational record to a third party by completing and submitting a release letter (with an original signature) to the college's registrar. The student needs to state what information can be provided and to whom the information can be released. The Federal Family Educational Rights and Privacy Act of 1974, 5 United States Code 301, 10 United States Code 8013 and Executive Order 9397 dictate the policy regarding release of student data. These directives specify that an educational record may not be released without the student's written consent specifying records to be released and to whom.

## **Transcript Request**

CCAF transcripts are provided free of charge. To request a transcript, complete an Air Force Form 2099, Request for Community College of the Air Force Transcript, which is available from the education services office or ANG/AFRC CCAF advisor, or send a written request to CCAF/RR, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613. Each request requires:

- ◆ Requester's full name or former name, if appropriate.
- ◆ Social security account number.
- ◆ Current address with ZIP code.
- ◆ Address with ZIP code to which transcript is to be sent.
- ◆ Requester's signature to legally authorize release of transcript.

Transcripts sent directly to educational institutions will be certified as official by the CCAF registrar. A student may request an official transcript be sent to a base or unit education services center. Transcripts sent directly to students are unofficial and stamped "Issued to Student."

### The Community College of the Air Force

is an institution of higher learning dedicated to the enlisted members of the United States Air Force. The college is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30333-4097; telephone number 404-679-4501) to award the Associate in Applied Science Degree.

## The Student

As a military member, the student abides by the *Uniform Code of Military Justice*. An airman is briefed on the code upon initial entrance into active duty and periodically thereafter. A copy of this code is also available in the legal office on each Air Force installation. Additionally, a student must follow the standards of behavior established by the affiliated schools.

### Feedback

Student participation is integral to the future development and continuous improvement of the college. This feedback is incorporated into every phase of CCAF's strategic planning process that continually impacts policies and procedures, course and program reviews, affiliated school operations and educational support services.

A student can offer feedback through a number of avenues. Some ways include classroom feedback; follow-up surveys by the schools, the college, the student leaders at each affiliated school; and the formal waiver review process. There are affiliated school representatives who also address student interests on the Policy Council, Affiliated Schools Advisory Panel and Education Services Advisory Panel. Also, the Chief Master Sergeant of the Air Force represents the student on the Board of Visitors.

A student may also provide feedback to the administrative center by visiting the CCAF homepage at [www.au.af.mil/au/ccaf/](http://www.au.af.mil/au/ccaf/) or sending an E-mail directly to an individual or office.

### Student Services

The Air Force recognizes off-duty activities as an essential part of the everyday life of its enlisted force and provides a variety of activities in which a student may participate.

**Bowling.** Schedules provide for open bowling, league bowling and special tournaments.

**Chapels.** Protestant, Catholic, Jewish and other religious activities are available, including special programs such as choir, study groups, social functions and religious education.

**Clubs.** Enlisted clubs serve food and beverages and provide entertainment such as music, dances, floorshows, variety acts and television viewing.

**Family Support Center.** Services include but are not limited to transition assistance, job search, employment applications, interviewing, relocation assistance, resume writing, Air Force aid, personal financial management and counseling for military personnel and their families.

## GENERAL INFORMATION

**Fitness Center.** Facilities are available for activities such as weight lifting, racquetball, handball, jogging, weight control, basketball, tennis, volleyball, softball and aerobics.

**Hobby Shops.** Facilities, equipment and instructors are available for those interested in automobile repair and maintenance, woodworking, ceramics, leatherwork, engraving, painting, electrical repair and photography.

**Library.** Reference books, journals, newspapers, recordings and tapes, and on-line services are available to support students.

**Life Skills Center.** Services include, but are not limited to, family advocacy, mental health and alcohol/drug abuse prevention and treatment on an inpatient, outpatient and group basis.

**Recreation Center.** Activities include table games, music listening, dancing, television viewing, tours, concerts, discussion groups, etc.

**Swimming.** Swimming instruction is a routine part of scheduled activities.

**Theater.** Current films are normally shown daily.

**Community College  
of the Air Force  
Homepage**

[www.au.af.mil/au/ccaf/](http://www.au.af.mil/au/ccaf/)

**GENERAL INFORMATION**

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## **DEGREE PROGRAMS ...**

**T**his section contains the degree program requirements of the Community College of the Air Force. Degree programs are developed by Air Force technical experts and civilian or military consultants, and reviewed by the dean of academic affairs, commander/president, Policy Council and Board of Visitors. The programs are designed to provide students with knowledge, skills and theoretical background for enhanced performance as technicians and noncommissioned officers.

## DEGREE PROGRAMS

### THE ASSOCIATE IN APPLIED SCIENCE DEGREE

The associate in applied science degree is offered in the following broad career areas:

- ◆ Aircraft & Missile Maintenance
- ◆ Allied Health
- ◆ Electronics & Telecommunications
- ◆ Logistics & Resources
- ◆ Public & Support Services

### Degree Completion Requirements

The associate in applied science degree consists of a minimum of 64 semester hours (SH). Degree requirements are distributed as follows:

	Semester Hours
Technical Education.....	24
Leadership, Management & Military Studies .....	6
Physical Education.....	4
General Education.....	15
Oral Communication.....	3
Written Communication.....	3
Mathematics .....	3
Social Science .....	3
Humanities .....	3
Program Elective.....	15
<i>Total</i> .....	<b>64</b>

Leadership, management and military studies; physical education; general education; and program elective requirements are identical for all programs.

A student needs to hold the journeyman (5) level in the appropriate AFSC at time of program completion. Attaining the journeyman level is waived for a student in occupational specialties that do not have journeyman levels.

A student must complete all degree requirements before separating, retiring or becoming a commissioned officer.

### Residency Requirement (16 semester hours)

A student must have a minimum of 16 SHs of CCAF credit applied to his or her degree program to graduate. The 16-semester-hour residency requirement is only satisfied by credit earned for basic military training or coursework completed in an affiliated school or through internship credit awarded for progression in an Air Force occupational specialty.

### Technical Education Requirement (24 semester hours)

Twenty-four semester hours are required to fulfill the technical education requirement. Twelve semester hours must be applied from the technical core area with the remaining 12 applied from either the technical core or the technical elective areas. Refer to individual academic degree programs for specific technical education requirements. A student can check with the CCAF counselor or advisor for advice regarding specific degree requirements and information regarding transfer credit. Requests to substitute comparable courses or to exceed specified semester-hour values in any subject or course are approved by the Academic Programs Division. Office symbols and DSN telephone numbers are listed on the Program Codes table starting on page 22.

Technical education requirements are generally satisfied by entry-level and advanced degree-applicable courses at affiliated schools and through internship. However, additional technical education requirements may be satisfied by application of courses accepted in transfer, testing credit, independent study or correspondence, certification, licensure, or registry.

The following are the criteria to apply courses accepted in transfer to the technical education requirement:

- ◆ Must be from an accredited institution or a recognized candidate for accreditation.

- ◆ Must be taught by faculty who meet the minimum faculty professional preparation requirements of the Commission on Colleges of the Southern Association of Colleges and Schools.
- ◆ Must be listed and identified in the offering institution's general catalog.
- ◆ Must be collegiate course work relevant to the technical requirement.
- ◆ Must have been completed with the equivalent of a "C" grade or better.
- ◆ Must not be developmental, preparatory, remedial, refresher or review.
- ◆ Must not duplicate or significantly overlap another course or test applied to the degree program.

Courses that are closely aligned by definition to the subject areas listed below may apply toward fulfilling specific technical elective requirements.

**Algebra-Based Physics.** Generally a sequence of courses for engineering students not pursuing a major or minor in physics or a technical program. Topics generally include mechanics, fluids, thermodynamics, wave motion, sound, light, electricity, magnetism, relativity, and atomic and nuclear structure. Prerequisites generally are high school algebra and trigonometry.

**Calculus.** Normally includes study of limits, continuity, derivatives, techniques of differentiation, curve sketching, integrals, fundamental theorem of calculus, exponential and logarithmic functions, basic techniques of integration, and applications of the integral.

**Calculus-Based Physics.** Generally a sequence of courses for engineering, physics and technical majors or minors. Topics usually include mechanics, fluids, thermodynamics, wave motion, sound, light, electricity, magnetism, relativity, and atomic and nuclear structure. Operational and mathematical analyses (differential and integral calculus) are stressed. Corequisite or prerequisite is calculus.

**College Algebra.** Normally includes, but is not limited to, the real number system, functions and relations, binomial theorem, matrices and determinants, logarithms, equations, sequences and series, and mathematical induction. Prerequisite is generally 2 years of high school algebra or its equivalent.

**Computer Science.** Hands-on use of computers in today's work environment. Use of desktop computers; concepts of mainframe computers; techniques of word processing, databases and spreadsheets; development of programming skills in Ada, Basic, FORTRAN, etc; concerns of virus prevention and detection; and data security. Computer history, hardware design, computer maintenance and management of computer systems are not acceptable.

**General Biology.** Normally includes study of fundamental principles of living organisms. Includes cell or subcellular structure, reproduction, heredity and development.

**General Chemistry.** Normally includes study of composition, structure, properties of and changes in matter, and accompanying energy phenomena as well as fundamental laws and theories including atomic and molecular structure.

**General Psychology.** Introduction to the major areas of psychology. Normally includes history of psychology, factors in development of the individual, human capacities and abilities, emotions and their control, and the learning process.

**General Sociology.** Introduction to the major areas of sociology. Normally includes nature and meaning of culture, social control and deviance, groups and associations, social institutions, social processes, ethnic relations, and social change. Emphasis is on man as a participant in society.

**Human Anatomy and Physiology.** Normally includes study of digestive, metabolic, nervous, muscular, endocrine, respiratory, circulatory and reproductive systems; and their application to health and hygiene.



## DEGREE PROGRAMS

**Statistics.** Basic statistical theory and application. Topics normally include descriptive statistics, probability, binomial and normal distributions, hypothesis testing, confidence intervals, correlation and simple regression, and nonparametric methods.

**Technical Math.** Normally includes study of applied mathematics that relates to problem solving and applications in a related technology. The level of difficulty must be equal to or higher than college algebra, trigonometry or calculus.

**Trigonometry.** Normally includes study of analytical trigonometry and applications to include trigonometric functions, solution of triangles and trigonometric form of complex numbers.

### Leadership, Management & Military Studies Requirement (6 semester hours)

The leadership, management and military studies (LMMS) requirement may be satisfied by applying professional military education, civilian courses accepted in transfer and/or by testing credit. However, the preferred method of completing leadership, management and military studies is through attending an airman leadership school, the NCO academy and/or the Air Force Senior NCO Academy.

The following are the criteria to apply civilian courses to the LMMS requirement:

- ◆ Must be from an accredited institution or a recognized candidate for accreditation.
- ◆ Must be taught by faculty who meet the minimum faculty professional preparation requirements of the Commission on Colleges of the Southern Association of Colleges and Schools.
- ◆ Must be listed and identified in the offering institution's general catalog.
- ◆ Must emphasize the fundamentals of management and management of human resources. Examples of *acceptable* courses are Principles of Management, Personnel Management, Human Resource Management,

Principles of Supervision and Organizational Behavior. Examples of *unacceptable* courses are Small Business Management, Managerial Accounting, Financial Management, Labor and Management Relations, and other specialized management and/or business courses.

- ◆ Must have been completed with the equivalent of a "C" grade or better.
- ◆ Must not be developmental, preparatory, remedial, refresher or review.
- ◆ Must not duplicate or significantly overlap another course or test applied to the degree program.

### Physical Education Requirement (4 semester hours)

Completing basic military training satisfies the 4-semester-hour physical education requirement. Civilian courses do not apply to this requirement.

### General Education Requirement (15 semester hours)

The general education requirement is satisfied by applying courses accepted in transfer or by testing credit. The following are the criteria to apply courses to the general education requirement:

- ◆ Must be from an accredited institution or a recognized candidate for accreditation.
- ◆ Must be taught by faculty who meet the minimum faculty professional preparation requirements of the Commission on Colleges of the Southern Association of Colleges and Schools.
- ◆ Must be listed and identified in the offering institution's general catalog as satisfying the institution's freshman and sophomore general education graduation requirement designed for transfer.
- ◆ Must have been completed with the equivalent of a "C" grade or better.
- ◆ Must not be developmental, preparatory, remedial, refresher or review.

- ◆ Must not duplicate or significantly overlap another course or test applied to the degree program.
- ◆ Must not be a special topic or problem, workshop, or similar course.
- ◆ Must not be narrowly focused on skills, techniques and procedures peculiar to a particular occupation.

Courses required to satisfy the general education requirement are as follows:

**Oral Communication**..... 3

Speech. Courses that prepare students to organize oral presentations to persuade, debate, argue or inform in a clear, concise and logical manner. Emphasis must be on content and delivery. Group and interpersonal communication courses are not acceptable.

**Written Communication**..... 3

English composition. Applicable communication courses must satisfy the delivering institution’s writing and composition requirement for graduation. Higher-level writing and composition courses may be applied as a program elective.

**Mathematics** ..... 3

Intermediate algebra or a college-level mathematics course that satisfies the delivering institution’s mathematics requirement for graduation. Courses such as accounting, business mathematics, computer mathematics, statistics (taught outside the mathematics department), history of mathematics, and mathematics for elementary and secondary teachers are not applicable. Three semester hours of mathematics are required for graduation. However, if an acceptable mathematics course is applied as a technical or program elective, a natural science course may be substituted for mathematics.

**Social Science** ..... 3

Courses from the following disciplines are acceptable: anthropology, archaeology, economics, geography, government, history, political science, psychology and sociology designed to impart knowledge, develop skills, and identify goals concerning elements and institutions of human society.

**Humanities**..... 3

Courses in fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy and religion are acceptable. Applied courses that teach how to play a musical instrument, perform a dance routine, or sculpt or draw an art form are not acceptable.

**Program Elective Requirement  
(15 semester hours)**

The following will satisfy the program elective requirement:

- ◆ Courses applicable to the technical education, LMMS or general education requirements.
- ◆ Natural science courses that meet the general education requirement application criteria. Courses in biological, physical and earth space science are acceptable. Appropriate natural science courses are freshman and sophomore courses that satisfy the delivering institution’s natural science requirement for graduation. Such courses as science for elementary and secondary teachers, health, nutrition, and hygiene are not acceptable.
- ◆ Foreign language credit earned at the Defense Language Institute or through the Defense Language Proficiency Test.
- ◆ A maximum of 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to the program of enrollment.

## DEGREE PROGRAMS

### THE PROGRAM CODES

This table indicates degree program eligibility for Air Force occupational specialties, including Air Force Specialty Codes (AFSC), reporting identifiers (RI) and special duty identifiers (SDI). An individual at the superintendent or chief enlisted manager level or an individual with an SDI or RI not listed below may register in CCAF programs related to the second, third or fourth (not duty/control) Air Force occupational specialty code.

<b>AFSC</b>	<b>Program Title</b>	<b>Program Code</b>	<b>Branch</b>	<b>DSN</b>	<b>Page No.</b>
1A0X1	Aviation Operations	4VCB	DFAT	5937	37
1A1X1	Aviation Operations	4VCB	DFAT	5937	37
1A2X1	Aviation Operations	4VCB	DFAT	5937	37
1A3X1	Information Systems Technology	0IYY	DFAT	2043	61
1A4X1	Air & Space Operations Technology	4VAS	DFAT	2043	29
1A5X1	Information Systems Technology	0IYY	DFAT	2043	61
1A6X1	Aviation Operations	4VCB	DFAT	5937	37
1A7X1	Aviation Operations	4VCB	DFAT	5937	37
1A8X1	Communications Applications Technology	2IAL	DFAS	6449	42
1C0X1	Aviation Management	1AVY	DFAT	5938	36
1C0X2	Aviation Management	1AVY	DFAT	5938	36
1C1X1	Airway Science	4VEN	DFAT	5938	32
1C2X1	Airway Science	4VEN	DFAT	5938	32
1C3X1	Information Systems Technology	0IYY	DFAT	2043	61
1C4X1	Information Systems Technology	0IYY	DFAT	2043	61
1C5X1	Air & Space Operations Technology	4VAS	DFAT	2043	29
1C6X1	Air & Space Operations Technology	4VAS	DFAT	2043	29
1NXXX	Communications Applications Technology	2IAL	DFAS	6449	42
1S0X1	Safety	9IYY	DFAT	5937	83
1T0X1	Survival Instructor	2IBS	DFAT	5937	88
1T1X1	Aircrew Life Support	4VAT	DFAT	5937	31
1T2X1	Pararescue	7GDP	DFAT	5937	76
1W0X1	Weather Technology	8FYU	DFAT	5938	91
2A0XX	Avionic Systems Technology	4VHS	DFAT	5938	38
2A1XX	Avionic Systems Technology	4VHS	DFAT	5938	38
2A3X1	Avionic Systems Technology	4VHS	DFAT	5938	38
2A3X2	Avionic Systems Technology	4VHS	DFAT	5938	38
2A3X3	Aviation Maintenance Technology	4VAD	DFAT	5937	35
2A4XX	Avionic Systems Technology	4VHS	DFAT	5938	38
2A5X1	Aviation Maintenance Technology	4VAD	DFAT	5937	35
2A5X2	Aviation Maintenance Technology	4VAD	DFAT	5937	35
2A5X3	Avionic Systems Technology	4VHS	DFAT	5938	38

## DEGREE PROGRAMS

<b>AFSC</b>	<b>Program Title</b>	<b>Program Code</b>	<b>Branch</b>	<b>DSN</b>	<b>Page No.</b>
2A6X1	Aviation Maintenance Technology	4VAD	DFAT	5937	35
2A6X2	Aerospace Ground Equipment Technology	4VAB	DFAT	5937	26
2A6X3	Aviation Maintenance Technology	4VAD	DFAT	5937	35
2A6X4	Aviation Maintenance Technology	4VAD	DFAT	5937	35
2A6X5	Aviation Maintenance Technology	4VAD	DFAT	5937	35
2A6X6	Aviation Maintenance Technology	4VAD	DFAT	5937	35
2A7X1	Metals Technology	4VLB	DFAT	5937	68
2A7X2	Nondestructive Testing Technology	4VXR	DFAT	5937	72
2A7X3	Aviation Maintenance Technology	4VAD	DFAT	5937	35
2A7X4	Survival Equipment	4VPF	DFAT	5937	87
2EXXX	Electronic Systems Technology	4VHP	DFAT	2043	53
2F0X1	Logistics	1AMY	DFAS	6449	63
2G0X1	Logistics	1AMY	DFAS	6449	63
2M0X1	Electronic Systems Technology	4VHP	DFAT	2043	53
2M0X2	Missile & Space Systems Maintenance	4VAK	DFAT	2043	69
2M0X3	Mechanical & Electrical Technology	4VGA	DFAS	6449	65
2P0X1	Electronic Systems Technology	4VHP	DFAT	2043	53
2RXXX	Maintenance Production Management	4VJG	DFAS	6449	64
2S0X1	Logistics	1AMY	DFAS	6449	63
2S0X2	Information Systems Technology	0IYY	DFAT	2043	61
2T0X1	Transportation	1ATY	DFAS	6449	89
2T1X1	Transportation	1ATY	DFAS	6449	89
2T2X1	Transportation	1ATY	DFAS	6449	89
2T3X0	Vehicle Maintenance	4VKC	DFAS	6449	90
2T3X1	Vehicle Maintenance	4VKC	DFAS	6449	90
2T3X2	Vehicle Maintenance	4VKC	DFAS	6449	90
2T3X4	Vehicle Maintenance	4VKC	DFAS	6449	90
2T3X5	Vehicle Maintenance	4VKC	DFAS	6449	90
2T3X7	Maintenance Production Management	4VJG	DFAS	6449	64
2W0X1	Munitions Systems Technology	4VRA	DFAT	5937	70
2W1X1	Aircraft Armament Systems Technology	4VRY	DFAT	5937	30
2W2X1	Munitions Systems Technology	4VRA	DFAT	5937	70
3A0X1	Information Management	1AUY	DFAS	6448	60
3C0X1	Information Systems Technology	0IYY	DFAT	2043	61
3C0X2	Computer Science Technology	0CYY	DFAT	2043	43
3C1XX	Information Systems Technology	0IYY	DFAT	2043	61
3C2X1	Electronic Systems Technology	4VHP	DFAT	2043	53
3C3X1	Information Systems Technology	0IYY	DFAT	2043	61

## DEGREE PROGRAMS

AFSC	Program Title	Program Code	Branch	DSN	Page No.
3E0X1	Mechanical & Electrical Technology	4VGA	DFAS	6449	65
3E0X2	Mechanical & Electrical Technology	4VGA	DFAS	6449	65
3E1X1	Mechanical & Electrical Technology	4VGA	DFAS	6449	65
3E2X1	Construction Technology	4VEB	DFAS	6449	44
3E3X1	Construction Technology	4VEB	DFAS	6449	44
3E4X1	Ecological Controls	3AKY	DFAS	6449	51
3E4X2	Ecological Controls	3AKY	DFAS	6449	51
3E4X3	Ecological Controls	3AKY	DFAS	6449	51
3E5X1	Construction Technology	4VEB	DFAS	6449	44
3E6X1	Maintenance Production Management	4VJG	DFAS	6449	64
3E7X1	Fire Science	9IFY	DFAS	6449	56
3E8X1	Explosive Ordnance Disposal	4VRC	DFAS	6449	54
3E9X1	Disaster Preparedness	9IMY	DFAS	6449	50
3H0X1	Aerospace Historian	9DHK	DFAS	6449	27
3M0X1	Restaurant, Hotel & Fitness Management	1FRS	DFAS	6449	82
3N0XX	Public Affairs	2FDE	DFAS	6449	79
3N1X1	Music	2CHB	DFAS	6449	71
3N2X1	Music	2CHB	DFAS	6449	71
3P0X1	Criminal Justice	9IJY	DFAS	2737	46
3S0X1	Human Resource Management	1AOY	DFAS	6448	59
3S0X2	Information Systems Technology	0IYY	DFAT	2043	61
3S1X1	Social Services	9IKY	DFAS	6449	85
3S2X1	Education & Training Management	2BAC	DFAS	6448	52
3U0X1	Human Resource Management	1AOY	DFAS	6448	59
3VXXX	Audiovisual Production Services	2IAJ	DFAS	6447	34
4A0X1	Health Care Management	7GCY	DFAS	2737	57
4A1X1	Logistics	1AMY	DFAS	6449	63
4A2X1	Biomedical Equipment Technology	7GAA	DFAS	2737	40
4B0X1	Bioenvironmental Engineering Technology	7GAM	DFAS	2737	39
4C0X1	Mental Health Services	7GAP	DFAS	2737	67
4D0X1	Dietetics & Nutrition	7GAD	DFAS	2737	49
4E0X1	Public Health Technology	7ECY	DFAS	2737	80
4F0X1	Allied Health Sciences	7GAL	DFAS	2737	33
4H0X1	Cardiopulmonary Laboratory Technology	7GDA	DFAS	2737	41
4J0X1	Allied Health Sciences	7GAL	DFAS	2737	33
4J0X2	Physical Therapist Assistant	7GAI	DFAS	2737	78
4M0X1	Aerospace Physiology Instructor	7GAN	DFAS	2737	28
4N0X1	Allied Health Sciences	7GAL	DFAS	2737	33

**DEGREE PROGRAMS**

<b>AFSC</b>	<b>Program Title</b>	<b>Program Code</b>	<b>Branch</b>	<b>DSN</b>	<b>Page No.</b>
4N1X1	Surgical Services Technology	7GEA	DFAS	2737	86
4P0X1	Pharmacy Technology	7GAH	DFAS	2737	77
4R0X1A	Nuclear Medicine Technology	7ABJ	DFAS	2737	73
4R0X1B	Radiologic Technology	7GDH	DFAS	2737	81
4R0X1C	Radiologic Technology	7GDH	DFAS	2737	81
4T0X1	Medical Laboratory Technology	7GAF	DFAS	2737	66
4T0X2	Histologic Technology	7GAE	DFAS	2737	58
4T0X3	Medical Laboratory Technology	7GAF	DFAS	2737	66
4U0X1	Allied Health Sciences	7GAL	DFAS	2737	33
4V0X1	Ophthalmic Technician	7GDI	DFAS	2737	74
4Y0X1	Dental Assisting	7GBC	DFAS	2737	47
4Y0X2	Dental Laboratory Technology	7GBB	DFAS	2737	48
5J0X1	Paralegal	1CAM	DFAS	6448	75
5R0X1	Social Services	9IKY	DFAS	6449	85
6C0X1	Contracts Management	1CAO	DFAS	6448	45
6F0X1	Financial Management	9GEC	DFAS	6448	55
7S0X1	Criminal Justice	9IJY	DFAS	2737	46
8C000	Social Services	9IKY	DFAS	6449	85
8D000	Communications Applications Technology	2IAL	DFAS	6449	42
8F000	Human Resource Management	1AOY	DFAS	6448	59
8M000	Information Management	1AUY	DFAS	6448	60
8R000	Human Resource Management	1AOY	DFAS	6448	59
9G000	Restaurant, Hotel & Fitness Management	1FRS	DFAS	6449	82
9L000	Communications Applications Technology	2IAL	DFAS	6449	42
9S100	Scientific Analysis Technology	4VES	DFAT	2043	84

## DEGREE PROGRAMS

### AEROSPACE GROUND EQUIPMENT TECHNOLOGY (4VAB)

**Occupational Specialty** 2A6X2

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

Aerospace Ground Equipment Maintenance.....	24
CCAF Internship.....	18

**Technical Electives** ..... *Maximum Semester Hours*

Advanced Aerospace Ground Equipment Maintenance .....	12
Air-Conditioning & Refrigeration.....	3
Computer Science .....	6
Corrosion Control .....	3
Diesel Engine Maintenance .....	6
Electricity/Electronics.....	6
Engineering Graphics.....	3
Enlisted Professional Military Education.....	6
Fluid Power .....	3
General Chemistry/Algebra-Based Physics .....	4
Hazardous Materials .....	3
Industrial Safety .....	3
Maintenance Management .....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech .....	
Written Communication.....	3
English composition .....	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

**AEROSPACE HISTORIAN  
(9DHK)**

**Occupational Specialty** 3H0X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
Advanced Writing.....	9
Aerospace Science.....	9
Archival Management.....	3
CCAF Internship.....	18
Interviewing.....	3
Research Methodology.....	3
Unit Historian Development.....	9

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Computer Science.....	6
Copyreading & Editing.....	3
Enlisted Professional Military Education.....	6
Human Communication.....	6
Logic.....	3
Military Science.....	3
Philosophy.....	3
Political Science.....	6
United States History.....	9

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.



## DEGREE PROGRAMS

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### AEROSPACE PHYSIOLOGY INSTRUCTOR (7GAN)

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**Occupational Specialty** 4M0X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

Aerospace Anatomy & Physiology Fundamentals.....	3
CCAF Internship.....	18
Clinical Research.....	3
Hyperbaric Chamber Operations & Maintenance.....	3
Instructional Methodology.....	6
Introduction to Aerospace Physiology.....	3
Life-Support Equipment Systems.....	6
Physiological Training Management.....	12
Respiratory & Circulatory Physiology.....	3
Survival Training.....	6

**Technical Electives** ..... *Maximum Semester Hours*

Computer Science.....	6
Emergency Medicine.....	3
Enlisted Professional Military Education.....	6
General Biology.....	4
General Chemistry.....	8
Guidance & Counseling.....	3
Human Anatomy & Physiology.....	4
Medical Readiness.....	3
Practice Teaching.....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

**Subjects/Courses**..... *Semester Hours*

Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

**AIR & SPACE OPERATIONS TECHNOLOGY  
(4VAS)**

**Occupational Specialty** 1A4X1, 1C5X1, 1C6X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
Aerospace Control & Warning Systems .....	20
CCAF Internship .....	18
Computer Networking.....	6
Radio Communications.....	6
Space Systems Operations .....	20

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Astronautics .....	3
Astronomy.....	3
Aviation/Flight Safety.....	3
Basic Electronics Theory/Applications .....	6
Computer Science .....	6
Enlisted Professional Military Education.....	6
Management Information Systems.....	3
Programming Languages .....	6
Solid-State Theory/Applications .....	3
Space Propulsion.....	3
Survival Training .....	3
Technical Writing .....	3

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## DEGREE PROGRAMS

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### AIRCRAFT ARMAMENT SYSTEMS TECHNOLOGY (4VRY)

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**Occupational Specialty** 2W1X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*  
 Aircraft Armament Systems..... 24  
 CCAF Internship..... 18

**Technical Electives** ..... *Maximum Semester Hours*  
 Advanced Aircraft Armament Systems..... 12  
 Aircraft Maintenance Systems ..... 3  
 Computer Science ..... 6  
 Corrosion Control ..... 3  
 Electricity/Electronics..... 6  
 Engineering Graphics..... 3  
 Enlisted Professional Military Education..... 6  
 Fluid Power..... 3  
 General Chemistry/Algebra-Based Physics ..... 4  
 Heavy Equipment Operation/Maintenance ..... 3  
 Industrial Safety ..... 3  
 Maintenance Management ..... 3  
 Materials & Processes ..... 3  
 Weapons Safety ..... 3

**Leadership, Management & Military Studies**  
 (6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<i>Subjects/Courses</i> .....	<i>Semester Hours</i>
Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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**AIRCREW LIFE SUPPORT  
(4VAT)**

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**Occupational Specialty** 1T1X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
Aircrew Life Support Principles & Procedures.....	24
CCAF Internship .....	18
General Principles of Survival .....	15

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Aircrew Life Support Instructor.....	3
Chemical Defense/Decontamination .....	3
Computer Science .....	6
Emergency Equipment.....	3
Enlisted Professional Military Education.....	6
Parachuting.....	3
Quality Assurance .....	3
Technical Writing .....	3

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## DEGREE PROGRAMS

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### AIRWAY SCIENCE (4VEN)

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**Occupational Specialty** 1C1X1, 1C2X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

Aeronautical Laws and Regulations/Legislation.....	6
Air Navigational Aids.....	3
Air Traffic Control Principles.....	15
Air Transportation Principles.....	3
Airport Management.....	3
CCAF Internship.....	18
Hostile Environment Techniques.....	3
Radar Approach Control.....	15
Tactical Air Command and Control.....	24

**Technical Electives** ..... *Maximum Semester Hours*

Advanced Flight Operations or Commercial Pilot's License.....	9
Aviation/Flight Safety.....	3
Basic Electronics Theory/Applications.....	3
Basic Flight Operations or Private Pilot's License.....	3
Climatology/Meteorology.....	3
Computer Science.....	6
Enlisted Professional Military Education.....	6
FCC General Radiotelephone Operator's License.....	9
Technical Writing.....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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The FAA Control Tower Operator examination is administered at the end of the air traffic controller basic skill-level awarding courses. A passing score on the examination results in award of the Control Tower Operator Certification.

**ALLIED HEALTH SCIENCES  
(7GAL)**

**Occupational Specialty** 4F0X1, 4J0X1, 4N0X1, 4U0X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Emergency Medicine .....	3
Human Anatomy & Physiology .....	8
Hyperbaric Medicine.....	18
Kinesiology .....	12
Medical Assisting.....	24
Nursing.....	24
Occupational Therapy.....	24
Orthotics.....	24

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Computer Science .....	6
Enlisted Professional Military Education.....	6
General Biology .....	8
General Chemistry .....	8
General Psychology .....	3
Medical Readiness .....	3
Medical Terminology.....	3
Pharmacology.....	3
Survival Training .....	3

**Leadership, Management & Military Studies** (6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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For certification as a registered medical assistant, graduates of medical service apprentice or aeromedical apprentice contact American Med Technologists, 710 Higgins Rd, Park Ridge IL 60068; (847) 823-5169; 1-800-275-1268; www.amt1.com.

## DEGREE PROGRAMS

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### AUDIOVISUAL PRODUCTION SERVICES (2IAJ)

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**Occupational Specialty** 3VXXX

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

CCAF Internship .....	18
Electronic Imaging .....	6
Graphic Arts .....	20
Imagery Production Processes .....	18
Library Administration/Science .....	15
Media Production .....	20
Photography .....	20
Visual Information Production/Documentation .....	21

**Technical Electives** ..... *Maximum Semester Hours*

Advertising Art/Design .....	6
Audio/Visual Communications .....	6
Color Science/Theory .....	6
Combat Camera .....	3
Commercial Art .....	6
Computer Aided Imagery .....	6
Computer Science .....	6
Desktop Publishing .....	3
Drawing .....	9
Enlisted Professional Military Education .....	6
Illustration .....	6
Layout/Design .....	6
Photographic Lighting Techniques .....	6
Projection Equipment Repair .....	6
Survival Training .....	3
Two-/Three-Dimensional Design .....	6

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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For certification as a certified graphics communications manager, contact International Publishing Management Association, 1205 W. College Ave, Liberty MO 64068-3733; (816) 781-1111; [www.impma.org](http://www.impma.org). Five years' minimum experience is required.

For certification as an electronic imager or professional photographer contact Professional Photographers of America, 229 Peachtree St NE Ste 2200, Atlanta GA 30303; (404) 522-8600; [www.ppa.com](http://www.ppa.com). Minimum 1-year experience and additional college courses may be required.

**AVIATION MAINTENANCE TECHNOLOGY  
(4VAD)**

**Occupational Specialty** 2A3X3, 2A5X1, 2A5X2, 2A6X1, 2A6X3, 2A6X4, 2A6X5, 2A6X6, 2A7X3

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
Aircraft Electrical/Environmental Systems.....	24
Aircraft Fuel Systems.....	24
Aircraft Maintenance .....	24
Aircraft Pneudraulic Systems.....	24
Aircraft Propulsion Systems.....	24
Aircraft Structural Maintenance.....	24
Aircrew Egress Systems.....	24
CCAF Internship.....	18
*FAA Airframe/Powerplant Certification.....	24
Helicopter Maintenance .....	24

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Advanced Aircraft Accessory Systems Maintenance..	12
Advanced Aircraft Airframe Repair .....	12
Advanced Aircraft Maintenance .....	12
Advanced Aircraft Propulsion Maintenance .....	12
Aircraft Aerodynamics.....	3
Aircraft Composite Bonded Structures .....	6
Aircraft Weight & Balance .....	3
Aviation Safety .....	3
Avionic Systems Theory/Maintenance .....	3
Computer Science .....	6
Corrosion Control .....	6
Electricity/Electronics .....	6
Engineering Graphics.....	3
Enlisted Professional Military Education.....	6
General Chemistry/Algebra-Based Physics .....	4
Hazardous Materials/Industrial Safety .....	3
Materials & Processes .....	3
Nondestructive Inspection.....	3
Quality Assurance .....	3
Technical Mathematics .....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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\*See page 93 for further information on FAA Certification.



## DEGREE PROGRAMS

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### AVIATION MANAGEMENT (1AVY)

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**Occupational Specialty** 1C0X1, 1C0X2

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

Aeronautical Laws & Regulations/Legislation .....	6
Air Navigational Aids .....	3
Airport Management .....	12
CCAF Internship .....	18
Climatology/Meteorology .....	3
Data Information Systems .....	6
Data Information Systems Management .....	3
Resource Management .....	6
Statistics .....	6

**Technical Electives** ..... *Maximum Semester Hours*

Advanced Flight Operations or Commercial Pilot's License .....	9
Air Traffic Control Principles .....	6
Air Transportation Principles .....	3
Aviation/Flight Safety .....	3
Basic Flight Operations or Private Pilot's License .....	3
Computer Science .....	6
Enlisted Professional Military Education .....	6
FCC General Radiotelephone Operator's License .....	9
Principles of Accounting .....	6
Technical Writing .....	3
Typing/Keyboarding .....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

**Subjects/Courses** ..... *Semester Hours*

Oral Communication .....	3
Speech .....	
Written Communication .....	3
English composition .....	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics .....	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology .....	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion .....	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

**AVIATION OPERATIONS  
(4VCB)**

**Occupational Specialty** 1A0X1, 1A1X1, 1A2X1, 1A6X1, 1A7X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

Aerial Gunner Principles/Procedures .....	24
Air Transportation Principles .....	6
Aircraft Loadmaster Principles/Procedures.....	24
Aviation/Flight Safety .....	6
CCAF Internship .....	18
*FAA Flight Engineer Certification.....	8
Flight Attendant Principles/Procedures.....	24
Flight Engineer, Fixed Wing.....	24
Flight Engineer, Helicopter .....	24
Flight Rules & Regulations .....	3
In-flight Refueling Operations .....	24
Introduction to Aviation/Aeronautics.....	3
Survival Training .....	6

**Technical Electives** ..... *Maximum Semester Hours*

Advanced Flight Engineering.....	12
Aerodynamics .....	3
Aircraft Systems.....	6
Aircraft Weight & Balance .....	3
Aviation Law.....	6
Climatology/Meteorology .....	6
Computer Science .....	6
Electricity/Electronics .....	6
Enlisted Professional Military Education.....	6
*FAA Airframe & Powerplant Certification.....	6
General Chemistry/Algebra-Based Physics .....	4
Human Factors in Aviation/Flight Physiology.....	3
Human Relations.....	3
Private/Commercial Pilot’s License.....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

**Subjects/Courses** ..... *Semester Hours*

Oral Communication .....	3
Speech .....	
Written Communication .....	3
English composition .....	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics .....	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology .....	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion .....	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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\*See page 93 for further information on FAA Certification.

## DEGREE PROGRAMS

### AVIONIC SYSTEMS TECHNOLOGY (4VHS)

**Occupational Specialty** 2A0XX, 2A1XX, 2A3X1, 2A3X2, 2A4XX, 2A5X3

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*  
Avionic Systems Theory/Maintenance ..... 24  
CCAF Internship ..... 18

**Technical Electives** ..... *Maximum Semester Hours*  
Advanced Electronics ..... 12  
Algebra-Based Physics ..... 4  
Aviation/Flight Safety ..... 3  
Basic Electronics Theory/Applications ..... 12  
CAD/CAM or Technical Drawing/Drafting ..... 3  
Communication Systems Theory/Maintenance ..... 12  
Computer Science ..... 6  
Digital Techniques ..... 6  
Electronic Systems Theory/Maintenance ..... 12  
Enlisted Professional Military Education ..... 6  
FCC General Radiotelephone Operator's License ..... 9  
Industrial Safety ..... 3  
Microprocessor Electronic Theory ..... 6  
Quality Assurance ..... 3  
Radar Systems Theory/Maintenance ..... 3  
Soldering Techniques ..... 3  
Solid-State Theory/Applications ..... 6  
Technical Writing ..... 3  
Trigonometry or higher-level Mathematics ..... 3

#### **Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

**Subjects/Courses** ..... *Semester Hours*  
Oral Communication ..... 3  
    Speech  
Written Communication ..... 3  
    English composition  
Mathematics ..... 3  
    Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics  
Social Science ..... 3  
    Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology  
Humanities ..... 3  
    Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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**BIOENVIRONMENTAL ENGINEERING  
TECHNOLOGY (7GAM)**

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**Occupational Specialty** 4BOX1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
Bioenvironmental Protection.....	8
CCAF Internship .....	18
Disaster Medicine .....	9
Introduction to Bioenvironmental Science.....	9
Occupational Environment.....	6
Radiation Health Physics .....	4
Waste Management.....	8
Water Systems Management.....	6

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Computer Science .....	6
Enlisted Professional Military Education.....	6
General Biology .....	8
General Chemistry .....	8
Hearing Conservation.....	4
Industrial Hygiene Measurements.....	6
Microbiology.....	8
Principles of Ecology .....	3
Radiological Hazards .....	4
Statistics .....	3
Survey of Nuclear Medicine Safety & Procedures.....	6

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or General education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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Degree graduates desiring certification as a occupational health and safety technologist contact Council of Certification of Health, Environmental and Safety Technologists, 208 Burwash Ave, Savoy IL 61874-9571; (217) 359-2686; www.cchest.org.

## DEGREE PROGRAMS

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### BIOMEDICAL EQUIPMENT TECHNOLOGY (7GAA)

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#### Occupational Specialty 4A2X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

#### **Technical Core** ..... *Maximum Semester Hours*

Biomedical Equipment Maintenance Management ....	12
CCAF Internship .....	18
Diagnostic Support Equipment Systems .....	12
Diagnostic Support Radiographic Systems .....	12
Physiological Monitoring Systems .....	9
Therapeutic Support Equipment Systems .....	12

#### **Technical Electives** ..... *Maximum Semester Hours*

Acceptance/Certification Procedures for Medical X-ray Systems .....	3
Basic Electronics Theory/Applications .....	6
Digital Techniques .....	6
Electronic Circuit Design/Analysis .....	6
Enlisted Professional Military Education.....	6
Human Anatomy & Physiology .....	4
Installation & Maintenance of X-ray Systems .....	9
Management of Biomedical Equipment Programs .....	3
Medical Readiness .....	3
Medical Terminology.....	3
Microprocessor Technology .....	6
X-ray System Technology .....	3

#### **Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

#### **Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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For certification as a biomedical equipment technician, contact International Certification Commission for Clinical Engineering and Biomedical Technology, 1110 N. Glebe Rd Ste 220, Arlington VA 22201-4795; (703) 525-4890 ext 240; www.aami.org. Completing the apprentice course and 2 years' experience are required.

**CARDIOPULMONARY LABORATORY  
TECHNOLOGY (7GDA)**

**Occupational Specialty** 4H0X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
Advanced Cardiopulmonary Procedures.....	9
Cardiopulmonary Anatomy & Physiology.....	6
Cardiopulmonary Instrumentation.....	3
Cardiopulmonary Invasive/Noninvasive Diagnostic Procedures.....	12
Cardiovascular & Pulmonary Diagnostic Principles.....	8
CCAF Internship.....	18
Clinical Respiratory Therapy.....	8
Pulmonary Diagnostic Procedures.....	8
Respiratory Therapy.....	6

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Computer Science.....	6
Emergency Medicine.....	3
Enlisted Professional Military Education.....	6
Medical Readiness.....	3
Medical Terminology.....	3

**Leadership, Management & Military Studies** (6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

For certification in pulmonary function technology, contact National Board of Respiratory Care Inc, 8310 Nieman Rd, Lenexa KS 66214-1579; (913) 599-4200; www.nbrc.org.

## DEGREE PROGRAMS

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### COMMUNICATIONS APPLICATIONS TECHNOLOGY (2IAL)

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**Occupational Specialty** 1A8X1, 1NXXX, 8D000, 9L000

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

Airborne Communications Systems.....	9
Broadcast Communications .....	20
CCAF Internship.....	18
Communications Analysis & Reporting .....	20
Cryptanalysis.....	12
Foreign Technical Language/Area Studies .....	18
Imagery Analysis .....	20
Introduction to Cartography.....	9
Photogrammetry.....	9

**Technical Electives** ..... *Maximum Semester Hours*

Aerial Photography .....	6
Aeronautics .....	3
College Algebra or higher-level Mathematics .....	3
Communication System Operations.....	6
Computer Science .....	6
Enlisted Professional Military Education.....	6
Intelligence Collection Management .....	6
International Studies .....	9
Interviewing .....	3
Principles of Communication.....	9
Principles of Electronics .....	6
Principles of Radar.....	6
Survival Training .....	4

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

**Subjects/Courses** ..... *Semester Hours*

Oral Communication .....	3
Speech .....	
Written Communication.....	3
English composition .....	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics .....	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology .....	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion .....	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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For certification in written translation, contact American Translators Association, 225 Reinekers Ln Ste 590, Arlington VA 22314; (703) 683-6100; [www.atanet.org](http://www.atanet.org).

**COMPUTER SCIENCE TECHNOLOGY  
(0CYY)**

**Occupational Specialty** 3C0X2

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
Calculus.....	6
CCAF Internship.....	18
Computer Systems Analysis & Design.....	12
Computer Systems Management.....	3
Programming Languages.....	16

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
College Algebra or Trigonometry.....	3
Computer Science.....	6
Data Communications.....	3
Data Structures.....	3
Database Design.....	3
Database Management.....	3
Discrete Math.....	3
Enlisted Professional Military Education.....	6
Principles of Accounting.....	3
Statistics.....	3

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.



## DEGREE PROGRAMS

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### CONSTRUCTION TECHNOLOGY (4VEB)

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**Occupational Specialty** 3E2X1, 3E3X1, 3E5X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

Building Construction & Design.....	20
Carpentry/Cabinetry.....	12
CCAF Internship.....	18
College Algebra/Trigonometry.....	3
Computer Aided Drafting.....	3
Construction Inspection/Building Codes.....	9
Drafting/Engineering Drawing.....	3
Engineering Assistant.....	20
Heavy Equipment Operations.....	20
Metals Fabrication/Characteristics.....	15
Pavement Construction.....	12
Project Management/Planning.....	3
Surveying.....	9
Welding.....	9

**Technical Electives** ..... *Maximum Semester Hours*

Blueprint Reading.....	3
Computer Science.....	6
Construction Material Estimating.....	3
Enlisted Professional Military Education.....	6
General Physics.....	3
Hazardous Materials.....	3
Industrial/Construction Safety.....	3
Properties & Strength of Materials.....	6
Soils & Foundations.....	3
Technical Writing.....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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For certification as a welder, contact American Welding Society, 550 NW Leune Rd, Miami FL 33126; (800) 443-9353; [www.aws.org](http://www.aws.org).

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**CONTRACTS MANAGEMENT  
(1CAO)**

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**Occupational Specialty** 6C0X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
*Business Law .....	3
CCAF Internship .....	18
*Contract Administration/Management .....	12
*Contract Law .....	6
*Pricing & Negotiation .....	6
*Principles of Government Contracting .....	6
*Purchasing Principles .....	9

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Computer Science .....	6
*Enlisted Professional Military Education .....	6
Human Relations .....	3
*Introduction to Business .....	3
Labor Relations .....	3
Materiel Management .....	3
*Principles of Accounting .....	3
*Principles of Economics (Macro/Micro) .....	6
*Principles of Marketing .....	3
*Statistics .....	3

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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\*Courses applicable to the 24-semester-hour business requirement for the Acquisition Professional Development (APD) Program. Also, may apply 4 SHs to the APD Program when 5-level career development course is completed and 2 SHs to the APD Program when resident Airman Leadership School, NCO Academy or USAF Senior NCO Academy is completed.

