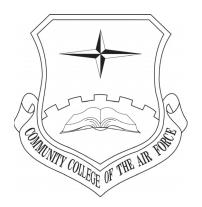
# Air University

# Community College of the Air Force



# The Airman's College We educate Airmen for life.

# 2014 - 2016 General Catalog Number 20

The Community College of the Air Force, Maxwell AFB, Gunter Annex, Alabama, is an institution of higher learning dedicated to the enlisted members of the United States Air Force. The Community College of the Air Force is accredited through Air University by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree.

Revised 9 March 2015 (Pages 3 & 12) The statements set forth in this catalog outline the current rules, regulations and policies of the Community College of the Air Force and are for informational purposes only. They should not be construed as the basis of a contract between the student and the college. While the provisions of this catalog will normally be applied as stated, the college reserves the right to change any provision listed in this catalog. It is the responsibility of each student to read and understand the provisions of this catalog.

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This catalog is available on-line at www.au.af.mil/au/barnes/ccaf/

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#### CCAF Homepage ... www.au.af.mil/au/barnes/ccaf/

Office	Symbol	Extension
Commandant	CC	5150
Commandant's Secretary	CCA	5150
Vice Commandant	CV	5152
Academic Affairs	DE	5153
Academic Programs	DEA	5015
Superintendent	DEA-1	5013
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SSgt Marlin Braun.	Student Services
SSgt Vanessa Glenn AAS, CCAF	Student Services

SrA Emmanuel Matthews ......Student Services

#### The Community College of the Air Force is dedicated to the professional

**MESSAGE FROM THE VICE COMMANDANT ...** 

growth of enlisted Airmen in the 21<sup>st</sup> century Air Force. We have prepared Airmen since our inception in 1972 while adjusting to stay abreast of our dynamic military mission and educationally at the fore-front of technology-focused colleges. Presently, our expeditionary mission-set coupled with rapidly advancing technological capabilities demand an educational institution that delivers prepared Airmen much earlier in their career. We are confident that our students are well prepared to serve in today's Air Force and equipped to achieve in the civilian or military sectors as their lives transition.

# **MESSAGE FROM THE COMMANDANT ...**

Welcome to the Community College of the Air Force! Our college is a federally-chartered degree-granting institution that serves the United States Air Force's enlisted total force. We partner with more than 106 affiliated Air Force schools, 256 Education Services Offices located worldwide, and more than 1,500 civilian academic institutions to serve more than 300,000 active, guard, and reserve enlisted personnel, making CCAF the world's largest community college system.

We strive to meet the demands of the Air Force's increasingly expeditionary environment and at the same time help Airmen achieve their educational goals by capitalizing on job-related training and education as part of flexible degree completion programs.

On the following pages you'll find information about our degree programs, our professional credentialing programs, and our regional accreditation. So whether you're a prospective or current student, an education counselor, a recruiter, or a commander, we've designed this catalog to provide valuable information about higher education opportunities with CCAF.

Lt Col Michael J. Artelli

CMSgt Andrew Hollis





# **GENERAL INFORMATION ...**

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 exclusively 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.

## **CCAF** 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.

# **Core Values**

The Air Force core values are:

Integrity First Service Before Self Excellence in All We Do

# CCAF Vision for the future is to become:

The community college of choice, providing a path to higher learning for those with a calling to serve.

# Accreditation

Air University (AU) is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) (1866 Southern Lane, Decatur, Georgia 30033-4097; telephone number 404-679-4501) to award associate and master's degrees. Air University achieved regional accreditation in June 2004, retroactive to the beginning of the 2004 calendar year. The Community College of the Air Force (CCAF) is a part of Air University. The Community College of the Air Force was separately accredited by SACSCOC from 1980-2004.

# 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 conferences 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.

#### **GENERAL INFORMATION**

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 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.

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 degreegranting 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 degrees 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 Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). After CCAF underwent a rigorous self-study and met accreditation standards, the Commission on Colleges accredited the college on 12 December 1980 to award the associate degree. During this accreditation process, the administrative offices relocated to Maxwell AFB, Alabama, on 1 April 1979. The SACS/COC 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 (AETC) remained the degree-granting authority for the college until 28 October 2004. On that date, degree-granting authority changed to the Air University Commander when President Bush signed the Fiscal Year 2005 National Defense Authorization Act.

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. The college participated in the Air University effort to gain regional accreditation by the SACS Commission on Colleges. On 25 June 2004, SACS notified Air University that their application for regional accreditation was approved, retroactive to 1 January 2004. From 2007-2009, CCAF participated in Air University's accreditation reaffirmation effort through SACSCOC. On 8 December 2009 SACS announced the reaffirmation of Air University's accreditation for a 10-year period. CCAF is now accredited through Air University by the SACS Commission on Colleges until 2019.

Over the years the college has grown both in numbers and recognition. With more than 300,000 registered students, the college is the largest multicampus community college in the world. Its affiliated schools are located in 37 states, and 9 foreign locations. About 6,300 CCAF faculty members provide quality instruction for the personal and professional development of enlisted personnel. More than one million transcripts have been issued in the last 10 years. Since issuing its first degree in 1977, the college has awarded more than 400,000 associate in applied science degrees.

# The System

The Air University (AU) Board of Visitors (BOV) is chartered to provide independent advice and recommendations on matters pertaining to the educational, doctrinal, and research policies and activities of Air University.

The AU BOV Undergraduate Education Subcommittee will review the AU colleges and related units responsible for degree applicable course and education programs, and make recommendations to the entire board on actions believed necessary to strengthen AU's undergraduate education offerings and programs.

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.

# **Student Learning Outcomes**

All CCAF graduates will meet the following learning outcomes. These outcomes are the overarching outcomes encompassed in all 68 CCAF degree programs.

- 1. Graduates will demonstrate satisfactory knowledge and skills identified in the Career Field Education and Training Plan Specialty Training Standard for their career field.
- 2. Graduates will meet nationally-normed average scores for general education courses to include critical thinking, oral communication, written communication, reading, mathematics, humanities, and the social and natural sciences related to the Educational Testing Services Proficiency Profile.
- 3. Graduates will demonstrate proficiency in leadership, management, and military studies.

# **Administrative Center**



Ryan Hall, CCAF Administrative Center Maxwell AFB, Gunter Annex, Alabama

The administrative staff brings together all elements of the system under the matrix authority of Air Force Instruction 36-2648, *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; at Lackland AFB, Texas, during 16 January 1977-31 March 1979; at Maxwell AFB, Alabama, during 1 April 1979 – 4 November 2008; at Maxwell AFB, Gunter Annex, Alabama, since 5 November 2008.

#### **GENERAL INFORMATION**

# Commandant

The CCAF commandant—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/commandants:

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. (interim)	16 August 1982
Col Rodney V. Cox, Jr.	19 October 1982
Col Russell A. Gregory	24 May 1988
Lt Col James L. Antenen (interim)	2 April 1992
Col Paul A. Reid	19 June 1992
Col Tamzy J. House	3 July 1996
Col James M. McBride	4 March 1999
Lt Col Jeffery K. Little (interim)	15 December 2001
Col Eric A. Ash	29 April 2002
Col Thomas D. Klincar	3 June 2005
Lt Col Raymond W. Staats	27 July 2007
Lt Col Timothy W. Albrecht	8 June 2009
Lt Col Jonathan T. Hamill	23 June 2011
Lt Col Michael J. Artelli	30 July 2013

# **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, academic advisors, education technicians/specialists and test examiners.

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/DEAC, 100 South Turner Boulevard, Maxwell AFB, Gunter Annex, Alabama 36114-3011; (334) 649-5021 or DSN 749-5021.

# Air University Board of Visitors

The board, under the provisions of the Federal Advisory Committee Act (FACA) of 1972, as amended, shall provide the Secretary of the Air Force, through the commander, Air University and Commander, Air Education and Training Command, independent advice and recommendations on matters pertaining to the educational, doctrinal, and research policies and activities of Air University. The Secretary of the Air Force or designated representative, on behalf of the Secretary of Defense, may act upon the board's advice and recommendations.

The board shall be composed of not more than thirty-five members, who are eminent authorities in the field of air power, defense, management, leadership, and academia. Board members appointed by the Secretary of Defense, who are not federal officers or employees, shall serve as special government employees under the authority of 5 U.S.C. § 3109. Members normally serve annual renewable terms up to a maximum of nine years.

The board meets at least twice a year, in the spring and the fall, at Maxwell AFB, Alabama. The board presents a written report with its advice and recommendations to the Air University commander and provides an annual out brief to the Secretary of the Air Force and to the US Air Force Chief of Staff. Meeting minutes, reports, or other documents pertaining to board meetings may be accessed at the GSA FACA Database (http://fido.gov/facadatabase).

# **The Advisory Bodies**

In addition to the Air University Board of Visitors, the college has three other advisory bodies. Advisory body members are selected from the CCAF system.

# 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 polices, 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 CCAF and the education services community; its primary focus is on the student body when making recommendations. The panel advises the CCAF commandant 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 commandant on marketing methods that will enhance participation in the college.

# **Policy Council**

Academic policies are developed by the Policy Council and endorsed by the AU Board of Visitors. The Policy Council is composed of representatives from all elements of the CCAF system. Chaired by the CCAF

#### **GENERAL INFORMATION**

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 commandant 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/DE, 100 South Turner Boulevard, Maxwell AFB, Gunter Annex, Alabama 36114-3011.

# **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 Air Force Recruiting Service Instruction 36-2001, *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. 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 documented in the **Degree Programs** section may register in programs related to their 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 (ITMS), is limited to 6 years from date of registration. A 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. A student who does not complete degree requirements within 6 years from the date of enrollment, and their primary occupational specialty (AFSC, Special Duty Identifier [SDI], or Reporting Identifier [RI] is not assigned to a specific degree program, will not be registered. A 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 a request through the education services office or ANG/AFRC CCAF advisor.

A student enrolled in the ITMS 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.

# **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.

# Award of Credit

A credit hour is the amount of work represented in intended learning outcomes and verified by evidence of student's achievement. CCAF follows sound practices for determining the amount and level of credit awarded for courses. It is institutionally established equivalency that reasonably approximates new theory at 15 contact hours equates to 1 semester hour, review of theory or laboratory of 30 contact hours equates to 1 semester hour, review of theory or laboratory of 30 contact hours equates to 1 semester hour, and test/examinations at 15:1 or 30:1, as appropriate to the type of examination administrated.

# **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 American Association of Collegiate Registrars and Admissions Officers or a National Association of Credential Evaluation Services member.

The General Education Mobile (GEM) program connects CCAF students with online general education courses offered by regionally accredited colleges and universities. The Air University Associate-to-Baccalaureate Cooperative (AU-ABC) program connects CCAF graduates with online 4-year degree programs. The AU-ABC program includes postsecondary schools with regional accreditation and national accreditation through the Distance Education and Training Council.

# **Civilian College Courses**

Courses completed with a "C" or higher at accredited civilian institutions may apply to CCAF degree programs. A grade of "C/D" is not acceptable in transfer. Courses must be program-applicable and cannot duplicate credit previously applied from other sources.

# **Department of Defense & Other Service Schools**

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 credit information on other DoD courses that may apply to a CCAF degree.

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.

# **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, College Board, Excelsior

#### **GENERAL INFORMATION**

College and the Defense Language Proficiency Test once CCAF receives the original test score report from the administrating agency.