## DEGREE PROGRAMS

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### CRIMINAL JUSTICE (9IJY)

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**Occupational Specialty** 3P0X1, 7S0X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

CCAF Internship .....	18
Criminal Investigations .....	16
Criminal Law .....	6
Fundamentals of Ground Combat Skills .....	8
Fundamentals of Law Enforcement .....	9
Introduction to Security .....	6
Physical Security Concepts .....	6
Police Administration & Supervision .....	6
Principles of Criminal Justice .....	6
Principles of Marksmanship.....	9
Special Weapons & Tactics .....	6

**Technical Electives** ..... *Maximum Semester Hours*

Antiterrorism.....	3
Computer Science .....	6
Constitutional Law .....	3
Corrections .....	6
Criminalistics/Forensic Science .....	3
Criminology .....	3
Emergency Medicine .....	4
Enlisted Professional Military Education.....	6
General Psychology .....	3
General Sociology.....	3
Instructional Methodology .....	6
Juvenile Justice .....	3
Patrol Dog Operations.....	8
Police Community Relations .....	3
Traffic Management/Investigation.....	6
Weapons Maintenance .....	6

### **Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

### **Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

**Subjects/Courses** ..... *Semester Hours*

Oral Communication .....	3
Speech .....	
Written Communication .....	3
English composition .....	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics .....	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology .....	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion .....	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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**DENTAL ASSISTING  
(7GBC)**

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**Occupational Specialty** 4Y0X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Dental Clinical Phase & Procedures .....	16
Dental Sciences .....	12
Oral Radiology.....	6
Preventive Dentistry Science .....	8

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Advanced Dental Hygiene .....	9
American Dental Association Certified Dental Assistant .....	14
Computer Science .....	6
Dental Administrative Procedures .....	6
Emergency Medicine .....	3
Enlisted Professional Military Education.....	6
General Biology .....	4
General Chemistry .....	4
General Psychology .....	3
Human Anatomy & Physiology .....	4
Medical Readiness .....	3

**Leadership, Management & Military Studies** (6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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The Commission on Dental Accreditation of the American Dental Association accredits the dental assistant apprentice course. For certification, course graduates contact Dental Assisting National Board Inc, 676 N. St Clair Ste 1880, Chicago IL 60611; (312) 642-3368; www.dentalassisting.com.

## DEGREE PROGRAMS

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### DENTAL LABORATORY TECHNOLOGY (7GBB)

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**Occupational Specialty** 4Y0X2

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

CCAF Internship .....	18
Complete Dentures .....	12
Construction of Removable Partial Dentures .....	12
Dental Ceramics .....	6
Dental Laboratory Fundamentals .....	6
Inlays, Crowns & Fixed Partial Dentures .....	9

**Technical Electives** ..... *Maximum Semester Hours*

Advanced Removable Prosthodontics .....	8
Computer Science .....	6
Enlisted Professional Military Education .....	6
Functional & Aesthetic-Fixed Prosthodontics .....	8
Medical Readiness .....	3
Porcelain & Metal Ceramic Restoration .....	8

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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The Commission on Dental Accreditation of the American Dental Association accredits the dental laboratory apprentice course. Graduates with 5 years' experience contact the National Board for Certification, Certified Dental Technician, 1530 Metropolitan Blvd, Tallahassee FL 32308; 1-800-684-5310; [www.nadl.org](http://www.nadl.org).

**DIETETICS & NUTRITION  
(7GAD)**

**Occupational Specialty 4D0X1**

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Diet Therapy .....	16
Dietetics .....	8
Dining Operations .....	6
Fitness & Health.....	6
Introduction to Food Preparation .....	9
Nutrition .....	9
Nutritional Medicine Administration .....	6
Subsistence Management .....	6

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Computer Science .....	6
Enlisted Professional Military Education.....	6
Food Services.....	6
General Biology .....	4
General Chemistry .....	4
Human Anatomy & Physiology .....	4
Medical Readiness .....	3
Principles of Accounting.....	3

**Leadership, Management & Military Studies** (6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

For certification as a dietary manager, contact Dietary Managers Association, 406 Surrey Woods Dr, St Charles IL 60174-2386; 1-800-323-1908; [www.dmaonline.org](http://www.dmaonline.org).

For certification as a lifestyle and weight management consultant, contact American Council on Exercise, 5820 Oberlin Dr Ste 102, San Diego CA 92121-3787; 1-800-825-3636; [www.acefitness.org](http://www.acefitness.org). Applicants must have current CPR Certification.

## DEGREE PROGRAMS

### DISASTER PREPAREDNESS (9IMY)

#### Occupational Specialty 3E9X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

#### **Technical Core** ..... *Maximum Semester Hours*

CCAF Internship .....	18
Disaster Preparedness .....	6
Emergency Operations/Response.....	9
Emergency Planning .....	6
Environmental Science .....	10
Federal Emergency Management Agency Independent Study Program .....	12
Hazardous Materials .....	6
Instructor Fundamentals.....	6
Radiological Fundamentals.....	3
Risk Assessment .....	3
Warfare Defense .....	3

#### **Technical Electives** ..... *Maximum Semester Hours*

Cartography/Map Reading .....	3
Civil Defense .....	3
Climatology/Meteorology.....	3
Computer Science .....	6
Emergency Information Systems .....	3
Enlisted Professional Military Education.....	6
Exercise Design .....	3
General Chemistry .....	4
Industrial Safety/Hygiene .....	3
Inventory Management .....	3
Public Administration .....	3
Technical Writing .....	3
Tests & Measurements.....	3

#### **Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

#### **Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication.....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or General education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

**ECOLOGICAL CONTROLS  
(3AKY)**

**Occupational Specialty** 3E4X1, 3E4X2, 3E4X3

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Entomology/Pest Control .....	3
Environmental Support .....	20
Liquid Fuel Systems.....	20
Utilities Systems .....	20
Waste Treatment .....	3

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Blueprint Reading/Schematic Diagrams .....	6
Botany/Plant Disease .....	6
Computer Science .....	6
Enlisted Professional Military Education.....	6
Environmental Law/Compliance.....	3
Fire-Suppression Systems .....	6
General Chemistry/Biology .....	8
General Physics .....	4
Hazardous Materials.....	6
Hydrology .....	3
Industrial Safety .....	3
Mechanics of Soils .....	3
Microbiology.....	3
Natural Gas Distribution .....	6
Pollution Prevention.....	3
Principles of Ecology .....	6
Principles of Electronics .....	3
Technical Writing .....	3
Welding/Pipefitting.....	6

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

For certification as a voluntary plumbing inspector, contact International Association of Plumbing and Mechanical Officials, 20001 Walnut Dr S., Walnut CA 91789-2825; (909) 595-8449 ext 112; www.iapmo.org. Examinations are given throughout the United States and cover the Uniform Plumbing Code.



## DEGREE PROGRAMS

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### EDUCATION & TRAINING MANAGEMENT (2BAC)

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#### Occupational Specialty 3S2X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

#### **Technical Core** ..... *Maximum Semester Hours*

Administration of Education & Training Programs	15
Business Communications	3
CCAF Internship	18
Classroom Management	3
Computer-Based Instruction	9
Educational Technology	3
Guidance & Counseling	3
Instructional Methodology	6
Instructional Systems Development	9
Office Management	3
Statistics	3
Technical Writing	3
Tests & Measurements	3

#### **Technical Electives** ..... *Maximum Semester Hours*

Computer Science	6
Curriculum Development	3
Educational/Developmental Psychology	3
Enlisted Professional Military Education	6
General Psychology	3
General Sociology	3
Public Relations	3
Supervision of Instruction	3

#### **Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

#### **Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<i>Subjects/Courses</i>	<i>Semester Hours</i>
Oral Communication	3
Speech	
Written Communication	3
English composition	
Mathematics	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

**ELECTRONIC SYSTEMS TECHNOLOGY  
(4VHP)**

**Occupational Specialty** 2EXXX, 2M0X1, 2P0X1, 3C2X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Communication Systems Theory/Maintenance.....	24
Electronic Communication-Computer Systems Theory/Maintenance.....	24
Electronic Systems Theory/Maintenance .....	24

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Advanced Electronics.....	12
Algebra-Based Physics.....	4
Basic Electronics Theory/Applications .....	12
College Algebra or higher-level Mathematics .....	3
Computer Science .....	6
Computer Systems Maintenance & Operations Principles.....	6
Digital Techniques .....	6
Enlisted Professional Military Education.....	6
FCC General Radiotelephone Operator’s License .....	9
High-Reliability Soldering .....	3
Industrial Safety .....	3
Microprocessor Electronic Theory.....	6
Quality Assurance .....	3
Solid-State Theory/Applications .....	6
Technical Writing .....	3

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## DEGREE PROGRAMS

### EXPLOSIVE ORDNANCE DISPOSAL (4VRC)

**Occupational Specialty** 3E8X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

Algebra-Based Physics .....	8
CCAF Internship .....	18
Electricity/Electronics .....	9
Explosive Ordnance Disposal .....	24
General Chemistry .....	4
Hazardous Materials .....	6

**Technical Electives** ..... *Maximum Semester Hours*

Accident Prevention.....	3
Basic Photography (Camera/Video Operations).....	3
Blueprint Reading/Schematic Diagrams .....	3
Computer Science .....	6
Emergency Medicine .....	3
Enlisted Professional Military Education.....	6
Heavy Equipment Operations .....	3
Industrial Safety .....	3
Industrial X-ray/Nondestructive Inspection .....	3
Inventory Management .....	3
Investigative Techniques.....	3
Map & Compass Reading .....	3
Nuclear Science .....	4
Principles of Marksmanship.....	3
Statistics .....	3
Technical Mathematics .....	3
Technical Writing .....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication.....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or General education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

**FINANCIAL MANAGEMENT  
(9GEC)**

**Occupational Specialty 6F0X1**

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
Business Law .....	6
Business Mathematics.....	3
CCAF Internship .....	18
Financial Analysis.....	3
Financial Principles/Management.....	3
Government Financial Systems.....	3
Microcomputer Software Applications .....	6
Military Pay & Accounting.....	6
Principles of Accounting.....	6
Statistics .....	3
Travel Accounting.....	9

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Business Finance.....	3
Computer Science .....	6
Enlisted Professional Military Education.....	6
International Finance.....	3
Money & Banking.....	6
Principles of Economics (Macro/Micro).....	6
Principles of Marketing.....	3

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication.....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## DEGREE PROGRAMS

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### FIRE SCIENCE (9IFY)

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#### Occupational Specialty 3E7X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

#### **Technical Core** ..... *Maximum Semester Hours*

Aerospace Vehicle Firefighting .....	9
CCAF Internship .....	18
Fire Apparatus Operation .....	6
Fire Department Administration .....	3
Fire Service Rescue .....	9
Hazardous Materials .....	6
Introduction to Fire Science .....	6
Structural Firefighting .....	12

#### **Technical Electives** ..... *Maximum Semester Hours*

Building Construction for Fire Protection .....	3
Computer Science .....	6
Emergency Medicine .....	6
Enlisted Professional Military Education .....	6
Fire Codes & Related Ordinances .....	3
Fire Command .....	3
Fire Hydraulics .....	3
Fire Instructor .....	3
Fire Prevention/Inspection .....	6
Fire Protection Systems .....	3
Fire/Arson Investigation .....	3
Firefighting Occupational Safety .....	3
General Chemistry .....	6
Technical Writing .....	3

#### **Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

#### **Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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For certification as an emergency medical technician at the basic, intermediate and paramedic levels, contact National Registry of Emergency Medical Technicians, Rocco V. Morando Bldg, 6610 Busch Blvd, PO Box 29233, Columbus OH 43229; (614) 888-4484; [www.nremt.org](http://www.nremt.org).

**HEALTH CARE MANAGEMENT  
(7GCY)**

**Occupational Specialty 4A0X1**

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Health Care Management .....	24
Health Care Statistics .....	3
Medical Care Evaluation .....	9
Medical Expense & Performance Reporting .....	9
Medical Records Management .....	9
Medical Resource Management .....	9
Patient Administration .....	9
Principles of Supervision .....	3

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Computer Science .....	6
Enlisted Professional Military Education .....	6
Human Anatomy & Physiology .....	8
Human Resource Management .....	3
Legal Aspects of Health Care .....	3
Medical Coding .....	6
Medical Ethics .....	3
Medical Readiness .....	2
Medical Terminology .....	3
Medical Transcription .....	3
Principles of Management .....	3

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## DEGREE PROGRAMS

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### HISTOLOGIC TECHNOLOGY (7GAE)

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#### Occupational Specialty 4T0X2

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

#### **Technical Core**..... *Maximum Semester Hours*

Bacteriology .....	6
CCAF Internship .....	18
Clinical Chemistry .....	9
Clinical Microbiology .....	9
Hematology, Serology & Blood Banking .....	9
Histologic Practicum.....	24
Histologic Specimen/Slide Processing.....	3
Histologic Technician-American Society of Clinical Pathologists Certification .....	30
Histopathology Procedures .....	24

#### **Technical Electives** ..... *Maximum Semester Hours*

Computer Science .....	6
Enlisted Professional Military Education.....	6
General Biology .....	8
General Chemistry .....	8
Human Anatomy & Physiology .....	4
Medical Readiness .....	3

#### **Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

#### **Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication.....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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Graduates desiring certification as a histologic technician contact American Society of Clinical Pathologists, Board of Registry, 2100 W. Harrison St, Chicago IL 60612-3798; (312) 738-1336; 1-800-621-4142; [www.ascp.org](http://www.ascp.org).

**HUMAN RESOURCE MANAGEMENT  
(1AOY)**

**Occupational Specialty** 3S0X1, 3U0X1, 8F000, 8R000

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

CCAF Internship .....	18
First Sergeant Academy .....	10
Guidance and Counseling .....	3
Human Relations/Interpersonal Communications.....	3
Human Resource Management/Administration .....	15
Interviewing .....	3
Introduction to Business.....	3
Manpower/Quality Management.....	20
Organizational Behavior .....	3
Personnel Recruiting .....	15
Principles of Management.....	3
Principles of Marketing.....	3
Word Processing .....	3

**Technical Electives** ..... *Maximum Semester Hours*

Business Communications .....	3
Business Ethics .....	3
Business Law .....	6
Computer Science .....	6
Enlisted Professional Military Education.....	6
General Psychology .....	3
Industrial Psychology.....	3
Labor Relations .....	3
Microcomputer Software Applications .....	6
Oral Communications .....	3
Principles of Accounting.....	6
Principles of Economics (Macro/Micro).....	6
Statistics .....	3
Technical Writing .....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

**Subjects/Courses** ..... *Semester Hours*

Oral Communications.....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

For certification in human resources, contact Society for Human Resource Management, 1800 Duke St, Alexandria VA 22314; (703) 548-3440; fax (703) 535-6490; www.shrm.org/hrci/; E-mail shrm@shrm.org.



## DEGREE PROGRAMS

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### INFORMATION MANAGEMENT (1AUJ)

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**Occupational Specialty** 3A0X1, 8M000

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

CCAF Internship .....	18
Information Security .....	3
Information Systems Administration .....	12
Information Systems Management .....	9
Microcomputer Software Applications .....	9
Office Equipment .....	3
Postal Operations/Management .....	15
Records/Publications Management .....	6

**Technical Electives** ..... *Maximum Semester Hours*

Business Communications .....	3
Computer Science .....	6
Desktop Publishing .....	3
Enlisted Professional Military Education .....	6
Human Resource Management .....	3
Principles of Accounting .....	6
Principles of Management .....	3
Technical Writing .....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

**INFORMATION SYSTEMS TECHNOLOGY  
(0IYY)**

**Occupational Specialty** 1A3X1, 1A5X1, 1C3X1, 1C4X1, 2S0X2, 3C0X1, 3C1XX, 3C3X1, 3S0X2

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
Airborne Information Systems .....	24
Broadcast Information Systems/Management.....	15
CCAF Internship .....	18
Command & Control Information Systems.....	15
Communication Networking .....	12
Communications-Electronics Program Management..	12
Computer Security .....	6
Data Information Systems/Management .....	20
Personnel Data Systems .....	12
Telecommunications Administration/Industry Regulation .....	6
Telecommunications Technology .....	6

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Business Mathematics/Statistics .....	3
College Algebra or higher-level Mathematics .....	6
Computer Science .....	6
Data Communications .....	3
Enlisted Professional Military Education.....	6
FCC General Radiotelephone Operator’s License .....	9
Principles of Accounting .....	3
Radio Communications .....	6
Survival Training .....	3
Typing/Keyboarding .....	3

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## DEGREE PROGRAMS

### INSTRUCTOR OF TECHNOLOGY & MILITARY SCIENCE (2IBB)

**Occupational Specialty** Air Force and other service enlisted personnel who are performing duty as full-time CCAF instructors may register in this program. Airmen must hold their career-field-related CCAF degree or equivalent civilian college degree before registration. Personnel holding the 1T0X1 or 4M0X1 AFSCs are not eligible.

**Degree Requirements** The journeyman (5) level (or fully qualified equivalent) must be held at the time of program completion. Registrants must complete the program within two years from initial date of registration.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
Adult/Vocational Education.....	3
CCAF Special Duty Internship.....	18
Curriculum Development.....	3
Educational Technology.....	3
Educational/Developmental Psychology.....	3
Foundations of Education.....	3
Guidance & Counseling.....	3
*Instructional Methodology.....	12
Instructional Systems Development.....	6
Learning Theories.....	3
*Practice Teaching.....	12
Supervision of Instruction.....	3
Tests & Measurements.....	3

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
**Air Force Specialty Training (related).....	6
CCAF Internship.....	18
Computer Science.....	6
Computer-Based Instruction.....	9
Enlisted Professional Military Education.....	6
Statistics.....	3
Technical Writing.....	3

**Leadership, Management & Military Studies** (6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

\*A methods course of at least 3 SHs and a teaching practicum are required to complete the core requirement.

\*\*A maximum of 6 SHs of specialty training may be applied if related to the subject matter being taught.

**LOGISTICS  
(1AMY)**

**Occupational Specialty** 2F0X1, 2G0X1, 2S0X1, 4A1X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Contract Management .....	3
Cryogenic Operations.....	10
Distribution Management.....	12
Fuels Distribution.....	15
Inventory Management .....	12
Logistics Automated Systems .....	6
Logistics Management .....	12
Materiel Handling/Plant Layout.....	3
Materiel Management .....	12
Principles of Accounting.....	6
Principles of Economics.....	6
Principles of Purchasing .....	3
Production/Operations Management.....	3
Warehouse Storage & Operations .....	6

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Business Law .....	3
Business Mathematics/Statistics .....	3
Computer Science .....	6
Enlisted Professional Military Education.....	6
Environmental Protection Procedures.....	3
General Chemistry .....	3
Hazardous Materials.....	3
Industrial Safety .....	3
Introduction to Business.....	3
Introduction to Petroleum Industry .....	3
Introduction to Transportation .....	3
Principles of Marketing.....	6
Quality Assurance .....	3

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech .....	
Written Communication .....	3
English composition .....	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics .....	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology .....	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion .....	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

For certification in transportation and logistics, contact American Society of Transportation and Logistics, 229 Peachtree St Ste 401, Atlanta GA 30303; (404) 524-3555; www.astl.org.

## DEGREE PROGRAMS

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### MAINTENANCE PRODUCTION MANAGEMENT (4VJG)

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**Occupational Specialty** 2RXXX, 2T3X7, 3E6X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

CCAF Internship .....	18
Human Resource Management .....	3
Management Information Systems .....	12
Production Management .....	6
Scheduling & Production Control.....	15
Statistics .....	3
Systems Management .....	6
Vehicle Integrated Management Systems .....	9

**Technical Electives** ..... *Maximum Semester Hours*

Computer Science .....	6
Enlisted Professional Military Education.....	6
Environmental Compliance.....	3
Industrial Safety .....	3
Principles of Accounting.....	3
Quality Assurance .....	3
Technical Writing .....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

**Subjects/Courses** ..... *Semester Hours*

Oral Communication .....	3
Speech .....	
Written Communication.....	3
English composition .....	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics .....	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology .....	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion .....	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

**MECHANICAL & ELECTRICAL TECHNOLOGY  
(4VGA)**

**Occupational Specialty** 2M0X3, 3E0X1, 3E0X2, 3E1X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Electrical Power Production .....	20
Electrical Systems .....	20
Heating Systems .....	20
Refrigeration & Air-Conditioning.....	20

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Air Distribution & Filtering Systems .....	3
Alternate Heating & Cooling .....	3
Blueprint Reading/Schematic Diagrams .....	6
Building Codes & Ordinances.....	3
Computer Science .....	6
Control Systems/Maintenance.....	6
Electricity/Electronics .....	9
Engine Principles .....	3
Enlisted Professional Military Education.....	6
Environmental Awareness .....	3
Environmental Compliance.....	3
Industrial Management.....	3
Industrial Safety .....	3
Motor, Starter & Control Devices .....	6
Quality Assurance .....	3
Technical Mathematics .....	3
Technical Physics.....	4
Technical Writing .....	3
Welding/Pipefitting.....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## DEGREE PROGRAMS

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### MEDICAL LABORATORY TECHNOLOGY (7GAF)

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**Occupational Specialty** 4T0X1, 4T0X3

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core**.....*Maximum Semester Hours*

American Society of Clinical Pathologists (ASCP) Certification (Cytotechnologist).....	24
ASCP Certification (Medical Laboratory Technician).....	24
CCAF Internship.....	18
Clinical Chemistry.....	12
Clinical Microbiology.....	9
Clinical Practicum.....	24
Cytology.....	24
Department of Health & Human Services Certification (Medical Laboratory Technology).....	24
Hematology.....	12
Histopathology.....	12
Immunology/Bloodbanking/Serology.....	24

**Technical Electives**.....*Maximum Semester Hours*

Computer Science.....	6
Enlisted Professional Military Education.....	6
General Biology.....	8
General Chemistry.....	8
Human Anatomy & Physiology.....	4
Medical Readiness.....	3
Organic/Inorganic Chemistry.....	8

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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The National Accrediting Agency for Clinical Laboratory Sciences accredits the medical laboratory apprentice course. Graduates seeking certification contact American Society of Clinical Pathologists, Board of Registry, 2100 W. Harrison St, Chicago IL 60612-3798; (312) 738-1336; [www.ascp.org](http://www.ascp.org).

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**MENTAL HEALTH SERVICES  
(7GAP)**

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**Occupational Specialty 4C0X1**

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

Abnormal Psychology	3
CCAF Internship	18
Drug & Alcohol Abuse	6
Guidance & Counseling	9
Human Biology	4
Human Growth/Lifespan Development	6
Human Relations	3
International Certification Reciprocity Consortium/ Alcohol & Other Drug Abuse Certification	6
Interpersonal Communications	3
Mental Health Care	24
Psychology of Adjustment	3

**Technical Electives** ..... *Maximum Semester Hours*

Computer Science	6
Emergency Medicine	3
Enlisted Professional Military Education	6
General Biology	4
General Chemistry	4
General Psychology	3
Human Anatomy & Physiology	4
Medical Readiness	3
Nursing (Mental Health related)	6

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<i>Subjects/Courses</i>	<i>Semester Hours</i>
Oral Communication	3
Speech	
Written Communication	3
English composition	
Mathematics	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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For certification as a substance abuse counselor, contact AF Alcohol/Drug Abuse Prevention Treatment Program, 5203 Leesburg Pike Ste 702, Falls Church VA 22041.



## DEGREE PROGRAMS

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### METALS TECHNOLOGY (4VLB)

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#### Occupational Specialty 2A7X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

#### **Technical Core** ..... *Maximum Semester Hours*

Aircraft Metals Technology ..... 24  
CCAF Internship ..... 18

#### **Technical Electives** ..... *Maximum Semester Hours*

Advanced Machining/Welding Techniques ..... 12  
Brazing ..... 3  
Computer Numerical Control ..... 6  
Computer Science ..... 6  
Corrosion Control ..... 3  
Engineering Graphics ..... 6  
Enlisted Professional Military Education ..... 6  
General Chemistry/Algebra-Based Physics ..... 4  
Hazardous Materials ..... 3  
Industrial Safety ..... 3  
Maintenance Management ..... 3  
Materials & Processes ..... 3  
Physical Testing of Materials ..... 3  
Technical Mathematics ..... 3

#### **Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

#### **Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<i>Subjects/Courses</i> .....	<i>Semester Hours</i>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

**MISSILE & SPACE SYSTEMS MAINTENANCE  
(4VAK)**

**Occupational Specialty 2M0X2**

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Missile Maintenance .....	24

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Computer Science .....	6
Corrosion Control .....	3
Electricity/Electronics .....	6
Engineering Graphics.....	3
Engineering Mechanics .....	3
Enlisted Professional Military Education.....	6
Fluid Power .....	3
General Chemistry/Algebra-Based Physics .....	4
Hazardous Materials.....	3
Heavy Equipment Operation/Maintenance .....	3
Industrial Safety .....	3
Maintenance Management .....	3
Materials & Processes .....	3
Nondestructive Inspection.....	3
Nuclear Weapons Systems Maintenance .....	3
Quality Assurance .....	3
Technical Writing .....	3

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## DEGREE PROGRAMS

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### MUNITIONS SYSTEMS TECHNOLOGY (4VRA)

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**Occupational Specialty** 2W0X1, 2W2X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

CCAF Internship .....	18
Munitions Operations/Inventory Management .....	24
Munitions Systems .....	24
Nuclear Weapons Systems .....	24

**Technical Electives** ..... *Maximum Semester Hours*

Advanced Munitions Systems .....	12
Advanced Nuclear Weapons Systems .....	12
Computer Science .....	6
Corrosion Control .....	3
Electricity/Electronics .....	6
Engineering Graphics .....	3
Enlisted Professional Military Education .....	6
Fluid Power .....	3
General Chemistry/Algebra-Based Physics .....	8
Hazardous Materials/Environmental Management .....	3
Heavy Equipment Operation/Maintenance .....	3
Industrial Safety .....	3
Maintenance Management .....	3
Principles of Accounting .....	6
Reactor Technology .....	3
Statistics .....	3
Weapons Safety .....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

**Subjects/Courses** ..... *Semester Hours*

Oral Communication .....	3
Speech .....	
Written Communication .....	3
English composition .....	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics .....	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology .....	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion .....	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

**MUSIC  
(2CHB)**

**Occupational Specialty** 3N1X1, 3N2X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
Arranging & Instrumentation.....	6
Band.....	6
CCAF Internship.....	18
Chorus.....	6
Ensemble.....	6
Music History.....	6
Music Theory.....	6
Production & Stage Craft Arts.....	6

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Applied Music.....	6
Aural Perception.....	6
Computer Science.....	6
Dance.....	3
Electricity/Electronics.....	3
Electronic Music (Synthesizers).....	3
Enlisted Professional Military Education.....	6
Fundamentals of Conducting.....	3
Public Relations.....	3
Voice.....	6

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## DEGREE PROGRAMS

### NONDESTRUCTIVE TESTING TECHNOLOGY (4VXR)

#### Occupational Specialty 2A7X2

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*  
 CCAF Internship ..... 18  
 Nondestructive Inspection ..... 24

**Technical Electives** ..... *Maximum Semester Hours*  
 Advanced Nondestructive Inspection Techniques ..... 3  
 Computer Science ..... 6  
 Corrosion Control ..... 3  
 Engineering Graphics ..... 8  
 Enlisted Professional Military Education ..... 6  
 General Chemistry/Algebra-Based Physics ..... 3  
 Hazardous Materials ..... 3  
 Industrial Safety ..... 3  
 Maintenance Management ..... 6  
 Materials & Processes ..... 3  
 Technical Mathematics ..... 3

**Leadership, Management & Military Studies**  
 (6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<i>Subjects/Courses</i> .....	<i>Semester Hours</i>
Oral Communication .....	3
Speech	
Written Communication.....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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**NUCLEAR MEDICINE TECHNOLOGY  
(7ABJ)**

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**Occupational Specialty** 4R0X1A

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

American Registry of Radiologic Technologists	
Nuclear Medicine Registry.....	24
Applied Nuclear Medicine Physics & Chemistry .....	9
CCAF Internship .....	18
Diagnostic Imaging, Clinical & Nonclinical .....	24
Nuclear Medicine Instrumentation.....	14
Radiation Safety & Procedures .....	14
Radioimmunoassay .....	4
Radiopharmaceuticals .....	8

**Technical Electives** ..... *Maximum Semester Hours*

Computer Science .....	6
Enlisted Professional Military Education.....	6

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<i>Subjects/Courses</i> .....	<i>Semester Hours</i>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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For certification in nuclear medicine technology, phases I and II course graduates contact American Registry of Radiologic Technologists, 1255 Northland Dr, Saint Paul MN 55120-1155; (651) 687-0048; [www.arrt.org](http://www.arrt.org).

## DEGREE PROGRAMS

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### OPHTHALMIC TECHNICIAN (7GDI)

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#### Occupational Specialty 4V0X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

#### Technical Core ..... *Maximum Semester Hours*

Assisting the Optometrist.....	8
General Psychology .....	3
*Human Anatomy & Physiology.....	3
Human Eye & the Visual System.....	6
Introduction to Operating Room Technology .....	8
Operating Room Practicum.....	8
Operating Room Technology.....	8
Optics.....	8
Spectacles & Contact Lenses .....	6

#### Technical Electives ..... *Maximum Semester Hours*

Algebra-Based Physics .....	4
Analytic Geometry.....	3
CCAF Internship.....	18
Computer Science .....	6
Enlisted Professional Military Education.....	6
General Biology.....	4
General Chemistry .....	4
Medical Readiness .....	3
Office Management .....	3

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

#### Physical Education (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<i>Subjects/Courses</i> .....	<i>Semester Hours</i>
Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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\*Must complete as part of degree program.

The Council on Optometric Education of the American Optometric Association accredits this degree program. Apprentice course graduates are eligible to take the Certified Paraoptometric Technician examination. Contact American Optometric Association, National Council on Paraoptometric Certification, 243 N. Lindbergh Blvd, St Louis MO 63141; (314) 991-4100; 1-800-365-2219; [www.aoanet.org](http://www.aoanet.org); or contact Joint Commission on Allied Health Personnel in Ophthalmology, 2025 Woodlane Dr, St Paul MN 55125-2995; 1-888-284-3937; [www.jcahpo.org](http://www.jcahpo.org).

For certification as an ophthalmic dispenser, contact American Board of Opticianry and National Contact Lens Examiners, 6506 Loisdale Rd Ste 209, Springfield VA 22150; (703) 719-5800; [www.abo.org](http://www.abo.org).

**PARALEGAL  
(1CAM)**

**Occupational Specialty 5J0X1**

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
Business Law .....	3
CCAF Internship .....	18
Civil Law .....	3
Claims Investigation.....	6
Introduction to Law for Paralegal .....	6
Law Office Management/Administration .....	6
Legal Administration .....	9
Legal Claims & Tort Litigation.....	6
Legal Ethics.....	3
Legal Research & Writing .....	6
Microcomputer Software Applications .....	3
Military Justice.....	3

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Business Organization/Entities .....	3
Civil Litigation Procedures .....	3
Computer Science .....	6
Contract Law .....	3
Criminal Law .....	3
Criminal Procedures.....	3
Enlisted Professional Military Education.....	6
Environmental Law.....	3
Estate Planning & Probate .....	3
Evidence.....	3
Family Law/Domestic Relations .....	3
Legal Investigation & Interviewing .....	3
Real Estate Law .....	3

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.



## DEGREE PROGRAMS

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### PARARESCUE (7GDP)

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#### Occupational Specialty 1T2X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

#### **Technical Core** ..... *Maximum Semester Hours*

Air Operations.....	9
CCAF Internship.....	18
Emergency Medicine.....	12
Evasion & Recovery.....	3
General Principles of Survival.....	12
Ground Operations.....	12
Mountain Travel/Rescue Techniques.....	9
Pararescue Indoctrination.....	3
Psychology of Environmental Stress.....	3

#### **Technical Electives** ..... *Maximum Semester Hours*

Computer Science.....	6
Enlisted Professional Military Education.....	6
Human Anatomy & Physiology.....	3
Parachuting/Scuba Diving.....	6
Physical Geography.....	3
Weapons Familiarization.....	3

#### **Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

#### **Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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**PHARMACY TECHNOLOGY  
(7GAH)**

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**Occupational Specialty** 4P0X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Fundamentals of Pharmacy .....	8
Introductory Pharmacology .....	8
Pharmaceutical Calculations .....	3
Pharmaceutical Preparation & Manufacture .....	6
Pharmacy Technician Certification .....	17

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Computer Science .....	6
Emergency Medicine .....	3
Enlisted Professional Military Education .....	6
General Biology .....	4
General Chemistry .....	8
Human Anatomy & Physiology .....	4
Medical Readiness .....	3
Organic Chemistry .....	8

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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The American Society of Health-System Pharmacists accredits the pharmacy apprentice course. For certification as a pharmacy technician, contact Pharmacy Technician Certification Board, 2215 Constitution Ave N.W., Washington DC 20037-2985; (202) 429-7576; [www.ptcb.org](http://www.ptcb.org).

## DEGREE PROGRAMS

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### PHYSICAL THERAPIST ASSISTANT (7GAI)

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#### Occupational Specialty 4J0X2

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A student must complete the Air Force physical therapy apprentice course to satisfy the technical core requirement. A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

#### **Technical Core**.....*Maximum Semester Hours*

Functional Anatomy, Pathophysiology & Therapeutic Procedures.....	12
Human Anatomy & Physiology.....	8
Introduction to Physical Therapy.....	12
Physical Therapy Clinical Arts.....	6
Physical Therapy Practicum.....	6
Physical Therapy Procedures & Modalities.....	6

#### **Technical Electives**.....*Maximum Semester Hours*

Advanced Physiology.....	3
Algebra-Based Physics.....	4
CCAF Internship.....	18
Computer Science.....	6
Enlisted Professional Military Education.....	6
General Biology.....	4
General Chemistry.....	4
Kinesiology.....	8
Medical Readiness.....	3

#### **Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

#### **Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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The Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association accredits this degree program. CCAF graduates in this degree may sit for the Physical Therapy Assistant State License examination. Contact the Board for Physical Therapy of the state in which licensure is desired.

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**PUBLIC AFFAIRS  
(2FDE)**

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**Occupational Specialty 3N0XX**

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Copyreading & Editing .....	3
Journalism .....	20
Mass Communication.....	20
Media Production.....	10
Photojournalism .....	3

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Advertising.....	3
Computer Science .....	6
Desktop Publishing .....	6
Enlisted Professional Military Education.....	6
General Psychology .....	3
Graphic Arts.....	3
Interviewing .....	3
Mass Communication Law .....	3
Photography .....	3
Public Relations .....	3

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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For accreditation in public relations, contact Public Relations Society of America, 33 Irving Pl 3d Fl, New York NY 10003; (212) 995-2230; www.prsa.org. Applicants must have 5 years’ experience.

For certification as a radio and telecommunications technician, contact National Association of Radio and Telecommunications Engineers, PO Box 678, Medway MA 02053; 1-800-896-2783; www.narte.org.

## DEGREE PROGRAMS

### PUBLIC HEALTH TECHNOLOGY (7ECY)

#### Occupational Specialty 4E0X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

#### Technical Core ..... *Maximum Semester Hours*

CCAF Internship .....	18
Environmental Medicine Office Procedures .....	3
Epidemiology .....	8
Hearing Conservation .....	4
Management of Disaster Medicine Programs .....	4
Management of Occupational Health Programs .....	9
Public Health.....	16
Sanitation .....	3

#### Technical Electives ..... *Maximum Semester Hours*

Advanced Epidemiology.....	4
Communicable Diseases .....	8
Computer Science .....	6
Disaster Medicine .....	4
Emergency Medicine .....	3
Enlisted Professional Military Education.....	6
Entomology.....	3
Food Safety.....	6
General Biology.....	8
General Chemistry .....	8
General Physical Science .....	4
General Psychology .....	3
Microbiology.....	4
Statistics .....	3
Zoonotic Diseases .....	3

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

#### Physical Education (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication.....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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**RADIOLOGIC TECHNOLOGY  
(7GDH)**

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**Occupational Specialty** 4R0X1B, 4R0X1C

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

American Registry of Radiologic Technologists Certification.....	24
CCAF Internship .....	18
Introduction to Radiologic Technology .....	6
Radiographic Anatomy & Physiology .....	6
Radiographic Physics.....	6
Radiographic Positioning.....	6
Radiographic Techniques & Darkroom Procedures.....	6
Radiography Clinical Practicum .....	12
Special Radiographic Procedures.....	8

**Technical Electives** ..... *Maximum Semester Hours*

Advanced Special Radiographic Procedures.....	12
Computer Science .....	6
Enlisted Professional Military Education.....	6
Medical Readiness .....	3
Radiographic Clinical Education .....	12
Radiographic Internship .....	16

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

**Subjects/Courses** ..... *Semester Hours*

Oral Communication .....	3
Speech	
Written Communication.....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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For certification in radiography (phases I, II and III) course graduates contact American Registry of Radiologic Technologists, 1266 Northland Dr, Saint Paul MN 55120-1155; (651) 687-0048; [www.arrrt.org](http://www.arrrt.org).

## DEGREE PROGRAMS

### RESTAURANT, HOTEL & FITNESS MANAGEMENT (1FRS)

**Occupational Specialty** 3M0X1, 9G000

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

CCAF Internship .....	18
Contract Management .....	3
Financial Management .....	3
Fitness & Health.....	6
Food & Beverage Preparation .....	12
Food Service Operations/Management .....	6
Food Service Sanitation & Safety .....	3
Front Office Management .....	3
Hotel Operations/Management.....	6
Human Anatomy & Physiology .....	3
Inventory Management .....	3
Mortuary Services .....	3
Nutrition.....	3
Principles of Accounting.....	6
Quantity Food Production .....	3
Recreation/Sports Management .....	3
Restaurant Operations/Management .....	9
Sports & Fitness Instruction.....	6

**Technical Electives** ..... *Maximum Semester Hours*

Baking.....	3
Business Communications .....	3
Business Law .....	3
Computer Science .....	6
Enlisted Professional Military Education .....	6
Equipment Selection/Layout/Facility Design.....	3
Food Science.....	3
Human Relations/Customer Service.....	3
Human Resource Management .....	3
Introduction to Business.....	3
Occupational Safety .....	3
Principles of Marketing/Sales .....	3
Principles of Purchasing .....	3
Recreation Safety & First Aid.....	3
Services Automation .....	3

### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

### Physical Education (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

**Subjects/Courses**..... *Semester Hours*

Oral Communication .....	3
Speech .....	
Written Communication.....	3
English composition .....	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics .....	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology .....	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion .....	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

For certification in food service management, contact National Restaurant Association Educational Foundation, Independent Programs Div, 250 S. Wacker Dr Ste 1400, Chicago IL 60606-5834; 1-800-765-2122; [www.edfound.org/NewASP/default.htm](http://www.edfound.org/NewASP/default.htm).

For certification as a personal trainer, group fitness instructor, weight management consultant or clinical exercise specialist, contact American Council on Exercise, 5820 Oberlin Dr Ste 102, San Diego CA 92121-3787; [www.acefitness.org](http://www.acefitness.org).

**SAFETY  
(9I1Y)**

**Occupational Specialty 1S0X1**

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

Accident Prevention Management .....	12
Accident/Fire Investigation .....	12
AFOOSH/OSHA Codes/Standards .....	12
Aviation/Flight Safety .....	12
CCAF Internship .....	18
Ground/Industrial Safety .....	24
Hazardous Materials.....	6
Hazardous Waste Management .....	6
Instructional Methodology .....	6
Safety Engineering .....	6
Weapons Safety Program Management .....	18

**Technical Electives** ..... *Maximum Semester Hours*

Computer Science .....	6
Electricity/Electronics .....	3
Enlisted Professional Military Education.....	6
Environmental Science.....	3
General Chemistry .....	8
Introduction to Public Administration.....	3
Oral Communications .....	3
Safety & Risk Analysis .....	3
Statistics .....	3
Technical Writing .....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

For certification in the occupational health and safety technologist program, contact Council on Certification of Health, Environment and Safety Technologists, 208 Burwash Ave, Savoy IL 61874-9571; (217) 359-0055; cchest@cchest.org; www.cchest.org. Individuals seeking certification should be involved in safety inspections, industrial hygiene monitoring, safety and health training, investigating and maintaining records and similar functions. May substitute health and safety courses or an associate degree or higher in certain discipline for up to 2 years of the experience requirement.



## DEGREE PROGRAMS

### SCIENTIFIC ANALYSIS TECHNOLOGY (4VES)

#### Occupational Specialty 9S100

**Degree Requirements** A student in the 9S100 reporting identifier does not have skill levels; therefore, none are required for graduation.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Special Duty Internship .....	18
Geophysical Analysis.....	12
Satellite Analysis Systems .....	6
Scientific Lab Technology.....	12
Scientific Measurements.....	12

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Algebra-Based Physics .....	3
Basic Electronics Theory/Applications .....	6
College Algebra or higher-level Mathematics .....	3
Computer Science .....	6
Computer Systems Maintenance & Operations Principles.....	3
Enlisted Professional Military Education.....	6
Meteorology.....	6
Physical Science.....	3
Statistics .....	3
Technical Writing .....	3

#### **Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

#### **Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication.....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

**SOCIAL SERVICES  
(9IKY)**

**Occupational Specialty** 3S1X1, 5R0X1, 8C000

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Chaplain Service Support.....	12
Counseling .....	3
Cultural Diversity.....	6
Equal Opportunity Management .....	24
Ethnic Studies .....	6
Family Services Administration.....	6
Group Dynamics .....	3
Social Problems.....	3
Social Psychology .....	3
World Religions .....	3

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Abnormal Psychology.....	3
Computer Science .....	6
Enlisted Professional Military Education.....	6
General Psychology .....	3
General Sociology.....	3
Human Communication .....	3
Human Development & Learning.....	3
Instructional Methodology .....	3
Interviewing Techniques.....	3
Principles of Accounting.....	3
Statistics .....	3
Technical Writing .....	3

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication.....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## DEGREE PROGRAMS

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### SURGICAL SERVICES TECHNOLOGY (7GEA)

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#### Occupational Specialty 4N1X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

#### **Technical Core** ..... *Maximum Semester Hours*

CCAF Internship .....	18
Fundamentals of Central Sterile Supply.....	8
Operating Room Practicum.....	16
Operating Room Technology.....	16
Surgical Nursing .....	12

#### **Technical Electives** ..... *Maximum Semester Hours*

Computer Science .....	6
Emergency Medicine .....	3
Enlisted Professional Military Education.....	6
General Biology .....	4
General Chemistry .....	4
General Psychology .....	3
Human Anatomy & Physiology .....	8
Medical Readiness .....	3
Medical Terminology.....	3
Nursing.....	6

#### **Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

#### **Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<i>Subjects/Courses</i> .....	<i>Semester Hours</i>
Oral Communication .....	3
Speech	
Written Communication.....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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The Association of Surgical Technologists accredits the surgical service apprentice course. Graduates contact Liaison Council on Certification, Association of Surgical Technologists Inc, 7108-C S. Alton Way, Englewood CO 80112; (303) 694-9130; [www.ast.org](http://www.ast.org).

For certification in sterile processing and distribution, degree graduates with 6 months' experience in sterile processing and distribution contact National Institute for Certification of Healthcare Sterile Processing and Distribution Personnel, PO Box 558, Annandale NJ 08801; 1800-555-97657; [www.sterileprocessing.org](http://www.sterileprocessing.org).

**SURVIVAL EQUIPMENT  
(4VPF)**

**Occupational Specialty 2A7X4**

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Fabrication & Parachute Maintenance .....	24
Parachute Riggings.....	3
Survival Equipment Inspection & Maintenance.....	9

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Applied Aerodynamics.....	3
Clothing & Textiles.....	6
Computer Science .....	6
Engineering Graphics.....	3
Enlisted Professional Military Education.....	6
General Chemistry .....	4
Hazardous Materials.....	3
Industrial Safety .....	6
Maintenance Management .....	3
Production Planning & Control.....	3
Tailoring.....	3
Technical Writing .....	3
Upholstery.....	6

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## DEGREE PROGRAMS

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### SURVIVAL INSTRUCTOR (2IBS)

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#### Occupational Specialty 1T0X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

#### **Technical Core** ..... *Maximum Semester Hours*

Advanced Survival Techniques.....	24
CCAF Internship.....	18
Evasion & Recovery.....	9
Foundations of Education.....	3
General Principles of Survival.....	16
Instructional Methodology.....	9
Instructional Systems Development.....	3
Practice Teaching.....	6

#### **Technical Electives** ..... *Maximum Semester Hours*

Audiovisual Media.....	3
Computer Science.....	6
Curriculum Development.....	3
Educational/Developmental Psychology.....	3
Emergency Medicine.....	6
Enlisted Professional Military Education.....	6
Guidance & Counseling.....	3
International Terrorism.....	3
Land Navigation.....	3
Mountain Travel.....	3
Parachuting.....	3
Psychology of Environmental Stress.....	3
Resistance Training.....	3
Technical Writing.....	3

#### **Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

#### **Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication.....	3
Speech	
Written Communication.....	3
English composition	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

**TRANSPORTATION  
(1ATY)**

**Occupational Specialty** 2T0X1, 2T1X1, 2T2X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

Air Cargo Procedures.....	3
Air Transportation Principles.....	3
Business/Transportation Law.....	6
CCAF Internship.....	18
Freight Transportation.....	6
Hazardous Materials.....	4
Household Goods Movement.....	9
Introduction to Transportation.....	3
Motor Fleet Management & Safety.....	9
Passenger Routing/Movement.....	9
Traffic Management.....	15
Transportation Automated Systems.....	6
Vehicle Operations.....	9

**Technical Electives** ..... *Maximum Semester Hours*

Business Mathematics/Statistics.....	3
Computer Science.....	6
Contract Management.....	3
Enlisted Professional Military Education.....	6
Human Relations.....	3
Industrial Safety.....	3
Introduction to Aviation/Aeronautics.....	6
Introduction to Business.....	3
Introduction to Logistics.....	3
Physical Distribution.....	6
Principles of Accounting.....	3
Principles of Marketing.....	3
Quality Assurance.....	3
Warehouse Storage & Operations.....	3

**Leadership, Management & Military Studies**

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

**Subjects/Courses** ..... *Semester Hours*

Oral Communication.....	3
Speech.....	
Written Communication.....	3
English composition.....	
Mathematics.....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics.....	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology.....	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion.....	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## DEGREE PROGRAMS

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### VEHICLE MAINTENANCE (4VKC)

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**Occupational Specialty** 2T3X0, 2T3X1, 2T3X2, 2T3X4, 2T3X5

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

**Technical Core** ..... *Maximum Semester Hours*

Automotive Engine Computer Systems .....	3
Automotive Service Excellence Examination.....	16
CCAF Internship.....	18
Gas/Diesel Engine Principles.....	4
Introduction to Business.....	3
Maintenance Scheduling .....	3
Power Train Fundamentals .....	3
Radiator/Fuel Tank Repair.....	3
Specialized Support Vehicles.....	15
Suspension/Steering/Brake Systems .....	3
Vehicle Body Repair/Painting .....	6
Vehicle Electrical/Starting/Changing Systems .....	3
Vehicle Fuel/Emission Systems.....	3
Vehicle Glass, Upholstery/Trim & Hardware.....	6
Vehicle Heating/Air-Conditioning.....	3
Vehicle Integrated Management Systems .....	7
Welding.....	8

**Technical Electives** ..... *Maximum Semester Hours*

Alternative Fuel/Electric-Powered Vehicle Systems ....	3
Computer Science .....	6
Engine Lubrication/Cooling Systems .....	3
Engine Overhaul .....	3
Enlisted Professional Military Education.....	6
Environmental Compliance.....	3
Industrial Management .....	3
Industrial Safety .....	3
Quality Assurance .....	3
Technical Mathematics .....	3
Technical Writing .....	3

### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

### Physical Education (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

**Subjects/Courses** ..... *Semester Hours*

Oral Communication .....	3
Speech .....	
Written Communication.....	3
English composition .....	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics .....	
Social Science .....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology .....	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion .....	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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For certification in vehicle maintenance, contact National Institute for Automotive Service Excellence, 13505 Dulles Technology Dr Ste 2, Herndon VA 20171-3421; 1-877-273-8324; [www.asecert.org/channels/about.cfm](http://www.asecert.org/channels/about.cfm).

**WEATHER TECHNOLOGY  
(8FYY)**

**Occupational Specialty 1W0X1**

**Degree Requirements** The journeyman (5) level must be held at the time of program completion.

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 18, Technical Education Requirement.

<b>Technical Core</b> .....	<b>Maximum Semester Hours</b>
CCAF Internship .....	18
Climatology.....	6
Dynamic Meteorology .....	6
Operational Weather Forecasting.....	12
Physical Meteorology.....	12
Plotting Weather Maps & Charts .....	6
Satellite Meteorology .....	6
Synoptic Meteorology.....	12
Thermodynamics.....	6
Weather Instruments & Observation .....	18
Weather Prognosis Techniques .....	12
Weather Radar Interpretation.....	3
Weather Station Operation.....	9

<b>Technical Electives</b> .....	<b>Maximum Semester Hours</b>
Algebra-Based Physics.....	4
Astronomy.....	3
Briefing Techniques .....	3
College Algebra or higher-level Mathematics .....	6
Computer Science .....	6
Enlisted Professional Military Education.....	6
General Chemistry .....	3
Physical Geography .....	3
Technical Writing .....	3
Tropical Meteorology.....	3
Upper Air Measurement.....	6

**Leadership, Management & Military Studies**  
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 20.

**Physical Education** (4 semester hours)

**General Education** (15 semester hours) Applicable courses must meet the criteria for application of courses to the general education requirement and agree with the definitions of applicable courses starting on page 20.

<b>Subjects/Courses</b> .....	<b>Semester Hours</b>
Oral Communication .....	3
Speech	
Written Communication .....	3
English composition	
Mathematics .....	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology	
Humanities .....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.



**DEGREE PROGRAMS**

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# **AIRCRAFT MAINTENANCE TECHNICIAN ...**

**T**he Community College of the Air Force continuously strives to increase and broaden the skills, knowledge, and experiences of Air Force enlisted personnel. The Air Force Airframe & Powerplant Certification Program is one such effort, designed to enhance performance levels of aviation maintenance technicians and noncommissioned officers.

## **Air Force Airframe & Powerplant Certification Program**

In 1998 the Department of Defense (DoD) embarked on an initiative to streamline and improve the Airframe & Powerplant (A&P) certification process. This initiative is for military aircraft maintenance technicians (AMT) who are eligible to pursue A&P certification based on training and experience as identified in the Federal Aviation Regulation (FAR) Part 65. However, many military aircraft maintenance personnel do not pursue certification because of its lengthy process. As a result, DoD established the Joint Service Aviation Maintenance Technician Certification Council (JSAMTCC) to standardize the certification process for the military and provide direction and resources necessary to fill the gaps within military training and experience. The college was selected to administer and manage this program.

For more information, contact CCAF at DSN 493-5937 or visit JSAMTCC at <http://www.hill.af.mil/367TRSS/a&p/>. This web site contains:

- ◆ A&P program instructions.
- ◆ Qualification Training Plan for all career fields with step-by-step procedures to obtain certification.
- ◆ Computer-based training information.
- ◆ Specialty training course information.
- ◆ Authorized designated maintenance examiner listing.
- ◆ Aviation information.

A student is encouraged to maintain his or her education and training records, maintenance experience and qualifications. After completing the requirements, the student mails a copy of the Qualification Training Plan to the CCAF program manager for evaluation. If eligible, CCAF issues a Certificate of Eligibility and FAA Form 8610-2, Airman Certificate and/or Rating Application. The A&P applicant will then present these required documents to the local FAA Flight Standards District Office safety inspector to be authorized for certification testing.

## **AIRCRAFT MAINTENANCE TECHNICIAN**

This program directly supports the mission of CCAF in that FAA certification of our aircraft maintenance technicians enhances mission readiness, contributes to recruiting, assists in retention and supports the career transition of Air Force enlisted members. Furthermore, it will develop a more well-rounded and diverse Air Force aviation maintenance professional.

### **FAA Certification Credit**

The Community College of the Air Force awards 30 SHs for the Federal Aviation Administration (FAA) Airframe *and* Powerplant certification and 18 SHs for the FAA Airframe *or* Powerplant certification. This credit may be awarded to students if the credit applies to the technical requirement and is needed to complete the program requirements. Refer to the applicable degree program for the maximum semester hours that may apply to fulfill technical core or elective requirements. A student currently possessing FAA certification who desires credit toward an applicable degree program can contact the education services office for procedures. Forward a written request, using the "Request for Verification of Certification" memo provided by the college, to FAA Airman Certification Branch AFS 760, PO Box 25082, Oklahoma City, Oklahoma 73125-4940. Only certified written verification from the FAA is accepted by CCAF.

# **OCCUPATIONAL INSTRUCTOR CERTIFICATE ...**

**T**he Community College of the Air Force offers an occupational instructor certification (OIC) program for instructors teaching at CCAF affiliated schools. The purpose of the certification is to recognize the excellent instructor qualification training provided to prepare instructors to teach CCAF courses and to formally acknowledge instructor experience. Officer, enlisted, civilian and other service instructors are eligible for this certification.

To qualify for the occupational instructor certification, the nominee needs to ...

- ◆ Be a full-time instructor teaching a CCAF course at the time of nomination.
- ◆ Have at least 2 years of teaching experience as a CCAF instructor.
- ◆ Hold an associate or higher degree from an accredited institution.
- ◆ Have completed an instructor methodology course of at least 3 semester hours.
- ◆ Have completed a teaching practicum of at least 5 semester hours.
- ◆ Hold the journeyman 5-skill level or fully qualified equivalent.
- ◆ Be recommended for certification by the affiliated school commander, commandant or professional military education flight chief.

**OCCUPATIONAL INSTRUCTOR CERTIFICATE**

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## AFFILIATED SCHOOLS ...

The affiliated schools of the Community College of the Air Force are responsible for developing, validating and delivering CCAF courses. Their courses are subject to increases and decreases in credit-hour value based on revisions and evaluations designed to meet the immediate needs of the Air Force. The credit hours for CCAF courses entered on the student transcript reflect the semester hour value of the courses when they were completed.

Becoming an affiliated school and part of the CCAF system is a voluntary process. Any Air Force school interested in affiliating with the Community College of the Air Force should write CCAF/SL, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613; call DSN 493-6388; fax 493-5009 or E-mail [campus.relations@maxwell.af.mil](mailto:campus.relations@maxwell.af.mil).

## AFFILIATED SCHOOLS

### **97 Operations Group**

Altus AFB, Oklahoma

### **Airman Leadership School**

Altus AFB, Oklahoma

### **Airman Leadership School**

Andersen AFB, Guam

### **Airman Leadership School**

Andrews AFB, Maryland

### **USAF Special Investigations Academy**

Andrews AFB, Maryland

### **Airman Leadership School**

Aviano AB, Italy

### **Airman Leadership School**

Barksdale AFB, Louisiana

### **9 Munitions Squadron**

Beale AFB, California

### **Airman Leadership School**

Beale AFB, California

### **Airman Leadership School**

Bolling AFB, District of Columbia

### **USAF School of Aerospace Medicine**

Brooks AFB, Texas

### **27 Logistics Support Squadron**

Cannon AFB, New Mexico

### **Airman Leadership School**

Cannon AFB, New Mexico

### **Airman Leadership School**

Charleston AFB, South Carolina

### **355 Logistics Support Squadron**

Davis-Monthan AFB, Arizona

### **355 Training Squadron**

Davis-Monthan AFB, Arizona

### **Airman Leadership School**

Davis-Monthan AFB, Arizona

### **Airman Leadership School**

Dover AFB, Delaware

### **436 Training Squadron**

Dyess AFB, Texas

### **Airman Leadership School**

Dyess AFB, Texas

### **Airman Leadership School**

Edwards AFB, California

### **Airman Leadership School**

Eielson AFB, Alaska

### **Airman Leadership School**

Eglin AFB, Florida

### **Airman Leadership School**

Ellsworth AFB, South Dakota

### **Airman Leadership School**

Elmendorf AFB, Alaska

### **NCO Academy**

Elmendorf AFB, Alaska

### **20 AF ICBM Maintenance**

F. E. Warren AFB, Wyoming

### **Airman Leadership School**

F. E. Warren AFB, Wyoming

### **336 Training Group**

Fairchild AFB, Washington

### **Airman Leadership School**

Fairchild AFB, Washington

### **Airman Leadership School**

RAF Feltwell, United Kingdom

### **Air Mobility Warfare Center**

Fort Dix, New Jersey

### **211 Engineering Installation Squadron (ANG)**

Fort Indiantown Gap, Pennsylvania

### **Airman Leadership School**

Fort Meade, Maryland

### **17 Training Group**

Goodfellow AFB, Texas

**Airman Leadership School**

Grand Forks AFB, North Dakota

**Airman Leadership School**

Hanscom AFB, Massachusetts

**NCO Academy, Airman Leadership School**

Hickam AFB, Hawaii

**Airman Leadership School**

Hill AFB, Utah

**ACC Logistics Support**

Hill AFB, Utah

**49 Logistics Support Squadron**

Holloman AFB, New Mexico

**Airman Leadership School**

Holloman AFB, New Mexico

**Airman Leadership School**

Hurlburt Field, Florida

**Command & Control Warrior School**

Hurlburt AFB, Florida

**Airman Leadership School**

Incirlik AB, Turkey

**18 Logistics Support Squadron**

Kadena AB, Okinawa, Japan

**18 Transportation Squadron**

Kadena AB, Okinawa, Japan

**Airman Leadership School**

Kadena AB, Okinawa, Japan

**NCO Academy**

Kadena AB, Okinawa, Japan

**Airman Leadership School**

Kapaun AS, Germany

**NCO Academy**

Kapaun AS, Germany

**81 Training Group**

Keesler AFB, Mississippi

**Airman Leadership School**

Keesler AFB, Mississippi

**Airmen Leadership School**

Keflavik NAS, Iceland

**58 Operations Group, Special Operations Command**

Kirtland AFB, New Mexico

**Airman Leadership School**

Kirtland AFB, New Mexico

**37 Training Group**

Lackland AFB, Texas

**Airman Leadership School**

Lackland AFB, Kelly Annex, Texas

**48 Logistics Support Squadron**

RAF Lakenheath, United Kingdom

**1 Logistics Support Squadron**

Langley AFB, Virginia

**Airman Leadership School**

Langley AFB, Virginia

**189 Airlift Wing**

Little Rock AFB, Arkansas

**314th Operation Support Squadron**

Little Rock AFB, Arkansas

**Airman Leadership School**

Little Rock AFB, Arkansas

**56 Logistics Support Squadron**

Luke AFB, Arizona

**Airman Leadership School**

Luke AFB, Arizona

**6 Supply Squadron**

MacDill AFB, Florida

**Airman Leadership School**

MacDill AFB, Florida

**Airman Leadership School**

Malmstrom AFB, Montana

**Academic Instructor School**

Maxwell AFB, Alabama



## AFFILIATED SCHOOLS

### **Airman Leadership School**

Maxwell AFB, Alabama

### **College for Aerospace Doctrine, Research & Education**

Maxwell AFB, Alabama

### **College for Professional Development**

Maxwell AFB, Alabama

### **College for Enlisted Professional Military Education**

Maxwell AFB-Gunter Annex, Alabama

### **Airman Leadership School**

McChord AFB, Washington

### **Airman Leadership School**

McConnell AFB, Kansas

### **I. G. Brown ANG Professional Military Education Center**

McGhee Tyson, Tennessee

### **Airman Leadership School**

McGuire AFB, New Jersey

### **Airman Leadership School**

Minot AFB, North Dakota

### **Airman Leadership School**

Misawa AB, Japan

### **347 Logistics Support Squadron**

Moody AFB, Georgia

### **Airman Leadership School**

Moody AFB, Georgia

### **366 Logistics Support Squadron**

Mountain Home AFB, Idaho

### **Airman Leadership School**

Mountain Home AFB, Idaho

### **57 Logistics Support Squadron**

Nellis AFB, Nevada

### **Airman Leadership School**

Nellis AFB, Nevada

### **Airman Leadership School**

Offutt AFB, Nebraska

### **Airman Leadership School**

Patrick AFB, Florida

### **Airman Leadership School**

Peterson AFB, Colorado

### **107 Air Control Squadron (ANG)**

Phoenix, Arizona

### **Airman Leadership School**

Pope AFB, North Carolina

### **Airman Leadership School**

Randolph AFB, Texas

### **Maintenance Management School**

Randolph AFB, Texas

### **Airman Leadership School**

Robins AFB, Georgia

### **USAF Reserve First Sergeant Academy**

Robins AFB, Georgia

### **Airman Leadership School**

Scott AFB, Illinois

### **4 Logistics Support Squadron**

Seymour Johnson AFB, North Carolina

### **Airman Leadership School**

Seymour Johnson AFB, North Carolina

### **20 Logistics Support Squadron**

Shaw AFB, South Carolina

### **Airman Leadership School**

Shaw AFB, South Carolina

### **82 Training Group**

Sheppard AFB, Texas

### **782 Training Group**

Sheppard AFB, Texas

### **882 Training Group**

Sheppard AFB, Texas

### **982 Training Group**

Sheppard AFB, Texas

### **Airman Leadership School**

Sheppard AFB, Texas

AFFILIATED SCHOOLS

**52 Logistics Support Squadron**

Spangdahlem AB, Germany

**Airman Leadership School**

Spangdahlem AB, Germany

**552 Training Squadron**

Tinker AFB, Oklahoma

**Airman Leadership School**

Tinker AFB, Oklahoma

**Airman Leadership School**

Travis AFB, California

**325 Logistics Support Squadron**

Tyndall AFB, Florida

**325 Training Squadron**

Tyndall AFB, Florida

**Airman Leadership School**

Tyndall AFB, Florida

**Airman Leadership School**

USAF Academy, Colorado

**381 Training Group**

Vandenberg AFB, California

**Airman Leadership School**

Vandenberg AFB, California

**Airman Leadership School**

Whiteman AFB, Missouri

**Airman Leadership School**

Wright-Patterson AFB, Ohio

**374 Supply Squadron**

Yokota AB, Japan

**Airman Leadership School**

Yokota AB, Japan

AFFILIATED SCHOOLS

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# COURSE DESCRIPTIONS ...

This section contains the codes and descriptions of the Community College of the Air Force courses that are segments of Air Force-conducted courses. Courses are identified by seven character codes; for example, AAS1204. The three letters identify a course area (in the example, AAS represents Aircraft Armament Systems) while the four digits identify the specific course within that area. The course descriptions in this section are arranged alphabetically and then numerically with the evaluated alphabetic code.

Community College of the Air Force courses are subject to changes of credit-hour value. They are continually evaluated and revised, as necessary, to meet the immediate needs of the Air Force. The credit hours entered on the CCAF transcript reflect the value of the courses when they were completed. The transcript is the only official and reliable indicator of an airman's accomplishments in terms of courses completed and semester hours earned. Direct your questions regarding courses not listed in this catalog to CCAF/DFA, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613. Or call (334) 953-2874 or DSN 493-2874; or fax (334) 953-2980 or DSN 493-2980.



## COURSE DESCRIPTIONS

### The Code Index

<b>AAS</b>	Aircraft Armament Systems	<b>ITL</b>	Intelligence
<b>ACL</b>	Aircrew Life Support	<b>LAW</b>	Law Enforcement
<b>ACT</b>	Aircrew Technology	<b>LEG</b>	Legal Service
<b>ADM</b>	Administration	<b>LMM</b>	Leadership, Management & Military Studies
<b>AFM</b>	Airfield Management	<b>LOG</b>	Logistics
<b>AGE</b>	Aerospace Ground Equipment	<b>MAC</b>	Machinist
<b>AHS</b>	Allied Health Science	<b>MAP</b>	Mapping
<b>AMT</b>	Aircraft Maintenance Technology	<b>MAT</b>	Mathematics
<b>AST</b>	Astronautics	<b>MEA</b>	Measurements
<b>ATC</b>	Air Traffic Control	<b>MEC</b>	Mechanical Maintenance
<b>AVA</b>	Audiovisual Arts	<b>MED</b>	Medical Assistant
<b>AVI</b>	Avionics	<b>MEL</b>	Metalworking
<b>BEE</b>	Bioenvironmental Engineering	<b>MET</b>	Meteorology
<b>BET</b>	Biomedical Equipment Technology	<b>MGT</b>	Management & Supervision
<b>CAR</b>	Carpentry	<b>MIL</b>	Military Science
<b>CIV</b>	Civil Engineering	<b>MKS</b>	Marksmanship
<b>CLT</b>	Cardiopulmonary Laboratory Technology	<b>MLT</b>	Medical Laboratory Technology
<b>CMR</b>	Computer Maintenance & Repair	<b>MRD</b>	Medical Readiness
<b>COM</b>	Communications	<b>MSL</b>	Missile Maintenance Technology
<b>CON</b>	Contracts	<b>MUN</b>	Munitions
<b>COR</b>	Corrosion Control	<b>NDT</b>	Nondestructive Testing
<b>CYT</b>	Cytology	<b>NMT</b>	Nuclear Medicine Technology
<b>DAS</b>	Dental Specialist	<b>NUR</b>	Nursing
<b>DLT</b>	Dental Laboratory Technology	<b>OCC</b>	Occupational Therapy
<b>DPO</b>	Disaster Preparedness	<b>OPD</b>	Orthotic Prosthesis Devices
<b>EDP</b>	Data Systems	<b>OPT</b>	Optometric Technology
<b>EDT</b>	Education & Training	<b>PAV</b>	Pavements
<b>EEO</b>	Electronic Equipment Operation	<b>PER</b>	Personnel
<b>ELT</b>	Electronics	<b>PHA</b>	Pharmacology
<b>EMT</b>	Emergency Medical Technology	<b>PHE</b>	Physical Education
<b>ENM</b>	Environmental Medicine	<b>PHO</b>	Photography
<b>ENV</b>	Environmental Science	<b>PHY</b>	Applied Physics
<b>EPP</b>	Electronic Power Production	<b>PLB</b>	Plumbing
<b>EXP</b>	Explosives Handling & Disposal	<b>PTH</b>	Physical Therapy
<b>FDS</b>	Food Service	<b>PTR</b>	Physiological Training
<b>FIN</b>	Finance	<b>RAD</b>	Radiologic Technology
<b>FIP</b>	Fire Protection	<b>REC</b>	Recreation
<b>FNS</b>	Food & Nutritional Science	<b>RTB</b>	Radio & Television Broadcasting
<b>FSC</b>	Family Support Center	<b>SAF</b>	Safety
<b>FTL</b>	Foreign Technical Language	<b>SAN</b>	Sanitation
<b>FUS</b>	Fuels	<b>SDI</b>	Special Duty/Reporting Identifier Internship
<b>GEO</b>	Applied Geography	<b>SEC</b>	Security
<b>GPS</b>	Geophysical Sciences	<b>SOC</b>	Social Services
<b>GRA</b>	Graphics	<b>SOO</b>	Solar Observation
<b>HAR</b>	Heating, Air-Conditioning & Refrigeration	<b>SUR</b>	Surveying
<b>HBM</b>	Hyperbaric Medicine	<b>SVE</b>	Survival Equipment
<b>HEO</b>	Heavy Equipment Operation	<b>SVR</b>	Survival & Rescue
<b>HIS</b>	Applied History	<b>SVS</b>	Services
<b>HIT</b>	Histologic Technology	<b>TRN</b>	Transportation
<b>HSA</b>	Health Services Administration	<b>TVS</b>	Television Systems
<b>HTM</b>	Hotel Management	<b>VEM</b>	Vehicle Maintenance
<b>INT</b>	Internship	<b>WEL</b>	Welding

**ADMINISTRATION****ADM1101 Typing I**

Touch typing to include thorough knowledge of keyboard and operation of machine parts. Emphasizes centering, simple tables, business letters, envelopes, rough drafts and manuscripts.

**ADM1102 Chapel Management**

Organization and management of chapel activities. Includes standard office practices, written communications, public relations, application of principles of funds accounting, preparation of budgets and publicity materials, and management of property and equipment.

**ADM1103 Document and Publications Management**

Management of publications and documents. Includes publications and forms systems, requisition procedures, inventory controls, and customer issues.

**ADM1104 Administrative Communications**

Management of written communications. Includes preparation of official letters, messages and administrative orders as well as suspense control of written communications.

**ADM1106 Information Management**

General administrative support and office management. Includes typing and keyboarding, microcomputer, word processing, computer security, career progression, plans and programs, administrative communications, publications, records and forms management, official correspondence, suspense files, document security, mail handling, electronic messages, Air Force orders,

awards and decorations, performance reports, telephone procedures, and quality assurance.

**ADM1107 Postal Operations**

Principles, policies, procedures and administration of military postal operations. Includes postal service center operations, preparation of transportation documents, domestic and international mail, registered mail, claims and inquiries, directory functions, administration of postage accounts, money order services, and postal supplies and equipment.

**ADM2102 Advanced Chapel Management**

Organization and management of chapel activities. Includes techniques for chapel supply management, use of applicable mechanized output products, budget management, control of chapel equipment, supply management, performance ratings, decorations, on-the-job training, funds accounting, preparation of budgets, publicity materials, professional communications and other supervisory duties.

**ADM2106 Advanced Information Management**

Integrated definition language modeling to analyze processes and improve efficiency. Includes information warfare doctrine and philosophy, contingency operations, resource management, quality improvement, computer network operating and distribution systems, and network operation management. Emphasizes student interaction, team learning, and exchange of viewpoints and experience.

**ADM2107 Postal Supervisor**

Technical skills and management techniques required for supervision of military postal center operations. Includes administration of postal management information system, postage meter monitoring, money order transactions, integrated retail terminals, mail security, search and seizure, and postal incident reporting.

**AEROSPACE GROUND EQUIPMENT****AGE1101 Aerospace Ground Equipment Familiarization**

Theory of operation and minor maintenance of ground support equipment. Includes service inspection, preoperational inspection, forms review and annotation.

## COURSE DESCRIPTIONS

### AGE1102 Auxiliary Aerospace Ground Support Equipment

Inspection, maintenance and repair of powered and nonpowered aircraft support equipment. Includes fault isolation; hydraulic, electrical and pneumatic schematics; maintenance stands; mobile work platforms; jacks and testers; oil and hydraulic servicing carts; liquid nitrogen and oxygen cart chassis maintenance; air cycle machines; tank dollies; tow bars; cowling trailers; seat removal cranes; and fuel reclamation units.



### AGE1103 Aerospace Ground Equipment Generator Sets

Familiarization, fault isolation procedures and maintenance of generator sets. Includes components, electrical systems, scheduled inspections and load bank testing.

### AGE1104 Introduction to Hydraulic Test Stands

Theory of operation and maintenance of ground support hydraulic test stands used to operate aircraft hydraulic systems; interpretation and use of hydraulic, and electrical schematics and diagrams; operation, fault-isolation procedures, inspection, bleeding, testing, prime mover repair, adjustment, and repair of high- and low-pressure hydraulic system components; and use of hydraulic fluid testing equipment.

### AGE1105 Air Compressors

Theory of operation and maintenance of rotary and reciprocating air compressors; interpretation and use of airflow and electrical schematics and diagrams; operation, fault-isolation procedures, inspection, testing, prime mover repair, adjustment, and repair of

high- and low-pressure system components; and use of hydrostatic test equipment.

### AGE1106 Bomb-Lift Equipment

Systems and components used in bomb lifts and munitions handling trailers. Includes performance of operational checks, inspections, load testing, fault-isolation, and maintenance of hydraulic, electrical and mechanical subsystems.

### AGE1107 Diesel Engine Maintenance

Operating characteristics and malfunction analysis of diesel engines; fuel system components; governing, cooling and lubricating systems; and associated power plant accessories.

### AGE1108 Basic Ground Support Equipment Electricity and Electronics

Basic electricity fundamentals; Ohm's law, series, parallel and series parallel circuits; inductive and capacitive circuits, transformers, principles of single- and three-phase motors and motor controls, resonance, and filters. Includes circuit analysis using electronic test equipment.

### AGE1109 Gas Turbine Engines

Theory of operation and maintenance of gas turbine engines; interpretation and use of airflow, electrical, lubrication, fuel and pneumatic schematics; operation; inspection; fault-isolation procedures; repair and testing of components; pneumatic load testing; and remote control use of pneumatic analyzers.

### AGE1110 Introduction to Ground Heaters

Theory of operation and maintenance of diesel and electric ground support heaters; interpretation and use of electrical, lubrication and airflow diagrams and schematics; and operation, inspection, carbon monoxide testing and fault-isolation procedures.

### AGE1111 Introduction to Ground Support Air-Conditioners

Theory of operation and maintenance of specific diesel and electric ground support air-conditioners; interpretation and use of airflow, refrigerant, fuel, lubrication, and electrical schematics and diagrams; operation; inspection; fault-isolation procedures; and repair and testing of components. Includes removal, evacuation and charging of refrigerant.

**AIR TRAFFIC CONTROL****ATC1401 Principles of Aviation Weather**

Weather principles, interpretation of reports and forecast as applied to flight. Includes analysis and use of weather data to write weather reports using format and symbols prescribed by *Federal Meteorological Handbook Number 1* and understanding how weather affects flight safety and control of air traffic in terminal area.

**ATC1405 Air Traffic Control Nonradar Procedures**

Principles of conventional approach control operations. Includes separation standards, terminology, inter- and intrafacility coordination, and procedures for control of aircraft without use of radar equipment.

**ATC1406 Air Traffic Control Radar Procedures**

Principles of approach control radar operations and equipment. Includes simulated operations employing situations requiring use of terminology, identification procedures, separation and basic control instructions for aircraft in a terminal radar environment.

**ATC1408 Air Traffic Control Fundamentals**

Weather briefing procedures, observations, and reports and application of aeronautical charts. Includes instrument approach procedure charts, standard terminal arrival route charts, visual and instrument flight rule supplements, terminal instrument procedures and basic theory of flight and aircraft performance characteristics.

**ATC2405 Airspace Management**

Design, coordination and management of airspace required for Air Force operational training activities. Includes national airspace system, categories of airspace, military training route program, military operations areas, airspace and air traffic control criteria.

**ATC2407 Terminal Instrument Procedures**

Development of terminal instrument procedures. Includes applications of trigonometry and analytic geometry, elements of airspace design and utilization, nonprecision approach and radar procedures, textual development, administrative techniques and planning criteria for airspace area design and utilization.

**ATC2408 Air Traffic Control Facility Management**

Guidelines, rules and regulations governing facility operations; and experience in terminal instrument procedures, national airspace system, mishap investigation and reporting, flight operations, manpower requirements, training programs and facility management techniques.

**ATC2409 Tactical Air Command and Control Management**

Close air support mission planning. Includes assessment of resources, operational planning and readiness management.

**AIRCRAFT ARMAMENT SYSTEMS****AAS1201 Aircraft Armament Systems Maintenance**

Aircraft armament systems. Includes component functions of nuclear weapons, missiles, rockets, bombs and ammunition with emphasis on explosive safety.

**AAS1202 Aircraft Air Munitions Loading and Unloading Laboratory**

Positioning, loading, safing, and downloading nuclear and nonnuclear air munitions from internal and/or external suspension components. Includes operation and maintenance of internal and external suspension components stressing explosive and ground safety, care and use of hand tools, and use of applicable handling equipment.

**AAS1203 Aerospace Ground Equipment Handling, Support and Maintenance**

Maintenance and use of powered and nonpowered aerospace ground equipment and armament support equipment. Includes theory of operation, component



## COURSE DESCRIPTIONS

location, removal, adjustment, repair, inspection, installation and trouble-isolation procedures.



### **AAS1204 Aircraft Armament Launch Ejection Systems**

Direct application of maintenance practices to electrical, pneumatic and mechanical subsystems. Includes theory of operations, malfunction analysis, trouble-isolation procedures, system operation, and repair, adjustment, removal and installation of components.

### **AAS2200 Advanced Aircraft Automatic Weapons Laboratory**

Theory of operation and maintenance of specified automatic gun systems. Includes support and handling equipment, testers, and care and use of hand tools. (May be repeated for credit on various aircraft.)

### **AAS2201 Advanced Aircraft Armament Systems Maintenance Laboratory**

Maintenance procedures and systems theory as applied to specific aircraft. Includes system operation analysis using wiring diagrams, engineering drawings and manufacturer's maintenance manuals; theory of operation; location of components; and removal, adjustment, repair, inspection, installation and trouble-isolation procedures.

### **AAS2202 Helicopter Aerial Gunner**

Operation of helicopter weapon systems and performance of related aircrew duties. Includes analysis and repair of in-flight malfunctions; weapon loading, inspection and servicing; hoist operation; cargo and passenger loading; medical evacuation; and navigation waypoint identification.

## **AIRCRAFT MAINTENANCE TECHNOLOGY**

### **AMT1104 Introduction to Aircraft and System Components**

Introduction to aircraft specifications, functions, system and component locations; basic knowledge and orientation of aircraft systems; and operational theory, inspection, and maintenance of landing gear, brake, flight control, pneumatic, hydraulic, oxygen, air-conditioning, pressurization, instrument and fuel systems. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT1105 Aircraft Maintenance Fundamentals**

Basic aircraft systems theory and operation principles, operation and care of ground support equipment, aircraft familiarization, maintenance documentation, maintenance safety precautions, and technical manual usage. Includes identification, selection, use and care of common hand tools, torque wrench procedures, and safety wiring. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT1106 Aircraft Familiarization and Flight Line Operations**

Introduction to aircraft ground operation hazards, movement, associated flight-line safety procedures, weight and balance, aerodynamics, regulations, hardware, aircraft servicing and inspection concepts. Includes principles of corrosion control. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1107 Air Force Technical Manuals**

Air Force technical order system, aircraft technical manuals, job guides, and fault isolation manuals for aircraft systems and components. Includes servicing, inspections, removal, repair, replacement, overhaul instructions, and interpretation of schematics and wiring diagrams. (May be repeated for credit on various aircraft.)



**AMT1108 Air Force Technical Order System Management**

Introduction to managing Air Force Technical Order System accounts, and how to post changes, revisions and rescissions to maintain current and accurate technical order libraries. Includes automated systems management and documentation to perform account custodial duties.

**AMT1109 Manufacturer's Technical Manuals**

Advanced selection and use of manufacturer's maintenance manuals and other publications relating to aircraft systems, subsystems and components.

Includes servicing, inspections, removal, replacement, repair and overhaul instructions, fault isolation, and interpretation of schematics and wiring diagrams. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1110 Transport Aircraft Cargo Configuration**

Theory of operation of aircraft configuration systems. Includes hands-on instruction for configuring aircraft for aeromedical litter support, container delivery, aerial delivery, troop drop and logistics pallets.

**AMT1114 Aircrew Egress Systems Fundamentals**

Introduction to aircrew egress systems. Includes operational theory, maintenance and ground safety procedures; use of ground support equipment, hand tools, aircraft hardware and safety devices; principles and operation of ballistic and nonballistic aircraft escape system components; and handling, storage and care of explosive components. (May be repeated for credit on various aircraft.)

**AMT1115 Aircrew Egress Systems Maintenance**

Application of theory in removal, replacement, adjustment, and rigging of ballistic and nonballistic aircraft canopy and ejection seat components for basic, dual and multicrew module escape systems. Includes inspection, repair, corrosion control, operational checks, fault isolation procedures, and basic, intermediate and advanced aircraft escape systems. (May be repeated for credit on various aircraft.)

**AMT1121 Aircraft Electrical Fundamentals**

Fundamentals of electricity, electrical circuitry and system components related to aircraft maintenance specialist. Principles, theories, and concepts of alternating and direct current. Includes magnetism, electrical terms, symbols, circuit construction, Ohm's law, electrical measuring equipment, interpreting electrical schematics, and nickel cadmium and lead acid battery fundamentals. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1122 Aircraft Environmental Systems Maintenance**

Aircraft cabin pressurization and air-conditioning systems. Includes an overview of theory of operation, repair of system components, operational checks, servicing procedures, fault isolation, cabin leakage checks, bench testing and calibration of components; and inspection and maintenance of cabin pressure regulators, heat exchangers, flow control valves,

## COURSE DESCRIPTIONS

temperature regulators, electronic temperature control units, distribution ducting and water separators. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT1123 Aircraft Electrical Systems Maintenance**

Introduction to aircraft electrical systems, and application of direct and alternating current generation and distribution systems for specific aircraft. Includes familiarization, inspection, operational checks on generators, transformers, rectifiers, inverters, control panels, frequency sensing relays, distribution busses, normal and emergency lighting, and aircraft subsystem electrical components. (May be repeated for credit on various aircraft—AF A&P program applicable course.)



### **AMT1124 Aircraft Control and Warning Systems**

Analysis of aircraft and engine control and warning systems principles. Includes fire-detection and overheat systems, antiskid normal and emergency braking system, landing gear warning system, takeoff warning system, master warning and caution panel, interior and exterior lighting systems, touchdown relays and weight on wheels switches, thunderstorm lighting, anticollision lighting, starting and ignition systems, and other control and warning systems inspection procedures, preventive maintenance and fault isolation. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT1131 Aircraft Hydraulic System Fundamentals**

Comprehensive study of hydraulic and pneumatic theory, operation, and maintenance. Includes power, landing gear, brake, antiskid, steering, flight control,

and other hydraulic systems and components; normal and emergency operations, inspection, and servicing procedures; repair, removal and installation of components; adjustments and operational checkout procedures; and use of schematic diagrams. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT1132 Aircraft Hydraulic Systems Maintenance**

Intermediate-level maintenance for hydraulic component repair. Includes construction features, purpose, theory of operation, disassembly, inspection, repair, and reassembly of hydraulic pumps, pressure regulators, valves, reservoirs, accumulators, actuators, brake assemblies, shock struts, steering control units and other aircraft pneumatic system components; ultrasonic cleaning of system filters; use of bench test stands; and hose fabrication. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT1141 Aircraft Fuel Systems Fundamentals**

Operational theory, functions and maintenance of aircraft fuel systems. Includes engine feed and crossfeed, transfer, defueling, dump, scavenge, in-flight refueling, quantity indication, and vent pressurization systems. Emphasizes maintenance procedures with safety precautions and human factors. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT1142 Aircraft Fuel Systems Maintenance**

Comprehensive study of integral, bladder, and externally mounted fuel tank systems and maintenance procedures. Includes use of special tools and equipment; selection of appropriate aircraft hardware; use of manufacturer's technical manuals; fault isolation; component removal, repair and installation; tank entry procedures; leak detection; corrosion control; selection and application of sealants; and fuel cell testing. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT1151 Helicopter Maintenance Fundamentals**

Introduction to helicopter airframe, systems, engines and flight-line maintenance procedures. Includes basic practices, tools, ground handling, equipment, inspections, troubleshooting, and removal and replacement of components; landing gear, electrical, fuels, utility, hydraulics and flight controls systems; and transmission and main and tail rotor. (May be repeated

for credit on various aircraft—AF A&P program applicable course.)

**AMT1152 Helicopter Semirigid Flight Controls**

Identification, purpose, and theory of operation of helicopter flight controls, semirigid rotor systems and system components; and procedures and techniques with practical experience used in rigging, adjusting, removing, repairing, replacing, servicing and balancing flight control system components. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1153 Helicopter Fully Articulated Flight Controls**

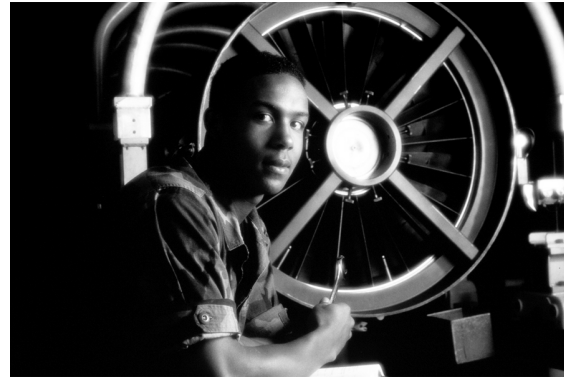
Comprehensive study of identification, purpose, and theory of operation of helicopter flight controls, fully articulated rotor systems and system components; procedures and acceptable techniques with practical experience used in rigging, adjusting, removing, replacing, servicing and balancing flight control system components. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1154 Helicopter Flight Line Maintenance**

Comprehensive study of helicopter flight-line maintenance procedures, operations and safety practices. Includes ground safety devices, servicing of aircraft systems, aircraft launch and recovery, towing and jacking, performance of scheduled inspections, and system operational checks. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1161 Turbine Engine Theory and Principles**

Basic engine theory of operation, system integration, construction breakdown, and aircraft and engine specific features; use of tools and maintenance materials to include common hand tools, torque wrenches and micrometers; identification of aircraft hardware, lock-wiring techniques and safety devices; identifies purpose and locations of engine main bearings, seals and major internal components of the engine; and removal and replacement of components and servicing. (May be repeated for credit on various engines—AF A&P program applicable course.)



**AMT1162 Turbine Engine Inspection and Repair**

Turbofan and turbojet construction, inspection, fault isolation, and repair of ignition, lubrication, fuel, starter, compressor bleed and pneumatic systems; engine removal and installation; conditioning, and servicing of installed engines; spectrometric oil sampling; disassembly inspection, repair, and reassembly of powerplant and accessories; and preservation for storage. (May be repeated for credit on various engines—AF A&P program applicable course.)

**AMT1163 Aircraft Engine Operation**

Detailed aircraft engine operation under normal and emergency operating procedures. Includes safety precautions, prerun checks, postrun inspections, engine limitations using weapon system trainers and simulators; and operational checkouts of installed aircraft engines. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1164 Turbine Engine Blade Blending**

Engine blade blending procedures according to aircraft and engine technical manuals. Emphasizes student knowledge and performance of proper tool usage and blending techniques. (May be repeated for credit on various engines—AF A&P program applicable course.)

**AMT1165 Auxiliary Power Unit Systems**

Theory of operation of gas turbine compressor power (GTCP) auxiliary power systems. Includes removal and replacement of engines and subsystems and troubleshooting and fault isolation using multimeters and other supporting equipment. Emphasizes normal and emergency operation of the GTCP system and subsystems, technical data and safety precautions; and removal and installation of engines from shipping containers with preservation and depreservation fluids.

## COURSE DESCRIPTIONS

(May be repeated for credit on various power units—AF A&P program applicable course.)

### **AMT1166 Helicopter Engine and Transmission Maintenance**

Theory of operation, purpose, and maintenance of turbine engines, semirigid helicopter rotors, and fully articulated rotor transmission and drive systems and components. Emphasizes performance assessments for removal and replacement of engines, rotor heads, main gearboxes and selected components; servicing procedures; rigging of engine controls; final adjustments; performance checks; and fault reporting. (May be repeated for credit on various helicopter engines—AF A&P program applicable course.)

### **AMT1167 Aircraft Throttle Rigging**

Fundamentals of throttle control rigging, cable installation and adjustment, system maintenance, and alignment. Includes corrosion control and treatment, evaluation of engine system components, operational checks, fault isolation, and repair; use of special tools and support equipment; application of safety; and use of manufacturer's technical manuals. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT1168 Aircraft Engine Flight Line Maintenance**

Advanced theory of operation of the turbine engine and function of engine components. Includes fault isolation, overhaul, and testing procedures with hands-on disassembly, inspection, repair, reassembly, and operational checkout of engines and accessories; and rigging and adjustment of fuel, oil, electrical and propeller systems performed on operational aircraft engines. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT1169 Turbine Engine Electrical and Ignition Systems**

Aircraft power plant electrical systems. Includes overhaul and testing procedures for turbine engine electrical system components and auxiliary power units. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT1170 Aircraft Propeller Inspection and Repair**

Theory, operation, and control of aircraft propellers and related systems. Includes inspection, removal,

replacement, repair and maintenance of propeller systems with experience in balancing of blades, hubs, and testing and operational checks of hydraulic and electrical standard propellers. (May be repeated for credit on various aircraft - AF A&P Program applicable course)

### **AMT1181 Aircraft Structural Maintenance Fundamentals**

Airframe structures, sheet metal composition and identification, rivet composition and identification, hand tools, technical orders, drafting, interpreting technical drawings, flat pattern and metal layouts, and shop mathematics. Emphasizes fabrication techniques to include machine setup and operation, powered and nonpowered bending, radius bends, hand and machine forming, hand and pneumatic riveting, hand and pneumatic drilling, dimpling, countersinking, and personal, work center, and chemical safety standards and applications. (May be repeated for credit on various aircraft—AF A&P program applicable course.)



### **AMT1182 Fundamentals of Low-Observable and Stealth Aircraft**

Introduction to history, principles, and theory of low-observable and Stealth aircraft design. Includes radar imagery, radar cross-section theory, radar signatures, radar signature reduction techniques and other related advanced stealth technology issues. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT1183 Aircraft Specialized Structural Repair**

Technical information for sheet metal repairs to include flush, nonflush and substructural aircraft damage restoration. Emphasizes special fastener identification, composition, installation and removal; cable identification, composition and manufacturing; aircraft

tubing identification, composition and manufacturing; and control surface balancing techniques and procedures. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1191 Aircraft Phased Inspections**

Concepts and application of phase inspection, techniques to perform scheduled aircraft inspections, and maintenance procedures. Includes use of inspection work cards, maintenance manuals, drawings, wiring schematics, special test and diagnostic equipment, lubrication equipment, safety precautions, assembly and rigging various aircraft systems, and maintenance records and forms documentation procedures. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1192 Aircraft Periodic Inspections**

Comprehensive study and application of the periodic inspection concept, and techniques to perform scheduled aircraft inspections and maintenance procedures involved. Includes use of inspection work cards, maintenance manuals, drawings, wiring schematics, special test and diagnostic equipment, lubrication equipment, safety precautions, assembly and rigging various aircraft systems, and maintenance records and forms documentation procedures. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1193 Aircraft Material System Support Management**

Unit aircraft maintenance support section requirements. Includes management and inventory of supplies, technical data, tool checkout procedures, maintenance of tools and equipment, and documentation to support aircraft maintenance activities.

**AMT1194 Aircraft Isochronal Inspections**

Comprehensive study and application of isochronal inspection concept and techniques to perform scheduled aircraft inspections and maintenance procedures. Includes use of inspection work cards, maintenance manuals, drawings, wiring schematics, special test and diagnostic equipment, lubrication equipment, safety precautions, assembly and rigging various aircraft systems, and maintenance records and forms documentation procedures. (May be

repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1195 Preflight and Postflight Inspections**

Aircraft preflight, postflight and between-flight inspections. Includes ground handling, aircraft launch and recovery procedures, safety, aircraft airworthiness inspection, engine inlet and exhaust inspection and servicing, use of inspection work cards, technical publications, and documentation of maintenance and inspections on aircraft forms. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT2117 Advanced Aircrew Egress Systems Maintenance**

Comprehensive study of advanced aircrew egress systems theory and maintenance procedures. Includes component location, removal, replacement, rigging, adjustment, repair, inspection and fault isolation procedures. (May be repeated for credit on various aircraft.)

**AMT2121 Advanced Aircraft Environmental Systems Maintenance**

Advanced study of aircraft environmental systems theory for specific aircraft and associated equipment. Emphasizes component location, fault isolation, servicing, repairing, testing and inspecting aircraft environmental systems. Includes bleed air manifold distribution, cabin pressurization, air-conditioning, under floor heat, gaseous and liquid oxygen systems, neo-electro static applications, anti-ice systems, and fire-extinguishing systems. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT2122 Advanced Aircraft Electrical Systems Maintenance**

Advanced aircraft electrical systems theory and operation of associated test equipment. Includes generation and distribution of alternating and direct current and primary, secondary, and emergency electrical systems. Emphasizes circuit analysis, wire maintenance, fault-isolation procedures, system operation, repair, adjustment, removal, installation of components, functional checkout, bench checking and testing, and inspection procedures. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

## **COURSE DESCRIPTIONS**

### **AMT2131 Advanced Aircraft Hydraulic Systems**

Advanced principles and design of specific aircraft hydraulic systems. Includes application of principles to determine functions and interrelationships of components using electrical and hydraulic schematics, fault isolation, and practice in removing, installing, repairing, servicing, adjusting, inspecting and modifying aircraft hydraulic systems. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT2132 In-flight Refueling Systems Maintenance**

Advanced maintenance procedures for removal, installation, rigging, and adjustment of in-flight refueling boom and receptacles, and associated equipment. Includes system operational checkout and fault isolation procedures. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT2141 Advanced Aircraft Fuel Systems Maintenance**

In-depth maintenance procedures and configuration of integral, bladder, auxiliary and externally mounted fuel systems. Includes fault isolation, leak source and path analysis, corrosion prevention, sealant preparation and application, repair and maintenance procedures, operational checkout, inspection, and storage; and engine feed, fuel transfer, scavenge, refuel, defuel, dump, vent, pressurization, fuel indication and in-flight refueling systems. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT2142 Advanced Aircraft Fuel System Inerting and Fire Suppression**

Advanced operational theory of aircraft nitrogen fuel inerting and firefighting systems. Includes fault isolation, operational checkout, pressurization, fuel scrubbing and firefighting systems. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT2151 Advanced Helicopter Airframe and Systems Maintenance**

Advanced theory of operation, component identification and trouble-isolation procedures. Includes practical experience in removal and replacement of electrical, instrument, fuel and hydraulic system components; operation, inspection

and maintenance of utility systems; removal, disassembly, reassembly, and adjustment of rotors and hubs; removal and replacement of transmission and drive systems; operation troubleshooting, replacement and rigging of flight controls; repair of landing gear systems; and scheduled inspections. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT2161 Advanced Turbine Engine Maintenance**

Advanced turbine engine theory and operational maintenance. Includes engine removal and replacement, related aircraft systems operation and fault isolation, testing and adjustment, repair of installed, and uninstalled engines; hands-on evaluations pertaining to disassembly, reassembly, inspection, preservation and depreservation; corrosion identification and control; and flight-line and shop engine support equipment, engine trimming and trending diagnostics. (May be repeated for credit on various engines—AF A&P program applicable course.)

### **AMT2162 Turbine Engine Fiber-optic Borescope**

Fiber-optic borescoping. Includes use, handling, and storage of Olympus, General Electric, or other flexible and rigid digital borescoping devices; inspections on engine sections and modules to include fan section, core section, turbine section and combustion chamber. Emphasizes performance on rigid and flexible borescope inspections as intended for flight-line or shop maintenance. (May be repeated for credit on various engines—AF A&P program applicable course.)

### **AMT2163 Turbine Engine Test Cell Maintenance**

Advanced operator maintenance and preparation of engines for testing. Includes prestart checks; engine operation; and fault isolation using vibration, temperature, and pressure data to determine serviceability or isolate engine problems; and service adjustments and use of portable and semiportable engine test facilities. (May be repeated for credit on various pieces of equipment—AF A&P program applicable course.)