Official transcripts or score reports must be sent directly from the issuing agency to the CCAF Registrar. Examination results documented on other college or university transcripts which credit was used is not acceptable.

# **Professional Credential**

The term "*Credential*" refers to professional certifications, licensures or registries. CCAF degree technical and/or program elective requirements may be satisfied by credit awarded for specific national professional credentials. Students are responsible for contacting their education center and provide copies of issued credentials and supporting documentation. Additional information concerning professional credentials is available on pages *91-102*.

A student holding a degree-relevant national professional credential should contact their education center to request that official written verification be sent to CCAF Credentialing Programs, CCAF/DEAL, 100 South Turner Boulevard, Maxwell AFB, Gunter Annex, Alabama 36114-3011. The credentialing agency will forward appropriate documentation to CCAF/DEAL for verification and loading of credential to student records.

Credentials must be current in order to be awarded CCAF technical credit. Airmen who have allowed an awarded credential(s) to expire or lapse are no longer certified or hold that credential. An expired credential is no longer valid and the person may no longer exercise the privileges granted of that credential. CCAF will not load national professional credentials to student records and award technical credit if the credential has expired or lapsed.

To determine the professional credentials that can be used in a degree program, refer to the degree plans of this catalog. To obtain a listing of all national professional credentials approved by CCAF for award of credit visit <u>http://www.au.af.mil/au/barnes/ccaf/certifications.asp</u>.

# **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 or 5) after completing 45 semester hours of degree-applicable course work and applying civilian course or test credit. At this point a counselor should provide special guidance to complete degree requirements.

# **Waiver Process**

A student desiring a waiver of academic policy and/or degree program requirements 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. The dean of academic affairs is the final authority for exceptions and waivers of academic policy.

CCAF does not have a waiver policy for CCAF-awarded credentialing programs. All published program requirements must be successfully completed. Waiver requests or exception to policies will not be accepted and/or approved.

# **Candidacy Status & Graduation**

The student's CCAF counselor or advisor/training technician recommends candidacy status and notifies the student of candidacy status. After a student meets all requirements, the college notifies the student's current education services office, or nominating training office or education service office of degree completion. All degree requirements must be satisfied before separation, retirement or commissioning and a student must have been enrolled in a degree program before that date. A student who completed all requirements prior to separation, retirement, or commissioning has six years from retirement, separation or commissioning to file for graduation. The college has two graduating classes each year—April and October. Diplomas are mailed to the education services offices about one week before graduation.

# **Degree Award Date**

The student's degree award date is the date the CCAF Administrative Center receives the completed *AF Form* 968, *CCAF Action Request*, nominating the student for graduation in a specific CCAF degree program. The *CCAF Action Request* is submitted by education services counselors or advisors to the CCAF Administration Center via the Air Force Automated Education Management System (AFAEMS). All degree requirements must be completed and recorded to the CCAF student record prior to nomination. Students should consider the time necessary for course and/or examination score reporting and transit time for college or university transcripts needed for credit in transfer decisions.

Students should not assume CCAF degree requirements are automatically completed upon successful completion of required courses via a civilian college or university or that this is the date they will be a CCAF graduate. The student must satisfy all requirements, up to and including nomination, for graduation before the close out of the member's Enlisted Performance Report (EPR). CCAF's policy is not to back date any student's graduation date to satisfy requirements for Senior Rater Endorsement, EPR, award packages, etc..

# Combat Wounded, III or Injured Airmen (Wounded Warriors)

Combat wounded, ill, or injured Airmen who commenced but did not complete a CCAF degree program and/or CCAF-awarded credentialing program may continue participation in their degree program and/or certification program after separation or retirement. To qualify, the member must have been awarded a 9W-series Reporting Identifier (RI) for combat-related injuries or illnesses as reflected in the Military Personnel Data System. Degree program participation is limited to the program of enrollment at the time of separation or retirement. These members will have 10 years from their separation or retirement date or from 30 December 2011 if they separated or retired between 12 September 2001 and 30 December 2011 to complete degree requirements.

# "No Fault" Exception

Ordinarily, to participate and graduate, a student must possess the required Air Force specialty code (AFSC). 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:

- Conditions or circumstances must be beyond the student's control.
- Student must be pursuing a degree in that AFSC at the time of loss.
- The "no fault" exception request must be submitted to the CCAF administrative center within one year of removal of specialty code.
- Degree requirements must be completed within one 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.

#### **GENERAL INFORMATION**

- 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/DEA, 100 South Turner Boulevard, Maxwell AFB, Gunter Annex, Alabama 36114-3011.

# 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 called a *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 obtaining permission from the affiliated school commander or designated representative.

# **Degree Program Withdrawal**

An admitted and registered student who has separated, retired or been commissioned 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 withdrawal from a degree program, the student must contact their local base education office or ANG/AFRC CCAF advisor.

# **Student Rights and Grievances**

Any Air University student has rights to present a program-related grievance or to appeal adverse action taken against him/her to leadership using the channels outlined in AU Policy, Regarding Student Rights and Grievance and those supplemented by CCAF affiliated schools.

# **The Educational Documents**

To initiate a record update, students must contact the education services office or ANG/AFRC CCAF advisor. To progress in a CCAF degree program, students must submit educational documentation reflecting course completion. The issuing institution or agency must mail these documents directly to: CCAF/DESS, 100 South Turner Boulevard, Maxwell AFB, Gunter Annex, Alabama 36114-3011. 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 Career Development Academy (formerly ECI) official transcript, showing semester-hour credits.
- Foreign transcript with an external course-by-course evaluation from American Association of Collegiate Registrars and Admission Officers or National Association of Credential Evaluation Services member. Foreign transcripts must be official and in English or accompanied by an English translation from the evaluation service.
- 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 Enrollment Management and Academic Programs Divisions 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, and upon credits being posted to student records, program managers assess progress toward degree requirements.

# **Document Update**

The college updates student records from educational documents submitted on behalf of the student. A student should not update records more than once a year unless applying for an Air Force commission, before separation or retirement, or when it may result in degree completion.

# **Privacy Act**

As a federal military education institution, AU must adhere to established federal and services policies and guidelines on records. Air University adheres to the guidelines of the Privacy Act of 1974 to protect the confidentially and integrity of student records. Though not mandated by law, AU also complies with the basic tenets of the Federal Family Educational Rights and Privacy Act (FERPA). However, the Department of Education, Family Policy compliance Office, views AU as a DOD Section 6 school that is solely funded by the DOD under 10 *United States Code (USC)* Section 2164, and is therefore exempt. The security and confidentiality of student records are central to the academic integrity of AU. AU is committed to protecting, to the maximum extent possible, the privacy rights of all individuals about whom it holds information, records, and files.

## **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. These directives mentioned under "Privacy Act" 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**

Transcripts are processed within two business days of request. There are five options for requesting a transcript; option four is the *only* option for overnight delivery.

1. Students may order transcripts on our: <u>http://www.au.af.mil/au/barnes/ccaf/transcripts.asp</u>.

2. Students can order a transcript by visiting the Air Force education center. CCAF advisors can request transcripts electronically for students via the CCAF Web Progress Report. To ensure compliance with the provisions of the Family Educational Rights and Privacy Act, CCAF advisors must verify the identity of each student prior to submitting transcript requests.

3. Students can order their own transcripts from any military computer that has an "af.mil" domain through the on-line Air Force Virtual Education Center Web site, via the Air Force Portal. To ensure compliance with the provisions of the Family Educational Rights and Privacy Act, students can only order transcripts for themselves.

#### **GENERAL INFORMATION**

4. Students and prior students have a transcript ordering option through Credentials Inc. that allows them to order transcripts via telephone or online from virtually anywhere in the world. Requests made using this service will be expedited on a next business day basis once the transaction has been completed (some transactions may require a faxed or mailed signature from the student for the order to be finalized). The online system is available 24 hours per day. It offers additional services such as being able send up to five transcripts to separate locations in a single transaction; additionally, students have an overnight shipping option. Operator assistance is available from 0700 to 1900 CST. The system has the ability to check the status of the order online or students can opt to receive e-mail or fax notification for receipt of the order, any problems with the order, and final completion of the order. Credentials Inc. charges a small handling fee that is assessed based on the number of transcripts ordered and delivery method. Users must have a valid credit card and e-mail or fax in order to use this service. Students can reach Credentials Inc. on the Web at https://www.credentials-inc.com/tplus/?ALUMTRO012308 or by phone at 1-847-716-3005 to order a transcript or to receive further information.

5. Students can submit a written request that includes full name or former name if appropriate, social security account number, and the address of the location the transcript is to be sent. A legal signature is the legal authorization for us to release a transcript. Mailing time can be as long as 15 days. Send a written transcript request to:

CCAF/DESS 100 South Turner Blvd Maxwell AFB, Gunter Annex AL 36114-3011

\*Note: "The appearance of hyperlinks does not constitute endorsement by the U.S. Air Force of this Web site or the information, products, or services contained therein. The U.S. Air Force does not exercise any editorial control over the information you may find at these locations. Such links are provided consistent with the stated purpose for this U.S. Air Force Web site."

# 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.

# **Student Complaints**

Each affiliate school maintains an adequate process for addressing student complaints. The policies and procedures are to provide a means to resolve legitimate student complaints quickly and at the most appropriate level of responsibility.

## 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.

A student may also provide feedback to the administrative center by visiting the CCAF homepage at <u>www.au.af.mil/au/barnes/ccaf/</u> and using the e-mail link or through the Air Force Virtual Education Center at https://afvec.langley.af.mil.

## **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. Activities include: bowling centers, chapels, clubs, family support centers, fitness centers, hobby shops, libraries, community centers, life skills centers, theaters, and swimming pools.

# DEGREE PROGRAMS ...

This section contains the degree program requirements of the Community College of the Air Force. Degree programs are developed by Air Force technical experts, civilian or military consultants and reviewed by the Dean of Academic Affairs, Commandant, 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.

# 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**

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

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

	Semester
	Hours
Technical Education	24
Leadership, Management & Military Studies	6
Physical Education	4
General Education	15*
Oral Communication3	
Written Communication3	
Mathematics	
Social Science	
Humanities	
Program Elective	15*
Total	64

\*Note: The Paralegal degree requires 18 SH hours of general education (addition of a 3 SH general education elective) and 12 SH of program elective.

Leadership, management and military studies; physical education; general education; and program elective requirements are standard for all programs. Exceptions may be required to satisfy certification or other programmatic recognition.

A student must 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 (3N2X1, 3S1X1, 7S0X1, Other Service Instructors).

# Residency Requirement (16 semester hours)

A student must have a minimum of 16 SHs of resident CCAF credit applied to his or her degree program to graduate. The 16 SH residency requirement is only satisfied by credit earned for coursework completed in an affiliated school or through internship credit awarded for progression in an Air Force occupational specialty. Note: Physical education credit awarded for basic military training is not resident credit.

# 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 advisor/training technician 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 18.

Technical education requirements are generally satisfied by entry-level and advanced degreeapplicable courses at affiliated schools and through internship. However, additional technical education requirements may be satisfied by application of courses accepted in transfer, testing credit, distance learning, or issued professional credentials.

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.

# 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 fulfilling the LMMS requirement is through attending Airman Leadership School, 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, Management Information Systems, 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 4semester-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, Associate in Arts or Associate in Science degrees.