### **AMT2164 Aircraft Turbine Engine Accident and Incident Analysis**

Turbine engine construction and design differences required for accident and incident investigation and analysis of engine accessory failures. Includes fuel and oil system contamination, compressor and turbine section damage and failure, material failure, accident

cause factors, identification and analysis of compressor, turbine and bearing failures, identification of in-flight and postimpact fires, and estimation of engine power at impact. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT2165 Turbine Engine Starting and Secondary Power Subsystems**

Advanced maintenance and fault isolation of various engine-starting systems. Includes analysis of the jet fuel starter, central gearbox, accessory drive gearbox and the airframe mounted accessory drive; starter and accessory drive electrical systems; servicing of the major components; and use of test equipment to isolate and correct system malfunctions. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT2181 Advanced Aircraft Structural Repair**

Advanced structural repair techniques for metal bonded sandwich structures. Includes surface preparation, fiberglass doublers, glass fabric laminates, adhesive and hot bonding methods, specialized scarf and step-joint repair of radomes, application of potted repairs, one-and two-skin core repair, aluminum core external patches, and transition and trailing edge area repairs of metal bonded honeycomb panels. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT2182 Advanced Aircraft Composite Repair**

Advanced composites to include cutting, trimming, drilling, countersinking, liquid shimming and installation of advanced composite structures. Emphasizes advanced training in aramid fiber and graphite structures, skin and core repairs, advanced composite repairs, and in-shop safety procedures; and visual inspection methods and tap testing, damage evaluation and classification, moisture removal, and programmable hot bond curing equipment. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT2191 Intermediate Aircraft Maintenance**

Advanced maintenance procedures and systems operational theory. Includes removal, replacement,

repair, rigging, and operational checkout of airframe accessories, primary and secondary flight controls, landing gear, throttle, canopy, and other related systems; use of special tools, and test and diagnostic equipment; and systematic use of maintenance manuals, drawings, and wiring schematics during fault isolation, inspection and aircraft modification. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT2192 Aircraft Weight and Balance - General**

Theory and methods used to control aircraft loading and center of gravity location. Includes weight and balance terminology; principles of force and movement acting on a free body; weight and balance computations and algebraic formulas; methods, procedures, equipment and safety precautions when weighing aircraft to determine center of gravity location; and loading calculations using manufacturer's loading charts, load adjuster slide rules and scientific calculators. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT2193 Aircraft Weight and Balance - Bomber**

Theory and methods used to control bomber aircraft loading and center of gravity location. Includes weight and balance terminology; principles of force and movement acting on a free body; weight and balance computations and algebraic formulas; methods, procedures, equipment and safety precautions when weighing aircraft to determine center of gravity location; and loading calculations using manufacturer's loading charts, load adjuster slide rules and scientific calculators. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT2194 Aircraft Weight and Balance - Airlift**

Theory and methods used to control airlift aircraft loading and center of gravity location. Includes weight and balance terminology; principles of force and movement acting on a free body; weight and balance computations and algebraic formulas; methods, procedures, equipment and safety precautions when weighing aircraft to determine center of gravity location; and loading calculations using manufacturer's loading charts, load adjuster slide rules and scientific calculators. (May be repeated for credit on various aircraft—AF A&P program applicable course.)



## COURSE DESCRIPTIONS



### **AMT2195 Advanced Aircraft Maintenance**

Advanced aircraft systems operation theory and maintenance procedures. Includes system operation analysis, use of wiring diagrams, engineering drawings, manufacturer's maintenance manuals, and special tools and equipment; rigging techniques and operational checkout of flight controls, landing gear, powerplant, hydraulic, electrical, environmental and airframe systems components; ground handling; fault isolation; and inspection concepts to ensure aircraft safety and airworthiness. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT2196 Aircraft Crash Recovery**

Response procedures for in-flight and ground emergencies. Includes evaluation of maintenance procedures, emergency towing, and use of special tools and support equipment required for emergency actions during aircraft tire failure, barrier extraction and handling of crashed aircraft. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT2197 Aircraft Battle Damage Assessment and Repair**

Battle damage identification and classification; repair of systems and structures; use of technical publications, tools and materials; proper wear and care of chemical warfare suits; safety; and prevention of foreign object damage. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT2198 Canopy Rigging**

Advanced study and practice of removing, installing and adjusting jettisonable aircraft canopies. Includes

egress system safety precautions, use of maintenance safety devices and system operational checks. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT2199 Aircraft Landing Gear and Door Rigging**

Advanced procedures for fault isolation, adjustment, and operational checkout of aircraft landing gear and door sequencing systems; and use of special tools and equipment. Emphasizes adherence to technical data and instructions provided in maintenance manuals. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT2219 Aircraft Flight Control Systems Maintenance**

Advanced maintenance and operation of primary and secondary flight control systems. Includes operational checks, rigging and adjustment, and hydraulic power systems of primary flight control systems for ailerons, rudders, stabilators and elevators, and secondary flight control systems for flaps, slats and speed-brakes. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT2220 Aircraft Transition Training and Familiarization**

Airframe transition training for skilled aircraft maintenance technicians converting from one aircraft to another. Includes general aircraft egress and/or ejection safety procedures, aircraft safe for maintenance identification, specific airframe engine, electrical, pneudraulic, environmental control, fuel, and related systems. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT2297 Aviation Quality Assurance**

Advanced quality assurance procedures to detect and analyze maintenance management deficiencies, determine causes, and recommend corrective action; and develop skills to evaluate maintenance activities and personnel to ensure safety procedures and maintenance practices meet highest standards. Includes written policies, managerial communications, directives and technical manuals, evaluation processes, inspection categories, deficiency analysis, management of aircraft weight and balance programs, administration of product quality deficiency reports, and research and investigation of component failures and manufacturer defects.

### **AMT2228 Advanced Aircraft Fault Isolation**

Advanced procedures and techniques used for fault isolation in aircraft malfunction situations. Includes aircraft technical data, fault isolation charts, and reading and interpretation of aircraft wiring diagrams and system schematics. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

### **AMT2298 Aviation Maintenance Supervisor**

Aircraft maintenance management programs, policies and procedures for first-line maintenance supervisors. Includes supervisory principles, aircraft safety, corrosion control, ground servicing procedures, engine operation, operational checkouts, fault isolation, ground-handling procedures, inspection concepts, and flight safety. (May be repeated for credit on various aircraft.)

### **AMT2299 Advanced Aviation Maintenance Management**

Aviation maintenance organizational structure. Includes concepts of production management, resource management, quality control and assurance, labor hour and cost accounting, material deficiency and product quality deficiency reporting, training documentation, and Core Automated Maintenance Systems.

### **AMT2301 Aviation Production Superintendent**

Advanced aircraft maintenance management and flight-line operation procedures. Includes establishing maintenance priorities, directing maintenance actions, and developing monthly and weekly maintenance plans; cannibalization procedures and supply system management; disaster preparedness, exercise scenarios, emergency war order and contingency planning; and determining and reporting aircraft mission capability and airworthiness status.

## **AIRCREW LIFE SUPPORT**

### **ACL1101 Basic Life Support**

Aircrew life-support programs and systems. Includes quality awareness, career progression and duties, safety, security, supply, automated data systems, oxygen systems, and technical orders.

### **ACL1102 Basic Life-Support Equipment**

Life-support test equipment for anti-G garments, aircraft oxygen systems and protective helmets; safety procedures; and physiological effects of flight.



### **ACL1103 Inspection and Use of Life-Support Equipment**

Inspection and use of life-support equipment. Includes personnel parachutes, harnesses and life rafts; maintenance and use of survival kits, anti-G garments, protective helmets, oxygen survival systems, life preservers, night vision devices, and antiexposure suits; and aircrew instruction in emergency egress, chemical defense, and flash protection.

### **ACL1104 Maintenance of Aircrew Night Vision Devices**

Maintenance and operation of night vision devices. Includes operational checks, physiological limitations, testing, purging and device adjustment procedures.

### **ACL2101 Advanced Life Support**

Life-support operations. Includes Air Force occupational safety and health, technical orders, supply,

## **COURSE DESCRIPTIONS**

aircrew instructions, supervision, training and life-support systems.

### **ACL2102 Aircrew Life-Support Instructor**

Knowledge and techniques needed to conduct aircrew life-support continuation training. Includes navigation with global positioning system equipment, survival, evasion, resistance and escape training.

## **AIRCREW TECHNOLOGY**

### **ACT1201 Aircraft Systems Familiarization**

Knowledge of aircraft systems applicable to duties of flight engineers with emphasis on theory of operation, normal operating procedures and emergency operating procedures. Includes familiarization with aircraft electrical, engine, hydraulic, environmental control, fuel and flight control systems.

### **ACT1202 Aircraft Flight Performance**

Principles and techniques for predicting takeoff power and performance factors. Includes weight variables at takeoff; time, distance, fuel and power requirements for ascent, maximum range, constant speed, cruise climb and maximum endurance cruise performance; and descent and landing data.

### **ACT1203 Air Refueling**

Analysis of in-flight refueling equipment and airborne operating procedures. Includes operation and components of refueling boom, nozzle, probe and drogue; mission planning and accomplishment; crew duties; identification of applicable publications; use of emergency equipment and egress routes; weather; bailout, ditching and crash-landing procedures; in-flight emergency procedures; and emergency warfare procedures.

### **ACT1205 Introduction to Aircraft**

Function and use of aircraft systems for aircrew members. Includes fuel, flight control, communications, pneudraulic, engine, electrical, air-conditioning and pressurization, and oxygen systems as well as aircraft ground-handling and servicing procedures.

### **ACT1206 Air-Refueling Flying Training**

Supervised practical application of air-refueling operator duties. Includes use of life-sustaining

equipment, operation of refueling boom and related equipment, application of navigation principles, and handling in-flight emergencies under actual flying conditions.

### **ACT1207 Aircrew Qualification**

Concepts, principles and procedures required for performance of aircrew duties. Includes security, aircrew member discipline, personal affairs, oral communications skills, safety, flying orientation, publications, aircrew coordination, life-support equipment, basic aerodynamics, aircrew training, and customs and border clearances.

### **ACT2101 Parachuting Jumpmaster**

Parachuting techniques as applied to directed and computed airdrop releases. Includes instruction in parachute characteristics and operations, personnel inspection, plotting and spotting techniques, aircraft characteristics and inspection, personal equipment, door bundle rigging, and air operations.

### **ACT2201 Helicopter Ground Training**

Advanced helicopter flight performance, systems familiarization and emergency procedures necessary for performance of power plant and flight control limitations and operational checks, systems trouble analysis, loading and refueling parameters, and rescue and recovery procedures.

### **ACT2202 Helicopter Simulator and Flying Training**

Comprehensive helicopter operational procedures in both a flight simulator and aircraft. Includes flight maneuvers, emergency procedures, instrument flying, navigation and voice procedures, weight and balance, fuel management, hoist and sling operation, and care of equipment and forms.

### **ACT2204 HC-130 Flight Engineer Ground Training**

Evaluation of HC-130 aircraft systems operation in both normal and emergency circumstances. Includes trouble-isolation techniques, operational checks, operating limitations, weight and balance computations, prediction of takeoff and landing performance requirements, theory of flight, aerodynamics, airspeed measurement, pre-takeoff checklists, and preflight inspections.

### **ACT2205 Flight Engineer Flying Training**

Flight instruction on normal and emergency airborne procedures. Includes navigation, aerial cargo delivery, air refueling, search intercept and night flying.

Emphasizes weight and balance adjustments, fuel management, monitoring of aircraft instruments, and in-flight normal and emergency procedures.

**ACT2207 Flight Engineer Aircraft Systems Familiarization**

Location, description, normal and emergency operation; inspection of fuel, oxygen, pneumatic, hydraulic, lighting, warning, electrical, environmental control, egress, engine, fire extinguishing, flight control, automatic flight control and instrument systems; and use of emergency equipment, emergency signals and emergency evacuation routes.



**ACT2208 Advanced Flight Performance Planning**

Calculation of aircraft ground run, takeoff, climb, cruise, and emergency performance data using current environmental conditions, gross weight and load factors.

**ACT2209 Trainer, Simulator and Flying Training**

Ground and airborne operational procedures in cockpit procedural trainer, flight simulator and aircraft. Includes inspections, flight performance, aircraft systems, crew communications and emergency procedures.

**ACT2213 Intelligence Trainer, Simulator and Flight Training**

Ground and airborne operational procedures in task trainer, flight simulator and aircraft. Includes inspections, console operation, mission procedures, data reporting, crew communications and emergency procedures.

**AIRFIELD MANAGEMENT**

**AFM1101 Airfield Management**

Introduction to flight planning and management of airfield functions. Includes reviewing flight plans for accuracy and completion; weather checks; airfield and runway condition assessments; maintenance and distribution of flight publications, diagrams and aeronautical charts; and notification of aircrew and airfield personnel.

**AFM2101 Advanced Airfield Management**

Advanced techniques and procedures of airfield management. Includes flight rules, use of military airfields by civilian aircraft, emergency action procedures, coordination of airfield construction and repair, airfield inspections, and airfield safety.

**ALLIED HEALTH SCIENCE**

**AHS1103 Cardiopulmonary Resuscitation**

Recognition and management of acute cardiorespiratory emergencies and upper airway obstructions using basic life support standards and cardiopulmonary resuscitation.

**AHS1110 Basic Anatomy and Physiology**

Gross morphology and physiology of the human body. Includes cells, tissues, the musculoskeleton, respiratory, circulatory, lymphatic, digestive and integumentary systems.

**APPLIED GEOGRAPHY**

**GEO1403 Area Studies**

Geographic, climatic, economic, political and military characteristics of a major area of interest. Emphasizes political and historical development of the area and impact of geography on deployment of weapons systems.

**APPLIED HISTORY**

**HIS1501 Introduction to Air Force Unit History**

Comprehension of Air Force history. Includes development of history program, qualifications and duties of unit historian, historical concepts and techniques, nature and source of historical materials, and application of historical methodology.

## **COURSE DESCRIPTIONS**

### **HIS1502 Methods of Historical Research**

Principles and methods of historical research and organization of historical materials. Includes researching sources; evaluation of documents; selection, use and maintenance of supporting documents; conducting oral interviews; and writing historical narratives.

### **HIS1503 Independent Research and Historical Writing**

Techniques of independent research for conducting oral interviews and historical writing. Includes preparation of outline, footnotes and bibliography, and writing narrative and abstract.

## **APPLIED PHYSICS**

### **PHY1422 Applied Technical Physics**

Physics survey. Includes basic principles, atomic structure, quantitative processes, interactions, transformations, principles of radiation, detectors and measurement techniques.

## **ASTRONAUTICS**

### **AST2402 Introduction to Space Systems**

Space systems and mechanics and defense and satellite systems. Includes identifying orbital parameters, and understanding applicable technical language and space-tracking detection systems.

### **AST2406 Satellite Systems Operations**

Techniques and procedures for satellite control and operation. Includes satellite type and mission, components and subsystems, tracking, command and control operations, duty positions, and crew procedures.

## **AUDIOVISUAL ARTS**

### **AVA2405 Visual Information Management**

Visual information support center management techniques; identification of effective work center administration, workload planning and production cost accounting; development of effective resource controls; analysis of quality and production control procedures; and implementing programs designed to foster effective customer relations.

### **AVA2802 Audiovisual Methods**

Designing and developing audiovisual materials for training. Includes learning theories and

communications process, media selection and operation of production and playback equipment, development of visual materials, application of writing principles for audiovisual packages, development of audio narratives, construction of audiovisual storyboards, and production of audiovisual lessons.

## **AVIONICS**

### **AVI1705 Automatic Flight Control Systems Theory**

Circuit analysis and operation of pitch, yaw, and roll axis channels and stability augmentation system.

### **AVI1706 Automatic Flight Control Systems Maintenance**

Trouble analysis, adjustment, and repair of automatic flight control systems and components. Includes principles of navigation systems and use and maintenance of associated test equipment.

### **AVI1707 Fundamentals of Avionic Systems**

Principles of avionic maintenance, hardware care, use of special tools, and repair of wiring and solderless connectors.

### **AVI1708 Engine Instrument Maintenance**

Operational theory, functional analysis, troubleshooting procedures, adjustment and calibration of aircraft engine instruments. Emphasizes maintenance and inspection of tachometer, oil pressure, fuel flow, pressure ratio and fuel quantity systems.

### **AVI1709 Integrated Flight and Navigational Instrument Maintenance**

Operation, analysis, and maintenance of integrated flight and navigational instruments. Includes magnetic compasses, transmitter indexing and calibration, optical transfer, electrical swing, and flight director systems.

### **AVI1710 Flight Instrument Maintenance**

Operation, analysis, and maintenance of pitot-static and vertical scale indicating systems, mechanical airspeed indicators, altimeters, air data computers, computer modules, sensors and automatic attitude reporting systems.

### **AVI1717 Avionic Maintenance Management**

Principles of supply systems and avionic maintenance management, procedures for maintenance inspections, and evaluation of maintenance activities.

**AVI1726 Avionic Manual Test Station Operation**

Principles and operation of manual test stations and test equipment used to maintain avionic systems.

**AVI1727 Avionic Manual Test Station Maintenance**

Practical experience in maintenance of manual test stations. Includes user calibration and limited maintenance.

**AVI1729 Integrated Avionic Systems Theory**

Operational characteristics of integrated avionic systems. Includes technical descriptions, theory of operation and circuit analysis of integrated avionic systems.

**AVI1730 Integrated Avionic Systems Laboratory**

Maintenance and troubleshooting of integrated avionic systems. Includes operational checkout, malfunction detection, maintenance of system components, alignment and application of circuit analysis techniques.

**AVI1731 Avionic Radar Systems Theory**

Operation and maintenance of monopulse helical scan radar, power supply, transmitter, receiver and indicating circuits.

**AVI1732 Avionic Radar Systems Maintenance**

Avionic radar trouble analysis and maintenance procedures. Includes detailed data flow and logic analysis of transmitter, receiver, antenna, indicating, ranging, tracking and synchronization circuits.

**AVI1733 Weapons Control Systems Maintenance**

Operational theory and detailed circuit analysis of weapons control system. Includes analysis, checkout and fault isolation of test equipment used in malfunction isolation techniques.

**AVI1734 Optical Sighting Systems**

Theory and circuit analysis of optical systems. Includes analysis, checkout, fault isolation and use of special test equipment.

**AVI1735 Avionic Radar Navigation Systems Theory**

Inertial navigation systems theory and detailed circuit analysis of stable platforms and computers. Includes integrators, accelerometers, gyroscopes and resolvers.

**AVI1736 Avionic Radar Navigation Systems Maintenance**

Circuit analysis, alignment and adjustment of avionic inertial and radar navigation equipment, and use of special and general test equipment.

**AVI1737 Avionic Terrain-Following Radar**

Detailed circuit analysis of transmitter, receiver, antenna, power supply, computer, and indicator; and trouble analysis using wiring diagrams and test equipment.

**AVI1738 Electronic Warfare Systems Theory**

Comprehensive electronic warfare systems and equipment theory. Includes infrared, panoramic receivers, recoding, radar homing and other electronic warfare subjects.

**AVI1739 Basic Electronic Warfare Systems Maintenance Laboratory**

Analysis, alignment and adjustment of electronic warfare equipment, and use of special and general test equipment.

**AVI1740 Electronic Warfare Systems Maintenance Laboratory**

Troubleshooting, repair, cable fabrication, soldering techniques and wiring diagram analysis of electronic warfare systems.

**AVI1741 Automatic Test Station Operation**

Terminal operation, equipment hookup, testing, troubleshooting procedures, and use of equipment in performing diagnostic testing on a wide variety of avionic equipment.

**AVI1742 Automatic Test Station Maintenance**

Operational checkout, troubleshooting and repair of automatic test stations used to maintain avionic equipment.

**AVI1743 Avionic Inertial Navigation Systems Theory**

Principles, theory and concepts applicable to airborne inertial navigation system. Includes system data flow and analysis.

**AVI1744 Avionic Inertial Navigation Systems Maintenance**

Inspection, adjustment, performance testing, malfunction analysis and corrective maintenance of inertial navigation system.

## **COURSE DESCRIPTIONS**

### **AVI1746 Avionic Sensor Systems Laboratory**

Circuit analysis, troubleshooting, disassembly, repair, reassembly and calibration of sensor control equipment.

### **AVI1747 Infrared Sensors Theory**

Principles, characteristics and functional analysis. Emphasizes circuit analysis using wiring diagrams and logic symbols.

### **AVI1748 Infrared Sensors Maintenance**

Functional analysis and maintenance of infrared sensors. Includes operational checkout, alignment, troubleshooting and repair using both specialized and standardized test equipment.

### **AVI1749 Laser Systems Theory**

Principles and applications of laser system. Includes block diagram analysis and use of related test equipment.

### **AVI1750 Laser Systems Maintenance**

Functional analysis and maintenance of laser systems. Includes operational checkout and troubleshooting using both specialized and standard test equipment.

### **AVI1752 Introduction to Maintenance Test Equipment**

Operation and use of standard test equipment. Includes multimeters, vacuum tube voltmeters, AC and DC differential voltmeters and frequency measuring devices.

### **AVI1754 Avionic Radio Communications Systems Theory**

Operational characteristics of avionic communications equipment. Includes use of schematic diagrams, data flow, and detailed circuit analysis of receiver and transmitter systems.

### **AVI1755 Avionic Radio Communications Systems Laboratory**

Operational testing, adjustment, inspection, malfunction analysis and maintenance.

### **AVI1756 Avionic Radio Navigation Systems Theory**

Operational characteristics of avionic radio navigation equipment. Includes use of schematic diagrams, data flow, and detailed circuit analysis of navigational receiver and transponder systems.

### **AVI1757 Avionic Radio Navigation Systems Laboratory**

Operational testing, adjustment, inspection, malfunction analysis and maintenance.

### **AVI1759 Airborne Warning and Control System Familiarization**

Introduction to Airborne Warning and Control System. Includes power distribution, cooling systems, and use of safety and security procedures and technical publications.

### **AVI1760 Intercommunication System**

Operating characteristics, circuit analysis and troubleshooting procedures of typical aircraft intercommunication system. Includes block diagram and detailed circuit analysis.

### **AVI2204 Advanced Aircraft Instrument Repair**

Operation, circuit analysis, troubleshooting, adjustments, and calibration of liquid quantity, compass system, and aircraft engine, gyro and pressure operated instruments. Includes operation of special test equipment for checking and calibrating instrument systems.

### **AVI2251 Identification Equipment**

Tactical uses, operation, adjustment, alignment, block diagram analysis and trouble analysis of aircraft identification system.

### **AVI2715 Flight Director System**

Maintenance and troubleshooting of the flight director system. Includes operational theory, circuit analysis, use of associated test equipment, service inspections, malfunction detection and isolation, and repair of system components.

### **AVI2716 Avionic Systems Laboratory**

Removal and installation of line replaceable units and operational checkout of avionic systems. Includes use of specialized and general test equipment.

### **AVI2717 Doppler Navigation Systems**

Systems theory of Doppler navigation systems. Includes detailed analysis of transmitter, receiver, antenna, indicator, computer and frequency tracker circuitry using wiring diagrams and test equipment.

### **AVI2718 Airborne Early Warning Radar**

Search radar principles and applications. Includes circuit analysis of stabilization, inertial, height finder

and indicator systems through use of schematic diagrams.

### **AVI2719 Avionic Search Radar**

Circuit analysis, operational checks, and adjustments of monopulse helical scan radar. Includes transmitters, receivers, indicators, antennas, power supplies and flexible waveguides.

### **AVI2720 Avionic Track Radar**

Phase and amplitude monopulse radar transmitting, receiving and ranging circuits. Includes troubleshooting and alignment of all components.



### **AVI2721 Avionic Forward-Looking Radar**

Data flow and systems analysis. Includes application of search and navigation radar principles and techniques peculiar to forward-looking radar, inspection, performance testing, alignment and repair.

### **AVI2722 Electronic Countermeasures**

Identification and recognition of passive and active countermeasures, electronic counter-countermeasure techniques, and data processing.

### **AVI2723 Radar Homing and Warning Systems**

Principles of radar homing and warning systems. Includes functional diagram analysis and maintenance procedures.

### **AVI2725 Electro-optical Viewing System**

Theory of target sensing and display using low-light television, holography and computer-aided graphic processing to detect and display targets. Includes operational checkout, alignment, troubleshooting and repair of electro-optical viewing system using specialized and standard test equipment.

### **AVI2726 Radar Mapping**

Principles, theory and wiring diagram analysis of side-looking radar system used in radar mapping. Includes detailed analysis of receiver, transmitter, timing, antenna stabilization and power distribution circuitry.

### **AVI2727 Avionic Camera Systems Maintenance**

Advanced camera systems alignment. Includes camera controls, photographic sensitive controls, image motion controls and camera magazines.

### **AVI2728 Data Display Systems**

Circuit analysis through use of logic symbols and schematics. Includes troubleshooting and bench checks.

### **AVI2729 Maintenance and Operation of Aircraft Test Equipment**

Certification, repair and operation of avionic test equipment used in troubleshooting, repair, and alignment of aircraft electrical components and test benches.

### **AVI2730 Advanced Avionic Systems**

In-depth avionic systems principles, characteristics, and uses; newest electronic innovations and repair techniques. Includes maintenance procedures and capabilities, limitations and techniques in employment of avionic systems.



## **COURSE DESCRIPTIONS**

### **AVI2731 Digital Interfacing Systems**

Theory and maintenance of digital interface circuits, analog-to-digital, digital-to-analog and digital-to-digital conversion circuits. Includes data-flow analysis, troubleshooting of conversion circuits, and tie-in to other digital and nondigital systems.

### **AVI2732 Airborne Command Post Communications Systems**

Advanced theory and operation of satellite communications systems. Includes data flow, circuit and systems analyses.

## **BIOENVIRONMENTAL ENGINEERING**

### **BEE1301 Introduction to Bioenvironmental Sciences**

Application of mathematics and physical and biological principles to personal protection. Includes measurement of illumination and ionizing and nonionizing radiation.

### **BEE1302 Bioenvironmental Protection**

Concepts of acoustics; analysis of generation, measurement and control of noise; principles of ventilation; and respiratory protection

### **BEE1303 The Occupational Environment**

Principles of occupational health and toxicology, establishment of case files, environmental pollution detection and control, and use of detection devices to determine level of exposure to hazards.

### **BEE1304 Water Systems Management**

Collecting and chemical testing water samples, monitoring water treatment facilities, and preparing reports with recommendations to prevent contamination.

### **BEE1305 Waste Management**

Collection, treatment, and disposal of liquid and solid-waste materials.

### **BEE2101 Introduction to Ergonomics**

Anticipation, recognition, evaluation and control of ergonomic hazards. Includes discussion of health effects, recognition of risk factors, methods of evaluation, standards and criteria, control of principles and methods, administrative controls, personal protective equipment, field surveys, and other current issues in ergonomics.

### **BEE2102 Bioenvironmental Engineering**

Planning, organizing, implementing and evaluating bioenvironmental engineering activities. Includes contract management, equipment accounts, budgeting, work controls, applied statistics, drinking water surveillance, water pollution, hazardous materials and waste management, air pollution, ergonomics, review and control of case files, and management of occupational health programs.

### **BEE2300 Environmental Protection**

Interpretation of standards and criteria applicable to environmental pollution control; implementation and evaluation of air, water, noise and solid-waste pollution surveys; and preparation of reports containing recommendations for control measures to comply with Environmental Protection Agency standards.

### **BEE2301 Industrial Hygiene Measurements**

Evaluation and control of industrial health and safety hazards based on standards set in Occupational Safety and Health Act, Department of Labor, and Environmental Protection Agency; and practicum in sampling techniques, in specimen collection and in laboratory analysis of results.

### **BEE2302 Radiological Hazards Identification**

Identification, evaluation, and control of ionizing and nonionizing radiation hazards found in medical, industrial and recreational facilities.

### **BEE2313 Hearing Conservation**

Measurement of auditory risk, automatic audiometer monitoring, selection and issue of personal ear protection devices, methods of monitoring noise exposure, and management of hearing conservation program.

### **BEE2316 Hazardous Waste Operations**

Evaluation and control of hazardous waste operations and remediation activities at hazardous waste sites according to Occupational Safety and Health Administration standards.

### **BEE2319 Bioenvironmental Engineering Readiness**

Medical readiness training program development and management. Includes peacetime and wartime plans; nuclear weapon accident response; hazardous material accident response; and medical aspects of nuclear, biological and chemical warfare.

**BEE2320 Ionizing Radiation Management**

Radiation protection development and management. Includes radioactivity and principles of radiation, interaction with matter, biological effects of radiation, external and internal dosimetry, radiation instrumentation, and transportation and disposal of hazardous materials.

**BIOMEDICAL EQUIPMENT TECHNOLOGY****BET1101 Introduction To Biomedical Equipment Technology**

Introduction to role and responsibilities, safety and hazards associated with biomedical equipment maintenance. Includes manufacturer's specifications, pneudraulics and refrigeration principles, hand tools, soldering techniques, and the troubleshooting and repair of biomedical equipment.

**BET1201 Dental and Sterilizer Systems**

Principles of operating procedures, characteristics, and internal circuitry of clinical and operatory dental equipment, sterilization equipment and systems, ultrasonic cleaners, plumbing, and medical gas and vacuum systems. Includes technical analysis of corrective maintenance, preventive maintenance and calibration.

**BET1202 General Medical Equipment Systems**

Principles of operation on infusion pumps, electrosurgical units, surgical suction apparatus, cell washing systems, hypo and hyperthermia units, infant incubators, ultrasonic therapy systems, fiber-optic scopes, and audiometers. Includes calibration, repair, related physiology, external operation and internal electronic circuitry.

**BET1203 Respiratory Equipment**

Introduction to volume and pressure ventilators, pulse oximeters, pulmonary function analyzers, anesthesia systems, and anesthesia and pulmonary gas analyzers. Includes equipment operations theory, calibration, repair, clinical and practical applications, external operation, and internal electronic circuitry.

**BET1204 Cardiographic Diagnostic Equipment**

Operation and maintenance of multichannel electrocardiographs, fetal heart monitors, defibrillators, blood pressure monitors and physiological monitors. Includes equipment

operation theory, clinical and practical applications, related physiology, calibration, repair, external operation and internal electronic circuitry.

**BET1205 Clinical Laboratory Systems**

Operation and maintenance of optics, electrolyte, blood gas and chemistry analyzers, blood cell counters, laboratory centrifuges water purification, tissue processors, and microscopes. Includes clinical and practical applications, equipment operations theory, related physiology, calibration, repair, external and internal electronic circuitry.

**BET1206 Introduction to Diagnostic Imaging**

Principles of diagnostic imaging, ionizing radiation, X-ray production, generation and radiation physics. Includes equipment operation theory and safety, clinical and practical applications, related physiology, calibration, repair, external operation, internal electronic circuitry of mobile radiographic systems, film processor systems, dental laser and filmless imaging systems.

**BET2201 Intermediate Diagnostic Imaging**

Equipment operation theory for the maintenance of mobile fluoroscopic systems, fixed imaging systems and high-frequency imaging systems. Includes related physiology, practical and clinical application, calibration, repair, external operation, and internal electronic circuitry.

**BET2202 Biomedical Equipment Practicum**

General maintenance practices and associated duties of a biomedical equipment repair shop. Includes troubleshooting, isolation and repair, or replacement of defective components, modules and circuit boards according to manufacturer's specifications; and identifying facts and statements concerning clinical applications, related physiology and complete specific maintenance tasks on a wide variety of medical systems and units.

**BET2322 X-ray System Technology**

Preinstallation surveys; procurement, installation and calibration of X-ray systems; radiographic and fluoroscopic principles; and Bureau of Radiological Health Compliance testing.

**BET2401 Managerial Functions in Biomedical Equipment**

Biomedical equipment manager responsibilities, workload and manpower management, administration of contractual and financial matters, employee

## **COURSE DESCRIPTIONS**

development, maintenance and supervision of equipment, safety programs, and information management.

### **BET2402 Advanced Field Medical Support Systems**

Emergency shelter preparation and power generation. Includes diesel generator units and field electrical systems. Emphasizes lighting, environmental control and X-ray systems.

### **BET2404 Computer-Based Medical Systems**

Conceptual and practical applications for advanced computer-based medical systems. Includes peripherals, networks and microprocessors.

### **BET2405 Telemedicine**

Clinical applications, functions, and benefits of a picture-archiving and communications system. Includes systems operations, preventive maintenance, inspection, calibration, troubleshooting, and repair of hardware and software related to a variety of telemedicine computer operating systems.

### **BET2406 Advanced Diagnostic Imaging Systems**

Advanced clinical and practical applications, related physiology, modalities, equipment operations theory, calibration, circuit analysis, troubleshooting and repair of advanced diagnostic imaging medical systems. Includes radiographic and fluoroscopic imaging systems, mammography and ultrasound systems.

### **BET2407 Advanced Medical Systems**

Advanced clinical and practical applications, laser physics, related physiology, modalities, equipment operation theory, calibration, circuit analysis, troubleshooting, safety precautions and repair of advanced medical and laser systems.

### **BET2408 Advanced Medical Laboratory Systems**

Advanced laboratory anatomy and physiology, clinical and practical applications, modalities, equipment operations theory and physiology, calibrations, circuit analysis, troubleshooting and repair of medical laboratory systems. Includes general clinical laboratory equipment, blood gas analyzers, cell washers, hematology analyzers and plasma sterilizers.

## **CARDIOPULMONARY LABORATORY TECHNOLOGY**

### **CLT1304 Fundamentals of Cardiopulmonary Anatomy and Physiology**

Cardiovascular and pulmonary anatomy and physiology and dysfunction, intrinsic and extrinsic regulation, and acid-base physiology.

### **CLT1305 Introduction to Cardiovascular Diagnostic Principles**

Practice in invasive diagnostic cardiac catheterization; physical principles governing such noninvasive cardiovascular diagnostics as electrocardiography, echocardiography, apex and phonocardiography, stress testing, and vector cardiography; and interpretation and management of electrocardiographic arrhythmia.

### **CLT1306 Introduction to Pulmonary Diagnostic Principles**

Fundamentals of gas laws and respiratory dynamics; and assessment of pulmonary functions making use of spirometry, diffusion, lung volume, airway resistance, flow and volume loops, compliance and blood gases.

### **CLT1307 Introduction to Respiratory Therapy**

Principles of medical gasses, specific medications used in respiratory therapeutics, physiological application of ventilatory support, and management of acute cardiopulmonary emergencies.

### **CLT1308 Introduction to Cardiopulmonary Management**

Management of cardiopulmonary emergencies. Includes Joint Commission for Accreditation of Healthcare Organizations standards, medical record documentation, medical computer system, Occupational Safety and Health Administration standards and basic cardiac life support.

### **CLT2305 Introduction to Cardiopulmonary Instrumentation**

Procedures and safety practices used in clinical application of blood gas analyzers and emergency equipment.

### **CLT2306 Cardiovascular Noninvasive Diagnostic Procedures**

Dynamic electrocardiography, stress testing, echocardiography, vectorcardiography, and apex and phonocardiography; and interpretation of medical

findings, emergency procedures and procedures for referral of cases.

**CLT2308 Pulmonary Diagnostic Procedures**

Clinical procedures for arterial puncture and blood gas analysis, calculation of results, and recognition of valid and invalid testing.

**CLT2312 Cardiopulmonary Laboratory Management**

Practices in cardiopulmonary laboratory operations. Demonstrated knowledge of regulatory and accreditation standards, clinical quality assurance and administration, health and safety standards, medical ethics, and control of fiscal and human resources.

**CLT2313 Critical Care Air Transport**

Critical care related to air evacuation and transportation of the sick and injured. Emphasizes flight operational and clinical training and altitude physiology to include stresses of flight and flight safety.

**CARPENTRY****CAR1503 Building Construction**

Light frame construction. Includes scaffold, foundation, form, roof, porch and stair construction.

**CAR2801 Advanced Roofing Repair**

Roof construction. Includes selection of materials, tar kettle operation and inspection, and removal and repair of damaged roofs.

**CIVIL ENGINEERING****CIV1101 Civil Engineering Organization and Work Force Management**

Functional responsibilities associated with various base civil engineering operations and management; principles of work information management system and civil engineering materiel acquisition system including capabilities of each; quality management to include awareness, process improvement and quality focus; real property maintenance requests, job orders, service calls and work orders; career field structure, progression and ladder; safety and security; and contingency responsibilities of civil engineering personnel.

**CIV1150 Technical Engineering**

Introduction to drafting and conventional surveying. Includes drafting sketches; pictorial views; architectural and engineering drawings; basic survey, horizontal and directional distance measurements; differential and trigonometric elevations; topographic surveying and mapping; road, building and utility layout; contingency operations; and quality management.

**CIV1151 Structural Apprentice**

Introduction to structural repair. Includes construction drawings and specifications, mathematics, tools, woodworking, forming and reinforcing, concrete, masonry, framing, stair construction, interior and exterior finishing, composition shingles, heavy timber bridges, preengineered building, doors and windows, suspended ceilings, floor and wall tile, interior trim, drywall, demolition, structural layout, sheet metal fabrication, doors and gates, welding, and contingency operations.

**CIV1501 Introduction to Site Development**

Introduction to surveying. Includes application of related mathematics, emphasizing trigonometry and mathematical applications to surveying, calculators and metric system.

**CIV2107 Metals Layout and Fabrication**

Material estimation and layout of structural components. Includes geometric principles, tools, machines and metal materials.

**CIV2509 Soil Engineering and Pavements**

Principles of soil identification. Includes listing specific gravity and grain size, moisture states and soil classification system, compaction control, California Bearing Ratio, density determination, field identification, soil exploration, and flexible and rigid pavements.

**CIV2517 Architectural and Structural Design**

Preparation of required program documents, design sketches, and architectural and structural working drawings. Includes use of mix data; preparation and testing of plastic concrete for slump and air content; and use of mixed concrete to prepare cylinder and beam test specimens.

**CIV2519 Civil Engineer Management**

Civil engineering force management, resources and training. Includes advanced topics in environmental

## COURSE DESCRIPTIONS

awareness, manpower assessment, scheduling, evaluation of contracts and projects, budgeting, development of job qualification standards, determination of job proficiency and establishment of upgrade qualification training programs.

### **CIV2520 Contract Construction Inspector**

Construction inspector role, blueprints, contract documentation, government furnished property, preperformance conferences, material submittals, warranties, guarantees, surveillance, acceptance procedures, safety, environmental awareness and site work. Includes inspection requirements for flexible and rigid pavements, masonry, metals, thermal and moisture protection, woods, finishes, doors, windows, and mechanical and electrical systems.

## COMMUNICATIONS

### **COM1100 Communications System Operation**

Operational theory of command communications systems. Includes data and broadcast transmitting and receiving systems.

### **COM1101 Key System Installation and Maintenance**

Principles of operation, circuit analysis, installation, and fault isolation of key systems and associated equipment. Includes safety procedures, technical publications and use of hand tools and general- and special-purpose test equipment.



### **COM1102 Solid-State Key Systems Installation and Maintenance**

Principles of operation, circuit analysis, installation, and fault isolation of solid-state key systems and associated equipment. Includes safety procedures,

technical publications, and use of hand tools and general- and special-purpose test equipment.

### **COM1400 Electronic Communications Theory**

Transmitter and receiver systems. Includes electronic principles, transmission lines and antennas.

### **COM1403 Radio Communications Theory**

Transmitter principles, receiver tuning and operation, antenna, wave propagation, and communications procedures.

### **COM1404 Communications Network Equipment Operation**

Network equipment operating techniques and procedures for ensuring continuity, reliability and speed of service; operation of relay station equipment; and concepts of operation of technical control facilities.

### **COM1432 Ground Electronic Digital Timing Systems**

Receivers, oscillators, counters, amplifiers, indicator units and associated power supplies. Includes theory of operation, functional applications, logic and schematic diagram analysis, malfunction isolation, corrective maintenance, and alignment procedures.

### **COM1433 Airborne Radio Operations**

Operation of various airborne radio communications systems and related electronic equipment.

### **COM1439 Electronic Digital Communications Control Systems**

Frequency shift converters, wire-line modulators and demodulators, digital-to-digital converters, control interfacing, radio modulators and demodulators, and associated power supplies. Includes theory of operation and functional applications, logic and schematic diagram analysis, malfunction isolation, corrective maintenance, and alignment procedures.

### **COM1465 Communications Center Computer Functions**

Computerized communications principles and communications center operational concepts. Emphasizes use of optical character reader, disk storage unit and magnetic tape unit.

### **COM1466 Communications Security Analysis**

Basic principles of communications security. Includes intelligence structure, communications procedures, equipment and applied electronics.

**COM1467 Command and Control Communications Countermeasures**

Concepts and issues; identification of threats, capabilities, criticality, and vulnerability for both tactical and strategic command, control and communications; and interrelated responsibilities of communications intelligence and operations.

**COM1468 Command Post Fundamentals**

Operation of voice and data information systems, and procedures used for command and control reporting.

**COM1713 Telephone Fundamentals**

Principles of telephony and sound. Includes security, safety, maintenance management procedures, and use of general- and special-purpose test equipment and technical publications.

**COM1714 Electronic Telephone Switching**

Four-wire communications, radio signaling, safety procedures, fault isolation, and repair and use of hand tools and general- and special-purpose test equipment.

**COM1717 Introduction to Telephone Switching Systems**

Principles of telephone operation, switching system fundamentals, basic circuit analysis, safety and use of technical publications.

**COM1718 Fundamentals of Switch Marker**

Block diagram analysis of switch matrix, time generator, transfer check and trouble access circuits. Includes sequencing, common control call for service, line and trunk circuits (two- and four-wire), preventive maintenance routines, supervisory circuits and panels, and fault report interpretation.

**COM1719 Fundamentals of Common Control**

Block diagram analysis of memory layout and addressing, register control circuits, call processing, final connection, peg count, trunk scanner and memory programming.

**COM1720 Telephone Substation Installation**

Terms, materials, specifications, telephone service orders and conduit specifications. Includes splicing drop wire, installation of substations and telephone instruments, and troubleshooting techniques.

**COM1723 Telephone Equipment Maintenance**

Malfunction analysis and repair of basic telephone circuits, main distribution frames and miscellaneous telephone equipment. Includes use of safety procedures, hand tools, and general- and special-purpose test equipment.

**COM1729 Pole Climbing Fundamentals**

Care and use of climbing equipment, climbing techniques, first aid and general safety procedures, use of rope ties and splices, and raising and securing aerial splicing equipment. Includes use of hand tools, cable cars and technical publications.

**COM1733 Underground Cable Splicing**

Analysis of cable plant maps and splicing diagrams. Includes splicing techniques, safety procedures, and use of general- and special-purpose test equipment and technical publications.

**COM1735 Cable Pressure Systems**

Use of manometer pressure testing gauges and gas flow indicators, leak location, flow analysis, and connection and adjustment of contractor terminals. Includes installation of pressure plugs, flanges and valves.

**COM1755 Communications Equipment Maintenance**

Principles of operation, configuration, circuit analysis and fault isolation. Includes use of special- and general-purpose test equipment, technical publications, and hand tools.

**COM1756 Telecommunication Systems**

Analysis of electronic signals as applied to communications circuits. Includes modulation and multiplexing applications, radio-wave propagation, networking principles, technical control operation, and reporting procedures.

**COM1759 Fiber-optic Cable Splicing**

Procedures and techniques for splicing, sealing and testing fiber-optic cable. Includes principles of fiber-optic systems, fusion and mechanical splices, and use of optical time domain reflectometers.

**COM1760 Cable Splicing and Sealing**

Procedures and techniques for splicing, sealing and testing lead and plastic sheathed cable. Includes general- and special-purpose hand tools, safety and straight, bridge, and butt-splicing using auxiliary and lead sleeves.

## **COURSE DESCRIPTIONS**

### **COM2100 Communications Systems Operations and Maintenance**

Communications systems maintenance, management and administration; automation of record communications to include video, text and voice; and system administration to include maintenance of system, and subordinate menus and hardware.

### **COM2101 Advanced Command and Control Operations**

Command post operations and communications security requirements. Includes development of operational checklists, control of classified information, physical security, communications, and supervision and training responsibilities.

### **COM2411 Frequency Management Applications**

Principles and techniques of applying frequency spectrum management controls. Includes organization and specific functions of international, national and DoD agencies with practical application coordinating with and reporting to these agencies.

### **COM2412 Systems Planning and Engineering**

Propagation predictions, interference factors and path reliability for various communications systems. Includes site planning, selection, surveying and use of system design parameters.

### **COM2708 Antenna Installation**

Antenna construction, elementary surveying, lightning protection, guy fabrication and installation, and erection of antenna support poles.

### **COM2723 Cable Testing**

Maintenance of cable system records, strip maps and route markers; and use of frequency generators, multimeters and Wheatstone bridge. Includes location and tracing of buried cable, fault location, excavation and backfilling procedures, insulation resistance measurement and calculation, and use of safety and communications security procedures.

### **COM2725 Cable Construction and Installation**

Aerial cable specifications in staking pole lines and distributing lines; erecting poles, guying, bracing and anchoring; suspension strand installation; lashing aerial cable; terminal and stepping pole installation; and installation of buried cable. Includes use of technical publications, maintenance schemes, cable records, diagrams, cable car and safety procedures.

### **COM2733 Tactical Air Control Network Operations**

Management of tactical air missions, communications operations and weapons systems. Includes weather report analysis.

### **COM2734 Satellite Communications Operation**

Theory associated with technical aspects of satellite communications operation control and hypothetical problem-solving situations.

### **COM2736 Introduction to Digital Switching Systems**

Theory of telephone operation and call progression using applicable technical manuals. Includes digital-to-analog and analog-to-digital conversions, time division multiplexing, peripherals, power equipment, and alarm circuits.

### **COM2737 Digital Switching Systems**

Basic principles of log utility module; translations used in call progression, and use of digital switching systems, database facilities and data tables.

### **COM2738 Digital Switching Systems Maintenance**

Manual and automatic testing, inspection, troubleshooting, and operation of digital switching equipment.

### **COM2739 Communications Network Evaluation**

Systems analysis. Includes applicable mathematics, transmission line theory, signal distortions, line conditioning, digital theory, multiplexing, modulation, and computer and switching systems.

### **COM2740 Communications Network Testing**

Practical approach to systems analysis. Includes use of general- and special-purpose test equipment, and technical manuals.

### **COM2741 Digital Switching Systems Administration**

Introduction to duties and responsibilities of systems administrator, interpretation of reports, and record documentation. Includes fundamentals of transmission lines and line testing.

## **COMPUTER MAINTENANCE & REPAIR**

### **CMR1402 Diagnostic Testing**

Analyzing and isolating electronic equipment malfunctions using computer programs. Includes use of technical manuals, and general- and special-purpose test equipment.

**CMR1740 Computer and Central Processor**

Operational theory, logic and circuit diagram analysis, and preventive and corrective maintenance. Includes use of general- and special-purpose test equipment, and technical manuals.

**CMR1741 Peripheral Equipment**

Operational theory, logic and circuit diagram analysis, and preventive and corrective maintenance. Includes use of general- and special-purpose test equipment, and technical manuals.

**CMR1746 Computer Maintenance**

Operational theory, logic and circuit diagram analysis; preventive and corrective maintenance; and troubleshooting. Includes use of general- and special-purpose test equipment, and technical manuals.