- 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/Public Speaking. Courses that prepare students to present effective public speeches to persuade, debate or argue in a clear, concise and logical manner. Emphasis on organization and delivery of public speeches. <u>Not acceptable courses</u> include group and interpersonal communication.

#### Written Communication......3

English composition. Applicable written communication courses must satisfy the delivering institution's writing and composition requirement for graduation. <u>Not acceptable courses</u> include business communication and technical writing.

computer mathematics; beginning or elementary algebra; statistics (taught outside the mathematics department); history of mathematics; and mathematics for elementary and secondary teachers.

#### 

Courses from the following disciplines are acceptable: anthropology, archaeology, culture, 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.

#### 

Courses in fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy and religion are acceptable. <u>Not</u> <u>acceptable</u> include applied courses that teach how to play a musical instrument, perform a dance routine, sculpt or draw an art form and sign language.

# General Education Goal and Learning Outcomes

The goal of the CCAF General Education requirement is to stimulate critical, innovative thinking and intellectual curiosity by providing graduates the foundational skills, knowledge and attitudes expected of informed and responsible citizens. Graduates will integrate, synthesize and apply knowledge in written and oral communication, mathematics, social sciences and humanities.

Upon completion of this program, students will be able to:

- 1. Write with clarity and precision for diverse audiences and understand and interpret the written expression of others.
- 2. Organize and deliver oral presentations to persuade, debate, argue or inform in a clear, concise and logical manner.
- 3. Understand and apply mathematical concepts and reasoning in problem solving.

- 4. Appreciate and value human diversity, individual differences, societies and the many expressions of culture.
- 5. Apply critical thinking skills as versatile problem solvers with enhanced mental agility and adaptability.

Note: Degree-specific program goals and learning outcomes can be found in the Web version of the CCAF General Catalog at <u>http://www.au.af.mil/au/barnes/ccaf/</u> under the Degree Programs section.

# 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. <u>Not acceptable</u> courses are science for elementary and secondary teachers, health, nutrition, and hygiene.
- Foreign language credit earned at the Defense Language Institute.
- A maximum of 9 SHs of CCAF degreeapplicable technical course credit otherwise not applicable to the program of enrollment.

# THE DEGREE PROGRAMS BY AFSC/SDI/RI

The tables on the following pages indicate 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.

AFSC	Program Title	Program Code	Flight	DSN Ext	Page
1A0X1	Aviation Operations	4VCB	DEAT	5050	33
1A1X1	Aviation Operations	4VCB	DEAT	5050	33
1A2X1	Aviation Operations	4VCB	DEAT	5050	33
1A3X1	Information Systems Technology	0IYY	DEAT	5050	61
1A4X1	Air & Space Operations Technology	4VAS	DEAT	5050	26
1A6X1	Aviation Operations	4VCB	DEAT	5050	33
1A8XX	Intelligence Studies and Technology	9INZ	DEAS	5030	63
1A9X1	Aviation Operations	4VCB	DEAT	5050	33
1B4X1	Cybersecurity	0CYC	DEAT	5050	42
1C0X2	Aviation Management	1AVY	DEAT	5050	32
1C1X1	Air Traffic Operations and Management	2IAA	DEAT	5050	27
1C2X1	Air Traffic Operations and Management	2IAA	DEAT	5050	27
1C3X1	Emergency Management	9IMY	DEAS	5030	50
1C4X1	Information Systems Technology	0IYY	DEAT	5050	61
1C5X1	Air & Space Operations Technology	4VAS	DEAT	5050	26
1C6X1	Air & Space Operations Technology	4VAS	DEAT	5050	26
1C7X1	Aviation Management	1AVY	DEAT	5050	32
1NXXX	Intelligence Studies and Technology	9INZ	DEAS	5030	63
1P0X1	Aircrew Safety Systems Technology	4VAT	DEAT	5050	30
1S0X1	Safety	9IIY	DEAT	5050	85
1T0X1	Survival Instructor	2IBS	DEAT	5050	88
1T2X1	Personnel Recovery	7GDP	DEAT	5050	80
1U0X1	Air & Space Operations Technology	4VAS	DEAT	5050	26
1W0X1	Meteorology	8FYY	DEAT	5050	72
1W0X2	Meteorology	8FYY	DEAT	5050	72
2A0X1	Avionic Systems Technology	4VHS	DEAT	5050	34
2A2XX	Avionic Systems Technology	4VHS	DEAT	5050	34
2A3X3	Aviation Maintenance Technology	4VAD	DEAT	5050	31
2A3X4	Avionic Systems Technology	4VHS	DEAT	5050	34
2A3X5	Avionic Systems Technology	4VHS	DEAT	5050	34
2A3X7	Aviation Maintenance Technology	4VAD	DEAT	5050	31

AFSC	Program Title	Program Code	Flight	DSN Ext	Page
2A3X8	Aviation Maintenance Technology	4VAD	DEAT	5050	31
2A5X1	Aviation Maintenance Technology	4VAD	DEAT	5050	31
2A5X2	Aviation Maintenance Technology	4VAD	DEAT	5050	31
2A5X3	Avionic Systems Technology	4VHS	DEAT	5050	34
2A5X4	Avionic Maintenance Technology	4VAD	DEAT	5050	31
2A6X1	Aviation Maintenance Technology	4VAD	DEAT	5050	31
2A6X2	Aerospace Ground Equipment Technology	4VAB	DEAT	5050	23
2A6X3	Aviation Maintenance Technology	4VAD	DEAT	5050	31
2A6X4	Aviation Maintenance Technology	4VAD	DEAT	5050	31
2A6X5	Aviation Maintenance Technology	4VAD	DEAT	5050	31
2A6X6	Aviation Maintenance Technology	4VAD	DEAT	5050	31
2A7X1	Metals Technology	4VLB	DEAT	5050	71
2A7X2	Nondestructive Testing Technology	4VXR	DEAT	5050	76
2A7X3	Aircraft Structural Maintenance Technology	4VAN	DEAT	5050	29
2A7X5	Aircraft Structural Maintenance Technology	4VAN	DEAT	5050	29
2A8XX	Avionic Systems Technology	4VHS	DEAT	5050	34
2A9XX	Avionic Systems Technology	4VHS	DEAT	5050	34
2F0X1	Logistics	1AMY	DEAS	5030	64
2G0X1	Logistics	1AMY	DEAS	5030	64
2M0X1	Electronic Systems Technology	4VHP	DEAT	5050	49
2M0X2	Missile & Space Systems Maintenance	4VAK	DEAT	5050	73
2M0X3	Mechanical & Electrical Technology	4VGA	DEAS	5030	68
2P0X1	Electronic Systems Technology	4VHP	DEAT	5050	49
2RXXX	Maintenance Production Management	4VJG	DEAS	5030	65
2S0X1	Logistics	1AMY	DEAS	5030	64
2T0X1	Transportation	1ATY	DEAS	5030	89
2T1X1	Transportation	1ATY	DEAS	5030	89
2T2X1	Transportation	1ATY	DEAS	5030	89
2T3X1	Vehicle Maintenance	4VKC	DEAS	5030	90
2T3X2	Vehicle Maintenance	4VKC	DEAS	5030	90
2T3X7	Maintenance Production Management	4VJG	DEAS	5030	65
2W0X1	Munitions Systems Technology	4VRA	DEAT	5050	74
2W1X1	Aircraft Armament Systems Technology	4VRY	DEAT	5050	28
2W2X1	Munitions Systems Technology	4VRA	DEAT	5050	74
3D0X1	Information Management	1AUY	DEAS	5030	60
3D0X2	Information Systems Technology	<b>0IYY</b>	DEAT	5050	61
3D0X3	Information Systems Technology	0IYY	DEAT	5050	61
3D0X4	Computer Science Technology	0CYY	DEAT	5050	38
3D1X1	Information Systems Technology	0IYY	DEAT	5050	61

AFSC	Program Title	Program Code	Flight	DSN Ext	Page
3D1X2	Electronic Systems Technology	4VHP	DEAT	5050	49
3D1X3	Electronic Systems Technology	4VHP	DEAT	5050	49
3D1X4	Information Systems Technology	0IYY	DEAT	5050	61
3D1X5	Electronic Systems Technology	4VHP	DEAT	5050	49
3D1X6	Electronic Systems Technology	4VHP	DEAT	5050	49
3D1X7	Electronic Systems Technology	4VHP	DEAT	5050	49
3E0X1	Mechanical & Electrical Technology	4VGA	DEAS	5030	68
3E0X2	Mechanical & Electrical Technology	4VGA	DEAS	5030	68
3E1X1	Mechanical & Electrical Technology	4VGA	DEAS	5030	68
3E2X1	Construction Technology	4VEB	DEAS	5030	39
3E3X1	Construction Technology	4VEB	DEAS	5030	39
3E4X1	Mechanical & Electrical Technology	4VGA	DEAS	5030	68
3E4X3	Entomology	3ALC	DEAS	5030	51
3E5X1	Construction Technology	4VEB	DEAS	5030	39
3E6X1	Maintenance Production Management	4VJG	DEAS	5030	65
3E7X1	Fire Science	9IFY	DEAS	5030	54
3E8X1	Explosive Ordnance Disposal	4VRC	DEAS	5030	52
3E9X1	Emergency Management	9IMY	DEAS	5030	50
3H0X1	Aerospace Historian	9DHK	DEAS	5030	24
3M0X1	Hospitality and Fitness Management	1FRS	DEAS	5030	57
3N0X2	Mass Communications	2FDE	DEAS	5030	67
3N0X5	Mass Communications	2FDE	DEAS	5030	67
3N1X1	Music	2CHB	DEAS	5030	75
3N2X1	Music	2CHB	DEAS	5030	75
3P0X1	Criminal Justice	9IJY	DEAS	5030	41
3S0X1	Human Resource Management	1AOY	DEAS	5030	58
3S1X1	Human Services	9IKY	DEAS	5030	59
3S2X1	Education & Training Management	2BAC	DEAS	5030	48
3S3X3	Management Engineering Technology	1AWY	DEAS	5030	66
4A0X1	Health Care Management	7GCY	DEAS	5030	55
4A1X1	Logistics	1AMY	DEAS	5030	64
4A2X1	Biomedical Equipment Technology	7GAA	DEAS	5030	36
4B0X1	Bioenvironmental Engineering Technology	7GAM	DEAS	5030	35
4C0X1	Mental Health Services	7GAP	DEAS	5030	70
4D0X1	Dietetics & Nutrition	7GAD	DEAS	5030	47
4E0X1	Public Health Technology	7ECY	DEAS	5030	84
4H0X1	Cardiopulmonary Laboratory Technology	7GDA	DEAS	5030	37
4J0X2	Physical Therapist Assistant	7GAI	DEAS	5030	82
4J0X2A	Physical Therapist Assistant	7GAI	DEAS	5030	82

AFSC	Program Title	Program Code	Flight	DSN Ext	Page
4MOX1	Aerospace Physiology Technology	7GAN	DEAS	5030	25
4N0X1	Practical Nursing Technology	7GAL	DEAS	5030	83
4N1X1	Surgical Services Technology	7GEA	DEAS	5030	87
4P0X1	Pharmacy Technology	7GAH	DEAS	5030	81
4R0X1	Diagnostic Imaging Technology	7GDH	DEAS	5030	45
4R0X1A	Nuclear Medicine Technology	7ABJ	DEAS	5030	77
4R0X1B	Diagnostic Medical Sonography	7GDK	DEAS	5030	46
4R0X1C	Diagnostic Imaging Technology	7GDH	DEAS	5030	45
4T0X1	Medical Laboratory Technology	7GAF	DEAS	5030	69
4T0X2	Histologic Technology	7GAE	DEAS	5030	56
4V0X1	Ophthalmic Technician	7GDI	DEAS	5030	78
4Y0X1	Dental Assisting	7GBC	DEAS	5030	43
4Y0X2	Dental Laboratory Technology	7GBB	DEAS	5030	44
5J0X1	Paralegal	1CAM	DEAS	5030	79
5R0X1	Human Services	9IKY	DEAS	5030	59
6C0X1	Contracts Management	1CAO	DEAS	5030	40
6F0X1	Financial Management	9GEC	DEAS	5030	53
7S0X1	Criminal Justice	9IJY	DEAS	5030	41
8A200	Hospitality and Fitness Management	1FRS	DEAS	5030	57
8B000	Education & Training Management	2BAC	DEAS	5030	48
8B100	Education & Training Management	2BAC	DEAS	5030	48
8C000	Human Services	9IKY	DEAS	5030	59
8D000	Intelligence Studies and Technology	9INZ	DEAS	5030	63
8F000	Human Resource Management	1AOY	DEAS	5030	58
8M000	Information Management	1AUY	DEAS	5030	60
8P100	Information Management	1AUY	DEAS	5030	60
8RXXX	Human Resource Management	1AOY	DEAS	5030	58
9L000	Intelligence Studies and Technology	9INZ	DEAS	5030	63
9S100	Scientific Analysis Technology	4VES	DEAT	5050	86

# THE DEGREE PROGRAMS BY PROGRAM CODE

Code	Program Title	Pg	Code	Program Title	Pg
0CYC	Cybersecurity	42	4VRA	Munitions Systems Technology	74
0CYY	Computer Science Technology	38	4VRC	Explosive Ordnance Disposal	52
0IYY	Information Sys Technology	61	4VRY	Aircraft Armament Sys Technology	28
1AMY	Logistics	64	4VXR	Nondestructive Testing Technology	76
1AOY	Human Resource Management	58	7ABJ	Nuclear Medicine Technology	77
1AWY	Management Engineering Technology	66	7ECY	Public Health Technology	84
1ATY	Transportation	89	7GAA	Biomedical Equipment Technology	36
1AUY	Information Management	60	7GAD	Dietetics & Nutrition	47
1AVY	Aviation Management	32	7GAE	Histologic Technology	56
1AWY	Management Engineering Technology	66	7GAF	Medical Laboratory Technology	69
1CAM	Paralegal	79	7GAH	Pharmacy Technology	81
1CAO	Contracts Management	40	7GAI	Physical Therapist Assistant	82
1FRS	Hospitality & Fitness Management	57	7GAL	Practical Nursing Technology	83
2BAC	Education & Training Management	48	7GAM	Bioenvironmental Engineering Tech	35
2CHB	Music	75	7GAN	Aerospace Physiology Technology	25
2FDE	Mass Communications	67	7GAP	Mental Health Services	70
2IAA	Air Traffic Operations & Management	27	7GBB	Dental Laboratory Technology	44
2IBB	Instructor of Technology & Military Sci	62	7GBC	Dental Assisting	43
2IBS	Survival Instructor	88	7GCY	Health Care Management	55
3ALC	Entomology	51	7GDA	Cardiopulmonary Laboratory Technology	37
4VAB	Aerospace Ground Equip Technology	23	7GDH	Diagnostic Imaging Technology	45
4VAD	Aviation Maintenance Technology	31	7GDI	Ophthalmic Technician	78
4VAK	Missile & Space Systems Maintenance	73	7GDK	Diagnostic Medical Sonography	46
4VAN	Aircraft Structural Maint Technology	29	7GDP	Personnel Recovery	80
4VAS	Air & Space Operations Technology	26	7GEA	Surgical Services Technology	87
4VAT	Aircrew Safety Sys Technology	30	8FYY	Meterology	72
4VCB	Aviation Operations	33	9DHK	Aerospace Historian	24
4VEB	Construction Technology	39	9GEC	Financial Management	53
4VES	Scientific Analysis Technology	86	3ALC	Entomology	51
4VGA	Mechanical & Electrical Technology	68	9IFY	Fire Science	54
4VHP	Electronic Systems Technology	49	9IIY	Safety	85
4VHS	Avionic Systems Technology	34	9IJY	Criminal Justice	41
4VJG	Maintenance Production Management	65	9IKY	Human Services	59
4VKC	Vehicle Maintenance	90	9IMY	Emergency Management	50
4VLB	Metals Technology	71	9INZ	Intelligence Studies & Technology	63

### 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.

Technical Core	Maximum Semester Hours
Aerospace Ground Equipm	ent Maintenance 24
CCAF Internship	

Technical Electives .......... Maximum Semester Hours Advanced Aerospace Ground Equipment

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
government, history, political science, psychology,
sociology Humanities
Drogram Elective (15 compater hours) Courses

**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; maximum 9 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.

Technical Core	. Maximum Semester Hours
Advanced Writing	9
Aerospace Science	9
CCAF Internship	
Interviewing	3
	3
Unit Historian Developmen	.t9

Technical Electives Maximum Semester H	ours
Computer Science	6
Copyreading & Editing	3
Human Communication	6
Leadership & Management	3
Logic	3
Managerial Communications	3
Military Science	3
Philosophy	3
Political Science	6
Statistics	3
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 15.

**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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Humanities

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

### AEROSPACE PHYSIOLOGY TECHNOLOGY (7GAN)

#### **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.

Technical Core Maximum Semester Hours		
Aerospace Anatomy & Physiology Fundamentals 3		
Aircrew Flight Equipment		
CCAF Internship		
Clinical Research		
Hyperbaric Chamber Operations & Maintenance		
Instructional Methodology		
Introduction to Aerospace Physiology		
Physiological Training Management 12		
Respiratory & Circulatory Physiology		
Survival Training		
Technical Electives Maximum Semester Hours		
Computer Science		

Emergency Medicine	3
General Biology	4
General Chemistry	
Guidance & Counseling	3
Human Anatomy & Physiology	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 15.

**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 16.

Saliate/Comment
Subjects/Courses
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities
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; maximum 9 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, 1U0X1

**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.

Technical Core	Maximum Semester Hours
Aerospace Control & Warn	ing Systems24
Air Weapons Control Opera	ations18
CCAF Internship	
Computer Networking	6
Radio Communications	6
Space Systems Operations.	

Technical Electives Maximum Semester Ho	ours
Astronautics	3
Astronomy	3
Aviation/Flight Safety	3
Basic Electronics Theory/Applications	6
Computer Science	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 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## AIR TRAFFIC OPERATIONS & MANAGEMENT (2IAA)

#### 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.

Technical Core Maximum Semester Hours
Aeronautical Laws and Regulations/Legislation
Air Navigational Aids
Air Traffic Control Principles
Air Transportation Principles
Airport Management
CCAF Internship
Control Tower Operations
Hostile Environment Techniques
Radar Approach Control
Tactical Air Command and Control

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#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
L
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
Fine arts (criticism, appreciation, historical
significance), foreign language, literature,
philosophy, religion
<b>Drogrom Elective</b> (15 competer hours) Courses

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### AIRCRAFT ARMAMENT SYSTEMS TECHNOLOGY (4VRY)

#### **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.

Technical Core	Maximum Semester Hours
CCAF Internship	

Technical Electives Maximum Semester Hour	S
Advanced Aircraft Armament Systems1	2
Aircraft Maintenance Systems	3
Computer Science	6
Corrosion Control	3
Electricity/Electronics	6
Engineering Graphics/Computer Aided Drafting	3
General Chemistry/Algebra-Based Physics	4
Heavy Equipment Operation/Maintenance	3
Hydraulic/Pneumatic Power	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 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

## AIRCRAFT STRUCTURAL MAINTENANCE TECHNOLOGY (4VAN)

#### Occupational Specialty 2A7X3, 2A7X5

**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.

Technical Core	Maximum Semester Hours
Aircraft Structural Mainter	ance 24
CCAF Internship	
FAA Airframe/Powerplant	Certification24
Low Observable Technolo	gies 12

Technical Electives Maximum Semester Hours
Advanced Aircraft Structural Repair 12
Aircraft Aerodynamics
Aircraft Composites & Bonded Structures
Computer Science
Corrosion Control
Engineering Graphics/Blue Print/Technical Drawing 3
General Chemistry/Algebra-Based Physics
Hazardous Materials
Industrial Safety
Maintenance Management
Materials & Processes
Quality Assurance
SpaceTEC Aerospace Technician Certification
Technical Mathematics

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
Fine arts (criticism, appreciation, historical
significance), foreign language, literature,
philosophy, religion
<b>Program Elective</b> (15 semester hours) Courses

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# AIRCREW SAFETY SYSTEMS TECHNOLOGY (4VAT)

#### Occupational Specialty 1P0X1

**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.

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

Aircrew Safety Systems Principles & Procedures2	24
CCAF Internship1	8
Fabrication & Parachute Maintenance2	24
General Principles of Survival	.3
Survival Equipment Inspection & Maintenance	.9

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

Advanced Survival Skills/Parachuting	12
Chemical Defense/Decontamination	3
Computer Science	6
Emergency Equipment	3
FAA Parachute Rigger Certification	6
Hazardous Materials	3
Industrial Safety	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 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
101 mathematics
Social Science
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# AVIATION MAINTENANCE TECHNOLOGY (4VAD)

# **Occupational Specialty** 2A3X3, 2A5X1, 2A5X2, 2A5X4, 2A6X1, 2A6X3, 2A6X4, 2A6X5, 2A6X6

**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.

Technical Core Maximum Semester Hours
Aircraft Electrical/Environmental Systems
Aircraft Fuel Systems
Aircraft Hydraulic Systems
Aircraft Maintenance
Aircraft Propulsion Systems
Aircrew Egress Systems
CCAF Internship
FAA Airframe/Powerplant Certification
Helicopter Maintenance

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

Advanced Aircraft Accessory Systems Maintenance .	12
Advanced Aircraft Maintenance	12
Advanced Aircraft Propulsion Maintenance	12
Aircraft Aerodynamics	3
Aircraft Weight & Balance	
Airframe Repair	
Aviation Safety	
Avionic Systems Theory/Maintenance	
Computer Science	
Corrosion Control	
Electricity/Electronics	
Engineering Graphics/Computer Aided Drafting	
General Chemistry/Algebra-Based Physics	
Hazardous Materials/Industrial Safety	
Materials & Processes	
Nondestructive Inspection	
Quality Assurance	
SpaceTEC Aerospace Technician Certification	
Technical Mathematics	
i comitour triautorilation internationality	

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

#### 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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities 3
Fine arts (criticism, appreciation, historical
significance), foreign language, literature,
philosophy, religion
<b>Program Elective</b> (15 semester hours) Courses

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See the Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

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# AVIATION MANAGEMENT (1AVY)