**CMR1748 Video Monitor Principles**

Operational theory of cathode-ray tube and associated circuits, logic and circuit diagram analysis; corrective and preventive maintenance; and troubleshooting. Includes use of hand tools, general- and special-purpose test equipment, technical manuals, and applicable safety procedures.

**CMR1749 Line Printer Maintenance**

Operational theory, logic and circuit diagram analysis; corrective and preventive maintenance; and troubleshooting. Includes use of hand tools, general- and special-purpose test equipment, and technical publications.

**CMR1752 Computer Console Theory**

Systems analysis and operation. Includes keyboard inputs, control panel functions, and logic and circuit diagram analysis.

**CMR2101 Automated Systems Operation**

Overview of computer fundamentals involving computer operating systems, computer system configuration, networking principles, and database management for local and wide area network environment. Includes operational theory of digital switching equipment, modems, data transmission principles, Ethernet bridge components, multiplexing devices, and associated signal and data processing hardware.

**CMR2102 Automated Systems Maintenance**

Analysis of computer network and system equipment operation to identify, isolate, and repair faulty hardware and software using diagnostic tests, debugging and troubleshooting techniques, general- and special-purpose test equipment, specific system and software manuals, and associated spare equipment.

**CMR2711 Timing and Control Systems**

Operational theory, logic and circuit diagram analysis; preventive and corrective maintenance; and troubleshooting. Includes use of general- and special-purpose test equipment, and technical manuals.

**CMR2714 Data Processing Equipment**

Operational theory, logic and circuit diagram analysis; preventive and corrective maintenance; and troubleshooting. Includes use of general- and special-purpose test equipment, and technical manuals.

**CMR2733 Data-Display Equipment**

Operational theory, logic and circuit diagram analysis; preventive and corrective maintenance; and troubleshooting. Includes use of hand tools, general- and special-purpose test equipment, technical manuals, and applicable safety procedures.

**CMR2751 Input and Output Control**

Principles of data flow and timing. Includes logic and circuit diagram analysis, and diagnosis of system malfunctions.

**CMR2770 Computer Systems**

Advanced operational theory and configuration. Includes data flow, logic and circuit diagram analysis, system operation, and diagnosis of system malfunctions.

**CMR2777 Display Electronics**

Theory of display sweep, azimuth and deflection circuits. Includes ball tab and cursor, lines and leaders, display programmer, symbol integration, alphanumeric positioning, data conversion, and pulse and video distribution.

**CMR2782 Disk Storage Systems**

Operational theory, logic and circuit diagram analysis; preventive and corrective maintenance; and troubleshooting. Includes use of general- and special-purpose test equipment, and technical manuals.



## **COURSE DESCRIPTIONS**

### **CONTRACTS**

#### **CON1644 Introduction to Small Purchases**

Processing small purchase contracts. Includes an understanding of small purchase policies and methods, procedures for nonappropriated fund purchases, modification of contracts, and small purchase administration.

#### **CON1646 Contract Procedures**

Procurement instrument identification numbering and procedures for acquisition instruments, customer-integrated automated purchasing system, and automated contracting; and basic cost analysis, fair and reasonable cost and price analysis, and use of competition.

#### **CON2109 Introduction to Contracting**

Fundamentals of government contracting. Includes contract law; planning, programming and budgeting; types of contracts; contracting sources; methods of contracting; formal advertising and negotiation; small purchases and general contracting policies; uniform contract format; contract preparation; and file documentation.

#### **CON2607 Principles of Contract Administration**

Procedures for administering contracts. Includes types of contracts, work statements, specifications, purchase descriptions, small purchase administration, quality assurance, warranties, foreign acquisitions, contract clauses, finance procedures, liquidated damages, contract modifications and disputes, contract negotiation methods, contract review, termination, contract pricing and accounting procedures.

#### **CON2616 Base-Level Service Contracting**

Advanced service contracting policies, contract requirements and surveillance planning. Includes case study on how to conduct job analysis, develop contract surveillance checklists and evaluate contractor performance.

### **CORROSION CONTROL**

#### **COR1507 Metallic Corrosion Control**

Preparation of metal surfaces. Includes corrosion inspection, preparation of fiberglass surfaces, mechanical and chemical corrosion removal, and surface treatment.

#### **COR1508 Metallic Protective Coatings**

Practical care and use of coating equipment. Includes determination of composition of coatings, application of coating system and identification of aerospace equipment markings.

#### **COR2501 Corrosion Control Laboratory**

Application of preservatives and surface preparation. Includes protection from environmental factors, measuring effects of temperature and humidity, analysis of corrosive factors, use of toxins and caustic agents, and compatibility of materials.

### **CYTOLOGY**

#### **CYT1101 Cytology**

Introduces cells and changes caused by disease conditions; determines typical cells through systematic microscopic slide examination; stains cytology specimens; examines body fluids; interprets cytological changes; prepares smears, cell blocks and microporous filters; and refers abnormal findings to pathologist for review.

### **DATA SYSTEMS**

#### **EDP1101 Principles of Data Processing**

Techniques, functions, and methods of data input to and retrieval from data systems. Includes coding data punched cards and operation of remote terminals.

#### **EDP1106 Principles of Computer Operation**

Introduction to basic components and features of computers, flowcharting, programming languages, numbering and coding systems, assembly, applications, and computer security.

#### **EDP1112 Computer Data Handler**

Techniques, principles, functions and methods of input for data-handler system. Includes data punch card coding and report generation.

#### **EDP1113 Data Processing, Inquiry and Retrieval Systems**

Basic functions and characteristics of computer systems; operations performed by computer components from input through output; procedures for data entry, inquiry and retrieval; and methods required to construct, input and retrieve data from computer using format statements.

**EDP1116 Operational Systems Utilities**

Characteristics and application of systems utilities. Includes system security and use of operational publications.

**EDP1117 Personnel Data Systems**

System fundamentals; data flow; use of central, local and optional tables and management output products; laboratory in interpreting formats, constructing and inputting immediate inquiry messages; and obtaining deferred retrieval products.

**EDP1118 Principles of Computer Systems**

Introduction to digital computers and peripheral devices. Includes internal data representation and computer mathematics; basic characteristics of machine, assembler and high-order level languages; operating system characteristics; computer facility operation; and computer security.

**EDP1128 Principles of Assembly Language Programming**

Introduction to flowcharting, compiling, executing and debugging programs. Includes address modification, macros and pseudooperation, file manipulation, and generation of user library.

**EDP1130 Introduction to System Software**

Large-scale computer system software. Includes catalog and file management software, library editor software, utility software and time-sharing procedures.

**EDP1131 Principles of Maintenance Management Information Systems**

Information processing and analysis. Includes preparing and inputting data and analyzing output data, file maintenance procedures, system familiarization, subsystems, structures, Air Force on-line data system, system troubleshooting procedures, and processing techniques.

**EDP1132 Computer System Familiarization**

Functions of computer systems. Includes knowledge of computer security, electronic data processing, forms management, terminology and organizational alignment.

**EDP1133 Remote Processing Station Computer Systems**

Functions, features, characteristics and operating procedures. Includes system instructions for all peripherals and punch card equipment, modes of processing, database management system, character representation, and procedures for interfacing with data processing installation.

**EDP1136 Microcomputer Software Applications**

Microcomputer and software application. Includes operating system, word processing, spreadsheet and database management applications.

**EDP1138 Information Management Systems**

Introduction to and operation of information management systems and subsystem files. Includes computer and data communications terminology and workstation components.

**EDP1201 Communications Computer Operator**

Theory and operation of automatic digital network message equipment for receiving and sending messages. Includes message traffic routing, encryption, optical card reader, optical scan unit, nine-track tape, paper tape, and procedures for receipt and distribution of hard copy messages.

**EDP1202 Software Engineering**

Principles for developing software package to maximize software life cycle. Emphasizes problem solving, algorithm design and user interface.

**EDP1203 Principles of Database Applications**

Principles and techniques of database design, utilization and maintenance using commercial software on personal and mainframe computers; and use of SQL, tables, and indexes to create queries and reports.

**EDP1204 Introduction to Logistics Automated Data System**

Introduction to standard base supply system that emphasizes operation and maintenance of automated data system. Includes initialization, remote processing, interfacing microcomputers, file structure, time-sharing, query language processor retrievals, report generation, production control and reject management.

**EDP1206 Principles of Object-Oriented Programming**

Introductory course in object-oriented programming. Includes problem definition, strategy development,

## **COURSE DESCRIPTIONS**

object and operation identification and implementation, and interface creation.

### **EDP2126 Principles of JOVIAL Programming**

Coding conventions; types and uses of constants; assignment, exchange, decision-making and compound statements; modifiers; indexing; subscripts; strings; arrays; and subroutines.

### **EDP2135 Database Management**

Application of data access methods for input and output operations. Includes coding, executing and debugging language programs.

### **EDP2136 Database Design**

Advanced techniques. Includes terminology, design considerations, file structure and handling, and database documentation requirements.

### **EDP2152 Systems Design**

Techniques and concepts of design based on state-of-the-art hardware and software computer systems. Includes security, control and audit features; construction of decision logic tables; top-down structured programming design; and project development.

### **EDP2178 Data Retrieval Systems**

Advanced techniques for writing and inputting computer inquiry statements. Includes coding, data retrieving and data analysis to solve given management problems.

### **EDP2183 Advanced Computer Networking**

Theory of computer-to-computer communications. Includes terminology and network configuration principles.

### **EDP2195 Job Control Language**

Production of single-step, two-step and multistep jobs. Includes functions, features, execution, modification, and analysis of in-stream and cataloged procedures.

### **EDP2201 Computer System Administrator**

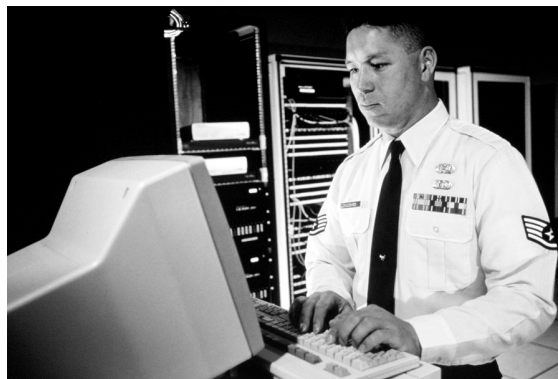
Overview of hardware, software and operating systems; and use of system software, database, networking, editor and security software to customize operating environment to meet needs of using organization.

### **EDP2202 Advanced Logistics Automated Data System**

Advanced techniques in standard base supply system. Includes distributed communications architecture, transaction processing, database concepts and integrity, processing management, microcomputers, programming and debugging techniques, and report generation.

### **EDP2206 UNIX Operating System**

Introduction to UNIX operating system. Includes file system, shell, standard editor, network services and shell programming.



### **EDP2207 Network System Administrator**

Local area network installation and operations. Includes local area network, wide area network, terminology, protocols, Windows environment, mail system, network administration functions, and hardware database management for users and passwords.

### **EDP2404 Advanced Data Inquiry and Retrieval**

Application of file definition and generation tasks, task-loading routines, database recovery, file update tasks, file query function, retrieval tasks search processor, sort tasks and output formats.

### **EDP2613 Computer Console Operation**

Advanced operating techniques in creating, accessing and manipulating data within a database management system using executive control language, transitioning aids, language processors and database functions. Includes system hardware and software concepts.

### **EDP2614 Database Applications Programming**

Advanced techniques in creating, accessing and manipulating data within a database management system using executive control language, transitioning

aids, language processors and database functions. Includes system hardware and software concepts.

**EDP2616 Database Administration and Maintenance**

Advanced techniques of maintaining and administering a database management system in an operational environment with emphasis on concepts.

**EDP2619 Computer Systems Security**

Procedures for administering and monitoring automatic data processing security. Includes security development, policies, duties and responsibilities, system abuse, and establishment of security training programs.

**EDP2732 Principles of ATLAS Programming**

Statement and program structure, preamble statements, procedure statements and program flow. Includes laboratory in programming applications.

**DENTAL LABORATORY TECHNOLOGY****DLT1317 Dental Laboratory Fundamentals**

Basic dental materials, equipment and procedures for cast fabrication; morphology of natural teeth; intraoral anatomy; physiology of human skull; dental forms and records; ethics; and human relations.

**DLT1318 Complete Dentures I**

Fabrication of master casts, base plates and occlusion rims; mounting of casts; selection and arrangement of artificial teeth; and final wax-up, contouring, processing and finishing of complete dentures.

**DLT1319 Complete Dentures II**

Nonanatomic denture occlusion; complete denture relines and repair; and fabrication of immediate dentures, surgical templates, interim acrylic removable partial denture and soft mouthguard.

**DLT1320 Construction of Removable Partial Dentures I**

Principles of dental survey and design, casting of metal removable partial dentures, preparation and fabrication of metal frameworks from wax-up, and casting through finishing.

**DLT1321 Construction of Removable Partial Dentures II**

Tooth arrangement on metal frameworks, wax-up and contouring of denture base, processing and

finishing of acrylic portions, partial denture repair, and orthodontic appliances.

**DLT1322 Construction of Inlays, Crowns and Fixed Partial Dentures I**

Occlusion, creation of stone casts and dies, use of wax additive technique, and casting and finishing of gold alloys.

**DLT1323 Construction of Inlays, Crowns and Fixed Partial Dentures II**

Fabrication, assembly and soldering procedures used constructing inlays, crowns, fixed partial dentures and acrylic resin crowns.

**DLT1324 Dental Ceramics**

Metal ceramic single unit restorations; wax-ups, casting and finishing of metal substructure; and application, firing, contouring and glazing of porcelain.

**DLT2101 Dental Laboratory Administration**

Dental service administrative functions and dental laboratory management. Includes computer applications, professional relations, training programs, acquisition and management of equipment and supplies, establishment of laboratory fabrication standards, and workload management.

**DLT2310 Porcelain and Metal Ceramic Restorations**

Advanced theory and construction of dental porcelains, porcelain jacket crowns, substructure design, ceramic alloys, intrinsic and extrinsic color modification; building and contouring of opposing porcelain occlusions to include extensive bridgework.

**DLT2314 Advanced Removable Prosthodontics**

Survey and design, articulation, tooth arrangement, processing and recovery of complete and partial dentures, orthodontics appliance, and hard night guard.

**DLT2315 Functional and Esthetic-Fixed Prosthodontics**

Pouring and articulating dies and master casts, creating functional anatomic and metal-ceramic wax-up, investing and burning out wax-up, casting metal, and applying porcelain.

## **COURSE DESCRIPTIONS**

### **DENTAL SPECIALIST**

#### **DAS1305 Basic Dental Sciences**

Facial, cranial and intraoral anatomy; tooth morphology; elementary physiology and chemistry; dental disease; infection control; and provider and patient relations.

#### **DAS1306 Clinical Procedures**

Restorative and fourhanded dentistry techniques and procedures, clinical and general emergency care, dental instrument use, and use of materials. Includes application of administrative regulations and procedures to dental records maintenance and patient scheduling.

#### **DAS1314 Preventive Dentistry Sciences**

Periodontal anatomy, microbiology, progression of periodontal disease, anticariogenic agents, anomalies, patient psychology and chair-side counseling.



#### **DAS1315 Preclinical Procedures**

Introduction to dental radiography, diagnostic and emergency dental procedures, clinical operations, surgical assisting procedures, and cardiopulmonary resuscitation.

#### **DAS1316 Clinical Phase**

Oral hygiene techniques, operative assisting duties, and dental radiography. Emphasizes radiation exposure techniques and safety.

#### **DAS2101 Dental Clinic Administration**

Dental clinic administration, management and logistics. Includes computer applications, professional relations, training programs, acquisition

and management of equipment and supplies, dental health records, and management of periodic dental examination programs.

#### **DAS2318 Advanced Dental Oral Hygiene Management**

Managing periodontal maintenance program, identifying administrative tasks, documenting periodontal status, charting, health and safety concerns, and professional and patient relations.

#### **DAS2319 Advanced Dental Oral Hygiene Clinical Skills**

Didactic and clinical skills necessary in treatment and maintenance of periodontal disease through radiographic exams, referrals for oral lesions, scaling and root planing techniques, and patient education and motivation. Includes periodontal probing, plaque and calculus detection, use of disclosing solutions, health care instructions, infection control procedures, instrument sharpening, hand instrumentation, ultrasonic instrumentation, fluoride therapy, dental sealants, and use of other ultrasonic devices.

### **DISASTER PREPAREDNESS**

#### **DPO1102 Disaster Preparedness**

Elements of disaster preparedness program. Includes planning and management, deployment and contingency operations, organization and responsibilities, personnel and equipment preparation, and unit management.

#### **DPO1104 Warfare Defense**

Nuclear, conventional, chemical and biological warfare defense to include wartime threat assessment, defensive measures, chemical and biological protective equipment, and chemical agent detection and decontamination; and control center operations to include warfare agent, hazard and fallout prediction.

#### **DPO1105 Nuclear, Biological and Chemical Cell Operations**

Familiarization with nuclear, biological and chemical cell operations. Includes report and warning organization, messages, mapping, chemical hazard prediction and fallout predictions.

#### **DPO1106 Emergency Operations**

Notification, response, withdrawal and recovery phases of emergency operations. Includes major accidents, both nonnuclear and radiological, and natural disaster operations.

**DPO1350 Disaster Medicine**

Medical responsibilities, medical capabilities, physical and medical effects of peacetime nuclear weapon accidents, physical and medical effects, medical capabilities, and chemical and biological warfare medical defenses.

**DPO2102 Advanced Disaster Preparedness**

Wartime and peacetime operations. Includes threat analysis and readiness postures; nuclear, biological and chemical control center operations; passive defense; readiness mobility program; chemical and biological warfare defense; live agent training; command and control; readiness flight management; major accident response; readiness training; and logistics.

**DPO2103 Disaster Preparedness Refresher**

Advanced operational procedures and techniques. Includes new equipment; emergency information system; threat updates; and nuclear, chemical, biological and conventional warfare defense concepts and operations.

**EDUCATION & TRAINING****EDT1101 Training Resource Management**

Application of management principles and concepts to satisfy organizational responsibilities for managing budget, facilities, equipment and personnel resources. Includes comprehension of student management system, short- and long-term funding concepts, program objective memorandum, and procedures for identifying and resolving training deficiencies due to nonavailability of resources.

**EDT1102 Objective and Test Development**

Theories and principles of learning, interpretation of training proficiency code keys and correlation of objectives. Includes principles, analysis, administration and construction of measurement items.

**EDT1501 Instructional Principles and Techniques**

Learning process. Includes application of communicative skills, instructional methods and aids, developmental approach, and instructional systems development.

**EDT1803 Instructor Fundamentals**

Principles of lesson planning, various methods of instruction, use of instructional aids, and construction and administration of evaluations. Includes learning theories. (Instruction suited to flight simulator, airborne, field and conventional classroom environments.)

**EDT1804 Fundamentals of Speech**

Principles of effective speaking. Includes organization and delivery using acceptable platform mannerisms and constructive, and effective use of visual aids.

**EDT1808 Development and Management of Training Programs**

Application of methods for determining training requirements. Includes analyzing training data and directives, administering career development programs, determining job classification and conducting staff visits to assist in setting up effective training programs.

**EDT1809 Use of Computers in Training**

Application of computers in training and instructional programs. Includes training files management, instructional system development and use of computer-assisted instruction principles in classroom environment.

**EDT1811 Computer-Based Instruction Development**

Principles of constructing computer-based instruction using system software commands.

**EDT1812 Introduction to Computer-Based Instruction**

Principles of computer-based instruction development. Includes design, specific computer language, program analysis and application of related materials.

**EDT2110 Military Training Instructor**

Prepares military training instructors to plan and deliver Air Force concepts, principles, and philosophies to Air Force basic trainees. Includes core values, leadership, human relations, psychological behavior, staff referral agencies, flight management and administration, dormitory instruction, and drill and ceremony procedures.

**EDT2113 Military Training Instructor Practicum**

Hands-on flight management of basic trainees under the supervision of military training instructor staff or assigned trainer appointed and trained by military training instructor staff.

## **COURSE DESCRIPTIONS**

### **EDT2801 Instructional System Development**

Systems analysis training requirements, criterion objectives, teaching steps and measurement devices, and planning, developing, validating, conducting and evaluating instruction.

### **EDT2802 Development and Management of Instructional Systems**

Concepts and philosophies of training and educational process, and development and management techniques for effective instructional systems and educational programs.

### **EDT2803 Applied Instructional System Development**

Practical exercises in development and evaluation of an instructional system; and education and training requirements, objectives and tests, plan and validation of instruction, and evaluation of a completed instructional system.

### **EDT2806 Basic Counseling**

Comprehension of human behavior. Includes adjustment mechanisms and different considerations in academic and nonacademic counseling, application of various counseling approaches, use of referral agencies, documentation, and follow up.

### **EDT2807 Tests and Measurements**

Test item construction. Includes development and correlation of objectives and standards; test item analysis; examination of characteristics of reliability, validity, comprehensiveness and differentiation; measurement errors; test administration and proctoring; and test critique.

### **EDT2809 Supervision of Instruction**

Course control documents and instructional system development, management of student academic programs, and measurement and evaluation of student and instructor performance.

### **EDT2810 Advanced Technical Instruction**

Modern instructional trends and innovations, analysis of problems relating to teaching methodology, and application of video recorders in practice teaching exercises.

### **EDT2813 Instructional Methodology**

Fundamentals of teaching emphasizing proficiency in specialized skills such as technical course writing, tests and measurements, programmed instruction,

training supervision, instructional system development and technical academic counseling. Includes learning process, effective study methods, and audiovisual aids such as single-concept films and automated teaching systems.

### **EDT2814 Practice Teaching**

Supervised application of teaching techniques and instructional methodology in regularly scheduled classes.

### **EDT2823 Technical Writing**

Techniques that enhance skills and knowledge in writing technical training materials. Includes review of basic grammar and English composition with practical exercises in researching, organizing and writing technical materials.

### **EDT2824 Instructional Processes**

Administration of programmed instruction. Includes curriculum analysis, construction of objectives, and course validation and evaluation.

### **EDT2838 Resident Course Development**

Resident training materials planning and development. Includes writing behavioral objectives and criterion-referenced tests, and planning, writing and editing a complete manuscript for an assigned unit of instruction.

### **EDT2839 Correspondence Course Development**

Preparation of correspondence course materials. Includes writing behavioral objectives, developing review exercises, preparing and using illustrations, using copyrighted material, and researching, planning and writing correspondence courses.

### **EDT2840 In-flight Instructor Training**

Prepares personnel for duties as an in-flight instructor, improves student instructor knowledge of aircraft systems and ability to instruct the systems in a formal aircraft and classroom environment, and enhances student instructor understanding of various instructional methods under actual flight conditions through observation and performance as a student instructor.

### **EDT2842 Training Management Supervision**

Dual channel on-the-job training concept, training needs, management of related automated products, accomplishment of a master training plan, individual training records and training assistance visits.

**EDT2843 Development and Application of Occupational Survey Data**

Practice in constructing and administering occupational surveys for instructors and other training personnel. Includes use of occupational measurement centers services and products, development of job inventories, and analysis, validation, processing and application of data resulting from surveys.

**EDT2846 Teaching Practicum**

Practice teaching under supervision of an experienced instructor supervisor, classroom and laboratory instruction, lesson planning, test administration, academic counseling, and preparation and use of audiovisual aids.

**EDT2847 Advanced Teleseminar Instructor**

Prepares experienced instructors to teach in teleseminar environment. Includes teleseminar instructional design, planning for teleseminar environment, affective component of teleseminar instruction, production environment, storyboarding, teleseminar instructional methodologies, coordinating for successful delivery and contingency planning for distance education environment, writing cognitive and affective objectives and samples of behavior for teleseminar presentations, and effectively planning and presenting teleseminar instruction.

**EDT4101 Foundations of Education**

Theories and principles relating to enhanced learning. Includes appreciation for self-concept, individual differences and affective domain, creative thinking, observational skills of instructor, student and instructor interaction, and group dynamics.

**EDT4102 Principles and Methods of Teaching**

Selection of teaching methods, organization of materials and preparation of written plans with behavioral objectives. Includes practice in employing teaching interview, guided discussion, demonstration, performance and lecture. Emphasizes improvement in communicative skills.

**EDT4103 Principles and Methods of Evaluation**

Construction, use and analysis of evaluation instruments; synthesis of valid decisions based on results of statistical studies; and examination of various evaluation instruments.

**ELECTRONIC EQUIPMENT OPERATION****EE01201 Aircraft Control and Warning Operations I**

Manual operating principles at plan position indicator, surveillance (plotter, teller, recorder) and status clerk. Includes duties and functions of each position and proficiency in radarscope and plotting operations.

**EE01206 Aircraft Control and Warning Operations III**

Theory and operation of a combat reporting center. Includes control and center operator consoles with operational procedures for all positions and overview of capabilities of aircraft control and warning system.

**EE01207 Spacecraft Ground Data Systems**

Orientation and coverage of responsibilities of ground data satellite control systems. Includes ground station data flow, command and control subsystems, altitude control, propulsion, power production, status processing satellite readout, data reduction, simulation, and ground data monitoring operations.

**EE01208 Semiautomatic Ground Environment Surveillance Operations**

Apprenticeship and practical application in data handling for electronic warfare duties as radar inputs and countermeasures technician. Includes a review of typical radar inputs and tracking methods employed in air surveillance and countermeasures operations.

**EE01212 Combat Reporting Center and Control and Reporting Center Systems**

Practical application of search scope alignments and radio operations. Includes power-on procedures, plan position indicator alignment, test mode display procedures, determining azimuth and range using azimuth and range readout, various aspects of surveillance management, console switch actions that control automatic data link, site registration, point and strobe insertion, processing of data track, and interpreting fragmentary orders and geographical reference systems.

**EE01213 Airborne Warning and Control Systems**

Basic air surveillance console switch action operations necessary to effectively use computerized and multisensor systems. Includes detecting, identifying, and tracking surface and airborne objects; manual and automatic transfer of air defense information; basic sensor system employment; and combating electronic warfare.



## **COURSE DESCRIPTIONS**

### **EEO1214 Airborne Warning and Control Systems Training Devices**

Operation of computerized training devices designed to simulate airborne surveillance console operations, sensors and scenarios with realistic demonstrations, practice and evaluation.

### **EEO1215 Airborne Warning and Control Systems In-flight Activities**

Application of flight activities designed to develop knowledge and skills used in strategic and tactical intercept operations. Includes coordination procedures required to accomplish early warning intercept missions within worldwide multiservice and allied air defense operations.

### **EEO1216 Radar Operations**

Operation of radar displays and techniques of detecting, identifying and monitoring surface or airborne objects using primary or beacon radar systems. Includes circuit operation, equipment features, antennas, weather effects and electronic warfare operations.

### **EEO1217 Air Weapons Controller Procedures**

Basic weapons applications for strategic and tactical intercept operations. Includes automated systems familiarization, intercept geometry, positional simulation and control procedures.

### **EEO1218 Missile Warning Operations**

Operation of computerized digital radar displays and equipment for detection and tracking of ballistic missiles. Includes communications capabilities and operational procedures for relay of missile warning information.

### **EEO2101 Aerospace Control and Warning Systems Operation**

Advanced techniques in employment of early warning radar system; and integration of digital computer systems with airborne and ground radar units for detecting, identifying and monitoring surface or airborne objects. Includes communications capabilities, system interface and procedures required to accomplish early warning missions.

## **ELECTRONIC POWER PRODUCTION**

### **EPP1100 Airfield Lighting System**

Basic airfield lighting system configurations. Includes control system, beacon lights, lighting fixtures, regulators and transformers, and condenser discharge cable repair, troubleshooting and maintenance.

### **EPP1502 Engine Systems and Associated Equipment**

Operation and maintenance of conventional, gas turbine and diesel engine systems. Includes cooling, starting, lubrication, intake, exhaust, governor and fuel.

### **EPP1503 Equipment and Pole Climbing**

Pole-climbing techniques using hot line tools and protective equipment, crossarm installation and removal, pole step installation, and civil engineering management procedures. Includes operations, communications security, general safety practices and pole-top rescue techniques.

### **EPP1504 Construction of Overhead Electrical Distribution Systems**

Electrical prints and staking sheets for pole location, framing, setting and erection techniques using anchors and guys. Includes insulated boom dielectric testing, pole grounding, inspection of substation fences and vegetation control; installation of lighting system, distribution transformers and service drops using safe clearance procedures and conductor support devices; maintenance on electrical switchgear and equipment; emergency transformer connections; conductor splices; de-energized conductor transfers; and line and aerial bucket operation and maintenance.

### **EPP1505 Underground Distribution Systems Maintenance**

Maintenance and inspection of underground electrical distribution system and manhole equipment. Includes fabricating and testing in-line splices, installing direct burial cable, replacing underground cable, tape termination techniques, and termination point inspection and testing.

### **EPP1506 Operation and Maintenance of Mobile Generator Sets**

Generator set wire diagrams and automatic start, power transfer and no-break power systems. Includes troubleshooting techniques and preoperation, single unit operation, and postoperation procedures.

### **EPP1507 Generator Set Operation and Aircraft Arresting Barriers**

Operating characteristics, configuration of aircraft arresting system, generator set associated equipment, power plant generator operation, problem analysis, and diesel engine tests and maintenance.



### **EPP1508 Wiring Methods**

Wiring diagrams, electrical terms and symbols, conduit application and bending techniques; and branch circuit construction, switch and outlet installation and troubleshooting techniques using test equipment and safety procedures per national electrical code guidelines.

### **EPP1509 Electrical Special-Purpose Systems**

Maintenance; troubleshooting; and repair of transformers, voltage regulators, battery banks and chargers, and emergency lighting systems. Includes dining hall and domestic appliances.

### **EPP2100 High-Voltage Cable Testing and Splicing**

Cable construction, splicing procedures, requirements for various underground systems, causes of underground cable failure and related preventive procedures, tape and hybrid splices, lead transition, tape termination, and separable insulated connectors.

### **EPP2501 Generator Set, Switchgear, and Governor Operation and Maintenance**

Operation, care, and maintenance of generator sets, equipment and components, gas turbine and diesel generators, hydraulic and electric governors, and automatic start and transfer switchgear.

### **EPP2503 Transportable Distribution Systems**

Set up, maintenance, troubleshooting and repair procedures for electrical distribution systems and secondary distribution centers under field conditions. Includes use of electrical plant schematics, test equipment and safety practices.

### **EPP2504 Electrical Distribution Systems**

Maintenance of hot line tools and advanced troubleshooting procedures for electrical distribution systems. Includes voltage regulator maintenance with application of electrical theories; replacement of single-phase lines, three-phase running corners, vertical construction, insulators on horizontal construction, crossarms using auxiliary sidearms, and crossarms and poles on dead ends; and changing straight line crossarm to double dead end and double crossarms on angles.

### **EPP2505 Advanced Motors and Controls**

Operational characteristics and troubleshooting of electric motors, frequency converters, transformers and grounding systems. Includes electronic components, line and wiring diagrams, and motor accessories.

## **ELECTRONICS**

### **ELT1101 Electric Motor Principles**

Theory and operation of electric motors, application of test equipment and job safety; and connection and disconnection, and operation of motors and maintenance procedures under hazardous operating conditions.

### **ELT1103 Satellite Communications Systems**

Operational theory and logic and circuit diagram analysis. Includes security and use of technical manuals.

## **COURSE DESCRIPTIONS**

### **ELT1104 Satellite Communications Maintenance**

Preventive and corrective maintenance and troubleshooting. Includes use of hand tools, safety procedures, general- and special-purpose test equipment, and technical manuals.

### **ELT1105 General Maintenance Training**

Introduction to maintenance concepts and practices. Includes career ladder progression, security, use of Air Force publications, Air Force Office of Safety and Health safety precautions, Air Force supply system, and maintenance management.

### **ELT1106 Introduction to Digital Electronics**

Numbering system conversions, digital math operations, Boolean algebra and digital logic functions. Includes truth table counter circuits, register circuits, converters, troubleshooting techniques and use of logic probe.

### **ELT1107 Basic Soldering Connections**

Basic performance laboratory. Includes soldering techniques, safety, and soldering and desoldering of components to terminal connections and printed circuit boards.

### **ELT1203 Solid-State Principles**

Semiconductor physics; theory of P-N junctions and multijunction devices; analysis of amplifier configurations and characteristics; and operation and feedback of audio, video, IF and RF amplifiers.

### **ELT1210 Basic Electronic Principles and Circuits**

Basic electronics, electrostatics, and series, parallel and series-parallel circuits; and changing currents, inductance, capacitance, inductive and capacitive circuits, transformers, resonance and filters. Includes circuit analysis using electronic test equipment.

### **ELT1211 Basic Electronic Circuits**

Principles of triode, tetrode, pentode, multiunit and multielement vacuum tube; and introduction to P-N junctions, transistor operation, transistor amplifiers, coupling and wave-shaping circuits, power supplies, sinusoidal and relaxation oscillators, hand tools and soldering techniques. Includes circuit fabrication using electronic fundamentals trainer and malfunction analysis using electronic test equipment.

### **ELT1215 Cryptographic Test Equipment Application**

Electronic test equipment in analysis of cryptographic equipment circuits. Includes oscilloscope, multimeter, electronic multimeter and signal generator.

### **ELT1218 Electronic Cryptographic Systems Maintenance Limited**

Equipment features, modes of operation, malfunction analysis and replacement of plug-in units. Includes installation, adjustment and operation of digital encryption devices using electronic multimeter, data-pulse generator, oscilloscope and hand tools.

### **ELT1219 Electronic Cryptographic Systems Maintenance Depot**

Milliwatt and microwatt logic, block diagram and circuit analysis, and operation of and component replacement for digital data encryption and decryption devices. Includes input and output modules, power supplies, message indicators, clock start modes, synchronization circuits, special test equipment and use of hand tools for depot level repair.

### **ELT1221 Tempest Problems and Solutions**

Installation, inspection and corrective maintenance procedures for cryptographic facilities to ensure suppression of undesirable emanations.

### **ELT1223 Cryptographic Systems and Devices**

Principles of secure communications systems. Includes use of electronic cryptographic devices; encrypted teletypewriter, data, and narrow- and wide-band secure voice terminals; system configurations; and emanation suppression techniques.

### **ELT1224 Data Transmission Techniques and Equipment**

Principles, methods and media of data transmission. Includes system timing, error control systems, and patch and test facilities.

### **ELT1232 Command Equipment Maintenance Depot**

Operation, circuit, logic, and malfunction analyses and repair of transmit, receive and ancillary satellite communications equipment. Includes principles of milliwatt logic, power supplies, data subsystem, manual vehicle test modes, and decimal and octal number conversions applicable to command equipment circuitry.

### **ELT1235 Command and Telemetry Systems Maintenance**

Purpose of systems and applicable safety, security and emanation suppression procedures. Includes theory of

decimal, octal and binary number conversions and milliwatt logic elements used in system and operational theory and adjustment of power supplies.

**ELT1236 Command and Telemetry Logic Control Assembly Maintenance**

Logic analysis of clock, start and resume test, frequency generator clock gate, timing counter, bit time decoder and message period timing circuits. Includes theory of pulse-code modulation extraction circuits, circuit card repair, malfunction analysis, and location of faulty elements of logic control assembly in a self-test configuration.

**ELT1237 Command and Telemetry Reference Loop Maintenance**

Operation, analysis, and physical and electrical description of telemetry transmitter, simulator, receiver, transceiver, special tester and associated circuits connected in a test configuration with logic control assembly. Includes malfunction analysis on printed circuit boards.



**ELT1249 Emanation Suppression Techniques**

Characteristics of data processing equipment; causes of emanations; testing techniques; equipment interfacing; emanation analysis; narrow- and broad-band test scan and correction factors; and use of oscilloscope, spectrum analyzer, impulse generator, signal generator and recording oscillograph.

**ELT1251 Tempest Analyst**

Introduction to secure communications, message and voice processors, channel matrices, and analytical computation tools. Includes instrumentation and analysis of recorded data and emanation suppression techniques.

**ELT1252 Cryptographic Equipment Maintenance**

Integrated circuit analysis, malfunction analysis and repair of associated special test equipment, and principles of emanation suppression techniques.

**ELT1259 Introduction to Electronics**

Electronic circuits and their use in various electronic systems. Includes power supplies, solid-state devices, digital techniques, digital mathematics and basic troubleshooting.

**ELT1262 Metrology Measurement Principles**

Tracing and verifying precision measurement equipment standards, publications, forms and supply management.

**ELT1264 Electromagnetic Pulse Detection Unit**

Theory of electromagnetic pulse and electrostatic discharge effect upon electronic devices. Includes electromagnetic and electrostatic emission protective devices.

**ELT1282 Multiplexer Maintenance**

Operation, logic, and malfunction analysis and repair of multiplexer and demultiplexer equipment. Includes delay compensator, synchronizer monitor logic analysis, system troubleshooting, and use of hand tools and general test equipment.

**ELT1419 Practical Electricity**

Fundamentals of DC circuits, AC electricity and structure of matter; analysis of basic electrical diagrams. Emphasizes electrical safety; multimeter operation to determine resistance and voltage; and basic troubleshooting procedures.

**ELT1429 Cryptographic Equipment Operation**

Assembly, disassembly, installation and performance checks of operational cryptographic equipment.

**ELT1430 Power Supply Analysis and Maintenance**

Block diagram, circuit and malfunction analysis of power supplies. Includes replacement of components and circuit boards.

**ELT1431 Speech Processing Circuits Maintenance**

Block diagram, circuit, and malfunction analysis of cryptographic speech processing and switching circuits. Includes replacement of components and circuit boards.

## **COURSE DESCRIPTIONS**

### **ELT1432 Transmission Circuits Maintenance**

Block diagram, circuit, and malfunction analysis of transmission circuits, transmit timing and preparation circuits. Includes replacement of components and circuit boards.

### **ELT1434 Receiver Circuits Maintenance**

Block diagram, circuit and malfunction analysis of receiver circuits. Includes replacement of components and circuit boards.

### **ELT1437 System Troubleshooting**

Overall system troubleshooting. Includes alignment, adjustment and performance checks.

### **ELT1439 Narrow-Band Communications Theory**

Evaluation of narrow-band (HF, VHF, UHF) telecommunication systems. Includes characterization of technical capabilities and limitations, theory and principles of operation, techniques for link performance assessment and propagational path prediction and analysis, and measurement procedures for technical evaluation of worldwide Defense Communications System.

### **ELT1450 Interface Equipment Maintenance**

Operational theory, logic, circuit diagram analysis, and preventive, and corrective maintenance of system interface equipment. Includes troubleshooting and repair procedures.

### **ELT1451 Fiber-optic Cable Installation and Maintenance**

Installation, splicing and maintenance procedures for fiber-optic cables and associated equipment, and use of specialized test equipment.

### **ELT1452 Satellite Communications Group Maintenance**

Analysis of satellite communications terminal tracking and control systems. Includes maintenance, calibration, repair, and inspection of servo-electronic, monitor, control equipment and alarm systems.

### **ELT1453 Missile System Electronic Analysis**

Signal flow analysis and applications to integral aerospace systems. Includes loop data-flow analysis, operation of standard test equipment, troubleshooting, safety and use of maintenance publications.

### **ELT1455 Communications Systems Theory**

Principles of multiplexing, tunable microwave and tropospheric scatter systems. Includes performance laboratory to emphasize analysis, troubleshooting, maintenance and repair using standard test equipment.

### **ELT1456 Digital Data Communications Theory**

Digital data communications systems theory. Includes functional and circuit analysis of transmitters, receivers, power supplies, data reception and detection circuits, and receiver timing and detection circuits.

### **ELT1457 Missile Launch Control Facility Maintenance**

Operational theory, logic and circuit diagram analysis, and preventive and corrective maintenance. Includes general- and special-purpose test equipment, and technical manuals.

### **ELT1529 Power Production Equipment**

Fundamental principles of power production equipment. Includes operation, troubleshooting, and repair of internal combustion engines, generators, exciters, voltage regulators, launch facility power generation system, and launch facility and launch control facility power distribution system.

### **ELT1538 Uninterruptible Power Supply Circuits**

Principles of logic and control circuits. Includes annunciator, synchronization and digital control; rectifier leg module assembly; charge limit control; inverter control; gate timing; inverter gate firing module; alarm annunciator; AC and DC protection; reverse transfer control; static switch control and preventive maintenance.

### **ELT1544 Security and Intrusion Detections**

Principles of operation of control units, monitoring and display equipment, audible alarms, sensors (mechanical, capacitance proximity, vibration, ultrasonic motion magnetic weapons, passive ultrasonic), and system checkout and troubleshooting.

### **ELT1546 Electronic Radio Control Systems**

Theory, operation, equipment analysis and maintenance of electronic radio control systems.

### **ELT1547 Energy Management and Control Systems Theory**

Equipment configuration, and theory and operation of energy management and control systems.

**ELT1701 AC Circuits**

Fundamentals of alternating current. Includes motors, generators, meter movements, inductance, inductive reactance, capacitance, capacitive reactance, frequency spectrum and use of oscilloscope.

**ELT1702 DC Circuits**

Fundamentals of direct current. Includes series, parallel, and series-parallel resistive circuits, magnetism and relay operation.

**ELT1712 Basic Solid-State Theory**

Solid-state power supplies and amplifiers. Includes P-N junctions, transistors, rectifiers, filters, limiters and clampers, and power, special and wide-band amplifiers.

**ELT1713 Transmitter and Receiver Systems**

Basic analysis of transmitter and receiver circuits, transmission lines, waveguides, antennas, cavity resonators, microwave oscillators, frequency control and automatic gain control circuits, crystal mixers, and parametric amplifiers. Includes schematic interpretation and troubleshooting techniques.

**ELT1714 Solid-State Applications**

Fundamental principles of solid-state applications in wave generation. Includes basic, pulsed and blocking oscillators; multivibrators; and time-based generators.

**ELT1716 Standard Test Equipment Laboratory**

Operational theory, function, and use of low-frequency generators, multimeters, electronic counters, frequency converters, audio oscillators, vacuum tube voltmeters, oscilloscopes and differential voltmeters.

**ELT1717 Special Test Equipment Workshop**

Operation and maintenance of test equipment used to maintain automatic programming and control equipment. Includes schematic analysis, and operation and maintenance of computer programming set and power supply.

**ELT1719 Sensing Systems Maintenance I**

Functional descriptions, technical characteristics, installation and operation procedures, block diagram and circuit analysis, preventive maintenance, and

troubleshooting procedures of wind and temperature dew point measuring equipment.

**ELT1720 Sensing Systems Maintenance II**

Functional description, technical characteristics, block diagrams, circuit analysis, test equipment, troubleshooting, preventive maintenance and operation of cloud height sets.

**ELT1721 Electrical Fundamentals**

Ohm's law; series, parallel and series-parallel circuit theory; meters and test equipment; and electrical code, terminology and wiring diagrams.

**ELT1727 Electron Tubes and Circuit Applications**

Theory and operation of diodes, triodes, multigrids and special-purpose tubes. Includes typical circuit applications, oscilloscope analysis, heterodyne, and principles of modulation and demodulation.

**ELT1729 Radar Systems Troubleshooting**

Circuit analysis of transmitters, receivers and transponders. Includes use of test equipment, troubleshooting and preventive maintenance.

**ELT1731 Surveillance Indicator Systems**

Circuit analysis of plan position indicator system. Includes synchronization system, sweep circuits, video circuits, amplifiers and cursors.

**ELT1733 Radar System Maintenance**

Circuit analysis and maintenance procedures applicable to a radar system. Includes use of detailed wiring diagrams and test equipment to isolate, identify and repair system components.

**ELT1756 Electronics Analysis Laboratory**

Analysis and maintenance of electronic monitoring and checkout systems. Includes operation of portable checkout equipment, malfunction isolation and repair techniques.

**ELT1772 Wave Generation and Shaping**

Principles and applications of wave-generating and shaping devices. Includes limiters, clampers, oscillators, blocking oscillators, multivibrators, time-base generators and sweep generators.

## **COURSE DESCRIPTIONS**

### **ELT1784 Microprocessor Fundamentals**

Introduction to integrated and microprocessor logic circuits. Includes analysis of microcomputer systems and hardware and software considerations.

### **ELT2112 Radio Equipment Theory**

HF, VHF and UHF communications equipment principles. Includes performance laboratory in troubleshooting and repair of HF, VHF and UHF mobile and portable communications equipment.

### **ELT2113 Ground Radio Theory**

Principles of transmitters, receivers, audio and data intercept consoles, and automatic switchboard principles as applied to ground radio system.

### **ELT2114 Radio Maintenance Laboratory**

Trouble analysis and fault isolation of subunits of transmitter, receiver and control sites.

### **ELT2116 Spectrometer Maintenance and Calibration**

Operation, logic analysis, repair, troubleshooting, calibration and alignment of fluid analysis spectrometer.

### **ELT2118 Intermediate Solid-State Fundamentals**

Fundamental principles of solid-state applications. Includes P-N junctions, diodes, rectifiers, transistors, zener diodes, integrated circuits, solid-state supplies and filters, power amplifiers, oscillators, multivibrators, electronic voltage regulators, logic diagrams, truth tables and solid-state logic circuits.

### **ELT2120 Tropospheric Radio Systems**

Operation, and circuit and functional analyses of tropospheric scatter radio terminals.

### **ELT2123 HF Receivers**

Operation, and circuit and functional analysis of HF receivers.

### **ELT2125 Radio Transceivers**

Operation, and circuit and functional analyses of universal radio equipment transceivers.

### **ELT2127 VHF Transceivers**

Operation, and circuit and functional analyses of VHF transceivers.

### **ELT2129 Instrument Landing System**

Operation, and circuit and functional analyses of instrument landing system. Includes familiarization with ground check procedures and flight inspection recordings.

### **ELT2136 Video Processing**

Circuit analysis of normal and moving target video-processing circuits, antenna azimuth processing circuits and radar control circuits.

### **ELT2137 Satellite Ground Station Equipment**

Maintenance of satellite ground station equipment. Includes alignment, adjustment procedures, and troubleshooting techniques using standard and specialized test equipment.

### **ELT2138 Ground Tactical Air Navigation Theory**

Introduction to flight facilities equipment operational theory. Includes, circuit functional analysis of ground tactical air navigation systems using test equipment and technical data.

### **ELT2401 Radar Principles**

Functional and circuit analyses of radar transmitters, receivers, and moving-target indicators. Includes modulator; high-voltage power supply; local oscillator; driver circuits; automatic tuning; master timing; RF, IF and video circuits; and troubleshooting and repair techniques.

### **ELT2408 Frequency Management Equipment Maintenance**

Problems associated with high-frequency signal propagation. Includes analysis principles, frequency selection based on propagation analysis, equipment operation, detailed circuit analysis, preventive maintenance, and troubleshooting of transmitter, receiver and spectrum analyzer components of frequency management equipment.

### **ELT2704 Meteorological Radar System**

Operational theory and circuit analysis of meteorological radar system. Includes inspection, installation, calibration, alignment, performance checks, troubleshooting and repair procedures, and use of applicable test equipment.