Occupational Specialty 1C0X2, 1C7X1

**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.

Technical Core Maximum Semester Hours
Aeronautical Laws & Regulations/Legislation
Air Navigational Aids
Airport Management
Aviation/Flight Safety
CCAF Internship
Data Information Systems
Data Information Systems Management
Resource Management
Statistics

Technical Electives Maximum Semester Hours
Advanced Flight Operations9
Air Traffic Control Principles
Air Transportation Principles3
Basic Flight Operations
Climatology/Meteorology3
Computer Science
FAA Aircraft Dispatcher Certification10
FAA Private/Commercial Pilot Certification
FCC General Radiotelephone Operator's License9
Principles of Accounting
Technical Writing
Typing/Keyboarding3

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

#### 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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# AVIATION OPERATIONS (4VCB)

**Occupational Specialty** 1A0X1, 1A1X1, 1A2X1, 1A6X1, 1A9X1

**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.

Technical Core Maximum Semester Hours
Aerial Gunner Principles/Procedures
Air Transportation Principles
Aircraft Loadmaster Principles/Procedures
Aviation/Flight Safety
CCAF Internship
FAA Flight Engineer Certification
Flight Attendant Principles/Procedures
Flight Engineer, Fixed Wing
Flight Engineer, Helicopter
Flight Rules & Regulations
In-flight Refueling Operations
Introduction to Aviation/Aeronautics
Survival Training
Technical Electives Maximum Semester Hours
Technical ElectivesMaximum Semester HoursAdvanced Flight Engineering12
Advanced Flight Engineering 12
Advanced Flight Engineering
Advanced Flight Engineering12Aerodynamics3Aircraft Systems6
Advanced Flight Engineering12Aerodynamics3Aircraft Systems6Aircraft Weight & Balance3Aviation Law6Climatology/Meteorology6
Advanced Flight Engineering12Aerodynamics3Aircraft Systems6Aircraft Weight & Balance3Aviation Law6
Advanced Flight Engineering12Aerodynamics3Aircraft Systems6Aircraft Weight & Balance3Aviation Law6Climatology/Meteorology6
Advanced Flight Engineering12Aerodynamics3Aircraft Systems6Aircraft Weight & Balance3Aviation Law6Climatology/Meteorology6Computer Science6Electricity/Electronics6FAA Airframe & Powerplant Certification6
Advanced Flight Engineering12Aerodynamics3Aircraft Systems6Aircraft Weight & Balance3Aviation Law6Climatology/Meteorology6Computer Science6Electricity/Electronics6
Advanced Flight Engineering12Aerodynamics3Aircraft Systems6Aircraft Weight & Balance3Aviation Law6Climatology/Meteorology6Computer Science6Electricity/Electronics6FAA Airframe & Powerplant Certification6FAA Private/Commercial Pilot's Certification3General Chemistry/Algebra-Based Physics4
Advanced Flight Engineering12Aerodynamics3Aircraft Systems6Aircraft Weight & Balance3Aviation Law6Climatology/Meteorology6Computer Science6Electricity/Electronics6FAA Airframe & Powerplant Certification6FAA Private/Commercial Pilot's Certification3

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

#### 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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# AVIONIC SYSTEMS TECHNOLOGY (4VHS)

Occupational Specialty 2A0X1, 2A2XX, 2A3X4, 2A3X5, 2A5X3, 2A8XX, 2A9XX

**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.

Aviation Maintenance Fundamentals12Avionic Test Equipment12CCAF Internship18Communication Systems12Electrical/Environmental Systems8Electronic Warfare Systems12Flight Instruments and Controls12Infrared Sensor Systems12Integrated Avionics Systems12Navigation Systems12Radar Systems12Weapons Control Systems8Technical ElectivesMaximum Semester HoursAviation/Flight Safety3Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & Transportation12Quality Assurance3
CCAF Internship.18Communication Systems12Electrical/Environmental Systems8Electronic Warfare Systems12Flight Instruments and Controls12Infrared Sensor Systems12Integrated Avionics Systems12Navigation Systems12Radar Systems12Weapons Control Systems8Technical ElectivesMaximum Semester HoursAviation/Flight Safety3Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & Transportation12Technologies (NCATT)12
CCAF Internship.18Communication Systems12Electrical/Environmental Systems8Electronic Warfare Systems12Flight Instruments and Controls12Infrared Sensor Systems12Integrated Avionics Systems12Navigation Systems12Radar Systems12Weapons Control Systems8Technical ElectivesMaximum Semester HoursAviation/Flight Safety3Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & Transportation12Technologies (NCATT)12
Communication Systems12Electrical/Environmental Systems8Electronic Warfare Systems12Flight Instruments and Controls12Infrared Sensor Systems12Integrated Avionics Systems12Navigation Systems12Radar Systems12Weapons Control Systems8Technical ElectivesMaximum Semester HoursAviation/Flight Safety3Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & Transportation12
Electronic Warfare Systems12Flight Instruments and Controls12Infrared Sensor Systems12Integrated Avionics Systems12Navigation Systems12Radar Systems12Weapons Control Systems8Technical ElectivesMaximum Semester HoursAviation/Flight Safety3Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & Transportation12
Electronic Warfare Systems12Flight Instruments and Controls12Infrared Sensor Systems12Integrated Avionics Systems12Navigation Systems12Radar Systems12Weapons Control Systems8Technical ElectivesMaximum Semester HoursAviation/Flight Safety3Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & Transportation12
Infrared Sensor Systems12Integrated Avionics Systems12Navigation Systems12Radar Systems12Weapons Control Systems8Technical ElectivesMaximum Semester HoursAviation/Flight Safety3Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & Transportation12Technologies (NCATT)12
Integrated Avionics Systems12Navigation Systems12Radar Systems12Weapons Control Systems8Technical ElectivesMaximum Semester HoursAviation/Flight Safety3Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & Transportation12Technologies (NCATT)12
Navigation Systems12Radar Systems12Weapons Control Systems8Technical ElectivesMaximum Semester HoursAviation/Flight Safety3Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & TransportationTechnologies (NCATT)12
Radar Systems12Weapons Control Systems8Technical ElectivesMaximum Semester HoursAviation/Flight Safety3Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & TransportationTechnologies (NCATT)12
Weapons Control Systems8Technical ElectivesMaximum Semester HoursAviation/Flight Safety3Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & TransportationTechnologies (NCATT)12
Technical ElectivesMaximum Semester HoursAviation/Flight Safety3Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & TransportationTechnologies (NCATT)12
Aviation/Flight Safety3Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & TransportationTechnologies (NCATT)12
Aviation Physics4Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & TransportationTechnologies (NCATT)12
Basic Electronics Theory/Applications12CAD/CAM or Technical Drawing/Drafting3Computer Science6FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & TransportationTechnologies (NCATT)12
CAD/CAM or Technical Drawing/Drafting
Computer Science
FAA Airframe/Powerplant Certification12FCC General Radiotelephone Operator's License9Industrial Safety3National Center for Aerospace & TransportationTechnologies (NCATT)12
FCC General Radiotelephone Operator's License9 Industrial Safety
Industrial Safety
National Center for Aerospace & Transportation Technologies (NCATT)12
Technologies (NCATT)
Quality Assurance 2
Quality Assurance
Soldering Techniques
Solid-State Theory/Applications
SpaceTEC Aerospace Technician Certification
Technical Writing
Transmitter and Receiver Systems

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15. **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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# BIOENVIRONMENTAL ENGINEERING TECHNOLOGY (7GAM)

#### **Occupational Specialty** 4B0X1

**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.

Technical Core Maximum Semester Hot	urs
Bioenvironmental Protection	8
CCAF Internship	18
CCHEST Occupational Health & Safety Technologis	t
Certification	12
Disaster Medicine	9
Introduction to Bioenvironmental Science	9
Occupational Environment	6
Radiation Health Physics	4
Waste Management	4
Water Systems Management	4

Technical Electives Maximum Semester Hour	rs
Computer Science	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 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology, sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### BIOMEDICAL EQUIPMENT TECHNOLOGY (7GAA)

#### **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.

Technical Core Maximum Semester Hours
Association for the Advancement of Medical
Instrumentation Certification12
Biomedical Equipment Maintenance Management12
CCAF Internship
Diagnostic Support Equipment Systems12
Diagnostic Support Radiographic Systems12
Physiological Monitoring Systems
Therapeutic Support Equipment Systems
<b>Technical Electives</b>

Basic Electronics Theory/Applications	6
Computer Science	6
Digital Techniques	6
Electronic Circuit Design/Analysis	6
Human Anatomy & Physiology	8
Management of Biomedical Equipment Programs	3
Medical Readiness	3
Medical Terminology	3
Microprocessor Technology	6

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

**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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# 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.

Technical Core	. Maximum Semester Hours
Advanced Cardiopulmonar	y Procedures9
Cardiopulmonary Anatomy	& Physiology6
Cardiopulmonary Instrume	ntation 3
Cardiopulmonary Invasive/	Noninvasive Diagnostic

Procedures12
Cardiovascular & Pulmonary Diagnostic Principles 8
CCAF Internship
Clinical Respiratory Therapy
Pulmonary Diagnostic Procedures
Respiratory Therapy

Technical Electives	Maximum Semester Hours
Computer Science	
Emergency Medicine	
Medical Readiness	
Medical Terminology	

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

The Commission on Accreditation for Respiratory Care and Commission on Accreditation of Allied Health Education Programs accredit the Cardiopulmonary Laboratory Apprentice courses (Phase I and II). See the Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

# COMPUTER SCIENCE TECHNOLOGY (0CYY)

#### **Occupational Specialty** 3D0X4

**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.

Technical Core Maximum Semester Hou	rs
CCAF Internship	18
CompTIA Certification	8
Computer Systems Architecture/Analysis /Design	12
Computer Systems Management	6
(ISC) <sup>2</sup> Certification	4
Global Information Assurance Certification	
Programming Languages	16

Technical Electives Maximum Semester Hours	
College Algebra or higher-level Mathematics3	
Computer Science	)
Computer Systems Networking	)
Data Communications	
Data Structures	
Database Management	
Discrete Math	
Microsoft MCSE Certification8	,
Physics	)
Software Design	
Statistics	
Technical Writing	

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

**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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# CONSTRUCTION TECHNOLOGY (4VEB)

#### 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.

Technical Core Maximum Semester Hours
Building Construction & Design 20
Carpentry/Cabinetry 12
CCAF Internship
College Algebra/Trigonometry
Computer Aided Drafting
Construction Inspection/Building Codes
Drafting/Engineering Drawing
Engineering Assistant
Engineering Operations and Management
Heavy Equipment Operations
Metals Fabrication/Characteristics
Pavement Construction
Project Management/Planning 4
Surveying
Welding
-

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

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

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
•
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# CONTRACTS MANAGEMENT (1CAO)

#### **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.

Technical Core	. Maximum Semester Hours
*Business Law	3
CCAF Internship	
*Contract Administration/M	Aanagement12
*Contract Law	6
*Pricing & Negotiation	6
*Principles of Government	Contracting7
*Purchasing Principles	9

Technical Electives Maximum Semester	Hours
Computer Science	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 15.

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 16.

Subjects/Courses Somestar Hours
Subjects/Courses
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

\*Courses applicable to the 24-semester-hour business requirement for the Acquisition Professional Development (APD) Program. Also, may apply 8 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. See the Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

# CRIMINAL JUSTICE (9IJY)

#### Occupational Specialty 3P0X1, 7S0X1

**Degree Requirements** The journeyman (5) level must be held at the time of program completion (Exception: Not required for 7S0X1).