### **ELT2709 Receivers and Transmitters**

Theory of receiver systems, indicators and servo systems. Includes amplitude, frequency, and pulse modulation, saturable reactors, magnetic amplifiers,

electromagnetic radiation, waveguides, resonant cavities, transmission lines and analysis of transmitter and RF system functional circuits.

**ELT2710 Test Equipment Laboratory**

Practical experience in use of precision measurement equipment. Includes waveform measuring devices and spectrum analysis.

**ELT2733 Logic and Circuit Analysis**

Digital logic and analysis of computer circuits. Includes basic circuits, adders, registers, and coder and decoders.

**ELT2739 Radar Transmitter Maintenance**

Circuit analysis and repair of radar transmitters.

**ELT2740 Radar Receiver Maintenance**

Circuit analysis and repair of radar receivers.

**ELT2741 Advanced Radio Frequency System**

Advanced study of antennas and RF systems. Includes circuit analysis of performance and maintenance monitors, and antenna lubrication, cooling and pressurization procedures.

**ELT2765 Digital Principles**

Solid-state fundamentals. Includes principles of logic circuits, amplifiers, multivibrators and digital voltmeters.

**ELT2775 Multiplex Switching**

Logic analysis of solid-state digital switching system. Includes troubleshooting and repair.

**ELT5714 Specialized Instrumentation**

Operational theory and application of special instrumentation principles. Includes principles of video recording, closed-circuit television, and microwave and laser systems.

**ELT5717 Radar Data Display Circuits**

Operational theory, application, and maintenance of precision-timing circuits, wave-shaping devices, sweep generation circuits, video-processing circuits and cathode ray tubes. Includes troubleshooting and fault analysis using multimeters, vacuum tube voltmeters and dual trace oscilloscopes.

**ELT5728 DC and Low-Frequency AC Measurement**

Introduction to metrology of voltage, current and power. Includes knowledge of instrument calibration standards, precision voltage and current measurement, differential voltmeters, thermal converter meters, vacuum tube voltmeters, voltmeter calibration system, resistance voltage dividers, ratio transformers, resistance bridges, measurement of capacitance and inductance, reactance bridges, low-frequency signal generators, function generators, and synchronization test equipment.

**ELT5771 Automatic Tracking Radar Theory I**

Principles of transmitters, antennas and RF groups, receivers, and range and angle-tracking systems.

**ELT5800 Advanced Electromechanical Systems Laboratory**

Auxiliary generator set operation and repair and applicable use of electrical wiring diagrams and engineering drawings to determine component operation, analyze circuitry and visualize system interrelationships. Includes prime mover, AC and DC generators and controls, and practice in maintenance, inspection, trouble isolation, servicing, load banking and adjustments.

**ELT5802 Integrated Circuit Analysis**

Theory of integrated and discrete circuit characteristics; circuit analysis of logic modules and diagrams; conversions between number systems with bases 2, 8 and 10; binary coded decimals; and Boolean algebra.

**ELT5805 Advanced Missile Maintenance Laboratory**

Diagram analysis, troubleshooting, alignment, calibration and inspection of missile systems. Extensive practice in circuit analysis using detailed wiring diagrams and test equipment to isolate, identify and correct malfunctions at component level.

**ELT5820 Tape Recorder Maintenance**

Detailed circuit analysis of servo, record and reproducing circuits. Includes direct and FM recording methods, and video and FM record and reproducing modes.

**ELT6723 High-Reliability Soldering and Connections**

Repair of miniature and microminiature electronic circuits and printed circuit boards. Includes soldering of components and modules to printed circuit boards and various terminals used in electronics equipment,



## COURSE DESCRIPTIONS

conformal coating removal and replacement of solid-state components.

### **ELT6778 Communications Control Console and Landline Selector Control**

Communications control console group and landline selector control group maintenance. Includes equipment operation, circuit analysis, alignments and adjustments, and fault isolation.

### **ELT6779 UHF Radio Communications**

Analysis of UHF multichannel radio transceivers. Includes performance testing, troubleshooting, alignments and adjustments using associated test equipment.

### **ELT6783 Communications Equipment Testing and Data Analysis**

Intensive performance laboratory using a variety of test equipment in data validation, systems analysis, and technical evaluation required in maintenance management and upgrading of worldwide Defense Communications Systems.

### **ELT6791 Mobile Communications Systems Maintenance**

Communications centrals. Includes nomenclature classification, equipment features, operational modes, malfunction analysis, field repairs, supply procedures and safety.

### **ELT6794 Command Post Maintenance**

Analysis of specialized modems, alarms and command synchronizers for satellite communications command operations. Includes theory of operation, block diagram analysis, and operation and maintenance systems.

### **ELT7737 Radio (Air and Ground 50KHz)**

VHF and UHF communications equipment principles. Includes troubleshooting and repair of VHF and UHF communications equipment.

### **ELT7750 Ground Navigational Maintenance**

Operation and circuit analysis of ground-based timer synchronizer, monitor, receiver and transmitter units. Includes preventive maintenance and troubleshooting of systems using technical data.

### **ELT7759 System Timing, Transmitter and Receiver**

Circuit analysis, alignment, and troubleshooting of transmitter and receiver master timing system. Includes digital techniques.

### **ELT7762 Digital Selective Identification**

Functional and logic diagram analyses of digitized selective identification feature system. Includes encoder and decoder, and fault isolation.

## **EMERGENCY MEDICAL TECHNOLOGY**

### **EMT1101 Emergency Response**

First responder role and responsibilities, understanding the human body, preventing disease transmission, establishing priorities of care, one and two rescuer cardiopulmonary resuscitation, treating injuries, identifying medical emergencies, and crisis intervention.

### **EMT1102 Emergency Medical Technician - Basic**

Introduction to emergency medical care; medical and legal ethics; management of shock, trauma, fractures and hemorrhage control; management of environmental, behavioral and medical emergencies of infants, children and adults; obstetrical, gynecologic and childbirth emergencies; transportation, lifting, and moving of the sick and injured; radio communications, documentation, ambulance operations, scene evaluation and emergency medical technician safety. Includes all required modules of the 1994 *EMT Basic National Standard Curriculum*.

### **EMT1103 Emergency Medical Technician - Intermediate**

Theory and techniques of advanced emergency medical care in prehospital and hospital settings, and prepares student to challenge National Registry Emergency Medical Technician - Intermediate examination. Includes patient assessment, advanced airway management, intravenous fluids, shock and clinical duties.

### **EMT2301 Introduction to Emergency Medical Technology**

Medical terminology, basic pharmacy, therapeutics, medical laboratory and postmortem care; and techniques in lecturing on allied health subjects.

### **EMT2302 Management of Common Medical Disorders**

Care of acute dental, respiratory, eye, ear, nose, throat, genitourinary, integumentary, cardiovascular, gastrointestinal, neurological and psychiatric disorders.

**EMT2303 Emergency Procedures and Examinations**

Emergency treatment of fractures; dislocations; head, chest, abdominal and thermal injuries; cricothyrotomy; intravenous therapy; minor surgery; temporary dental fillings; gastric lavage and gavage; and emergency childbirth.

**EMT2304 Public Health**

Water purification, insect and rodent control, sewage and water disposal, rabies control, occupational health, and health and sanitation procedures.

**EMT2305 Clinical Practicum**

Hospital care of traumatic injuries, temporary dental care, taking patient history, physical examinations, diagnoses of specific diseases, use of laboratory tests to support diagnoses, supervision of medical care and medications, and skills required in remote duty areas.

**EMT2306 Emergency Service Management**

Introduction to emergency service management, and provision of health care in emergency services by recognizing life-threatening conditions and providing advanced life-support techniques, diagnosis and treatment of broad spectrum of conditions commonly encountered in an emergency service. Includes use of available resources to ensure optimal care for nonemergency conditions, management and operations of an emergency service.

**EMT2316 First Aid and Self-Help**

Identification and treatment of hemorrhage; shock; fracture and dislocations; burns; heat disorders; hypothermia; chemical and botanical poisons; snake, insect and marine-life bites under field conditions; and application of drug therapy, artificial respiration and heart massage.

**ENVIRONMENTAL MEDICINE****ENM1303 Epidemiology**

Terminology, detection and control of communicable diseases.

**ENM1305 Occupational Medicine and Industrial Hygiene**

Measurement of occupational health hazards and use of personal equipment to minimize exposure to radiation, respiratory and hearing hazards.

**ENM1308 Evaluation of Food-Handling Training and Sanitation**

Administration of programs designed to measure training of food-handling personnel and compliance of personnel and food-handling facilities with sanitation standards.

**ENM1310 Medical Entomology**

Theory of entomology and its importance in public health and transmission of diseases.

**ENM1311 Operational Entomology**

Epidemics, vector bionomics and vector-borne diseases as they affect military; surveillance, prevention and control of vector-borne diseases; and information, intelligence and field operations.

**ENM2302 Advanced Epidemiology**

Investigation, control and prevention of communicable diseases. Includes medical entomology, maintenance of public health standards and food safety.

**ENM2304 Advanced Occupational and Public Health Management**

Introduction to Food and Drug Administration food code, epidemiological concepts, occupational and public health principles and programs, management principles and trend analysis.

**ENM2306 Public Health Emergency and Disaster Operations**

Didactic and field training in public health preventive medicine for emergency and disaster operations. Emphasizes role of public health personnel in responding to disasters and complex humanitarian relief efforts; role of federal, state and local governments in contingency planning and operations; field supplies, equipment, sanitation and hygiene; chemical and biological monitoring and decontamination procedures; methods of ensuring safe food and water in field conditions; disease vector investigation and surveillance techniques; and site selection and setup.

**ENVIRONMENTAL SCIENCE****ENV1101 Environmental Awareness**

Environmental laws and regulations, forms and records, pesticide hazards and benefits, hazardous waste management characteristics, pollution prevention facts, compliance standards and documents, emergency planning, and spill response facts.

## COURSE DESCRIPTIONS

### ENV2101 Environmental Compliance

Environmental compliance, hazardous material, waste management, emergency planning, and spill response. Includes hazardous Communications Standard and National Environmental Acts and procedures to protect the environment and react to hazardous situations.

### EXPLOSIVES HANDLING & DISPOSAL



### EXP1101 Explosive Ordnance Disposal Apprentice - Phase I

Methods for performing explosive ordnance reconnaissance, ordnance identification procedures, access and recovery of unexploded ordnance, and disposal operations involving nonnuclear, chemical and biological ordnance.

### EXP1102 Explosive Ordnance Disposal Apprentice - Phase II

Methods and procedures for safe identification, recovery, evaluation, and disposal of all conventional and nuclear explosive ordnance. Includes placed,

projected and dropped munitions, and associated fuses; aircraft explosive hazards; guided missiles; and detailed instruction on recovery, evaluation and disposal of nuclear weapons.

### EXP1705 Nuclear Explosive Weapons Maintenance

Application of safety practices. Includes weapons maintenance, storage, handling, assembly, inspection and preparation for shipment.

### EXP1706 Explosive Ordnance Disposal Orientation

Explosive ordnance disposal mission and history. Includes associated mathematical formulas, munitions identification, publications, nonelectrical firing procedures, and base recovery and chemical operations.

### EXP2101 Advanced Explosive Ordnance Disposal

Management skills and operations training for explosive ordnance disposal craftsman. Includes base recovery after attack plans, emergency off-base response, explosive ordnance reconnaissance and environmental protection considerations.

## FAMILY SUPPORT CENTER

### FSC1102 Family Support Center Manager Qualification Course

Overview of quality of life changes in the Air Force and introduction to the principles of managing change in the Family Support Center function.

### FSC1103 Family Support Center Family Readiness Qualification Course

Principles of contingency planning. Includes crisis response to casualty situations, identification of coping strategies during separations and evacuations, stress management, and community resource collaboration.

## FINANCE

### FIN1107 Basic Accounting

Accounting principles with practice in preparing accounting reports and transactions, types of journals, posting to accounts, charting accounts, and preparation of vouchers, inventories and cash controls.

### FIN1108 Financial Management

Basic concepts of business law, contracting, finances, accounting, reporting, insurance and legal problems.

**FIN1109 Budgeting**

Planning, programming and budgeting system within the federal government. Includes the federal budget cycle, influence of foreign currency, fiscal control, management controls and reports, and fiscal year closeouts.

**FIN1113 Introduction to Financial Analysis**

Financial statement analysis. Includes preparation of financial statements, and horizontal, vertical and ratio analyses.

**FIN1116 Automated Accounting Systems**

Concept and operation of automated accounting systems. Includes analysis of source documents, system output, coding and processing of accounting transactions.

**FIN1119 Financial Planning**

Basic principles of financial planning. Includes development of fund requirements for personnel, nonpersonal services, materiel and travel budget functions.

**FIN1122 Introduction to Accounting and Finance**

Functions and responsibilities of accounting and finance systems used in governmental operations.

**FIN1123 Travel Pay Accounting**

Computation of travel allowances. Includes permanent change of station, dependent travel entitlements, dislocation, temporary duty, movement of mobile homes and leave accounting for travel-generated leave.

**FIN1124 Paying and Collecting Procedures**

Policies and procedures for payment and collection of funds. Includes pay agent and cashier operations, check payments, foreign payments, and accounting systems used for payment and collection functions.

**FIN1125 Military Pay Accounting**

Policies and procedures for military pay system. Includes determination of pay entitlements, deductions, allowances and leave; and preparation and control of military pay documents pertaining to each type of pay transaction.

**FIN1126 Government Funds and Systems**

Treasury funds and accounting systems used by DoD. Includes accounting structure and computer

codes, general governmental accounting system, general ledger accounting system and reporting procedures, and practical experience in addressing and posting internal accounting records, batch processing and nonremote direct input of data for accounting records.

**FIN2114 Automated Accounting**

Advanced computerized methods. Includes applications, data elements and codes, established records, remote operations, batch and interface processing, accounting and finance outputs, and system recovery procedures.

**FIN2115 Advanced Automated Materiel Systems**

Computerized materiel accounting system. Includes categories and sources of inventory, local procurement, disbursement transactions, issues, turn-ins, receipts of materiel, accounting and finance adjustments, system failure and recovery, and practical application to materiel systems.

**FIN2116 Cost and Economic Analysis**

Application of concepts and techniques of cost and economic trend analysis. Includes data collection methods; establishment of cost, performance and operational standards; and analysis of cost, fiscal and related accounting reports to develop cost and economic trends and performance indicators.

**FIN2119 Resource Management Accounting System**

Organization and functions of base-level accounting and finance office and various accounting systems used in base-level accounting.

**FIN2120 Automated Comptroller Systems**

Practical applications of automated systems used in government comptroller function. Includes information retrieval, data design and development. Emphasizes organizational structure, automated data programs acquisition and legal constraints.

**FIN2122 Advanced Accounts Control**

Management of major treasury funds. Includes analysis of authorization process, methods to control public funds, availability periods and status of appropriations, components in expenditure and collection accounting, general accounting procedures for receipts (general, special, trust), deposits and reimbursement (revolving, open), and refund accounts.

## **COURSE DESCRIPTIONS**

### **FIN2123 Advanced Pay**

Policies and procedures for payment of personnel. Emphasizes management functions and responsibilities associated with compensation systems. Includes terms of pay, deductions from pay, collections, leave accounting and management of quality assurance programs.

### **FIN2124 Advanced Travel Pay Accounting**

Accounting procedures applicable to travel pay entitlements.

### **FIN2133 Advanced Financial Analysis**

Cost and economic analysis, use of statistical techniques and communicative skills to support analytical efforts, support agreements, financial planning and management systems, status of funds, contingency operations, and management and supervisory responsibilities.

## **FIRE PROTECTION**

### **FIP1101 Basic Hazardous Materials**

General principles of hazardous materials. Includes recognizing and identifying hazardous materials, analyzing the incident, planning and implementing response, evaluating progress, and other competencies necessary to perform at awareness and operations levels of hazardous materials response.



### **FIP1804 Structural Firefighting**

Principles and techniques of structural firefighting. Includes identification and use of personal protective equipment, forcible entry, rescue practices, vehicle extrication, ladders and ventilation practices; and structural fire ground operations. Includes fire hose,

appliances and stream, salvage and overhaul, sprinklers, and practice in fire control.

### **FIP1805 Aerospace Vehicle Firefighting**

Aircraft fire response and firefighting principles. Includes aircraft and airport familiarization, rescue procedures, turret and pump operation, resupply of aircraft rescue firefighting vehicles, and live training fires on various aircraft.

### **FIP1807 Fire-Protection Fundamentals**

Fire-protection mission, organization and publications; occupational health and safety; quality principles; portable fire extinguishers; and fire ground basics, behavior, alarm communications center, and prevention and readiness. Includes fire-protection contingency responsibilities.

### **FIP2100 Advanced Fire Alarm Systems**

Operation and maintenance of fire alarm and suppression systems, and development of related inspection checklists. Includes practical experience in connecting, testing, troubleshooting, and repairing electrical and electronic portions of representative fire-detection, alarm and suppression systems.

### **FIP2101 Advanced Hazardous Materials**

Advanced principles of hazardous materials. Includes incident management system, hazardous materials mitigation, use of monitoring devices and other competencies necessary to perform as a hazardous materials technician or incident commander.

### **FIP2808 Fire Service Rescue**

Principles of rescue. Includes use of protective clothing and equipment, emergency first aid and rescue tools; aircraft fundamentals; building construction; egress system; pressure suits; and rescue vehicles and equipment.

### **FIP2810 Firefighting Vehicle Systems**

Inspection and operation of special-purpose vehicles. Includes fuel, electrical, air, hydraulics, heating and cooling, drive train assembly and firefighting systems; and operator maintenance on aircraft rescue firefighting and rescue vehicles.

### **FIP2815 Fire-Prevention Inspecting**

Advanced analysis of various functions of technical services branch of fire-protection organization. Includes building and facilities engineering and design criteria for

installed and portable fire-protection systems, funding and programming, and administrative and inspection procedures.

**FIP2818 Supervisory Firefighter**

Supervisory fire-protection duties and responsibilities. Includes firefighting tactics and strategies; command and control using incident management system, aircraft emergency entry, budgeting, manning and quality fire-protection programs; and extensive use of ground and simulator exercises for performance of various crew duties.

**FOOD & NUTRITIONAL SCIENCE****FNS1301 Basic Medical Food Service Administration**

Supervision and training of medical food service personnel, and security and maintenance of forms, records and medical materiel.

**FNS1302 Nutrition and Diet Therapy**

Principles of normal nutrition, metric system, food nutrients, and digestion and absorption. Includes recommended daily allowances, therapeutic nutrition, and professional and patient relationships.

**FNS2302 Advanced Nutrition and Dietetic Therapy**

Medical and dietetic terminology, nutrition, food nutrients, digestive system, recommended dietary allowances, applied clinical nutrition, patient interview and diet instructions.

**FNS2304 Nutritional Medicine Administration**

Nutritional medicine management and procedures. Includes menu planning and development, subsistence requirements, operating Nutrition Management Information System, nutritional medicine, and diet therapy.

**FOOD SERVICE****FDS1805 Introduction to Food Preparation**

Principles of and techniques on quantity food preparation. Includes meat, poultry and seafood identification, grading and preparation; cooking terms; seasoning agents; weights and measures; recipe conversions; and food quality.

**FDS1810 Food Service Techniques**

Methods and principles of food service techniques. Includes standard food service publications;

employee, customer, and contractor duties and relationships; sanitation; nutrition; preparation and use of subsistence records; accounting for meals served; storeroom procedures; and catering to flight and missile crews.

**FDS1811 Dining Hall Operations**

Operations of standard cafeteria facilities and meal preparation in central kitchen concept. Includes breakfast, lunch, dinner, and short order preparation and service.

**FDS2620 Food Facilities Management**

Administration of dining room facilities. Includes supervisory principles, organization of dining rooms and staff, interpersonal relations, customer relations, and food service principles.

**FOREIGN TECHNICAL LANGUAGE****FTL1401 Intermediate Technical Russian**

Application of technical vocabulary and language used to describe military equipment, operations and control procedures. Emphasizes development of skills necessary to translate oral communications and written materials. Prerequisite: resident language course or demonstrated proficiency.

**FTL1402 Intermediate Technical Chinese**

Application of technical vocabulary and language used to describe military equipment, operations and control procedures. Emphasizes development of skills necessary to translate oral communications and written materials. Prerequisite: resident language course or demonstrated proficiency.

**FTL1404 Intermediate Technical Vietnamese**

Application of technical vocabulary and language used to describe military equipment, operations and control procedures. Emphasizes development of skills necessary to translate oral communications and written materials. Prerequisite: resident language course or demonstrated proficiency.

**FTL1405 Intermediate Technical Spanish**

Application of technical vocabulary and language used to describe military equipment, operations and control procedures. Emphasizes development of skills necessary to translate oral communications and written materials. Prerequisite: resident language course or demonstrated proficiency.

## **COURSE DESCRIPTIONS**

### **FTL1406 Intermediate Technical Arabic**

Application of technical vocabulary and language used to describe military equipment, operations and control procedures. Emphasizes development of skills necessary to translate oral communications and written materials. Prerequisite: resident language course or demonstrated proficiency.

### **FTL1409 Intermediate Technical Korean**

Application of technical vocabulary and language used to describe military equipment, operations and control procedures. Emphasizes development of skills necessary to translate oral communications and written materials. Prerequisite: resident language course or demonstrated proficiency.

### **FTL1410 Intermediate Technical Hebrew**

Application of technical vocabulary and language used to describe military equipment, operations and control procedures. Emphasizes development of skills necessary to translate oral communications and written materials. Prerequisite: resident language course or demonstrated proficiency.

### **FTL1412 Intermediate Technical Persian-Farsi**

Application of technical vocabulary and language used to describe military equipment, operations and control procedures. Emphasizes development of skills necessary to translate oral communications and written materials. Prerequisite: completion of resident language course or demonstrated proficiency.

## **FUELS**

### **FUS1101 Fuels Fundamentals**

Introduction to fuels concepts and practices. Includes career ladder progression, security and fuels management; and use of Air Force publications, technical orders, Air Force Office of Safety and Health safety precautions, Air Force supply system and hazardous materials.

### **FUS1501 Fuel System Maintenance Laboratory**

Application of fuel system equipment. Includes manual valves, pumps, gauges, pipeline, hand and specialized tools, bonding and grounding, and fluids and hydraulics.

### **FUS1503 Hydrant System Maintenance**

Operation, inspection, and servicing of original and modified Panero and Pritchard hydrant systems. Includes loading and offloading facilities, filters and separators, gauges, valves, and strainers.



### **FUS1507 Fuel Subsystems (Mechanical)**

Operation, inspection and maintenance of fuel mechanical subsystems. Includes tanks, filtration equipment, meters, and loading and offloading equipment.

### **FUS1508 Specialized Fuel Systems and Tank Entry**

Identification of components of Type III Phillips system; motor vehicle fueling system; principles of troubleshooting, inspecting and operating; and procedures for tank entry and deactivating fuel systems.

### **FUS1509 Fuel Hydrant and Air-Transportable Systems**

Operation and maintenance of permanently installed hydrant and air-transportable systems. Includes Panero and Pritchard hydrant and application of hydrant

accounting relative to transferring, receiving, issuing and defueling.

**FUS1511 Aerial Bulk Fuel Delivery**

Principles of loading and unloading bulk fuel delivery systems used in cargo aircraft.

**FUS1602 Operation of Fuel-Servicing Vehicles**

Operation of various fuel-servicing vehicles, associated components and hose carts. Includes practice in driving and application of procedures used to service various aircraft with fuel and related expendables.

**FUS2503 Fuels Analysis**

Analysis of fuels. Includes color and particle assessment, matched weight monitor, undissolved water content of aviation fuels, heavy hydrocarbon contamination test, fiber determination, conductivity testing, bottle method, aircraft sump samples, flashpoint and fuels system icing-inhibitor testing.

**FUS2504 Air-Transportable Hydrant Refueling Systems**

Operation and maintenance of various air-transportable fueling systems that receive, issue and transfer fuel. Includes implementing petroleum product quality control procedures.

**FUS2601 Quality Control of Aircraft Fuels**

Application of quality assurance principles. Includes identification of contamination sources; sampling methods and use of equipment; laboratory hygiene and safety standards test intervals; and practice in testing for solids, water, conductivity, fuel system icing inhibitor, potential hydrogen odor and flashpoint.

**FUS2602 Fuel Storage Facilities Maintenance**

Application of complex maintenance techniques and repair procedures for filtration equipment, electrical controls, pumps and conventional hydrant fuel systems.

**FUS2603 Fuel Stock Fund Accounting**

Application of stock fund accounting principles. Includes facilities operation, inventory management, implementing administration procedures, quality assurance of facilities operation and implementing management information system using remote computer terminals.

**FUS2607 Fuels Management**

Application of advanced techniques for planning, organizing, directing, and coordinating fuels activities involving personnel, facilities and equipment.

**FUS2608 Petroleum Tank-Cleaning Supervision**

Supervision of tank-cleaning operations; tank acceptance, precleaning and safety equipment inspections; procedures for tank entry, cleaning and return to service; and analysis of tank preventive maintenance records and "as build" drawings.

**GEOPHYSICAL SCIENCES****GPS1402 Seismic Analysis**

Procedures and methods required to analyze seismic observations such as identification and application of seismic travel time charts and tables, event types, and distance ranges. Includes teleseismic, special, deep-event, regional, and near-regional and local analyses.

**GPS1403 Seismic Techniques**

Introduction to theories of earth's interior construction and physical properties. Includes seismic-wave propagation; theory and principles of longitudinal, transverse and Rayleigh wave generation; and transmission through and around the earth.

**GPS1404 Seismic Equipment Operation**

Introduction to seismic equipment and station operation. Includes station block diagrams, logs and routine forms, timing and signal subsystem theory and operation, oscilloscope operation and timing synchronization, seismic signal generation and transmission, and methods of signal amplification and control.

**GPS1406 Seismic Station Operation**

Practical application of seismic theory, observation, analysis and equipment. Includes equipment operation under simulated field conditions, data analysis and reporting, and station documentation.

**GPS1411 Scientific Technician Orientation**

Professional responsibilities of the scientific technician, selection and use of various publications, equipment and personal safety, and areas directly associated with scientific analysis.



## **COURSE DESCRIPTIONS**

### **GPS1412 Detection Systems**

Introduction to seismic, hydroacoustic and satellite detection systems. Includes operational characteristics and concepts.

### **GPS1413 Satellite Detection Systems**

Introduction to orbital mechanics and satellite equipment operations. Includes physics of orbit, conic sections and sensor theory.

## **GRAPHICS**

### **GRA1101 Visual Information**

Graphics, lettering, basic drawing and perspective; and applying basic illustrating techniques, reproduction methods and processes, visual communications, and graphic imaging.

## **HEALTH SERVICES ADMINISTRATION**

### **HSA1305 Health Care Management**

Introduction to medical computer systems, medical service account, documentation and communications management. Includes publications and forms management; collection of fees; and preparation of vouchers, medical expense and performance reporting system, report of patients and typed communications.

### **HSA1306 Patient Administration**

Introduction to interpersonal relations, admission and disposition of patients, maintenance of clinical and medical treatment records, release of medical information, eligibility for medical care, quality assurance and risk management, and medical terminology.

### **HSA2001 Resource and Information Management**

Operation and function of resource management office. Includes analysis of medical manpower standards, management of medical expense and performance reporting system, quality procedures, methods improvement, correspondence management, report of patients, and controls and procedures for patient valuables.

### **HSA2313 Hospital Administration**

In-depth study of components of health care delivery system. Includes organization and structure; understanding concepts, processes and techniques

used in health administration; and behavior theory applicable to work environment.

### **HSA2314 Medical Expense and Performance Reporting**

Terminology, personnel utilization data, collection, expense assignment and coding systems used in the management of medical resources.

## **HEATING, AIR-CONDITIONING & REFRIGERATION**

### **HAR1105 Refrigeration and Air-Conditioning Systems**

Fundamental principles for operating, maintaining and troubleshooting the following systems and components: refrigeration, air-conditioning, pneumatic, electronic and electrical controls, dampers, air handlers, fan units, dehumidifiers and humidifiers, evaporators, generators, condensers, air compressors, water pumps, refrigeration lines, filters, water chillers, cooling towers, ventilation systems, control center, launch duct, computer room air-conditioning systems, and air balancing.

### **HAR1106 Domestic and Commercial Refrigeration**

Maintenance, troubleshooting and repair of cold storage and small commercial systems. Includes cooling towers, evaporative condensers, water pumps, and air-compressing equipment with electrical, electronic, pneumatic, motor controls and devices.

### **HAR1108 Pneumatic Controls**

Control fundamentals and devices, and calibration and adjustment of controllers. Includes connecting, adjusting, and operating pressure selectors and cumulators; installation and calibration of transmitters and receiver controllers; and application of system accessories such as airflow instruments, air driers and sensors.

### **HAR1109 Electrical and Electronic Controls**

Fundamentals of electrical and electronic control operation and application; and installation, adjustment, troubleshooting, and maintenance on electrical control circuits, sensors, controllers and control devices. Includes cybernetics and energy monitoring control systems.

### **HAR1110 Environmental Systems**

Principles of environmental systems. Includes operation and maintenance of chillers; heat recovery, hydraulic cooling water and steam boiler systems; air handlers; exhaust fans; and purge air system.

**HAR1111 Air-Conditioning and Refrigeration Fundamentals**

Basic operation, maintenance, troubleshooting, and repair of air-conditioning and refrigeration equipment. Includes use and care of tools, fabrication of refrigeration lines, application of soldering and brazing techniques, physics, refrigeration components, accessories, and compressor checks.

**HAR1113 Heating Systems**

Operation and maintenance of heating systems. Includes low- and high-temperature water and steam; oil and gas-fired space heaters and burners, warm-air and water heating systems, water heaters, coal burning equipment, and water treatment.

**HAR1115 Heating, Air-Conditioning and Refrigeration Contingency Training**

Heating, refrigeration and water treatment equipment associated with contingency operations. Includes miscellaneous support equipment, international electrical systems and contingency responsibilities of civil engineering personnel.

**HAR2102 Refrigeration Maintenance Laboratory**

Advanced installation, servicing, repair, and maintenance of ventilating, refrigeration and air-conditioning equipment. (May be repeated for credit on various refrigeration and air-conditioning systems.)

**HAR2103 Automotive Air-Conditioning**

Operation, service, inspection and maintenance of automotive air-conditioning systems.

**HAR2105 Liquid Oxygen Storage Tank Maintenance**

Operation and maintenance of liquid oxygen storage tanks; and use of special test equipment to analyze malfunctions, bench test and repair storage tanks.

**HAR2106 Oxygen and Nitrogen Plant Components**

Advanced operation and maintenance of oxygen and nitrogen plant components and support equipment. Includes prime movers; air compressors; air-purification, refrigeration and air separator systems; cryotainers; gas storage cylinders; purity testing; and quality control.

**HAR2107 1.5-Ton Oxygen and Nitrogen Plant Operation**

Principles of plant operation. Includes concepts of flow controls and inspections and maintenance of expansion engines.

**HAR2108 Industrial and Indirect Expansion Systems**

Theory of operation; determining equipment operation efficiency; maintenance and troubleshooting package liquid chiller, centrifugal, and absorption air-conditioning systems and cascade applications; and adjustment of related equipment controls.

**HAR2110 Heating, Ventilation and Air-Conditioning System Control**

Advanced operation, maintenance, and troubleshooting techniques for pneumatic controls to include their transmission system and components, electric, and electronic controls; analysis of thermodynamics and psychometrics on equipment design; and schematics and use of calibration equipment on various system configurations.

**HAR2111 Advanced Air-Conditioning and Refrigeration**

Application of physics in refrigerant, refrigeration cycle characteristic and system component applications, brazing and soldering techniques; and system maintenance procedures.

**HEAVY EQUIPMENT OPERATION**



**HEO1601 Pavement and Construction Equipment Operator**

Introduction to rigid and flexible pavement construction and maintenance, fencing, snow and ice control, welding, drainage structures, career field structure, contingency responsibilities, quality management, and safety; and operating techniques and operator-level

## **COURSE DESCRIPTIONS**

maintenance for various types of construction equipment. Includes sweepers, tractor-trailers, 5-ton dump trucks, loaders, industrial tractors, graders, backhoes, dozers, distributors and pavers.

### **HISTOLOGIC TECHNOLOGY**

#### **HIT1101 Histology**

Study of human organs and tissues for developing histotechnological skills. Emphasizes recognition, composition and functions of organs and tissues; and autopsy, surgical and cytological procedures.

### **HOTEL MANAGEMENT**

#### **HTM1101 Consumer Services Management**

Management responsibilities and policies in functional areas of military exchange services and commissary, billeting, linen exchange, laundry, and dry cleaning operations. Includes facility utilization, merchandising, retail sales, funding and concession operations associated with each functional area.

### **HYPERBARIC MEDICINE**

#### **HBM2301 Hyperbaric Chamber Operations and Maintenance**

Hyperbaric chamber design, operation, and maintenance and facility safety codes.

#### **HBM2304 Hyperbaric Training for Health Care Technicians**

Physiological problems associated with diving and decompression procedures; management and treatment of decompression sickness; arterial gas embolism; management of gas gangrene, carbon monoxide poisoning and disorders treated with hyperbaric therapy; and hyperbaric chamber operation and safety procedures.

### **INTELLIGENCE**

#### **ITL1101 Intelligence Fundamentals**

Mission and organization, intelligence cycle, libraries, administration and data-handling systems. Emphasizes recognition of document security, operations security and communications security.

#### **ITL1102 Analysis and Reporting of Intelligence Data**

Identification of essential elements of information, selection of reporting vehicle, and production of concise, timely and technical summaries.

#### **ITL1103 Intelligence Operations Lab**

Comprehensive laboratory of intelligence operations scenarios.

#### **ITL1104 Basic Morse Code**

Recording international Morse code, typing and computer keyboard familiarization, theory of radio wave propagation, radio communications, and operational security. Includes recognition and reporting of various types of distress signals.

#### **ITL1105 Morse Interceptor**

Interception, copying and processing transmissions keyed in international Morse code. Includes computer-based recording, storing and forwarding; transcribing signals through varying degrees of interference; frequency search missions; frequency measurement; and maintenance of operation logs.

#### **ITL1201 Airborne Intelligence Operations**

Procedures relating to airborne command, control and communications. Includes pre-mission preparation, aircraft system operation, mission objective orientation, crew coordination, airborne battle staff support for electronic combat, weapons systems, and targeting and postmission operations.

#### **ITL1301 Aircrew Intelligence Training**

Aircrew intelligence using available resources and presentation media to present aircrew intelligence training in evasion and escape, survival and rescue, and enemy capabilities.

#### **ITL1401 Electronic Signal Exploitation**

Analysis of electronic signals to obtain electronic intelligence. Includes technical documents, computerized data for management and analysis, and potential for electronic intelligence usage in electronic combat.

#### **ITL1402 Radio Communications Analysis**

Computerized data in analysis of radio communications network administration. Includes determining network organization, operation and types of related communications.

**ITL1404 Signals Analysis**

Use of oscilloscope and sonograph for specific purpose of radio signal analysis, and analyzing, identifying and recording communications.

**ITL1501 Orientation to Imagery Interpreters**

Various forms of imagery, photographic, space radar and advanced sensor systems; fundamental interpretation of various imagery forms to determine significant cultural and manmade points of reference; and use of related equipment types to assist in evaluation process.

**ITL1502 Imagery Radar Interpretation**

Operational theory and types of radar and imagery systems, determination of radar significant cultural and manmade features, and use of related equipment types to assist in evaluation process.

**ITL1503 Photographic Interpretation I**

Analysis of photographs to determine structural characteristics of industrial transportation, power and housing facilities.

**ITL1506 Automated Imagery Interpretation**

Use of computer-assisted tactical information system to enhance imagery interpretation capability. Includes management, querying system database and generating interpretation reports.

**ITL1507 Photographic Interpretation II**

Photographic interpretation of military facilities and equipment. Includes analysis of capability, activity and camouflage, and concealment and deception techniques.

**ITL1601 Mission Planning and Support**

Target determination and analysis of threat parameters, and selection and plotting of mission tract using all available intelligence data.

**ITL1602 Conventional Weapons Application**

Use of computer-assisted weaponeer data, target analysis and knowledge of delivery systems to solve weapons application problems.

**ITL1903 Target Materials Management**

Indexing, maintaining and issuing target materials to fulfill unit intelligence and mission requirements; and use of reference documents and procedures to keep materials current.

**ITL2401 Voice Intelligence Collection**

Aural recognition and comprehension of foreign language voice communications, recognition and communications procedures, and weapons systems parameters unique to various nations.

**ITL2402 Airborne Intelligence Collection**

Application of operational procedures relating to collection of communications and electronic intelligence. Includes ground reparation; aircraft system components to include interphone equipment, keyboard equipment and operation; briefing on emergency procedures; and performance of preengagement, engagement and postengagement operations.

**ITL2504 Multisensor Analysis**

Multispectral analysis of designated system capabilities to counter specific DoD intelligence problems. Includes special operations, denial and deception, low-intensity conflict, and possible solutions.

**ITL2505 Theory and Fundamentals of Electromagnetic Spectrum Sensors**

Electromagnetic spectrum and light table orientation: and theory; operation and parameters of electro-optical, infrared, radar and multispectral systems.

**ITL2506 Exploitation Support Data**

Imagery interpretation and analysis to support DoD-designated intelligence problems using imagery titling and exploitation support data with mensuration techniques.

**INTERNSHIP****INT3000 Internship - Apprentice**

Successful completion of apprentice training requirement of Air Force dual channel on-the-job training (OJT) program. Includes completion of career field fundamentals and basic principles through technical training, demonstration of job proficiency of task outlined in specialty training standard, and supervisor's recommendation for advancement to apprentice level.

**INT5000 Internship - Journeyman**

Successful completion of fully skilled journeyman training requirements of Air Force dual channel OJT program. Includes a minimum of 6 months' satisfactory experience at apprentice level, completion of comprehensive Air Force career development course

## **COURSE DESCRIPTIONS**

with a closed-book proctored examination or other approved written training materials needed to increase knowledge of career field beyond apprentice level; minimum of 12 months' satisfactory full-time performance in a journeyman specialty, and supervisor's recommendation for advancement to journeyman level.

### **INT7000 Internship - Craftsman**

Successful completion of craftsman training requirements of Air Force dual channel OJT program. Includes a minimum of 18 months' satisfactory full-time performance in a craftsman specialty, comprehensive Air Force career development course with a proctored closed-book examination on skill area and/or management requirement and/or formal craftsman training, completion of management training through airman leadership school, and supervisor's recommendation for advancement to craftsman level.

## **LAW ENFORCEMENT**

### **LAW1801 Marksmanship Laboratory**

Qualification training in use of revolvers, shotguns, automatic handguns and rifles. Includes nomenclature, capabilities and characteristics of specific weapons; operator care, cleaning and maintenance procedures; application of marksmanship fundamentals; weapons safety practices; analysis of force policies; clearing procedures and function checks; and ammunition types and uses.

### **LAW1803 Fundamentals of Law Enforcement**

Legal and procedural aspects of police operations, physical apprehension and restraint techniques, searches and seizures, procedures for lawful apprehensions, patrol operations to include enforcement of traffic laws, operation of speed detection equipment, resource protection, emergency first aid, weapons safety, arming and use of force, confrontation management, antihijacking and accident scenes, crisis intervention, and antiterrorism and airbase ground defense operations.

### **LAW1850 Patrol Dog Training Techniques**

Training and conditioning techniques used to prepare both military working dog and handler to work effectively as a team. Includes operant conditioning, dog obedience, controlled aggressiveness, health

checks and first aid for dogs, and maintenance and care of dog, kennel and associated support equipment.

### **LAW1851 Patrol Dog Operations**

Specialized training techniques designed to prepare military working dog team to perform a variety of police functions. Includes vehicle and foot patrols; tracking, detecting and alerting; area searches; gunfire conditions; concepts of utilization (airbase ground defense, security, law enforcement duties); and preparation and maintenance of required records, reports and forms.

### **LAW2801 Patrol Dog Detection Techniques**

Specialized training techniques that prepare military working dog handlers to perform drug and explosive detection operations. Includes dog conditioning, drug and explosive identification and detection, and legal aspects of searches and seizures.

### **LAW2811 Traffic Planning and Management**

Analysis of police traffic functions and services, traffic patterns, and traffic movement in response to emergency situations. Includes theory of traffic control and safety procedures, analysis of traffic trends and accident causes, preparation of reports and records, traffic engineering and control techniques, research and development, and use of speed-measuring devices and breathalyzer units.

### **LAW2815 Fundamentals of Special Investigations I**

Analysis and application of special agent responsibilities. Includes ethical standards, prosecutory jurisdiction, investigative thought process, apprehension policies and preparation of investigative plan, detachment and individual operations, surveillance, professional liaison, and use of spot reports, case briefings and reports of investigation.

### **LAW2816 Military Law**

Analysis of history and evolution of military law and military justice system with special emphasis on *US Constitution*, *Uniform Code of Military Justice* and *Manual for Courts-Martial*; and application of rules of evidence and legal aspects of apprehension, search and seizure regarding suspect's constitutional rights and legal and procedural aspects of court testimony.

### **LAW2817 Behavioral Science Study of Sources and Interviews**

Analysis of techniques and psychological aspects of interviewing. Emphasizes interrogation process that

includes preparation for interviews and interrogations, administering oaths, use of interrogation techniques, appreciation of the relationship between investigator's attitude and effective interviews, and postinterview and investigation requirements.



### **LAW2818 Investigative Techniques**

Application of methods and techniques used to conduct investigations and covers photographic and scientific aids to investigation. Includes practical exercises in observation and description; surveillance; collection and preservation of evidence; apprehension, search and seizure; crime scene searches; and firearms training.

### **LAW2821 Counterintelligence Investigations**

Analysis of historical development of intelligence services and threat, structure and tactics of hostile intelligence services. Includes explanation of terms, policies, elements of proof, special investigative techniques concerning sabotage, security violations, special inquiry cases, protection of dignitaries, and direction, collection, analysis and dissemination phases of intelligence collection cycle.

### **LAW2824 Principles of Traffic Accident Investigation**

Analysis and application of advanced techniques used to gather facts and determine causes of traffic accidents. Includes review of traffic safety procedures; preparation of field sketches, diagrams, and traffic violation and accident investigation reports and forms; and techniques used to teach traffic accident investigation to other policemen.

### **LAW2836 Military Working Dog Supervisors**

Advanced training for military working dog supervisors in preparation for positions as kennel masters. Includes management of military working dog sections; maintenance and care of dog, kennel, and associated equipment; and conditioning, proficiency training and use of dog teams.

### **LAW2838 Locks and Locking Devices**

Assembly and disassembly procedures for common types of locks and locking devices as applied to advanced security vulnerability investigations.

### **LAW2842 Advanced Special Investigations**

Responsibilities, jurisdiction and interagency relationships with federal investigative agencies. Includes collection and dissemination of counterintelligence information; legal processes pertinent to evidence; legal rights of the accused; apprehension, search and seizure; methods of interviewing and interrogating; report preparation and processing of case files; and communicative skills.

## **LEADERSHIP, MANAGEMENT & MILITARY STUDIES**

### **LMM1101 Leadership and Management**

Leadership role and responsibilities of journeymen; theories, techniques, and practical application of leadership and followership; supervision; management; stress management; problem solving; concepts of human behavior; standards of discipline; effective counseling techniques; evaluation of enlisted personnel; and current social issues.

### **LMM1102 Managerial Communications**

Principles of oral and written communications for airmen, theories and concepts of communications, factors influencing communications process, and speaking techniques such as oral presentations, and principles of effective writing.

### **LMM1103 Military Studies**

Organization, mission and history of Air Force, dress and appearance, drill and ceremonies, customs and courtesies, respect for flag, military deterrence, democratic process, code of conduct, and personal readiness.

## **COURSE DESCRIPTIONS**

### **LMM2121 Leadership and Management II**

Role and responsibilities of craftsman and supervisor. Includes concepts of human behavior; standards of discipline, effective counseling techniques, methods of orienting new personnel, principles of motivating individuals within groups, evolution of management theory, personnel management skills, and applied problem-solving techniques in management, social relations and labor relations.

### **LMM2122 Managerial Communications II**

Principles of oral and written communications applicable to technician and supervisor. Includes planning and organizing for effective communications by applying principles and theories of oral presentations, analyzing methods for improving listening, lessening barriers to effective communications, and effective writing principles.

### **LMM2123 Military Studies II**

Organization and mission of the Air Force, military justice system, and relationship of US foreign and domestic policies to military readiness.

### **LMM2124 Quality of Life**

Introduction to management of quality-of-life issues. Includes counseling of subordinates on importance of physical fitness, suicide awareness, human relations, management of human resources, stress management, and introduction to hazards of tobacco usage and substance abuse.

### **LMM2131 Leadership and Management III**

Senior noncommissioned officer responsibilities for managing military resources using selected leadership and management theories, concepts, techniques, and skills necessary to maintain order and discipline. Includes roles and views of human resources in management hierarchy and methods for improving worker performance through analytical decision making.

### **LMM2132 Managerial Communications III**

Advanced practical experience in communications through written and oral reports on various military topics.

### **LMM2133 Military Studies III**

Elements of international relations, national policy and employment of military force in achieving

objectives over a broad range of circumstances.

Includes international relationships and role of national security organizations, particularly the US Air Force, in achieving national objectives and application of USAF and joint forces in various military environments, past and present.

### **LMM2134 Organizational Theory and Behavior**

Organizations and their structure and intensive examination of important behavioral processes, and theories discussed in terms of behavioral, technological and communications factors. Includes organizational norms, conflict, motivation, self-concept, values, stress and interpersonal relations.

## **LEGAL SERVICE**

### **LEG2103 Legal Administration**

Law library, legal office automation, pretrial administration and posttrial procedures. Includes relationship with attorneys and clients.

### **LEG2104 Claims Investigation**

Fundamentals of Military Claims Act and Federal Tort Claims Act, techniques of investigating incidents and accidents, and legal procedures for claims. Includes special research assignments relevant to transportation, recovery, hospital damage, government property and admiralty claims.

### **LEG2105 Military Justice**

Pretrial procedures, evaluation of evidence, confessions and searches, appellate review, nonjudicial punishment, automated military justice analysis management system, posttrial matters, records of trial, actions of convening authority, court-martial orders and recent developments in military justice.

### **LEG2106 Civil Law**

Practical knowledge of administrative separations, personnel claims, transportation recovery claims, general claims, tort litigation, claims administrative management program, nonappropriated funds, private associations and legal assistance.

### **LEG2107 Legal Office Management**

Law library management, legal research, staff judge advocate and noncommissioned officer-in-charge relations, office budgets, on-the-job training, USAF judiciary, human relations, paralegal utilization, and practical exercises for effective oral and written

communicative skills and civil service employee matters.

**LEG2108 Legal Claims and Tort Litigation**

Procedures for processing general claims and tort litigation. Includes approving authority actions, emergency and advanced payments, prohibited acts, Article 139 (*Uniform Code of Military Justice*) claims, personnel and transportation claims, Military Claims Act, foreign and international agreement claims, Federal Tort Claims Act, and other claims.