#### 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.

Technical Core Maximum Semester Hours
CCAF Internship
Criminal Investigations
Criminal Law
Fundamentals of Ground Combat Skills
Fundamentals of Law Enforcement
Introduction to Security
Physical Security Concepts
Police Administration & Supervision
Police Safety/Survival
Principles of Criminal Justice
Principles of Marksmanship
Special Weapons & Tactics
Weapons Maintenance

Technica	al Electives	Maximum	Semester Hours	

Antiterrorism	3
Computer Science	6
Constitutional Law	3
Corrections	6
Criminalistics/Forensic Science	3
Criminology	3
Deployment Operations	12
Emergency Medicine	
General Psychology	
General Sociology	
Instructional Methodology	
Juvenile Justice	3
Patrol Dog Operations	12
Police Community Relations	
Technical Writing	
Traffic Management/Investigation	

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

#### 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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### **CYBERSECURITY**

(0CYC)

Occupational Specialty 1B4X1

**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.

Technical Core Maximum Semester Ha	ours
CCAF Internship	18
Cyber Defense & Countermeasures	18
Cyber Laws & Ethics	3
Industrial Control Systems	3
Networking Principles	12
Principles of Communication Networks	6
Principles of Telephony Networks	3
Systems Analysis	6

Technical Electives Maximum Semester Hour	S
Certified Ethical Hacker	3
College Algebra or higher-level Mathematics	6
Computer Science	6
CompTIA Certification	3
Global Information Assurance Certification	6
Information Security	
(ISC) <sup>2</sup> Certification	3
Network Security	
Physics	3

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### DENTAL ASSISTING (7GBC)

#### **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.

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

CCAF Internship	
Dental Clinical Phase & Procedures	
Dental Sciences	
Oral Radiology	6
Preventive Dentistry Science	

Technical Electives Maximum Semester H	ours
Advanced Dental Hygiene	9
Computer Science	6
Dental Administrative Procedures	6
Emergency Medicine	3
General Biology	4
General Chemistry	4
General Psychology	3
Human Anatomy & Physiology	4
Medical Readiness	3
Oral Hygiene	4

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

The Commission on Dental Accreditation of the American Dental Association accredits the Dental Assistant Apprentice Course. CCAF Dental Assisting graduates have the opportunity to become certified through the Dental Assisting National Board by examination. See the Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

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# DENTAL LABORATORY TECHNOLOGY (7GBB)

#### **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.

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

CCAF Internship18	3
Complete Dentures	2
Construction of Removable Partial Dentures12	2
Dental Ceramics	5
Dental Laboratory Fundamentals	5
Inlays, Crowns & Fixed Partial Dentures13	3

Technical Electives Maximum Semester Hours	
Advanced Removable Prosthodontics	
Computer Science	
Fixed Prosthodontics	
Medical Readiness	
Porcelain & Metal Ceramic Restoration	

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/Courses Semester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

The Commission on Dental Accreditation of the American Dental Association accredits the Dental Laboratory Apprentice Course. CCAF Dental Laboratory Technology graduates have the opportunity to become certified through the National Board for Certification in Dental Laboratory Technology by examination. See the Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

#### DIAGNOSTIC IMAGING TECHNOLOGY (7GDH)

#### Occupational Specialty 4R0X1, 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.

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

American Registry of Radiologic Technologists	
Certification	24
CCAF Internship	18
Diagnostic Imaging Anatomy & Physiology	6
Diagnostic Imaging Clinical Practicum	12
Diagnostic Imaging Physics	6
Diagnostic Imaging Positioning	6
Diagnostic Imaging Procedures	8
Diagnostic Imaging Technique & Darkroom	
Procedures	6
Introduction to Diagnostic Imaging Technology	6

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

Advanced Diagnostic Imaging Procedures 12
Computer Science
Diagnostic Imaging Clinical Education/Internship 12
Medical Readiness

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Humanities
<b>_</b>

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

The Joint Review Committee on Education in Radiologic Technology accredits the Diagnostic Imaging Apprentice course. See the Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT)

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# DIAGNOSTIC MEDICAL SONOGRAPHY (7GDK)

#### **Occupational Specialty** 4R0X1B

**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.

Technical Core Maxim	num Semester Hours
American Registry of Radiologic T	Technologists
Certification	24
CCAF Internship	
Clinical Sonography Practicum I	8
Clinical Sonography Practicum II	
Diagnostic Sonography	6
Sonographic Scanning	10
Technical Floring 16	

lechnical Electives	Maximum Semester Hours
Computer Science	6

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

**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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### 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.

Technical Core Maximum Semester Hours
CCAF Internship
Diet Therapy 16
Dietary Manager/Food Protection Professional
Certification
Dietetics
Food Service Operations
Fitness & Health
Introduction to Food Preparation
Nutrition
Nutritional Medicine Administration
Subsistence Management
Technical Electives Maximum Semester Hours
Computer Science
Food Services
General Biology
General Chemistry

#### 

Human Anatomy & Physiology ...... 4

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# EDUCATION & TRAINING MANAGEMENT (2BAC)

Occupational Specialty 3S2X1, 8B000, 8B100

**Degree Requirements** The journeyman (5) level must be held at the time of program completion. 8B100s must complete the Military Training Leader course to enroll in this program.

**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.

Technical Core Maximum Semester Hour	S
Administration of Education & Training Programs1	5
Business Communications	3
CCAF Internship	8
Classroom Management	3
Computer-Based Instruction	9
Educational Technology	3
Guidance & Counseling	6
Instructional Methodology	6
Instructional Systems Development	9
Office Management	3
Statistics	
Technical Writing	
Tests & Measurements	

#### 

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# ELECTRONIC SYSTEMS TECHNOLOGY (4VHP)

**Occupational Specialty** 2M0X1, 2P0X1, 3D1X2, 3D1X3, 3D1X5, 3D1X6, 3D1X7

**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.

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

American Society for Quality Certified Calibration

Timerican Society for Quanty Cortifica Canoration	
Technician Certification	6
CCAF Internship	18
Communication Systems Theory/Maintenance	24
CompTIA Certification	8
Electronic Communication-Computer Systems	
Theory/Maintenance	24
Electronic Systems Theory/Maintenance	24
Global Information Assurance Certification	6
(ISC) <sup>2</sup> Certification	
Missile and Space Electronic Systems	
Theory/Maintenance	24
Precision Measurement Equipment	
Theory/Maintenance	24
Technical Electives Maximum Semester Ho	ours
Advanced Electronics	
Algebra-Based Physics	
Basic Electronics Theory/Applications	
College Algebra or higher-level Mathematics	3
Computer Science	
Computer Systems Maintenance & Operations	
Principles	6
Digital Techniques	6
FCC General Radiotelephone Operator's License	9
High-Reliability Soldering	3
Industrial Safety	
Microprocessor Electronic Theory	6
Microsoft MCSE Certification	8
Quality Assurance	
Solid-State Theory/Applications	6
Technical Writing	

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15. 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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Humanities
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion
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**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

The Electronics Technicians Association International accredits the Comm Cables & Antenna Systems apprentice course and Fiber Optic Cable Installation course. See the Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

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# EMERGENCY MANAGEMENT (9IMY)

#### Occupational Specialty 1C3X1, 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.

Technical Core Maximum Semester He	ours
CCAF Internship	18
Command & Control Information Systems	16
Emergency Management	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	17

Technical Electives Maximum Semester Hours
Cartography/Map Reading3
Civil Defense
Climatology/Meteorology3
Computer Science
Emergency Information Systems
Exercise Design
General Chemistry4
Industrial Safety/Hygiene
Inventory Management
Public Administration
Technical Writing
Tests & Measurements

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/Courses Semester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# ENTOMOLOGY (3ALC)

Occupational Specialty 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.

Technical Core	. Maximum Semester Hours
CCAF Internship	
Entomology/Pest Control	
Environmental Awareness.	
Environmental Support	

Technical Electives Maximum Semester Hours
Botany/Plant Disease 6
Computer Science 6
Environmental Law/Compliance 3
General Chemistry/Biology 8
General Physics 4
Hazardous Materials
Hydrology
Industrial Safety
Microbiology
Pollution Prevention
Principles of Ecology
Technical Writing

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Humanities
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion
<b>Program Elective</b> (15 semester hours) Courses

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# 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.

Technical Core	. Maximum Semester Hours
Algebra-Based Physics	8
CCAF Internship	
Electricity/Electronics	9
Explosive Ordnance Dispo	sal24
General Chemistry	8
	6

Technical Electives Maximum Semester Hour Accident Prevention	
Basic Photography (Camera/Video Operations)	
Blueprint Reading/Schematic Diagrams	3
Computer Science	6
Emergency Medicine	3
Heavy Equipment Operations	3
Industrial Safety	
Industrial X-ray/Nondestructive Inspection	
Inventory Management	3
Investigative Techniques	3
Map & Compass Reading	3
Nuclear Science	4
Principles of Marksmanship	
Statistics	3
Technical Mathematics	
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 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 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.

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

American Society of Military Comptrollers Certifie	ed
Defense Financial Manager Certification	6
Business Law	6
Business Mathematics	3
CCAF Internship	18
Financial Analysis	9
Financial Principles/Management	9
Government Financial Systems	6
Microcomputer Software Applications	6
Military Pay & Accounting	12
Principles of Accounting	6
Statistics	3
Travel Accounting	9
-	

Technical Electives Maximum Semester	Hours
Business Finance	3
Computer Science	6
International Finance	3
Leadership & Management	3
Managerial Communications	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 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Humanities
Fine arts (criticism, appreciation, historical
significance), foreign language, literature,
philosophy, religion
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**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# FIRE SCIENCE (9IFY)

#### **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.

Technical Core Maximum Semester Hours	
Aerospace Vehicle Firefighting9	
CCAF Internship18	
Emergency Medicine	
Fire Apparatus Operation6	
Fire Department Administration	
Fire Service Rescue9	
Hazardous Materials8	
Introduction to Fire Science	
Structural Firefighting12	

Technical Electives Maximum Semester Hours
Building Construction for Fire Protection
Computer Science
Fire Codes & Related Ordinances
Fire Command
Fire Hydraulics
Fire Instructor
Fire Prevention/Inspection
Fire Protection Systems
Fire/Arson Investigation
Firefighting Occupational Safety
General Chemistry
NREMT Emergency Medical Technician
Certification
Technical Writing

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/Courses Semester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

The International Fire Service Accreditation Congress accredits fire protection apprenticeship, journeyman and craftsman courses. See the Professional Credentialing section for certification information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

#### 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.

Technical Core Maximum Semester Hours
CCAF Internship
Health Care Management
Health Care Statistics
Medical Care Evaluation
Medical Expense & Performance Reporting9
Medical Records Management9
Medical Resource Management
Patient Administration
Principles of Supervision/Management
Registered Health Information Technician
Certification

Technical Electives	. Maximum Semester Hours
Computer Science	
Human Anatomy & Physio	logy8
Human Resource Managen	nent 3

Leadership & Management	
Legal Aspects of Health Care	
Managerial Communications	
Medical Coding	6
Medical Ethics	
Medical Readiness	
Medical Terminology	
Medical Transcription	

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
government, history, political science, psychology,
sociology Humanities

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# HISTOLOGIC TECHNOLOGY (7GAE)

#### **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.

Technical Core Maximum Semester Ha	ours
CCAF Internship	18
Clinical Chemistry	9
Clinical Microbiology	
Histologic Practicum	
Histologic Specimen/Slide Processing	
Histologic Technician-American Society of	
Clinical Pathologists Certification	12
Histopathology Procedures	8
Human Anatomy & Physiology	8

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

6
8
8
3
3

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

#### 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 16.

Subjects/Courses Semester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# HOSPITALITY AND FITNESS MANAGEMENT (1FRS)

#### Occupational Specialty 3M0X1, 8A200

**Degree Requirements** The journeyman (5) level must be held at the time of program completion. A student in the 8A200 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.

Technical Core Maximum Semester Hours
American Culinary Federation Certified Chef4
CCAF Internship
Contract Management
Culinary Institute of America Certification
Financial Management3
Fitness & Sports Management 6
Food & Beverage Preparation12
Food Service Operations/Management
Food Service Sanitation & Safety
Front Office Management
Front Range Training & Consulting Certification 6
Hospitality/Fitness Technology 3
Human Anatomy & Physiology 4
Human Relations/Customer Service
International Food Service Executive Association
Certification7
Introduction to Hospitality
Inventory/Storeroom Management
Lodging Operations/Management
Mortuary Services
Principles of Accounting
Quantity Food Production
Recreation Management
Service Readiness
Sports & Fitness Instruction 6
Technical Electives Maximum Semester Hours
Business/Hospitality Law
Business/Managerial Communications
Computer Science
Convention/Event Planning
Economics
Food Science
Health/Nutrition

 Human Resource Management
 3

 Introduction to Business
 3

 Leadership & 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 15.

#### 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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
Fine arts (criticism, appreciation, historical
significance), foreign language, literature,
philosophy, religion
<b>Program Elective</b> (15 semester hours) Courses

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See the Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

#### 2014-2016 CCAF General Catalog

# HUMAN RESOURCE MANAGEMENT (1AOY)

Occupational Specialty 3S0X1, 8F000, 8RXXX

**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.

Technical Core Maximum Semester Hours
CCAF Internship
Guidance & Counseling
Human Relations/Interpersonal Communications3
Human Resource Management/Administration15
Interviewing
Organizational Behavior
Personnel Recruiting15
Principles of Management
Principles of Marketing
Word Processing

Technical Electives Maximum Semester Ho	ours
Business Ethics	3
Business Law	6
Business/Managerial Communications	6
Computer Science	6
General Psychology	3
Industrial Psychology	3
Introduction to Business	3
Labor Relations	3
Leadership & Management	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 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communications
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# HUMAN SERVICES (9IKY)

Occupational Specialty 3S1X1, 5R0X1, 8C000

**Degree Requirements** The journeyman (5) level must be held at the time of program completion (Exception: Not required for 3S1X1). A student in the 8C000 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.

Technical Core Maximum Semester Hours
*Airman & Family Readiness Administration
CCAF Internship
Chaplain Service Support 12
Counseling/Crisis Intervention9
Cultural Diversity
Equal Opportunity Management
Ethnic Studies
General Psychology
Group Dynamics
Human/Interpersonal Communication
Introduction to Human Services
Resource Management
Social Problems
World Religions

Technical Electives Maximum Semester Hours
Abnormal Psychology3
Computer Science
Ethics
General Sociology
Human Development & Learning3
Instructional Methodology3
Interviewing Techniques
Leadership & Management3
Managerial Communications 3
Marriage & Family 3
Principles of Accounting
Social Psychology
Social Work
Statistics
Technical Writing

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

#### 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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### \*MUST BE COMPLETED BY 8C000 STUDENTS AS PART OF DEGREE PROGRAM UNLESS ISSUED A WAIVER AUTHORIZATION.

# INFORMATION MANAGEMENT (1AUY)

Occupational Specialty 3D0X1, 8M000, 8P100

**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.

Technical Core Maximum Semester Hor	urs
CCAF Internship	.18
CompTIA Certification	8
Global Information Assurance Certification	6
Information Security	6
Information Systems Administration	.14
Information Systems Management	9
(ISC) <sup>2</sup> Certification	4
Microcomputer Software Applications	
Office Equipment	3
Postal Operations/Management	.15
Records/Publications Management	6

# Technical ElectivesBusiness/Managerial Communications6Computer Science6Database Design/Management6Desktop Publishing6Human Resource Management3Leadership & Management3Microsoft MCSE Certification8Principles of Accounting6Principles of Management3Technical Writing3

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

#### 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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# INFORMATION SYSTEMS TECHNOLOGY (0IYY)

**Occupational Specialty** 1A3X1, 1C4X1, 3D0X2, 3D0X3, 3D1X1, 3D1X4

**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.

<b>Technical Core</b> Maximum Semester Hours           Airborne Information Systems         24
Broadcast Information Systems/Management
CCAF Internship
Command & Control Information Systems 15
Communication Networking
Communications-Electronics Program Management . 12
CompTIA Certification
Computer Security
Computer Systems Architecture/Analysis/Design6
Data Information Systems/Management
Global Information Assurance Certification
(ISC) <sup>2</sup> Certification
Telecommunications Administration/Industry
Regulation
Telecommunications Technology
Technical Electives Maximum Semester Hours

Business Mathematics/Statistics	3
College Algebra or higher-level Mathematics	6
Computer Science	6
Data Communications	3
FCC General Radiotelephone Operator's License	9
Microsoft MCSE Certification	8
Principles of Accounting	3
Radio Communications	6
Survival Training	

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
Fine arts (criticism, appreciation, historical
significance), foreign language, literature,
philosophy, religion
<b>Program Elective</b> (15 semester hours) Courses

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# INSTRUCTOR OF TECHNOLOGY & MILITARY SCIENCE (2IBB)

**Occupational Specialty** This program is offered to Air Force and other service enlisted personnel who are assigned to CCAF affiliated schools teaching CCAF degree-applicable courses. Applicants must complete three semester hours of CCAF-approved instructor methodology coursework and hold their career-fieldrelated CCAF degree or equivalent civilian college degree before registration.\* Personnel holding the 1T0X1 AFSC 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 and have a documented 12 semester hours (180 contact hours) CCAF Teaching Internship transcribed.

**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.

Technical Core Maximum Semester Hours	
Adult/Vocational Education	
Curriculum Development	
Educational Technology	
Educational/Developmental Psychology	
Foundations of Education	
Guidance & Counseling	
**Instructional Methodology12	
Instructional Systems Development	
Learning Theories	
Supervision of Instruction	
**Teaching Internship12	
Tests & Measurements	
Technical Electives Maximum Semester Hours	
Aircrew Instructor Flight Training9	

CCAF Internship	12
Computer Science	
Computer-Based Instruction	
***Related Specialty Training	6
Statistics	
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 15.

#### 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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

\*Other Service Instructors and Airmen performing duty as qualified CCAF instructors in Professional Military Education (8T000) are exempt from the requirement to hold a career-field-related degree.

\*\*A 12 SHs CCAF Teaching Internship and 3 SHs of CCAF-approved instructor methodology coursework 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. See the Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

# INTELLIGENCE STUDIES AND TECHNOLOGY (9INZ)

Occupational Specialty 1A8XX, 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.

Technical Core Maximum Semester Hours
Airborne Communications Systems
Aircrew Fundamentals
Analysis and Reporting
CCAF Internship
Collection Management/Mission Planning
Cryptanalysis 12
Digital Network Analysis 12
Geospatial Intelligence Fundamentals
Intelligence Fundamentals 12
Military Operations
Signals Analysis
Voice Collection/Foreign Technical Language

Technical Electives Maximum Semester Hours
Cartography 3
Computer Science
College Algebra or higher-level Mathematics 3
Cultural/International Studies
Geography
Interviewing
Photogrammetry
Principles of Communication
Principles of Electronics
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 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion
<b>Dreason Elective</b> (15 competer hours) Comme

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# 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.

Technical Core Maximum Semester H	ours
CCAF Internship	18
Contract Management	3
Cryogenic Operations	10
Distribution Management	12
Fuels Distribution	15
Inventory Management	12
Logistics Automated Systems	9
Logistics Management	12
Materiel Handling/Plant Layout	3
Materiel Management	
Principles of Accounting	6
Principles of Economics	
Principles of Purchasing	
Production/Operations Management	
Warehouse Storage & Operations	

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

Business Ethics
Business Law
Business Mathematics/Statistics
Certified Logistics Technician
Computer Science
Environmental Protection Procedures
General Chemistry4
Hazardous Materials
Industrial Safety
Introduction to Business
Introduction to Petroleum Industry
Introduction to Transportation
Labor Relations
Leadership & Management3
Managerial Communications
Medical Readiness
Principles of Marketing
Quality Assurance
Technical Writing

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

#### 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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# MAINTENANCE PRODUCTION MANAGEMENT (4VJG)

#### 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.

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

CCAF Internship	18
Human Resource Management	. 3
Maintenance Management	
Management Information Systems	
National Association of Fleet Administrators	
Certification	. 6

6
15
3
6
9

# Technical ElectivesMaximum Semester HoursComputer Science6Environmental Compliance3Industrial Safety3Principles of Accounting3Quality Assurance3Technical Writing3

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities
<b>_</b>

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### MANAGEMENT ENGINEERING TECHNOLOGY (1AWY)

#### **Occupational Specialty-** 3S3X3

**Degree Requirements** The journeyman (5) level must be held at the time of program completion. (Exception: not required if completion of technical school was prior to 1 Oct 2012.

**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.

Technical Core Maximum Semester Hours
Budgeting
CCAF Internship
Data Collection and Analysis9
Database Management
Human Resource Management9
Industrial Engineering
Principles of Accounting
Project Management
Simulation Modeling
Statistics

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

Business/Managerial Communications	3
Calculus	6
College Algebra/Trigonometry	3
Computer Science	6
Economics (Micro/Macro)	6
Industrial/Organizational Psychology	3
Organizational Design and Change	9
Quality Control/Quality Assurance	20
Technical Writing	3
Test and Measurements	3
Work Group Facilitation	3

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

# Mass Communications (2FDE)

#### Occupational Specialty 3N0X2, 3N0X5

**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.

Technical Core Maximum Semester Hours
Broadcast Communications 16
CCAF Internship 18
Digital/Electronic Imaging9
Editing 6
Journalism12
Photojournalism/Photography 16
Public Relations
Television/Radio Production16

Technical Electives Maximum Semester Hou	rs
Advertising/Marketing	. 6
Animation/Illustration	. 6
Color Science/Theory	. 6
Computer Science	. 6
Desktop Publishing	. 3
General Psychology	. 3
Graphic Arts/Design	. 6
Interviewing	. 3
Mass Communication Law/Ethics	. 6
Principles of Communication	. 3
Typography	. 3

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities
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; maximum 9 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, 3E4X1

**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.

Technical Core Maximum Semester Hours
CCAF Internship18
Electrical Power Production20
Electrical Systems20
Heating Systems20
Liquid Fuel Systems
Refrigeration & Air-Conditioning20
Utilities Systems
Waste Management

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Technical Electives ...... Maximum Semester Hours
General Physics ......4
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#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

The DoD Environmental Protection Agency accredits the Missile and Space Facilities apprentice course. See the Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

#### MEDICAL LABORATORY TECHNOLOGY (7GAF)

#### **Occupational Specialty** 4T0X1

**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.

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

CCAF Internship	18
Clinical Chemistry	12
Clinical Microbiology	9
Clinical Practicum	18
Hematology	12
Immunology/Bloodbanking/Serology	24

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

Computer Science	6
General Biology	
General Chemistry	
Human Anatomy & Physiology	
Medical Readiness	
Medical Terminology	
Organic/Inorganic Chemistry	

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

The National Accrediting Agency for Clinical Laboratory Sciences accredits the Medical Laboratory Apprentice course. See the Professional Credentialing section for information on credentialing and CCAF's Education Research Tool (CERT).