**LOGISTICS**

**LOG1101 Introduction to Supply Management**

Organizational structure and functions, definitions, terminology, basic concepts and processes of Air Force supply system.

**LOG1102 Introduction to Logistics Planning**

Logistics principles, practices and techniques. Includes career progression, logistics module, wartime and contingency planning, logistics command and control, support agreements, and deployment management.

**LOG1602 Stock Control**

Maintenance of proper stock levels. Includes practical exercises in requisitioning, materiel control, monitoring requirements, due-out releases and shipments.

**LOG1603 Equipment Management**

Management of equipment allowances and authorizations. Includes practice in turn-in procedures, records maintenance and special procedures.

**LOG1608 Stock Fund Management**

Management and control of inventories; analysis of stock fund management reports and listings; interrelationships of accounting and finance, base supply and supported organizations; relationship of stock fund transactions and monetary records; satellite procedures; reporting procedures; interface of accounting and finance and supply computer records; and preparation of general support operating program.



**LOG1609 Introduction to Medical Materiel**

Introduction to supply discipline. Includes principles and concepts of property accounting by computer systems, and use of medical materiel publications and computer terminals.

**LOG1611 Medical Stock Control**

Stock control procedures peculiar to medical materiel. Includes issues, inventory control, requisitioning, maintenance of due-in and due-out files, and receipts resulting from requisitions.

**LOG1612 Medical Asset Management**

Principles of storage and warehousing. Includes potency dated items, controlled medical items, quality assurance, inventory stratification, turn-ins, disposition of medical materiel, physical inventories and quality control after daily processing cycle.

**LOG2101 Advanced Logistics Planning**

Advanced logistics planning techniques. Includes wartime and contingency planning, logistics command and control systems, and deployment management.



## **COURSE DESCRIPTIONS**

### **LOG2601 Introduction to Planning and Programming**

Introduction to logistics planning techniques. Includes types of plans, composition of plans, mobility planning and logistics center operation.

### **LOG2602 Automated Logistics Plans Management**

Advanced techniques, principles, functions, and methods of entering data into and retrieving data from a computer for logistics plans. Includes data maintenance procedures, methods, and purposes as well as uses of retrieved data and computer output products.

### **LOG2603 Logistics Management**

Management practices that ensure effective and economic accomplishment of group and project objectives of entire field of logistics.

### **LOG2604 Electronic Communications Programs Management**

Principles of planning, programming and implementing electronic communications systems. Includes techniques and procedures for determining manpower and budgetary requirements, construction planning at all levels of command, monitoring program implementation, managing systems and records, and administering minor changes to ongoing programs.

### **LOG2605 Supply System Management and Analysis**

Understanding supply computer system, customer support procedures, materiel management, financial management and supply management analysis. Includes extensive use and analysis of management reports and listings.

### **LOG2606 Mission of Medical Materiel Management**

Mission objectives, organization and responsibilities of medical materiel function. Includes property responsibility and supply discipline, concepts and principles of automatic data processing, quality assurance, turn-ins, reserve assets inventory, inventory adjustments, property disposition, quality control, and corrective actions.

### **LOG2607 Data Records and Document Control**

Establishing, revising and updating master record; catalog change actions; validation of records; computer products; and maintenance of document files.

### **LOG2608 Medical Equipment Management and Budgeting**

Medical equipment management, repair and budgeting.

### **LOG2619 Munitions Inventory Procedures**

Explosive munitions supply system and security handling and storage. Includes maintenance support, property accounting, files maintenance and nuclear ordnance commodity managed asset manual accounting; and concepts and procedures for issue, turn-in, shipping, receiving, stock replenishment, inventory control and supply discipline.

### **LOG2620 Contingency and Wartime Support**

Strategic materiel management during wartime contingencies. Includes wartime processing procedures, and manning and reporting actions using concepts from combat supply management and weapon system management information systems, and combat follow-on supply systems using war reserve material, deployable assets and war-readiness spares kits.

### **LOG2622 Contingency Wartime Planning**

Introduction to contingency wartime planning and basics of Air Force planning. Includes players, resources, plan development, execution, analysis, force selection, support planning, operational plan development and base support planning.

## **MACHINIST**

### **MAC1101 Machine Shop Fundamentals**

Fundamentals of machine shop operations. Includes shop mathematics and problem solving, care and use of precision measuring devices, construction and interpretation of shop drawings and sketches; use of shop data; manufacturing parts; layout operations; fitting, assembly and disassembly of machine parts; operation and maintenance of general shop equipment; hazardous and toxic waste management; and safety.

### **MAC1102 Tool Design**

Tool design methods, fabrication techniques, machine preparation, and use of special tools, jigs, fixtures and attachments. Includes contour machines, power cutoff saws, precision and surface grinding operations, and identification and selection of metals from drawings.

### **MAC1104 Milling Operations**

Milling operations within drawing specifications. Includes plain and face, angular, form, gear cutting, internal milling operations and adjustment, maintenance,

storage, and cleaning of milling equipment and attachments.

**MAC1105 Lathe Operations**

Lathe operations within drawing specifications. Includes turning (straight, shoulder, taper), filing, parting, knurling, boring, external and internal threading, tool grinding, center alignment, facing and center drilling, drilling, and reaming.

**MAC2101 Intermediate Computer Numerical Control**

Intermediate-level computer numerical control machine operations in computer-aided manufacturing. Includes technical mathematics, programming and multidimensional milling techniques.

**MANAGEMENT & SUPERVISION****MGT1100 Fundamentals of Human Relations**

Interpersonal relations, values, problem solving, individual and group behavior, labor relations, and orientation to management process.

**MGT1108 Data Collection and Analysis**

Collecting and extracting data from man-hour reporting systems, vehicle integrated management system documentation, on-equipment and off-equipment maintenance transaction reports, and preparing data for statistical analysis.

**MGT1109 Overview of Maintenance Systems Analysis and Scheduling**

Maintenance concepts, policies and procedures. Includes career progression, security, publications, Air Force supply system, safety precautions, and Air Force Occupational Safety and Hazard program.

**MGT1110 Introduction to Maintenance Scheduling**

Introduction to time compliance technical order system; responsibilities and duties of various organizations connected with maintenance activities; automated products, time cards, slides, logs, and records to plan, schedule, track and/or report maintenance actions. Emphasizes use of computer terminal.

**MGT1116 Maintenance Management**

Management responsibilities for maintenance and maintenance production activities, system concepts

and responsibilities, inspection concepts, and various centralized and decentralized maintenance activities.

**MGT2107 Integrated Management System**

Advanced organizational and functional responsibilities; system description and operation; data input documentation and conversion; file update; determining data maintenance procedures, methods and purposes; and use of retrieved data and computer output products.

**MGT2114 Vehicle Integrated Management System**

Automated management system, procedures for data input, maintenance file update, maintenance data retrieval, and use of performance indicators on daily, weekly and monthly computer products to determine vehicle maintenance effectiveness.

**MGT2116 Production Control Management**

Production control management techniques. Includes interpreting work requirements, planning duties, controlling work requests and applying material management techniques.

**MGT2120 Engine Manager**

Advanced preparation for a base engine manager position. Includes data processing fundamentals; specific data for loading, updating and maintaining comprehensive engine management system; recovery procedures; and use of remote terminal devices.

**MGT2206 Maintenance Control and Analysis Craftsman**

Controlling maintenance scheduling, and analyzing and reporting vehicle and equipment status. Includes troubleshooting system errors using the on-line vehicle integrated management system, applicable software and related publications.

**MGT2212 Advanced Maintenance Management**

Detailed analysis of vehicle maintenance structure. Includes supervisory responsibilities, self-inspection system, maintenance programs, material and maintenance control functions, environmental awareness, and requirements for manpower, budgeting, mobility, contingencies and training.

**MGT2600 Management Applications, Functions and Techniques**

Management principles and techniques, organizational assessment skills, supervisory and leadership techniques, and application of principles to planning and scheduling use of resources.

## **COURSE DESCRIPTIONS**

### **MGT2601 Maintenance Systems Management**

Concepts, data systems, creating reports, forecasting manpower requirements, scheduling aerospace vehicle and equipment needs, and managing supply forms and producing generation flow plans, maintenance plans and engine tracking procedures.

### **MGT2963 Electronic Communications Programs Management**

Introduction to principles of planning, programming and implementing electronic communications systems. Includes techniques and procedures for determining manpower and budgetary requirements, construction planning at all levels of command, monitoring program implementation, management of systems and records, and administration of minor changes to ongoing programs.

### **MGT2964 Advanced Communications-Electronics Maintenance Management**

Techniques and concepts of electronic communications system maintenance and personnel management. Emphasizes required documentation and publications, understanding configuration controls, hardware quality control and tracking, support resources, hardware engineering and installation, organizational design specifications, mobile communications systems, wide-area network usage, command and control systems, unique functional organizations and mission needs, and personnel training and supervision.

## **MAPPING**

### **MAP1401 Introduction to Cartography**

Maps and charts, geographic coordinates, world geographic reference system coordinates and universal transverse Mercator coordinates. Includes determination of true and magnetic courses.

## **MARKSMANSHIP**

### **MKS1101 Marksmanship Laboratory**

Qualification in use of handguns, shotguns, rifles, machineguns and grenade launchers. Includes basic nomenclature, capabilities and characteristics of specific weapons; operator care, cleaning and maintenance procedures; application of marksmanship fundamentals, weapons safety and clearing procedures; and ammunition types and uses.

### **MKS1102 Firearms Maintenance**

Operation and maintenance of handguns, shotguns, rifles, machineguns, mortars and grenade launchers. Includes safety procedures, technical order indexes and detailed disassembly and assembly; functioning cycle and causes of malfunctions; visual and nondestructive mechanical inspections; repair, replacement and adjustment of firearm components; and use, care and handling of special tools associated with firearms.

### **MKS1103 Firearms Instructor**

Fundamentals of teaching to emphasize proficiency in specialized skills such as technical course writing, tests and measurements, programmed instruction, instructional system development and academic counseling. Includes learning process, effective study methods and audiovisual aids such as single-concept films and automated teaching systems, dry and live fire supervision, coaching, and firearms range operation and safety.

## **MATHEMATICS**

### **MAT1103 Introduction to Statistics**

Principles of frequency distribution and computing and interpreting probability, discrete and continuous probability distributions, binomial formulas, and probability tables; and statistical methods to emphasize variance analysis, correlation procedures, standard deviation and correlation programs.

### **MAT1104 Applied Algebra and Trigonometry**

Algebraic functions and their graphs. Includes polynomials and complex numbers, circular functions, solution of triangles, and trigonometric functions and their graphs.

### **MAT1405 Spectrum Analysis Mathematical Applications**

Basic mathematical functions used to determine emission symbols as applied to spectrum management. Includes square root, exponents, plain and solid geometry, and basic algebraic and trigonometric functions.

### **MAT1601 Electronic Mathematics**

Mathematic principles and its application to electronics. Includes algebraic expressions, solution of equations, word problems and trigonometric functions.

**MAT2103 Applied Statistics**

Application of statistical techniques and principles to maintenance, manpower or general management data. Includes statistical inference, trend analysis, hypothesis testing, tests for significance, correlation coefficients, and statistical analysis and application of such statistical techniques as T-Test, Chi-Square, Cochran C Test and Spearman Rank Correlation Coefficient.

**MEASUREMENTS****MEA2707 Optical Measurements**

Theory of geometry of reflection and refraction. Includes lens system, optical tooling instruments, and optometric and special devices.

**MEA2710 Electronic Measurements**

Time and frequency measurements. Includes practice in phase, distortion and frequency measurements; waveform analysis; and use of oscilloscope calibrating equipment.

**MEA2716 Precise Time and Frequency Calibration Systems**

Advanced precise time and frequency calibration. Includes measurements, standards and time-transfer methods.

**MEA2717 Microwave Theory and Application**

Theory of microwave measurements, microwave mathematics, transmission lines, signal generators, laboratory equipment, microwave impedance concepts and microwave systems analysis.

**MEA2718 Fixed-Frequency Microwave Measurements**

Advanced fixed-frequency microwave power measurement, attenuation measurement and spectrum analysis.

**MEA2720 Applied Physical Measurements I**

Introductory physical, linear, and angular measurements and their technical applications.

**MEA2721 Applied Physical Measurements II**

Principles of physical measurements. Includes temperature, mass weight, force density, viscosity and flow, and pressure measurements.

**MEA2722 Applied Physical Measurements III**

Principles of physical measurements. Includes rotary motion, torque, humidity, sound and vibration measurements.

**MEA2724 Engine Measurement Systems**

Theory, operation, alignment, and calibration of jet engine equipment and test stands. Includes theory and calibration techniques using block diagrams.

**MECHANICAL MAINTENANCE****MEC1211 Maintenance Orientation**

Mechanic responsibilities and maintenance concepts. Includes professional responsibilities of technician; maintenance management and inspection systems; selection and use of manufacturer's technical data, maintenance records and forms; and safety.

**MEC1507 Mechanical Fundamentals (Missile Complex)**

Knowledge of principles of mechanics. Includes configuration of a missile complex, use and care of hand tools, security, weapons system operational capabilities, technical orders, civil engineering manuals, maintenance management and missile safety.

**MEC2208 Ground Heater Maintenance**

Application of advanced principles, theory and operation of ground heaters. Includes service inspections, operating procedures, safety precautions, trouble isolation and repair of system components. (May be repeated for credit on various ground heaters.)

**MEC2213 Diesel Engine Overhaul**

Advanced diesel engine maintenance. Includes disassembly, inspection and maintenance of engine components; and reassembly, and servicing and operational checks.

**MEC2501 Diesel Generator Maintenance Laboratory**

Troubleshooting, repair and maintenance of diesel-powered generating equipment.

**MEC2504 Maintenance of Aircraft Arresting Systems**

Theory and practical training in operating principles and maintenance of friction and hydraulic arresting mechanisms used in modern aircraft arresting systems. Includes training on engaging and arresting mechanisms.

## **COURSE DESCRIPTIONS**

### **MEC2505 Advanced Gas Turbine Engine Maintenance Laboratory**

Theory and maintenance procedures applied to specific auxiliary gas turbine engines. Includes theory of operation, air and fluid flow, control features and inspection, trouble isolation, and servicing, testing and installation procedures.

## **MEDICAL ASSISTANT**

### **MED1301 Introduction to Medical Assisting**

Preventive, occupational and disaster medicine; hearing conservation programs; clinical procedures; office file maintenance; and ordering and management of office supplies and materials.

### **MED1302 Medical Assisting**

Techniques for preparing, examining and treating patients; patient relationships; basic pharmacology; assisting in minor surgery; cardiopulmonary resuscitation; emergency treatment of shock and injuries; recording and screening results of refraction, visual testing, audiometry, and conductive and perceptive deafness; and electrocardiography procedures.

## **MEDICAL LABORATORY TECHNOLOGY**

### **MLT1304 Hematology, Serology and Blood Banking**

Elements of basic hematology, coagulation, blood banking, serology and quality control; study of hemoglobin, hematocrit, blood differentials and manual cell counts; erythrocyte sedimentation rate; erythrocyte and leukocyte maturation; sickle cell testing; blood coagulation, grouping, typing and compatibility testing; detection and identification of atypical antibodies; hemolytic disease of newborn; donor services; antigen-antibody reactions; serological testing procedures for autoimmune diseases and infections; and laboratory management and administration.

### **MLT1305 Clinical Chemistry**

Elements of basic chemistry; quality control; use of glassware and balances; pipetting techniques; laboratory math; metric conversions; solution calculations; venipuncture techniques; specimen analysis for electrolytes, renal and liver functions; and protein, glucose and enzyme testing using automated and manual spectrophotometric principles, and urinalysis chemical analysis.

### **MLT1306 Clinical Microbiology**

Elements of basic microbiology, quality control, bacteriological techniques, bacteria cultivation from clinical material, antimicrobial susceptibility, parasite identification, fungal examinations, overview of viruses and rickettsia, laboratory asepsis and sterilization techniques, microscopic urinalysis, and patient sensitivity.

### **MLT2302 Clinical Laboratory Procedures**

Medical material procedures and receipt and preparation of blood, fluids, cultures and stool specimens in a hospital environment. Includes laboratory administration, professional and patient relations, supervision, and publications.

### **MLT2303 Immunology and Blood Banking**

Theoretical and supervised practical application of immunology, blood banking and immunohematology. Includes antigen-antibody reactions, serological testing, quality assurance, atypical antibodies studies, and transfusion, donor service and blood storage procedures.

### **MLT2304 Hematology**

Theoretical and supervised practical application in hematology. Includes cellular morphology, automated analysis, quality assurance and coagulation studies.

### **MLT2306 Medical Microbiology**

Theoretical and supervised practical application of medical microbiology, parasitology, mycology and virology. Includes collection of clinical specimens, sterilization, storage, quality assurance, microscopic examination and culture procedures.

### **MLT2307 Medical Laboratory Administration**

Principles and procedures of procurement and disposition of laboratory equipment and supplies, supervision of personnel, quality improvement, and required standards to maintain accreditation and regulatory agency guidelines.

### **MLT2308 Chemistry Laboratory**

Theoretical and supervised practical application of chemistry. Includes quality assurance, safety, toxicology, blood gases, urinalysis and special chemistry procedures.

**MEDICAL READINESS****MRD1300 Basic Medical Readiness**

Relationship of human body systems to triage, treatment and transportation of casualties.

**MRD1302 Field Medical Facility**

Techniques, functions and methods to assemble, disassemble and maintain a field medical facility. Includes stocking medical supplies and equipment, site selection and facility configuration, concept of operation, aeromedical evacuation, and principles of facility security.

**METALWORKING****MEL1515 Fundamentals of Airframe Repair**

Principles of airframe repair. Includes performance of shop mathematics, identification of aircraft structures and component balancing, use of hand tools, working characteristics of metals and types of corrosion, safety, constructing flat pattern and metal layouts, nonpowered cutting and bending, powered cutting, and maintenance management.

**MEL1516 Forming and Hand-Riveting**

Forming and hand-riveting of aircraft parts. Includes nonpowered bending, radius bends, hand and machine forming, forming joggles, rivet identification and pattern layout, hand drilling, countersinking, dimpling, riveting, and rivet removal.

**MEL1517 General Structure Repair**

General structural repair of aircraft. Includes proficiency in pneumatic drilling, dimpling, countersinking and riveting; nonflush skill and sealed skin repair; and substructural and skill repair.

**MEL1518 Aircraft Specialized Repair**

Aircraft specialized repairs. Includes repair of fiberglass and metal bonded honeycomb as well as use of aerodynamic smoothing compound and installation of special fasteners, cable assemblies, and aircraft tubing.

**MEL1521 Fundamentals of Low-Observable Aircraft**

Principles, history and theory of low-observable aircraft design. Includes radar imagery, radar cross-section theory, radar signatures, radar signature

reduction techniques and other related stealth technology issues.

**MEL2101 Advanced Aircraft Structural Repair**

Advanced structural repair techniques for metal bonded sandwich structures. Includes surface preparation, fiberglass doublers, glass fabric laminates, adhesive and hot-bonding methods, and specialized scarf and step-joint repair of radomes; and application of potted repairs, one- and two-skin core repair, aluminum core external patches, and transition and trailing edge area repairs of metal bonded honeycomb panels.

**MEL2514 Structural Repair of Composite Materials**

Airframe repair dealing entirely with composite structures. Includes evaluation and repair of various types of damage.

**METEOROLOGY****MET1802 Meteorology and Weather Instruments**

Elementary meteorology providing a foundation for understanding and observing weather elements. Includes applied concepts in using temperature, humidity, pressure, wind, cloud height instruments; weather radar; and communications equipment.

**MET1803 Weather Observation**

Practice in observing weather elements; making instrument evaluations; encoding and recording weather observations of sky conditions, cloud forms, atmospheric phenomena, visibility and obstructions, wind, temperatures, humidity, pressure and precipitation; and classification of storm echoes received on storm detection equipment.

**MET1804 Plotting Weather Maps and Charts**

Preparation of maps and charts from land, airways and ship station reports. Includes thermodynamic diagrams, constant pressure charts, aircraft meteorological reports and local area surface charts.

**MET1807 Environmental Support of Electro-optical Systems**

Principles of operation and environmental sensitivity of precision-guided munitions, and application of physics of atmospheric radiative heat transfer to provide data necessary for target acquisition and tactics.

## **COURSE DESCRIPTIONS**

### **MET2801 Weather Radar Operation**

Principles and operation of weather radar system. Emphasizes interpretation of weather radar echoes.

### **MET2804 Climatology Data Analysis**

Use of frequency and distribution curves to interpret and present climatological data with charts, graphs and tables.

### **MET2806 Synoptic Meteorology**

Analysis of pressure, coriolis, centrifugal and friction forces on wind motion. Includes solar radiation and its effect on air stability, elementary thermodynamics, fronts and pressure systems; and preparation and presentation of weather briefings.

### **MET2807 Operational Weather Forecasting**

Subjective and objective forecasting techniques for flight paths and terminals, use of Teletype and facsimile data plus current data from functional weather equipment and radar for analysis and forecasting exercises. Emphasizes developing forecasting techniques and identifying parameters associated with severe weather.

### **MET2809 Central Weather Facility**

Theories and techniques of weather analysis and forecasting in a simulated weather station environment. Includes operational mission duties of weather map analysis, forecasting, development of specialized products, and development and presentation of weather briefings.

### **MET2817 Tropical Meteorology**

Identification and analysis of tropical weather data from wind field to establish a sound basis for tropical forecasting. Includes applicable streamline isotach techniques of direct kinematic analysis, tropical meteorology, and application of theoretical, climatological and empirical analytic methods.

### **MET2821 Atmospheric Physics**

Interpretation of concepts of force, motion, friction, work, energy, velocity, acceleration, thermodynamics, and pressure as applied to characteristics and structure of atmosphere and heat transfer process.

### **MET2822 Weather Prognosis Techniques**

Advanced analysis of synoptic features and application of rules and methods to prognosticate

their movement. Includes long and short waves, pressure system, fronts and vorticity patterns; application of rules, methods and materials used to predict movement of above features; and isallobaric indicators, tropospheric flow and steering, time differential charts, and grid and J. J. George methods.

### **MET2825 Advanced Weather Station Operations**

Requirements and procedures for acquisition and management of weather resources and programs, environmental support plans, certification of weather personnel, unit quality control programs, management information system input, obtaining meteorological support from other weather agencies, and determining concepts and procedures to support unique operations requirements.

## **MILITARY SCIENCE**

### **MIL1201 Military Operations**

Concepts and principles of ground, air and naval operations. Includes strategic, tactical and support operations.

### **MIL1202 US and Allied Offensive and Defensive Forces**

Components, functions and capabilities of US and allied offensive and defensive forces. Emphasizes weapons systems and method used for effective employment.

### **MIL1203 Third World and Nonaligned Nations Forces**

Components, functions, and capabilities of offensive and defensive forces of nonaligned nations. Emphasizes weapons systems and employment.

### **MIL1302 Offensive and Defensive Forces**

Force components, functions, and capabilities of foreign offensive and defensive forces. Emphasizes weapons systems and methods of employment.

### **MIL1402 Air Defense**

Principles of territorial air defense stressing command, control, communications and warning procedures as well as map reading relating to plotting of airborne aircraft locations.

### **MIL1403 Tactical Air Operations**

Tactical air operations stressing command and control. Includes ground attack, aerial interact and general aerial operations.

**MIL1406 Aviation Transportation**

Concepts and principles of air transport operations. Includes organization, facilities, command, control, communications and operational procedures.

**MIL2403 Analysis of Foreign Air Forces**

Evaluation of command, control, communications and employment capabilities of Communist air forces. Includes organizational structure, installations and equipment.

**MIL2503 Analysis of Foreign Ground Forces**

Evaluation of capabilities, command, control, communications and employment. Includes organizational structure, installations and equipment of foreign ground forces.

**MIL2602 Foreign Naval Forces**

Evaluation of command, control, communications and military capabilities of foreign naval forces. Includes employment, organizational structure, installations and equipment.

**MIL2701 Strategic Industries**

Analysis of development and capabilities of foreign industries to produce military equipment and nuclear, chemical, and biological weapons.

**MIL2702 Special Military Studies**

Analysis of foreign and domestic forces denial and deception techniques, specialized warfighting concepts, and counternarcotic operations. Includes study of special operations forces, US Government and DoD functions relating to special operations, and domestic and international legal theory relative to military operations.

**MIL2801 Offensive Missile Systems**

Analysis of capabilities, command, control, communications and employment. Includes organizational structure, operational and test facilities, and specific equipment of foreign offensive missile forces.

**MIL2802 Defensive Missiles**

Analysis of foreign defensive missiles. Includes organizational structure, installations and employment; and functions and components of launch sites, support facilities and related electronic equipment.

**MISSILE MAINTENANCE TECHNOLOGY****MSL1203 Missile Electrical Principles**

Introduction to principles of electricity related to missile weapons systems maintenance. Includes theory of electron flow; relationships of current, voltage, and resistance and impedance; component identification and operation; interpretation of schematic diagrams, function and operation of meters; and circuit measuring instruments.

**MSL1205 Handling Vehicles and Auxiliary Equipment**

Knowledge of principles of operation and maintenance of missile-handling vehicles and auxiliary equipment. Includes operation of handlift trucks; hoist, crane and winch units; trucks to include semitrailors and tractors and similar vehicles; portable heating and air-conditioning units; ventilation safety filtering units; hydraulic pressure charging units; cable testing equipment; dispatching of equipment; and inspection and maintenance of related facilities.

**MSL1206 Security and Access Systems**

Basic study of function, operation, and maintenance of security and personnel access systems. Includes surveillance and alarm systems; voice and radio systems; vault door-locking mechanism; combination locks; vibration detection systems; personnel access control and associated electrical circuitry; electric, mechanical and hydraulic operated vault doors up to 100 tons in size; cagetype elevators; hydraulic and electric actuator systems and support equipment; and associated test equipment.

**MSL1207 Suspension and Test Equipment**

Function, operation, and maintenance of leak test equipment, purging equipment and systems, suspension systems and mechanisms, power and monitoring circuitry, installation and removal of safing pins and locking devices, and familiarization with ordnance handling procedures.

**MSL1208 Equipment Operation Laboratory**

Practical experience in transportation, removal, replacement, installation, and alignment of missile equipment, components and sections. Includes operation, operational checkout and operator maintenance procedures to include semitrailors and tractors, crane, winches and hoists; and use of test equipment to ensure correct installation of electric and hydraulic systems.



## **COURSE DESCRIPTIONS**

### **MSL1211 Missile Familiarization**

Knowledge of missile assembly and launch complex, and basic principles of security, safety, deployment, dispatching and professional responsibilities. Includes basic concepts of corrosion control, preventive maintenance and treatment.

### **MSL1502 Missile Crew Procedures**

Introduction to performance of missile crew duties. Includes operation of power supply, launch control checkout and monitoring, practical experience communications, and evaluation of hazard-sensing and warning systems as well as alert support, alert emergencies and launch procedures.

### **MSL2101 Launch Base Fundamentals**

Duties and responsibilities of space launch base units, space system test philosophy, launch management and launch documentation. Includes safe handling of cryogenics, high-pressure gases, fuels and oxidizers; and storage, handling and disposal of hazardous waste.

### **MSL2102 Launch and Space Vehicles**

Launch and space vehicle operations. Includes airframes, payload fairings, propulsion, major systems and components.

### **MSL2201 Missile Handling and Inspection**

Transition course in missile familiarization and procedures of missile receipt and inspection, installation and removal; and missile ordnance installation, inspection and transportation. Includes operation and inspection of missile ground support and test equipment.

### **MSL2206 Missile Maintenance Laboratory**

System familiarization and troubleshooting; manufacturer's maintenance manuals and technical data; removal and replacement of access panels for adjustment of mechanical subsystems; and replacement of components; experience in electrical checkout of ordnance circuits; and inspection and maintenance of environmental and RF interference shielding.

## **MUNITIONS**

### **MUN1201 Munitions Systems Maintenance**

Munitions career field functions and familiarization with nuclear and nonnuclear munitions. Includes

differentiation of component functions of nuclear and conventional weapons, missiles, and ammunition with Emphasizes control procedures, inspection and explosive safety.

### **MUN1202 Nuclear Weapons Systems**

Nuclear weapons career field maintenance functions and familiarization with nuclear weapons systems. Includes principles of nuclear weapons, nuclear weapons publications, practicing nuclear standards and application of nuclear security.

### **MUN1203 Operation and Function of Nuclear Weapons**

Operation and function of components of specific nuclear weapons. Includes preparation for strike, disassembly, limited life-component exchanges, weapons buildup, inspections and application of emergency procedures.

### **MUN1204 Nuclear Weapons Maintenance**

Standard specifications for nuclear weapons, operation and maintenance of special tools, measurement of defects, packaging, and general repair prevention. Includes cleaning, painting, making, and surface repair and prevention.

### **MUN1205 Weapons Movement**

Familiarization and operator maintenance on cargo vehicles, tow vehicles, ground power units and general munitions trailers. Includes initial and periodic inspections and lift vehicle operations.

### **MUN1206 Munitions Inventory Procedures**

Nuclear and conventional munitions supply system. Includes security, maintenance support, property accounting (automated, manual), files maintenance storage, and concepts and procedures for issue, turn-in, shipping, receiving, stock replenishment, inventory control and supply discipline.

### **MUN1208 Munitions Inspection Procedures**

Conventional munitions inspection procedures. Includes munitions serviceability determinations; civilian, DoD and Federal Aviation Administration shipments; manufacturer's modifications; issue and turn-in inspections; and ammunition disposition requests.

### **MUN2201 Reentry Systems Maintenance**

Advanced operation and maintenance of space reentry systems. Includes functions, shroud operation,

deployment module, reentry system final buildup, preparation and packaging for transport, and application of safety and security procedures.

**MUN2202 Reentry Vehicle Maintenance**

Advanced operational theory and maintenance of reentry vehicles. Includes alignment, adjustments, maintenance procedures and troubleshooting analysis.

**MUN2203 Advanced Munitions Systems**

Advanced operational theory and maintenance of specific air munitions. Includes assembly, disassembly, guidance systems testing, handling, electronic systems troubleshooting, and safety. (May be repeated for credit for various munitions systems.)

**MUN2204 Advanced Munitions Production Planning**

Advanced munitions combat planning. Includes munitions logistic systems, construction and validation of conventional munitions plans, combat production concepts, practical assembly and delivery of munitions, and contingency stock control procedures.

**NONDESTRUCTIVE TESTING**

**NDT1101 Fundamentals of Nondestructive Testing**

Introduction to nondestructive testing of aerospace metals and structures; and eddy current, liquid penetrant, magnetic particle, radiography, and ultrasonic testing methods. Includes basic metallurgy, technical publications, aircraft construction features, and occupational safety and health standards. (AF A&P program applicable course.)

**NDT1102 Fundamentals of Radiographic Inspection**

Basic theory of radiographic inspection and how electronically generated and isotope sources of radiation are used for radiographic inspection. Includes methods and materials used for radiographic inspection and film processing, correct interpretation of radiographs, development of inspection techniques, and performance of radiographic inspections. (AF A&P program applicable course.)

**NDT1103 Fundamentals of Liquid Penetrant Inspection**

Basic theory of liquid penetrant inspection used to determine the severity of surface discontinuities in

materials and objects; and explains capillary action and how it is used in penetrant inspection, inspection methods, operation of equipment and performance of inspections. Includes chemical safety and hazard training incorporating Occupational Safety and Health Act and Air Force Occupational Safety and Health standards. (AF A&P program applicable course.)

**NDT1104 Fundamentals of Magnetic Particle Inspection**

Basic theory of magnetic particle inspection and how magnetizing currents are used in magnetic particle testing. Includes use of wet and dry materials, equipment operation, interpretation of indicators, inspection techniques, and performance of inspections. (AF A&P program applicable course.)

**NDT1105 Fundamentals of Ultrasonic Inspection**

Basic theory of ultrasonic inspection and how principle of sound generation is used in ultrasonic inspection. Includes straight and angle beam testing, sound wave propagation, calibration and use of equipment, Snell's Law, inspection techniques, equipment maintenance, ultrasonic standards and performance of ultrasonic inspections. (AF A&P program applicable course.)

**NDT1106 Fundamentals of Eddy Current and Bond Testing Inspection**

Basic theory of eddy current and bond testing inspections, electromagnetic principles, formulas and inspection techniques used in eddy current inspections. Includes phase amplitude and impedance testing, identification and inspection techniques of conventional and advanced composites, and eddy current equipment calibration and inspections on composite materials. (AF A&P program applicable course.)

**NDT2101 Advanced Nondestructive Inspection Procedures**

Advanced techniques and development of nondestructive testing procedures for aerospace-related components. Includes evaluation of process control procedures; need for dye penetrant, magnetic particle, ultrasonic, radiographic, phase amplitude, impedance testing on metallic and composite materials; and operation and maintenance of inspection equipment. (AF A&P program applicable course.)

**NDT2102 Advanced Ultrasonic and Phase Amplitude Inspection**

Advanced ultrasonic and phase amplitude testing procedures and techniques. Includes analysis of process

## COURSE DESCRIPTIONS

control and inspection applications for thickness testing, distance amplitude correction curve, skip distance, and weld inspections; bolt-hole inspections with scanner, conductivity testing, metal sorting, nonconductive coating thickness testing and flaw testing on various aerospace metals; and operation and maintenance of inspection. (AF A&P program applicable course.)

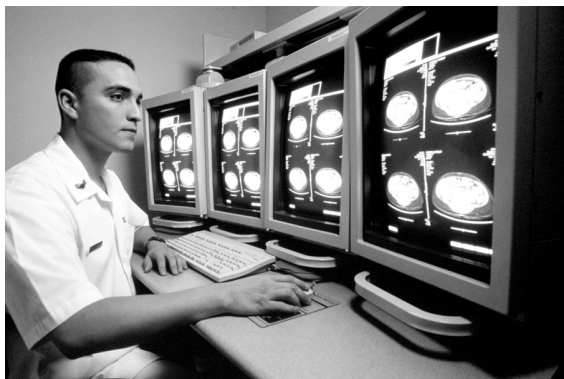
### **NDT2103 Advanced Dye Penetrant, Magnetic Particle and Radiographic Inspection**

Advanced training in penetrant, magnetic particle, and radiographic inspection techniques and procedures. Includes in-shop process control techniques, radiation techniques, curve charting and special radiographic inspection procedures; radiation safety; and equipment maintenance and operation. (AF A&P program applicable course.)

### **NDT2104 Advanced Oil Analysis and Spectrometric Results**

Principles of spectrometric oil analysis. Includes analysis of wear patterns, types of failures, sources of wear and nonwear metals in oil wetted systems, interpretation and evaluation of analytical data in oil analysis case histories, and operation and maintenance of atomic emission spectrometer and atomic absorption spectrophotometer equipment. (AF A&P program applicable course.)

## **NUCLEAR MEDICINE TECHNOLOGY**



### **NMT1101 Nuclear Medicine**

Principles of mathematics, chemistry and physics as applied to field of nuclear medicine; preparation and uses of radiopharmaceuticals; radiation detection, effects, dose calculation and safety; hematologic and

radionuclide dilution procedures and protocol; techniques and procedures of gastrointestinal and organ concentration-excretion measurements; imaging techniques and procedures; and radioassay and radiation therapy procedures. Includes operating radionuclide imaging and detection devices and assisting medical professionals in preparing and administering radiopharmaceuticals and organizing and administering radionuclide-imaging services.

## **NURSING**

### **NUR1102 Electroneurodiagnostics**

Neuroanatomy and neurophysiology of the human body as it relates to neurology; concepts of basic electricity; neurological disorders and how they affect neurodiagnosis; instrumentation and troubleshooting of electroencephalogram and evoked potential average; interpretation of basic wave patterns, normal variants, artifacts, and abnormal patterns and waveforms; and clinical guidelines used in electroneurodiagnosis. Includes introduction to nerve conduction, electromyography, video monitoring, telemetry and polysomnography.

### **NUR1103 Otolaryngology**

Functions and responsibilities of clinical and surgical assistant to an otolaryngologist. Includes audio evaluations; maintenance and care of specialized otolaryngologic instruments and equipment; diagnosis and treatment of common ear, nose and throat disorders; and pre- and postoperative patient care. Emphasizes procedures and administrative management.

### **NUR1104 Orthopedics**

Anatomy, medical terminology, and care and handling of orthopedic patients; and assisting with management of orthopedic clinics, minor surgery, fabrication and modification of casts, and treatment of patients with orthopedic conditions or injuries.

### **NUR1304 Fundamentals of Patient Care**

Human anatomy and physiology, medical terminology, interpersonal relations and human needs, patient needs, basic nursing techniques, and cardiopulmonary resuscitation.

### **NUR1318 Basic Nursing**

Infection control; patient movement, safety, comfort and hygiene; specimen collection; nutrition and elimination; vital signs; and pre- and postoperative care.

**NUR1319 Intermediate Nursing**

Medications and fluid therapies; basic wound care; cardiorespiratory procedures; skeletal and immobility procedures; obstetric, neonatal and pediatric care; eye, ear, nose and throat care; patient care planning; and basic cardiac life-support procedures.

**NUR1324 Introduction to Operating Room Technology**

Anatomy and physiology, medical terminology, safety, surgical supplies and equipment, anesthesia, pre- and postoperative patient care, and transportation and positioning of surgical patient.

**NUR1325 Operating Room Technology**

Microbiological basis for sterilization, asepsis and disinfection of operating room; and scrubbing, gowning and gloving in this environment.

**NUR1326 Operating Room Practicum**

Practicum in scrub and circulator duties, preparation of surgical patient, and professional ethics.

**NUR1328 Introduction to Clinical Practicum**

Introduction to hospital nursing care. Includes patient sensitivity, safety, security, medical readiness, plans, documents and patient care.

**NUR1329 Medical Unit Practicum**

Medical unit experience and procedures. Includes initial screening, routine physical examinations, housekeeping, hygiene, wheelchair transportation, and meal selection and distribution.

**NUR1330 Surgical Unit Practicum**

Surgical unit experience and procedures. Includes pre- and postoperative instructions, dressing changes, intravenous care, and body waste assistance.

**NUR1331 Obstetrical Unit Practicum**

Obstetrical unit experience and procedures. Includes patient assistance in labor and delivery, fetal heart monitoring, infant identification, delivery room preparation, nursery care and postpartum procedures.

**NUR1332 Emergency Department Practicum**

Hospital emergency department experience and procedures. Includes patient transfers, simple triage, wound preparation, communications and operation of emergency vehicles.

**NUR1333 Fundamentals of Mental Health**

Factors of mental health disorders and theories of modern psychological development. Includes identification and recognition of childhood, adolescent, and other mental health disorders.

**NUR1334 Mental Health Evaluations**

Principles and techniques of interviewing, documentation of initial mental health screening, social histories, and administration and scaling of mental health tests.

**NUR1336 Mental Health Administration**

Introduction to Air Force mental health programs and basic administrative functions. Includes family advocacy, humanitarian reassignments and deferments, and personnel reliability programs.

**NUR1337 Mental Health Clinical Experience**

Techniques of caring for alcohol rehabilitation center patients and mental health inpatients and outpatients.

**NUR1338 Operating Room Nursing Practicum**

Clinical experience in scrub and circulating technician duties in orthopedic, general, and obstetric and gynecologic surgery.

**NUR1339 Fundamentals of Central Sterile Supply**

Practicum in operation of equipment used in central sterile supply.

**NUR1340 Introduction to Substance Abuse Counseling**

Programs, policies and administrative procedures likely to be encountered when counseling substance abusers.

## **COURSE DESCRIPTIONS**

Emphasizes substance abuse identification, drug testing, prevention and intervention, cultural awareness, and basic theory and skills needed to provide for clients.

### **NUR1341 Introduction to Mental Health Services**

Mental health procedures and documentation, psychological testing methods, emergency life-support procedures, crisis management, psycho-pharmacology, and role-playing exercises demonstrating ability to appropriately handle client scenarios likely to be encountered in mental health services profession.

### **NUR1342 Allergy-Immunology**

Vaccination procedures; methods of properly administering intradermal, subcutaneous and intramuscular injections; pollen counting; allergen identification; composition of various vaccines; mechanisms of anaphylaxis and shock; and pharmacology of various drug groups.

### **NUR2315 Aerospace Physiological Principles and Survival Techniques**

Effects of hypoxia, hyperventilation, stress and changes in barometric pressure on the human body; use of oxygen; altitude indoctrination; and survival techniques.

### **NUR2316 Aerospace Nursing**

Effects of flight-induced psychological changes, diseases and injuries on patients; in-flight nursing care; care of patients in aircraft emergencies; and organization and operation of aeromedical evacuation system.

### **NUR2329 Nursing Staff Development**

Planning, organizing, implementing and evaluating nursing service staff development programs. Includes needs assessment, instructional program design and methodology, and correlation with Joint Commission on Accreditation of Healthcare Organizations and American Nurse Association.

### **NUR2331 Nursing Management**

Development of supervisory and communicative skills needed to manage medical personnel and resources. Includes medical supply system, staff development, legal considerations, safety programs, and professional and patient relations.

### **NUR2334 Operating Room Administration**

Human and fiscal management of surgical environment, time management, supervision and resource management. Emphasizes staff development, professional and patient relationships, quality, and medical readiness.

### **NUR2335 Mental Health Interventions**

Mental health intervention for psychiatry, psychology, family advocacy and substance abuse prevention. Includes certification process for substance abuse counselors; practical application in treatment planning, development and implementation; and documentation of patient care.

### **NUR2340 Aerospace Medicine Administration**

Directing and controlling fiscal and medical human resources uniquely related to aerospace medicine.

### **NUR2341 Human Resources Development**

A self-paced distance learning course that provides in-depth managerial preparation to identify and define the training and development needs of human resources in health care organizations.

## **OCCUPATIONAL THERAPY**

### **OCC1101 Occupational Therapy**

Anatomy, kinesiology and psychology, and their relationship to human performance; physical and mental clinical conditions; and techniques and application of craft activities. Includes planning and implementing therapeutic activity programs directed toward functional restoration of patients with physical and/or psychosocial dysfunction.

## **OPTOMETRIC TECHNOLOGY**

### **OPT1301 Introduction and Basic Optics**

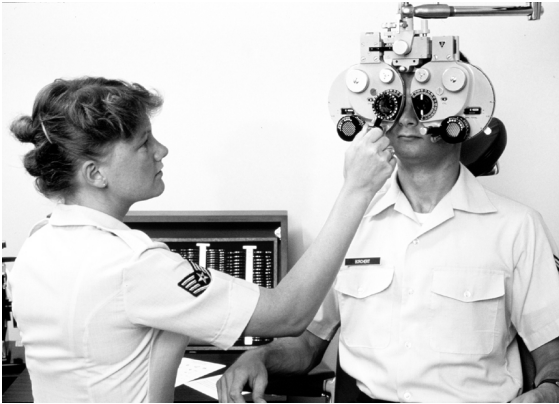
Basic geometrical and ophthalmic optics.

### **OPT1302 Visual Acuity and Its Correction**

Anatomy and physiology of visual system, eye as an optical instrument, visual acuity measurement, and spectacle selection, ordering, repair and verification procedures.

### **OPT1303 Assisting the Optometrist**

Applications of tonometry, visual fields and eye safety measures, and fitting of contact lenses.

**OPT1304 Vision Classification**

Military visual standards and visual exams, depth perception, phoria, accommodation, near point of convergence, and color vision testing.

**ORTHOTIC PROSTHESIS DEVICES****OPD1301 Introduction to Orthotics**

Medical ethics and terminology, emergency medical care, history of orthotics, professional and patient relationships, principles of life support, administrative procedures, and selected orthotic nomenclature.

**OPD1302 Anatomy, Physiology and Kinesiology of Orthoses**

Principles of body systems and functions and mechanics of upper and lower extremities, spine and pelvis.

**OPD1303 Orthotic Devices**

Principles and identification of orthotic devices used on upper and lower extremities, spine and pelvis; evaluation of patient requirements; and selection of orthotic devices.

**OPD1304 Orthotic Tools and Fabrication**

Introduction and practicum in use of hand tools and shop machines used in assembling orthotic appliances.

**OPD1305 Orthotic Methods and Materials**

Principles and tools used in orthotic laboratory; interpreting prescriptions; performing tracing, measuring and casting procedures; design and fabrication of appliances from measurements,

patterns and positive casts; preparation of patient and fitting of devices; and adjustments and repairs.

**PAVEMENTS****PAV2502 Concrete and Bituminous Pavement**

Advanced construction of concrete and bituminous pavements. Includes drainage, grading, materials, identification of defects and repairs.

**PERSONNEL****PER1110 Personnel Support For Contingency Operations**

Concepts of deployment of personnel in contingency or exercise situation emphasizing duties and responsibilities to support area commander at a deployed site. Includes concepts, predeployment planning, operation of microcomputers, field condition procedures and redeployment.

**PER1111 Sales Fundamentals**

Principles of merchandise advertising. Includes knowing value of good community relations, use of publicity materials, selection of sales techniques, sales record keeping and customer screening.

**PER1119 Introduction to Personnel Management**

Basic management and administrative functions. Includes selection, training, placement, classification, evaluation, reassignment, promotion, separation of personnel, pay procedures, performance evaluations, and scheduling and conducting meetings.

**PER2103 Personnel Data Systems**

Principles and functions of techniques and methods of entering data into and retrieving data from personnel data system. Includes data maintenance procedures and methods, uses of retrieved data, and computer output products.

**PER2108 Manpower Management**

Concepts of manpower organization. Includes measurement methods, development of manning tables, management advisory studies, authorization routines and manpower reports.

**PER2112 Unit Personnel Administration**

Management of unit personnel, procedures for ensuring compliance with standards, procedures for protocol, written correspondence, enforcement of directives, personnel management computer products, assignment

## COURSE DESCRIPTIONS

of special duties, unauthorized absences and handling of complaints and inquiries. Includes line-of-duty determinations, dependent care responsibilities, and functional relationships between units and personnel office and principles and procedures for monitoring commander's call; Privacy Act; responding to security police reports; and handing private property, unit property, or damage of government property.

### PER2113 Quality Force Management

Principles and procedures for achieving and maintaining a quality work force; and administration of policies associated with dormitory management, individual financial responsibility, professional military education, retention programs, weight control and physical fitness, promotion and demotion actions, administering of reprimands and admonitions, unfavorable information files and control rosters, and administrative separation of personnel.

### PER2121 Organizational Evaluation and Development

Methodologies for evaluating and improving effectiveness of organizations. Includes familiarization of functional chronology, review and analysis of work performance processes, feasibility studies and planning, standards development, cost analysis and comparison, training requirements, and productivity enhancement.

### PER2612 Resource Management

Principles of resource management. Includes policy and procedures regarding orientation and guidance of newcomers to work force; counseling referrals to various agencies; purpose of morale, welfare and recreation programs; and policy and procedures for control of drug and alcohol abuse, maintenance of discipline using prevention-correction punishment method and relationships shared with senior key personnel.

### PER2613 Advanced Resource Management

Management of personnel retention programs. Includes retention office management, office automation, customer service, employer support, family programs, benefits and cultural diversity.

## PHARMACOLOGY



### PHA1306 Fundamentals of Pharmacy

Pharmaceutical inorganic and organic chemistry, administrative operations of hospital pharmacy, conversion of weights and measures, and calculation of doses using ratio, proportion and metric apothecary and avoirdupois system.

### PHA1307 Introductory Pharmacology

Principles of pharmacology, human anatomy and physiology; studies of drug abuse, toxicology, and pharmaceutical and medicinal agents; and role-play in using prescriptions to dispense in a model pharmacy.

### PHA1308 Pharmaceutical Preparations and Their Manufacture

Properties, preparation and incompatibilities of various pharmaceutical substances; pharmaceutical compounding techniques in laboratory; reduction and enlargement of formulas; specific gravity; percentage preparations; concentration and dilution; allegation; and temperature conversion.

### PHA1309 Pharmacy Practicum

Inpatient and outpatient pharmaceutical procedures. Includes computerized information systems, sterile and nonsterile compounding, dispensing of medication and logistical procedures.

### PHA2101 Pharmacy Administration

Pharmacy administration, management and logistics. Includes pharmaceutical calculations and dispensing procedures, controlled substance management, drug therapy, pharmacy practice standards, inventory control, sterile product management, training programs, and quality improvement.

**PHOTOGRAPHY****PHO1101 Basic Broadcasting**

Organization, function, station management and administrative services; news writing; spot announcements; and feature material for radio and television. Includes announcing news, sports, features and special events; interview techniques; control room operation; programming and production; and regulatory agencies and broadcast standards.

**PHO1102 Basic Still Photography**

Theory and application of photographic fundamentals, chemistry, optics, sensitized materials, light sources; exposing and processing black-and-white films; printing black-and-white negatives; camera operations for standard and reproduction photography; portraiture; exposing and processing color reversal film; color slide reproduction; exposing, processing and printing color negatives; sensitometric procedures; and electronic imaging techniques.

**PHO1104 Basic Journalism**

Communications techniques (printed, oral, graphic, radio, television) to support internal and external public affairs and community relations programs; preparation of news releases, articles, photographs, radio programs and other public affairs material for public dissemination; conducting community relations; collecting, evaluating and preparing materials for internal information; and participating in publication process of newspapers and other internal media.

**PHO2501 Combat Camera Operations**

Principles of contingency readiness. Includes principles and practices of base defense, communications security and operations, physical security, night operations, military tactics and operations, field sanitation, and field operations in the joint war-fighting environment.

**PHYSICAL EDUCATION****PHE1000 Physical Education**

Physical fitness using drills, calisthenics and running, and introduction to Air Force aerobics program and first-aid procedures. Includes severe bleeding, shock and stoppage of breathing.

**PHE1800 Physical Conditioning**

Calisthenics and running to condition muscle and body organs (heart, lungs). Includes coordination, stamina and overall fitness for extensive field exercises.

**PHE1801 Physical Conditioning and First Aid**

Body conditioning through exercise, running, walking and negotiation of a confidence course. Includes first aid, heat disorders, life-saving steps, and respiratory and circulatory emergencies.

**PHYSICAL THERAPY****PTH1305 Introduction to Physical Therapy**

Legal and ethical responsibilities, medical terminology, and physiological theories and processes that apply to working with the diseased and injured.

**PTH1306 Introductory Anatomy and Physiology**

Gross anatomy and physiology. Emphasizes structure and function of cell and respiratory, cardiovascular, lymphatic, renal, integumentary, skeletal and muscular systems.

**PTH1308 Physical Therapy Procedures and Modalities**

Thermotherapy, hydrotherapy, cryotherapy, electrotherapy and light therapy in simulated clinical laboratory setting.

**PTH1309 Physical Therapy Clinical Arts**

Selected physical therapy treatment procedures and modalities in clinical practicum and administration and communications.

**PTH1310 Functional Anatomy, Pathophysiology and Therapeutic Procedures**

Basic concepts and principles of therapeutic exercise, and in-depth functional anatomy of axial skeleton and upper and lower extremities as they relate to disease and treatment approaches.

**PHYSIOLOGICAL TRAINING****PTR1301 Introduction to Aerospace Physiology**

Principles of basic laws of atmosphere and gas as they apply to pressure chamber operations and procedures, and introduction to medical terminology, medical computer systems, decompression sickness, pressure chamber effects and administrative duties. Includes publications and forms management, filing, and scheduling.



## **COURSE DESCRIPTIONS**

### **PTR1302 Respiratory and Circulatory Physiology**

Physiological impact of ascent, acceleration, spatial disorientation and compression changes; and recognition of body heat imbalance, hypoxia, shock and other low-pressure chamber reactions.

### **PTR1303 Life-Support Equipment Systems**

Operation and maintenance of systems used to sustain aircrew members in flight oxygen storage system, breathing apparatus, pressure demand regulators and masks, ejection seats, parachutes, helmets, pressure suits and survival equipment, and participation in low-pressure chamber flights.

### **PTR2350 Hyperbaric Physiology and Therapy**

Nitrogen narcosis, oxygen toxicity, air embolism, carbon monoxide poisoning, gas gangrene, mechanical effects of compression and decompression, and application of treatment tables and therapy.

### **PTR2352 Aerospace Physiology Management**

Management of an aerospace physiology unit. Includes information management system, symptoms and treatment of decompression sickness, and career progression.

## **PLUMBING**

### **PLB1501 Introduction to Plumbing**

Fundamental principles of plumbing systems. Includes project planning, technical publications, maintenance of tools and equipment, structural openings, plumbing terminology, engineering drawings, and sewer systems.

### **PLB1504 Fixtures and Appurtenances**

Installation of bathtubs, showers, water closets, lavatories and urinals; winterization of piping; and inspection and maintenance of water supply and waste systems. Includes materials recovery and restoration.

### **PLB1505 Utility Equipment**

Maintenance of utility system equipment. Includes piping, fire hydrants, sprinkler, natural gas, fire-suppression systems and components, and backflow prevention.

### **PLB1507 Water and Waste Distribution Systems**

Waste, water supply and building distribution systems. Includes fire-suppression, deluge, sound suppression, hazardous waste water, installation of water heaters, safe work practices; steel pipe and copper tubing assembly, corrosion identification and control, and application of fraud, waste and abuse information.

### **PLB2501 Maintenance of Natural Gas Distribution Systems**

Advanced installation and maintenance of natural gas distribution systems. Includes inspections and maintenance of gas mains, service lines, and gas pressure regulators.

### **PLB2502 Backflow Prevention Devices**

Theory, operation, maintenance and testing of plumbing backflow prevention devices. Includes records and logs of actions taken.

### **PLB2503 Fire-Suppression System Maintenance**

Advanced testing, inspecting, maintaining and repairing of fire-suppression systems (excluding electrical). Includes inspection and operational checks, principles of operation, and troubleshooting and repair of fire sprinkler and other fire-suppression systems.

## **RADIO & TELEVISION BROADCASTING**

### **RTB1104 Visual Information Production**

Basic motion media technique, recording of controlled and uncontrolled actions in field and studio environments, basic audio recording, audio and video production operations, and videotape editing under field and studio conditions.

### **RTB1801 Audio Mixing and Production**

Basic audio theory. Includes use of microphones and tape recorders; techniques for splicing, editing, duplicating, storing, and handling equipment and materials; and user maintenance of audio equipment.

### **RTB1802 TV Studio Operation**

Principles for television production. Includes personnel functions, control room responsibilities, set construction, camera operations, video switching, makeup techniques, fundamentals of color theory, telecine operations, TV lighting and teleprompter operations.

**RADIOLOGIC TECHNOLOGY****RAD1301 Introduction to Radiologic Technology**

Radiologic technology and its role in delivery of health care. Includes health care delivery systems, hospital and radiology department organization, professional development, accreditation and credentialing, basic radiation protection, professional ethics, medical terminology and communications, methods of patient care, radiobiology, and computer applications in radiology department.

**RAD1302 Introduction to Radiographic Physics**

Production and characteristics of radiation, matter, energy, Ohm's law and basic X-ray circuits; methods of rectification; X-ray detection and measurement; construction of X-ray tubes; use of tube rating charts; and effects of kVp, mA, distance and collimation on patients.

**RAD1305 Introduction to Radiographic Positioning**

Osteology and arthrology of upper and lower extremities, abdomen, thorax, vertebral column, and skull. Includes related standards and special radiographic projections using radiographic phantoms.

**RAD1307 Radiographic Anatomy and Physiology**

Structure and functions of cells and integumentary, muscular, reproductive, endocrine, respiratory, cardiovascular, lymphatic, venous, digestive, biliary, urinary, skeletal, muscle and central nervous systems.

**RAD1308 Imaging Equipment and Film Processing**

Operation and characteristics of diagnostic imaging equipment and procedures for processing radiographic film. Includes radiographic equipment; image intensified fluoroscopy; various imaging equipment; imaging noise-recording media; techniques, characteristics, handling and storage of film; intensifying screens; automatic processing; silver recovery; and film artifacts.

**RAD2301 Radiography Clinical Education**

Clinical environment practicum in a training hospital, radiographic exposure principles and systems, preparation of technique charts, standardization of automatic film-processing systems, control of secondary and scattered

radiation, radiation protection, department administration, and review of radiographic anatomy.

**RAD2303 Advanced Special Radiographic Procedures**

Radiographic equipment used for special procedures, review of radiographic examinations that require negative or positive contrast media, infection control procedures, surgical radiographic procedures, and mobile radiographic and fluoroscopic procedures.

**RAD2304 Radiography Internship**

Standard radiographic procedures accomplished under supervision of qualified radiologic technologists, and assisting radiologist with barium contrast studies, interventional studies and nonstandard radiographic procedures.

**RAD2306 Diagnostic Ultrasound**

Diagnostic ultrasound principles and equipment. Includes abdominal and pelvic sonography and obstetrical applications.

**RAD2307 Ultrasonic Scanning**

Procedures and application of obstetrical, pelvic, abdominal, thyroid, breast, testicular and superficial structure scans.

**RAD2311 Management of Diagnostic Imaging Services**

Diagnostic imaging services workload accounting, budgeting, occupational safety and health standards, and manpower applications. Emphasizes professional ethics, continuing education, total quality management and team building.

**RECREATION****REC1102 Fitness and Health**

Methods used in measuring physical fitness, determining nutrition requirements, evaluating human physiology, analyzing exercise physiology and managing health resources.

**REC1103 Morale, Welfare and Recreation Management**

Morale, welfare and recreation (MWR) management. Emphasizes employee administration, procurement of resources and facilities, and organization of MWR activities.

## **COURSE DESCRIPTIONS**

### **REC2102 Advanced Morale, Welfare and Recreation Management**

Advanced morale, welfare and recreation management. Emphasizes employee administration, procurement of resources and facilities, and organization of activities.

## **SAFETY**

### **SAF1802 Missile, Explosives and Nuclear Safety**

Safety standards for handling, storing, transporting, and operating conventional and nuclear munitions and missiles.

### **SAF1803 Accident Investigation**

Accident investigation, reporting and analysis. Emphasizes trend analysis, statistical displays, report preparation, accident investigation and system validation.

### **SAF1811 Safety Engineering**

Safety techniques and program requirements concerning electrical problems, high-pressure liquids and gases, explosives, chemical safety, environmental health and portable power hand tool hazards; protective equipment and procedures for machine guarding, hazard identification, safety color coding and use of industrial shop safety surveys. Includes practical exercises in shop layout and resolving problems in storage, construction and flight-line safety.

### **SAF1812 Safety Management I**

Basic philosophy of accident prevention. Includes safety education and training reference materials and safety plans and programs.

### **SAF2101 Flight Safety Management**

Flight safety management and airfield safety operations. Includes history of flight safety, mishap classification and prevention, hazard abatement, and inspection, evaluation and reporting programs.

### **SAF2604 Accident Prevention Management**

Philosophy of weapons accident prevention, safety and transportation. Emphasizes inspection, classification, and mishap investigation and reporting.

### **SAF2805 Safety Management II**

Methods used in education and training relating to safety and accident prevention. Includes development and maintenance of related administrative materials and implementing safety plans and programs.

### **SAF2807 Advanced Safety Management**

Safety standards pertaining to operation, transportation, and disposal of conventional and nuclear munitions and missiles. Emphasizes inspection preparation and reporting as well as mishap investigation and reporting.

### **SAF2809 Weapons Safety Program Management**

Application of mishap investigation and safety inspection programs and procedures; storage, flight line handling and transportation of weapons; and procedures for site planning, management of explosive ordnance disposal, and related waivers and deviations.

## **SANITATION**

### **SAN1506 Vegetation Management**

Identification of terrestrial weeds and characteristics of ornamental and turf pests, plant biology, and physiology; classification of herbicides and aquatic pests; application of pesticides; and herbicide use problems.

### **SAN1507 Pest Management**

Application of integrated pest management program and performance of chemical control procedures. Includes medical and economic impact, introduction to entomology, and identification of household, structural, vertebrate, venomous, disease vectoring and stored product pests.

### **SAN1808 Environmental Support Equipment**

Environmental support equipment, corrosion control procedures, use of hand and special tools, operation and maintenance of specific water and wastewater treatment support equipment, and pump maintenance.

### **SAN2802 Water Analysis and Treatment Laboratory**

Analysis of basic chemistry as it pertains to water and wastewater treatment, water testing procedures, and treatment of water for industrial use.

**SAN2821 Field Water Purification Systems**

Advanced principles of operation for field water purification and distribution systems. Includes unit setup, startup and operation; maintenance and service requirements of unit, pumps, latrines and showers; and layout, shutdown and storage.

**SECURITY****SEC1801 Marksmanship Laboratory**

Qualification in automatic rifles, machineguns and grenade launchers. Includes nomenclature, capabilities and characteristics of specific weapons; operator care, cleaning and maintenance procedures; application of marksmanship fundamentals; weapons safety practices; analysis of use-of-force policies, clearing procedures and functional checks; employment of traversing and elevation devices; and ammunition types and uses.

**SEC1804 Fundamentals of Ground Combat Skills**

Analysis of airbase defense concepts and principles with instruction in subjects such as fire control and distribution measures, prisoner-of-war processing, early warning devices, land navigation, camouflage, and threats against resources. Includes application of tactical communications, associated support equipment and field training disciplines.

**SEC1805 Special Weapons and Tactics**

Application of special weapons. Includes nomenclature, capabilities, and characteristics of slap flares, hand grenades, claymore mines and antitank weapons; employment of individual and team concepts in tactical situations; patrol techniques used in a combative environment; and principles of urban survivability.

**SEC1806 Introduction to Security**

Introduction to fundamental concepts of security operations required in protection of Air Force physical and personnel resources. Includes instruction in basic duties and responsibilities of security specialists, types and uses of tactical and mobile patrol teams, security reporting and alerting systems, physical security safeguards, alarm systems, building and area search procedures, and introduction to security police automated system.

**SEC1855 Specialized Mobile Security Functions**

Concepts of worldwide mobile operations. Emphasizes practical application of defensive tactics and techniques. Includes the use of force continuum, international relations, explosive devices, lethal and nonlethal weapons, defensive tactics, terrorism, information sources, countersurveillance, hostage survival, threat conditions, aircraft familiarization and individual protective measures.

**SEC2850 Intrusion Detection Equipment Operator**

Analysis of characteristics, capabilities, limitations, and vulnerabilities of associated sensor subsystems and small permanent communications and display segment equipment. Emphasizes technical orders, system operation and control of response forces.

**SEC2851 Closed-Circuit Television Operator**

Analysis of characteristics, capabilities, limitations and vulnerabilities of perimeter surveillance and system closed-circuit television equipment. Emphasizes application of troubleshooting, system operation and television monitoring to prevent unauthorized entry into controlled areas.

**SEC2855 Support Weapons Qualification**

Mortars, recoilless rifles, heavy machineguns and/or grenade launchers; nomenclature, characteristics capabilities of specific weapons systems; operator care; cleaning maintenance; weapons safety; tactical employment; forward observation; fire-direction center operations (mortar courses only); ammunition types and uses; practical exercises involving crew drills for gunners, assistant gunners ammunition bearers; and live firing qualification.

## **COURSE DESCRIPTIONS**

### **SEC2856 Ground Defense Leadership and Management**

Analysis and application of logistical and tactical planning for employment of security police units engaged in ground defense operations for US installations located in hostile areas. Includes concepts, principles and organization for distributed area defense. Emphasizes leadership of combat elements, patrol planning procedures and integration of defense forces.

### **SEC2860 Electronic Security System Operator**

Analysis of characteristics, capabilities, limitations and vulnerabilities of electronic security systems. Emphasizes application of troubleshooting, installation and configuration techniques associated with battery modules, solar panels, handheld monitors, communications modules, tripods, sensors, power supply systems, annunciator systems and thermal imagers.

## **SERVICES**

### **SVS2100 Services Management**

Management principles of services functions. Includes food production, mortuary services, fitness and recreation, accounting, budgeting, quality assurance, marketing, and hotel and motel operations; and customer service techniques and employee relations. May include field operations.

## **SOCIAL SERVICES**

### **SOC1209 Introduction to Equal Opportunity**

Introduction to equal opportunity advisor skills and the human relations climate. Includes individual and group behavior, communications, discrimination, dynamics of power and major ethnic groups.

## **SOLAR OBSERVATION**

### **SOO2501 Solar Theory and Related Principles**

Advanced solar theory as applied to solar observation. Includes explanation of structure, characteristics and features of sun; optics, spectroscopy and Solar Observing Optical Network telescope system; computer application and operating principles; solar observations; and classification of solar data.

### **SOO2502 Solar Observing Optical Network System Operations**

Advanced operating principles for Solar Observing Optical Network System. Includes application of integrated telescopic, spectroscopic, photographic, and computer capabilities to analyze and encode solar observations.

## **SPECIAL DUTY/REPORTING IDENTIFIER INTERNSHIP**

### **SDI3000 Special Duty Internship - Apprentice**

Demonstrated knowledge and job proficiency (minimum 4 months) at apprentice level with rank of airman (E-2) or higher in career field represented by a special duty identifier and reporting identifier.

### **SDI5000 Special Duty Identifier - Journeyman**

Demonstrated knowledge and job proficiency (minimum 8 months) at journeyman level with rank of airman (E-2) or higher in career field represented by a special duty identifier and reporting identifier.

### **SDI7000 Special Duty Identifier - Craftsman**

Demonstrated knowledge and job proficiency (minimum 12 months) at craftsman and supervisor level with rank of staff sergeant (E-5) or higher or career field represented by a special duty identifier and reporting identifier.

## **SURVEYING**

### **SUR1501 Fundamentals of Surveying**

Distance and direction measurements, horizontal control, traverse computation, and transit adjustment.

### **SUR1502 Construction Surveys**

Basic topographic mapping, road layouts, profile and cross-section surveys, vertical road alignments, earthwork computations, grade stakes, building layouts, and utility surveys.

## **SURVIVAL & RESCUE**

### **SVR1101 Air Operations**

Techniques of conducting pararescue aerial operations emphasizing insertion operations. Includes water employment and aerial cargo delivery.

**SVR1102 Ground Operations**

Techniques of conducting pararescue ground operations. Includes pararescue assisted evasions, insertion and extraction operations, small team tactics, and adverse terrain operations.

**SVR1301 Land and Water Survival Techniques**

Survival techniques and equipment necessary for protecting aircrew technicians, patients and passengers against perils inherent in entering a land or water environment after ditching or crash landing.

**SVR1501 General Principles of Survival**

Survival techniques for a temperate environment. Includes procurement of plant and animal food, food preparation and preservation, preparation and use of water, signaling and communications, campsite selection, shelter construction, firecraft, burden carrying, and classroom and field location instruction.

**SVR1801 Special Survival Techniques**

Survival techniques in arctic, coastal, open seas, tropical, mountain and desert environments. Includes identifying and determining survival conditions, personal protection, sustenance, environmental medical techniques, signaling and communications, recovery and egress procedures, shelter craft and firecraft unique to special environments, and classroom and field location instruction.

**SVR1803 Map and Compass**

Map reading and use of compass for navigation in wilderness areas. Includes position determination, travel preparation, use of natural aids to navigation,

route selection, application of travel techniques, and classroom and field location instruction.

**SVR1804 Mountain Travel**

Travel techniques required in mountainous terrain. Includes mountain climbing and patient evacuation equipment; mountaineering techniques; navigation principles; establishment of trail camps; trip preparation; shelter and campsite selection and construction; emergency bivouac; water and food procurement, preparation and preservation; and classroom, outdoor tower and mountainous field location instruction.

**SVR1805 Psychology of Environmental Stress**

Stresses encountered in prisoner-of-war environments. Includes resistance to exploitation; international agreements relative to captivity and camp organization; application of escape-and-evasion techniques; and Communist history and theory, interrogation and indoctrination procedures, and group resistance in captivity.

**SVR1806 Search-and-Rescue Operations**

Signaling and communications, guiding and directing recovery and rescue operations, coordinating activities with civilian and military agencies, techniques of management, operations, and tactics employed in air-ground search and rescue. Includes pickup devices, egress from fixed- and rotary-wing aircraft, pyrotechniques, litter and patient handling, coordination of activities with other agencies, and classroom and field location instruction using actual equipment.

**SVR1818 Pararescue Indoctrination**

Pararescue techniques. Includes medical terminology, anatomy, treatment of temperature-related injuries, medical kits, mountain indoctrination and diving physics.

**SVR1819 Evasion and Recovery**

Principles and practices of evasion and recovery. Includes use of clothing and equipment; procurement of food and water; application of methods of signaling; evasive traveling; provision of fire, shelter, medicine and hygiene; and responsibilities during a search-and-rescue operation.

**SVR1821 Parachute Water Survival**

Survival procedures after parachute entry into water. Includes parachute and rafting procedures, hazards and medical aspects of aquatic survival, sustenance and

## **COURSE DESCRIPTIONS**

survival living, and responsibilities during helicopter search-and-rescue attempts.

### **SVR1822 Resistance Training Instructor Orientation**

Principles, procedures, instructional techniques and theories of conducting wartime Code of Conduct training. Includes methods for instructing resistance, psychological aspects of prisoner-of-war resistance for instructors and students, and history and utility of Code of Conduct training.

### **SVR2801 Advanced Survival Techniques**

Adaptation of survival-and-evasion principles, procedures and techniques necessary for survival in extreme environmental conditions. Includes barren arctic, barren desert, jungle and open ocean environments.

## **SURVIVAL EQUIPMENT**

### **SVE1101 Sewing and Fabrication Principles**

Introduction to sewing machine operation and fabrication of flight clothing and accessories. Includes inspection, repair, modification and fabrication of flight clothing, antigravity suits, protective covers and upholstery, and the characteristics of textiles used in soundproofing panels.

### **SVE1102 Sewing Machine Maintenance**

Introduction to the operation, inspection, timing, adjustment, troubleshooting analysis, preventive maintenance of different series of sewing machines, and use of maintenance manuals to perform operator maintenance and troubleshoot malfunctions.

### **SVE1103 Automatic Parachutes**

Principles of automatic back, seat and chest personnel parachutes, and special-purpose parachutes used for aircraft deceleration. Includes preparation and assembly of automatic parachutes, automatic rip cord release and inspection, and servicing according to technical publications.

### **SVE1104 Inspection and Maintenance of Survival Equipment**

Inspections, maintenance, and packing of personal parachutes, life rafts, escape slides, life preservers and full pressure, and antiexposure flight suits.

### **SVE1105 Survival Equipment Orientation**

Introduction to survival equipment operations and practices. Includes identifying basic facts relating to Air Force Office of Safety and Health safety practices, operations security, use of Air Force publications, Air Force supply system, maintenance management, inspection systems, shop and maintenance practices, and environmental issues.

### **SVE2101 Advanced Sewing Machine Maintenance**

Advanced operation, inspection, timing, adjustment, fault isolation analysis and preventative maintenance procedures for series industrial-rated sewing machines. Includes use of maintenance manuals to perform operator maintenance and fault isolation.

## **TELEVISION SYSTEMS**

### **TVS1702 Television Equipment Maintenance**

Application of electronic principles to maintenance of television equipment. Includes circuit analysis, alignment, and performance tests and troubleshooting procedures.

### **TVS1720 Cockpit TV Sensor Systems Maintenance**

Circuit analysis, operational checks, system alignment and troubleshooting using specialized tools and test equipment.

### **TVS1730 Basic Television Equipment Maintenance**

Maintenance of receivers, monitors, videotape recorders, cameras and audio systems. Includes fundamentals of television communications, operational maintenance of studio transmissions and computer-embedded control systems.

### **TVS1740 Basic Imagery System Maintenance**

Description, operation and maintenance of light tables, minilabs, electromechanical cameras, electronic imaging centers and still digital cameras. Includes photographic fundamentals, and processing and printing negative film.

## **TRANSPORTATION**

### **TRN1609 Air Transportation Weight and Balance**

Preparation of transportation documents and reports; methods and techniques of weight-and-balance computations; and mathematical formulas, balance computers, weight charts, and aircraft weight records for hazardous and nonhazardous cargo including passengers.

**TRN1610 Aircraft Load Planning**

Palletized and nonpalletized cargo planning with special consideration to weight, bulk and properties. Includes preinspection of aircraft loading equipment, loading and restraining cargo for flights.

**TRN1613 Intransit Visibility System**

Basic Intransit Visibility System and the Global Transportation Network. Includes computer equipment configuration for data transmission, the international maritime satellite, hub and server connections, and troubleshooting system data errors.

**TRN1617 C-17 Loadmaster Qualification**

Overview of C-17 cargo-handling system and passenger and aeromedical-handling procedures. Includes flight operations, mission preparation and special-handling procedures.

**TRN1638 Aircraft Systems Familiarization and Operations - C-5 Loadmaster**

C-5 auxiliary power unit operation, hydraulic and kneeling systems, and forward and aft door operation. Includes preoperation inspection, trouble-isolation techniques, operational checks, operating limitations and use of synthetic trainers.

**TRN1640 Cargo Aircraft Operations**

Ground operations, preflight, in-flight and postflight duties of aircraft loadmaster. Includes positioning aircraft, determining load arrangement, aircraft preparation, preflight and in-flight briefings of passengers, aircraft preparation, and postflight inspection of aircraft.

**TRN2603 Air Passenger Service Procedures**

Application of computers in movement of passengers and baggage by the single passenger reservation system. Emphasizes the need for good customer relations.

**TRN2626 C-17 Loadmaster Airdrop**

Loadmaster airdrop qualification in C-17 aircraft. Includes aerial delivery of airborne personnel, transportation of heavy equipment, low-altitude parachute extraction and container delivery system.

**VEHICLE MAINTENANCE****VEM1102 Computer Control System Fundamentals**

Principles of operation, and troubleshooting and repair of malfunctions associated with vehicle computer control systems. Includes tools, portable testers, manufacturer's and specifications safety procedures.

**VEM1502 Brake and Suspension Systems**

Hydraulic principles related to vehicle brake, steering and suspension systems. Includes hydraulic and air brakes, master cylinders, brake boosters, various front-end designs, wheel alignment, hand tools, portable testers, manufacturer's technical manuals and safety procedures.

**VEM1505 Accessory Equipment Repair**

Window and door regulator alignment and adjustment, trim hardware and automotive glass replacement, and removal, repair and replacement of upholstery. Includes safety procedures, manufacturer's specifications and tools equipment.

**VEM1513 Automotive Electrical Systems**

Troubleshooting and repair of vehicle electrical systems. Includes ignition, starting charging systems, electrical schematics, manufacturer's technical manuals and safety procedures.

**VEM1517 Automatic Transmissions**

Principles of troubleshooting, disassembling, repairing, and reassembling automatic transmissions and related components. Includes hand tools, manufacturer's technical manuals and safety procedures.

**VEM1524 Specialized Support Vehicles**

Fundamental maintenance of firefighting, refueling other special-purpose vehicles. Includes hydraulic, pneumatic and electrical systems; tools; test equipment; publications; safety; and troubleshooting, adjustment and repair of associated system components.

**VEM1530 Overview of Vehicle Maintenance**

Familiarization with tools and procedures used in vehicle maintenance. Includes safety and materiel control principles; use of tools, test equipment and publications; inspection of vehicles; and maintenance policies and procedures.



## COURSE DESCRIPTIONS

### VEM1531 Vehicle Winterization and Corrosion Control

Preparation of vehicles for storage, shipment and inclement weather. Includes corrosion control, checklists, compliance records and test materials publications.

### VEM1533 Body and Fender Repair and Painting

Repair, replacement, and refinishing of body panels, fenders and frames. Includes manufacturer's specifications, tools and spray-painting equipment.

### VEM1534 Radiator and Fuel Tank Repair

Inspection, test, repair, and replacement of vehicle radiators and fuel tanks. Includes tools, safety procedures and tank patches.

### VEM2501 Electromechanical Circuits and Systems

Automotive test equipment to inspect, service, test, adjust, and troubleshoot engine starting, ignition and charging circuits.

### VEM2505 Vehicle Test Equipment

Use of test equipment necessary to troubleshoot various engine components. Includes oscilloscope, timing light, dwell meter, exhaust gas analyzer, hydrometer, growler, cooling system analyzer, generator bench, load testers, and special equipment for testing diodes, voltage regulators and distributors.

### VEM2508 Advanced Special Support Vehicles

Maintenance of firefighting, refueling and other special-purpose vehicles. Includes troubleshooting, disassembly, reassembly and replacement of hydraulic, pneumatic and electrical systems; use of tools, test equipment and publications; and safety procedures.

### VEM2509 Advanced Automotive Maintenance

Maintenance principles using tools, portable testers, publications and safety procedures to inspect, troubleshoot and repair automotive systems. Includes gas and diesel engines, power trains and replacement of inoperative vehicle system components.

## WELDING

### WEL1501 Oxyacetylene Welding

Introduction to oxyacetylene welding. Includes operation and maintenance of welding equipment; identification of beads, lap joints and tee joints of

carbon steel; position welding; cutting ferrous metals; silver and lead soldering; brazing steel and gray cast iron; fusion welding of ferrous castings; and forging metals.

### WEL1502 Metallic Arc Welding

Basic metallic arc welding. Includes operation and maintenance of equipment; selection of electrodes; building up flat surfaces, fillet welds and butt joints; and interpreting drawings and symbols.

### WEL1503 Inert Gas Shielded Welding

Introduction to welding of edge, butt and tee joints of heat and corrosion resistant ferrous, aluminum, magnesium and titanium alloys.



### WEL1513 Heat Treatment

Fundamental principles of heat treatment. Includes identification and classification of metals, analyzing hardness and testing and evaluating heat treatment of all aluminum and ferrous metals.

# **TERMS & ACRONYMS ...**

**A&P**, Airframe and Powerplant

**AC&W**, aircraft control and warning

**ACE**, American Council on Education

**AETC**, Air Education and Training Command

**AFOSH**, Air Force Occupational Safety and Health

**AFRC**, Air Force Reserve Command

**AFSC**, Air Force specialty code

**AGE**, aerospace ground equipment

**Air Force specialty codes** are alphanumeric identifiers of occupational specialties of airmen and their skill levels: unskilled (1 level), apprentice (3 level), journeyman (5 level), craftsman (7 level) or superintendent (9 level).

**Air Force specialty** is a group of related Air Force occupations that require common qualifications and are identified by title and code, the Air Force specialty code.

**Airman** refers to both male and female enlisted personnel.

**AMT**, aircraft maintenance technician

**ANG**, Air National Guard

**APD**, Acquisition Professional Development

**Armed Services Vocational Aptitude Battery (ASVAB)** consists of prerequisite tests for USAF enlistment and is a factor in occupational assignment.

**ASCP**, American Society of Clinical Pathologists

**ATC**, Air Training Command

**AU**, Air University

**AWACS**, airborne warning and control systems

**Board of Visitors (BOV)** collectively reviews policies and operations that are forwarded to the Secretary of the Defense through the AETC commander, and guides CCAF actions.

**CAD**, computer-aided design

**Candidates for graduation** are students who—before commissioning, retiring or separating—have completed all requirements for their degree

## TERMS & ACRONYMS

program, submitted final documents to the college and been recommended for award of the associate in applied science degree.

**Catalog of registration** is the edition of the catalog current at the time students registers or to which they are subsequently moved when granted a program or catalog change or when they do not complete their degree within 6 years of date of registration.

**CCAF courses** are Air Force courses taught in affiliated schools.

**CCAF degree-applicable courses** may be applied toward the technical core, technical elective, LMMS or program elective portion of CCAF associate degree programs or toward certifications.

**CCAF nondegree-applicable courses** may be applied toward certification but are not applicable to the degree program.

**CCAF permanent record** is the official record of each student who completes an Air Force course for which the college awards credit and civilian transfer credits applied toward degree completion.

**CCAF**, Community College of the Air Force at Maxwell AFB, Alabama, is an institution of higher learning dedicated to the enlisted members of the United States Air Force. The college is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award the associate degree in applied science degree.

**CLEP**, College-Level Examination Program

**Commander/president**, chief executive officer with command authority.

**CRL**, Command and Telemetry Command Reference Loop

**DANTES**, Defense Activity for Non-Traditional Education Support

**Degree award date** is the date Admissions & Registrar Directorate receives the degree completion documents or the date a manual review by CCAF administrative staff reveals a student has completed all degree requirements.

**Disenrollment** applies to a student who was withdrawn from a degree program for cause.

**DoD**, Department of Defense

**EFP**, electronic field production

**ELINT**, electronic intelligence

**EMT**, emergency medical technician

**FAA**, Federal Aviation Administration

**FAR**, federal aviation regulation

**FCC**, Federal Communications Commission

## TERMS & ACRONYMS

**FEMA**, Federal Emergency Management Agency

**GER**, general education requirement

**ICC**, International Certification Commission

**Internship** is a performance-based and documented system that may include a correspondence course; documented on-the-job training; and a closed book, proctored examination, all based on an Air Force specialty.

**IVD**, interactive videodisc

**JSAMTCC**, Joint Service Aviation Maintenance Technician Certification Council

**LMMS**, leadership, management and military studies

**MWR**, morale, welfare and recreation

**NCO**, noncommissioned officer

**Occupational specialty codes** are alphanumeric identifiers of Air Force enlisted occupational specialties. There are three types of occupational specialty codes—Air Force specialty code, special duty identifier and reporting identifier.

**OIC**, occupational instructor certification

**OJT**, on-the-job training

**OSHA**, Occupational Safety and Health Administration

**Policy Council** is a governing body that develops academic policies that are endorsed by the Board of Visitors. The council is composed of representatives from all elements of the CCAF system.

**Primary Air Force specialty code (PAFSC)** is what CCAF uses to determine degree program.

**Proficiency (P) credit** is awarded to Air Force enlisted personnel who have completed tri-service or Department of Defense initial skills technical training and demonstrate journeyman level competency.

**Program managers** are occupational specialists who evaluate permanent student records and progress reports, review courses from affiliated schools, develop degree programs relevant to occupational specialties and work with education services personnel in advising students.

**Programmatic accreditation** is official recognition by national professional organizations in such fields as business, health, law and engineering and provides quality assurance concerning educational preparation of members of a profession or occupation.

**Progress report (PR)** is an internal worksheet reflecting a student's record, including credits applied toward degree completion and cannot be used as an official education record.

## TERMS & ACRONYMS

**Registered student** is an individual currently registered in a CCAF degree program.

**Reporting identifier (RI)** is an alphanumeric occupational specialty code for an enlisted occupational specialty not included in the AFSC structure.

**Residency** is the requirement that at least 16 semester hours of CCAF credit be applied toward a CCAF degree.

**RF**, radio frequency

**RIP**, report on individual personnel

**SACS**, Southern Association of Colleges and Schools

**SATCOM**, satellite communications

**Separated student** is an individual who has been withdrawn from a degree program due to commissioning, retirement or separation.

**SH**, semester hour

**SOON**, Solar Observing Optical Network

**Special duty identifier (SDI)** is an alphanumeric occupational specialty code assigned to airmen who, on a semipermanent or permanent duty basis, perform tasks that do not provide a normal career progression pattern and are unrelated to any Air Force specialty.

**Subsequent degree** is a CCAF degree earned after award of the first CCAF degree.

**TACAN**, tactical air navigation

**Technical core** are those courses directly related to a student's field of study.

**Technical elective** is a course that is beneficial but not essential toward a student's field of study.

**Transcript** is the official educational record of a student.

**USAF**, United States Air Force

**VFR**, visual flight rules

**Withdrawn** applies to a student who has been removed from active student status because of administrative reasons or a personal request.

## INDEX ...

## A

Accreditation, *iii*, 14  
 Acronyms, 189  
 Administration, 104, 105  
 Administrative Center, 3  
 Admission, 8  
 Advanced Standing, 10  
 Advisory Bodies, 6  
 Aerospace Ground Equipment Tech, 26  
 Aerospace Historian, 27  
 Aerospace Physiology Instructor, 28  
 Affiliated School, 4, 97  
 Affiliated Schools Advisory Panel, 6  
 Air & Space Operations Tech, 29  
 Air Force Specialty Code, 22, 189  
 Air Force Specialty, 189  
 Air Traffic Control, 104, 107  
 Aircraft & Missile Maintenance, 18  
 Aircraft Armament Systems Tech, 30  
 Aircraft Armament Systems, 104, 107  
 Aircraft Maintenance Tech, 104, 108  
 Aircrew Life Support, 31, 104, 117  
 Aircrew Tech, 104, 118  
 Airfield Mgt, 104, 119  
 Airway Science, 32  
 Algebra, 19  
 Algebra-Based Physics, 19  
 Allied Health Sciences, 33, 104, 119  
 Allied Health, 18  
 Applied Geography, 104, 119  
 Applied History, 104, 119  
 Applied Physics, 104, 120  
 Armed Services Vocational Aptitude Battery, 189  
 Astronautics, 104, 120  
 Audiovisual Arts, 104, 120  
 Audiovisual Production Services, 34  
 Aviation Maintenance Tech, 35  
 Aviation Operations, 37  
 Avionic Systems Tech, 38  
 Avionics, 104, 120

## B

Bioenvironmental Engineering Tech, 39  
 Bioenvironmental Engineering, 104, 124  
 Biology, 19  
 Biomedical Equipment Tech, 40, 104, 125  
 Board of Visitors, 6, 7, 189

## C

Calculus, 19  
 Calculus-Based Physics, 19  
 Candidacy Status, 10  
 Candidates for Graduation, 189  
 Cardiopulmonary Laboratory Tech, 41, 104, 126  
 Carpentry, 104, 127  
 Catalog Change, 10  
 Catalog of Registration, 190  
 Certification, 10  
 Change
 

- Degree Program, 10
- Catalog, 10

 Chemistry, 19  
 Civil Engineering, 104, 127  
 Code Index, 104  
 College Algebra, 19  
 Commander/President, 1, 4  
 Communications Applications Tech, 42  
 Communications, 104, 128  
 Computer Maintenance & Repair, 104, 130  
 Computer Science Tech, 43  
 Computer Science, 19  
 Construction Tech, 44  
 Contracts Mgt, 45  
 Contracts, 104, 132  
 Core Values
 

- AF, 10
- CCAF, 11

 Corrosion Control, 104, 132  
 Course Descriptions, 103  
 Criminal Justice, 46

## INDEX

### D

Data Systems, 104, 132  
Degree  
    Associate in Applied Science, 18  
    Completion Requirement, 18  
    Program, 17  
    Subsequent, 9  
    Time Limit, 8  
Dental Assisting, 47  
Dental Laboratory Tech, 48, 104, 135  
Dental Specialist, 104, 136  
Dietetics & Nutrition, 49  
Disaster Preparedness, 50, 104, 136  
Disenrollment, 190  
Document  
    Fraudulent, 12  
    Process, 12  
    Update, 13  
DoD School, 9

### E

Ecological Controls, 51  
Education & Training Mgt, 52  
Education & Training, 104, 137  
Education Services Advisory Panel, 6  
Electronic Equipment Operation, 104, 139  
Electronic Power Production, 104, 140  
Electronic Systems Tech, 53  
Electronics & Telecommunications, 18  
Electronics, 104, 141  
Emergency Medical Tech, 104, 148  
Entrance Requirement, 8  
Environmental Medicine, 104, 149  
Environmental Science, 104, 149  
Explosive Ordnance Disposal, 54  
Explosives Handling & Disposal, 104, 150

### F

FAA Certification Credit, 94  
Family Support Center, 104, 150  
Feedback, 14  
Finance, 104, 150  
Financial Mgt, 55  
Fire Protection, 104, 152  
Fire Science, 56

Food & Nutritional Science, 104, 153  
Food Service, 104, 153  
Foreign Technical Language, 104, 153  
Forms  
    AF Fm 968, 8, 11, 12  
    AF Fm 2096, 11  
    AF Fm 2099, 13  
Fraudulent Document, 12  
Fuels, 104, 154

### G

General Biology, 19  
General Chemistry, 19  
General Education, 18, 20  
General Information, 1  
General Psychology, 19  
General Sociology, 19  
Geography, 104, 119  
Geophysical Sciences, 104, 155  
Grading Policy, 9  
Graduation, 10  
Graphics, 104, 156

### H

Health Care Mgt, 57  
Health Services Administration, 104, 156  
Heating, Air-Conditioning & Refrigeration, 104, 156  
Heavy Equipment Operation, 104, 157  
Histologic Tech, 58, 104, 158  
History, 104, 119  
Homepage, 7, 13, 15  
Hotel Mgt, 104, 158  
Human Anatomy, 19  
Human Resources Mgt, 59  
Humanities, 18  
Hyperbaric Medicine, 104, 158

### I

Information Mgt, 60  
Information Release, 13  
Information Systems Tech, 61  
Instructor of Tech & Military Science, 62  
Intelligence, 104, 158  
Internship, 104, 159, 191

**L**

Law Enforcement, 104, 160  
 Leadership, Mgt & Military Studies, 18, 20, 104, 161  
 Legal Service, 104, 162  
 Licensure, 10  
 Logistics & Resources, 18  
 Logistics, 63, 104, 163

**M**

Machinist, 104, 164  
 Maintenance Production Mgt, 64  
 Management & Supervision, 104, 165  
 Mapping, 104, 166  
 Marksmanship, 104, 166  
 Mathematics, 18, 20, 104, 166  
 Measurements, 104, 167  
 Mechanical & Electrical Tech, 65  
 Mechanical Maintenance, 104, 167  
 Medical Assistant, 104, 168  
 Medical Laboratory Tech, 66, 104, 168  
 Medical Readiness, 104, 169  
 Memberships, 197  
 Mental Health Services, 67  
 Metals Tech, 68  
 Metalworking, 104, 169  
 Meteorology, 104, 169  
 Military Science, 104, 170  
 Missile & Space Systems Maintenance, 69  
 Missile Maintenance Tech, 104, 171  
 Mission  
     AETC, 8  
     CCAF, 9  
 Munitions Systems Tech, 70  
 Munitions, 104, 172  
 Music, 71

**N**

“No Fault” Exception, 11  
 Nondestructive Testing Tech, 72  
 Nondestructive Testing, 104, 173  
 Nuclear Medicine Tech, 73, 104, 174  
 Nursing, 104, 174

**O**

Occupational Instructor Cert, 95, 191  
 Occupational Specialty Codes, 191  
 Occupational Therapy, 104, 176  
 Ophthalmic, 74  
 Optometric Tech, 104, 176  
 Oral Communication, 18, 21  
 Orthotic Prosthesis Devices, 104, 177  
 Other Service School, 9

**P**

Paralegal, 75  
 Pararescue, 76  
 Pavements, 104, 177  
 Personnel, 104, 177  
 Pharmacology, 104, 178  
 Pharmacy Tech, 77  
 Philosophy, 2  
 Photography, 104, 179  
 Physical Ed, 18, 20, 104, 179  
 Physical Therapist Assistant, 78  
 Physical Therapy, 104, 179  
 Physics, 104, 120  
 Physiological Training, 104, 179  
 Physiology, 19  
 Plumbing, 104, 180  
 Policies, 8  
 Policy Council, 6, 191  
 President, 1, 4  
 Primary AFSC, 191  
 Proficiency (P) Credit, 9, 191  
 Program Codes, 18, 22  
 Program Elective, 21  
 Program Manager, 191  
 Programmatic Accreditation, 191  
 Progress Report, 191  
 Psychology, 19  
 Public & Support Services, 18  
 Public Affairs, 79  
 Public Health Tech, 80



## INDEX

### R

Radio & Television Broadcasting, 104, 180  
Radiologic Tech, 81, 104, 181  
Recreation, 104, 181  
Registered Student, 192  
Registration, 8  
Reporting Identifier, 22, 192  
Residency Requirement, 18  
Residency, 192  
Restaurant, Hotel & Fitness Mgt, 82

### S

SACs, *iii*, 1, 14  
Safety, 83, 104, 182  
Sanitation, 104, 182  
School  
    Affiliated, 4, 97  
    DoD, 9  
    Other Service, 9  
    Training, 1  
Scientific Analysis Tech, 84  
Security, 104, 183  
Separated Student, 192  
Services, 104, 184  
Simler, 3  
Social Science, 18, 21  
Social Services, 85  
Sociology, 19  
Solar Observation, 104, 184  
Special Duty Identifier, 22, 192  
Special Duty/Reporting Identifier Internship, 104, 184  
Staff Directory, *iii*  
Statistics, 19  
Student  
    Behavior, 14  
    Feedback, 14  
    Record, 12  
    Separated, 192  
    Services, 14  
Subsequent Degree, 192  
Surgical Services Tech, 86  
Surveying, 104, 184  
Survival & Rescue, 104, 184  
Survival Equipment, 87, 104, 186

Survival Instructor, 88

### T

Technical Core, 192  
Technical Education, 18  
Technical Elective, 192  
Telephone Directory, *iii*  
Television Systems, 104, 186  
Terms, 189  
Time Limit to Complete Degree, 8  
Training School, 1  
Transcript Request, 13  
Transfer Credit  
    By Examination, 9  
    Certification, 10  
    DoD, 9  
    Licensure, 10  
    Other Service School, 9  
    Registry, 10  
Transportation, 89, 104, 186  
Trigonometry, 20

### U

Updating Document, 13

### V

Vehicle Maintenance, 90, 104, 187  
Vision  
    AETC, 5  
    AF, 4  
    CCAF, 6

### W

Waiver Process, 10  
Washback Policy, 11  
Weather Tech, 91  
Welcome, 1  
Welding, 104, 188  
Withdrawal, 11, 192  
Written Communication, 18, 21

# MEMBERSHIPS ...

The Community College of the Air Force holds memberships in the following organizations:

- ◆ Alabama Association of Collegiate Registrars
- ◆ American Association of College Registrars and Admissions Officers
- ◆ American Association of Community Colleges
- ◆ American Council on Education
- ◆ American Technical Education Association
- ◆ Aviation Technology Education Council
- ◆ Council for Higher Education Accreditation
- ◆ National Council for Marketing and Public Relations
- ◆ National Council for Occupational Education
- ◆ Southern Association of Colleges and Schools
- ◆ Southern Association of Collegiate Registrars and Admissions Officers
- ◆ Southern Association of Community, Junior and Technical Colleges
- ◆ The College Board

This publication has been reviewed and approved by the preparing agency according to current directives on policy, essentiality, propriety and quality.

**MEMBERSHIPS**

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