#### MENTAL HEALTH SERVICES (7GAP)

#### **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.

Technical Core Maximum Semester Hours
Abnormal Psychology
CCAF Internship
Drug & Alcohol Abuse
Drug & Alcohol Abuse Counselor Certification6
Guidance & Counseling9
Human Growth/Lifespan Development
Human Relations
Interpersonal Communications
Mental Health Care
Psychology of Adjustment

Technical Electives Maximum Semester How	irs
Computer Science	6
Emergency Medicine	3
General Biology	4
General Chemistry	4
General Psychology	3
Human Anatomy & Physiology	4
Human Biology	4
Medical Readiness	
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 15.

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 16.

Subjects/Courses Semester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### METALS TECHNOLOGY (4VLB)

#### 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.

Technical Core	. Maximum Semester Hours
Advanced Machining	
Aircraft Metals Technology	
Brazing/Welding Techniqu	es9
CCAF Internship	

Technical Electives Maximum Semester H	Tours
Computer Numerical Control	6
Computer Science	6
Corrosion Control	3
Engineering Graphics/Computer Aided Drafting	6
FAA Airframe/Powerplant Certification	12
General Chemistry/Algebra-Based Physics	4
Hazardous Materials	3
Industrial Safety	3
Maintenance Management	3
Materials & Processes	3
Physical Testing of Materials	3
SpaceTEC Aerospace Technician Certification	6
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 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
Fine arts (criticism, appreciation, historical
significance), foreign language, literature,
philosophy, religion
<b>Program Flective</b> (15 semester hours) Courses

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### METEOROLOGY (8FYY)

Occupational Specialty 1W0X1, 1W0X2

**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.

Technical Core Maximum Semester Hours
CCAF Internship
Climatology
Dynamic Meteorology
Operational Weather Forecasting16
Physical Meteorology18
Plotting Weather Maps & Charts
Satellite Meteorology
Synoptic Meteorology12
Weather Instruments & Observation
Weather Prognosis Techniques16
Weather Radar Interpretation
Weather Station Operation

# Technical Electives Maximum Semester Hours Algebra-Based Physics 4 Collago, Algebra on bisher, loval Mathematics 6

College Algebra or higher-level Mathematics	6
Computer Science	6
General Chemistry	4
Physical Geography	3
Physical Training	3
Technical Writing	3
Thermodynamics	3
Tropical Meteorology	6
Upper Air Measurement	

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities
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; maximum 9 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.

Technical Core	Maximum Semester Hours
CCAF Internship	
Missile & Space Systems I	Maintenance 24
SpaceTEC Aerospace Tech	nnician Certification

Technical Electives Maximum Semester Hours
Computer Science
Corrosion Control
Electricity/Electronics
Engineering Graphics/Computer Aided Drafting
Engineering Mechanics
General Chemistry/Algebra-Based Physics
Hazardous Materials
Heavy Equipment Operation/Maintenance
Hydraulic/Pneumatic Power
Industrial Safety
Maintenance Management
Materials & Processes
Nondestructive Inspection
Nuclear Weapons Systems Maintenance
Quality Assurance
Technical Writing

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Humanities
Program Flactive (15 semester hours) Courses

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### MUNITIONS SYSTEMS TECHNOLOGY (4VRA)

#### 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.

# Technical CoreMaximum Semester HoursCCAF Internship18Munitions Operations/Inventory Management24Munitions Systems24Nuclear Weapons Systems24

Technical Electives Maximum Semester Hours	
Advanced Munitions Systems12	
Advanced Nuclear Weapons Systems12	
Computer Science	
Corrosion Control	
Electricity/Electronics	
Engineering Graphics/Computer Aided Drafting3	
General Chemistry/Algebra-Based Physics	
Hazardous Materials/Environmental Management3	
Heavy Equipment Operation/Maintenance	
Hydraulic/Pneumatic Power	
Industrial Safety	
Maintenance Management	
Principles of Accounting	
Reactor Technology	
Statistics	
Weapons Safety	

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/Courses Semester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 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 (Exception: Not required for 3N2X1).

#### 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.

Technical Core Maximum Semester Hours	5
Arranging & Instrumentation6	5
Band6	5
CCAF Internship 18	3
Chorus6	5
Ensemble6	5
Music History 6	5
Music Theory 6	5
Production & Stage Craft Arts6	5

Technical Electives Maximum Semester	Hours
Applied Music	6
Aural Perception	6
Computer Science	6
Dance	3
Electricity/Electronics	3
Electronic Music (Synthesizers)	3
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 15.

**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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### 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.

Technical Core	Maximum Semester Hours
American Society for No	
(ASNT) Certification	
CCAF Internship	
Nondestructive Inspectio	n

Technical Electives Maximum Semester Hours
Advanced Nondestructive Inspection Techniques3
Computer Science
Corrosion Control
Engineering Graphics/Computer Aided Drafting3
FAA Airframe/Powerplant Certification
General Chemistry/Algebra-Based Physics4
Hazardous Materials
Industrial Safety
Maintenance Management
Materials & Processes
SpaceTEC Aerospace Technician Certification
Technical Mathematics

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### NUCLEAR MEDICINE TECHNOLOGY (7ABJ)

#### 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.

#### Technical Core ...... Maximum Semester Hours American Registry of Radiologic Technologists

Nuclear Medicine Registry	24
Applied Nuclear Medicine Physics & Chemistry	
CCAF Internship	18
Diagnostic Imaging, Clinical & Nonclinical	24
Nuclear Medicine Instrumentation	18
Radiation Safety & Procedures	14
Radiopharmaceuticals	
Technical Electives Maximum Semester 1	Hours
Computer Science	6

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### OPHTHALMIC TECHNICIAN (7GDI)

#### **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.

Technical Core Maximum Semester Hours
Assisting the Optometrist8
Commission on Paraoptometric Certifications8
General Psychology
*Human Anatomy & Physiology4
Human Eye & the Visual System6
Introduction to Operating Room Technology
Operating Room Practicum
Operating Room Technology8
Optics
Spectacles & Contact Lenses
Vision Classification

# Technical ElectivesMaximum Semester HoursAlgebra-Based Physics4Analytic Geometry3CCAF Internship18Computer Science6General Biology4General Chemistry4Medical Readiness3Office Management3

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

\*Must be completed as part of degree program. The Accreditation Council on Optometric Education accredits the Ophthalmic Apprentice course. Apprentice course graduates are eligible to take the Certified Paraoptometric Technician examination. See the Professional Credentialing section information credentialing and CCAF's Credentialing and Education Research Tool (CERT).

#### 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 student must complete the Air Force paralegal apprentice and craftsman courses to satisfy the technical core requirement. Courses listed as Technical Electives may also be applied as program electives. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance.

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

Civil Law	9
*Ethics	3
International Law	3
Legal Claims & Tort Administration	6
Legal Claims & Tort Investigation	3
Legal Research & Writing	9
Military Justice	6
Non-Judicial Punishment	
Paralegal Internship	8
Pre/Post Trial Administration	6

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

Computer Science	6
Contract Law	3
Criminal Law	3
Criminal Procedures	3
Environmental Law	3
Estate Planning & Probate	3
Evidence	3
Family Law/Domestic Relations	
Law Office Administration	
Law Office Supervision & Training	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 15.

Physical Education (4 semester hours)

**General Education** (18 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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
Fine arts (criticism, appreciation, historical
significance), foreign language, literature,
philosophy, religion
General Education Elective
A general education course selected from English
composition, mathematics, social science,
humanities, or natural science.

**Program Elective** (12 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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

\*Must be completed as part of degree program; may be applied in technical core or humanities area or general education elective area.

This degree program is approved by the American Bar Association. See Professional Credentialing section for credentialing information and CCAF's Credentialing and Education Research Tool (CERT).

NOTE: Paralegals may not provide legal services directly to the public except as permitted by law.

#### PERSONNEL RECOVERY (7GDP)

#### 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.

Technical Core Maximum Semester Hours
Air Operations12
CCAF Internship18
Emergency Medicine
Evasion & Recovery
General Principles of Survival12
Ground Operations
Mountain Travel/Rescue Techniques9
Personnel Recovery Indoctrination
Psychology of Environmental Stress

Technical Electives	Maximum Semester Hours
Computer Science	6
Human Anatomy & Physic	logy4
Marksmanship	3
Parachuting/Scuba Diving	6
Physical Geography	3

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

#### 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 16.

Subjects/Courses Semester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### PHARMACY TECHNOLOGY (7GAH)

#### **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.

Technical Core	. Maximum Semester Hours
CCAF Internship	
Fundamentals of Pharmacy	
Introductory Pharmacology	
Pharmaceutical Calculation	s8
Pharmaceutical Preparation	& Manufacture 6
Pharmacy Technician Certi	fication 17

Technical Electives	aximum Semester Hours
Computer Science	6
Emergency Medicine	
General Biology	
General Chemistry	
Human Anatomy & Physiolog	y4
Medical Readiness	
Organic Chemistry	

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Humanities

**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

The American Society of Health-System Pharmacists accredits the Pharmacy Apprentice course. See the Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

#### PHYSICAL THERAPIST ASSISTANT (7GAI)

#### Occupational Specialty 4J0X2, 4J0X2A

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

**Technical Education** (24 semester hours) The PTA practicum no longer required for students who graduated the physical medicine apprentice course from 1 Feb 2011 and after. However, practicum required for students who graduated the physical medicine apprentice course prior to 1 Feb 2011. A student must complete the Air Force physical medicine 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.

Technical Core Maximum Semester Hours
Functional Anatomy, Pathophysiology &
Therapeutic Procedures12
Human Anatomy & Physiology8
Introduction to Physical Therapy12
Orthotics
Physical Therapy Clinical Arts6
Physical Therapy Practicum
Physical Therapy Procedures & Modalities
Technical Electives Maximum Semester Hours
Advanced Physiology

4
18
6
4
4
8
3

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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 for exact details. See Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

#### PRACTICAL NURSING TECHNOLOGY (7GAL)

#### Occupational Specialty 4N0X1

**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.

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

CCAF Internship	
Emergency Medicine	
Human Anatomy & Physiology	
Medical Assisting	
Nursing	

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

Computer Science	6
General Biology	8
General Chemistry	8
General Psychology	3
Medical Readiness	3
Medical Terminology	3
Pharmacology	8
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 15.

#### 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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

The National Registry of Emergency Medical Technicians accredits the Aerospace Medical Services apprentice course. See the Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

#### 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.

Technical Core Maximum Semester Hours	
CCAF Internship	18
Communicable Diseases	6
Epidemiology	8
Food Safety/Sanitation	6
Hearing Conservation	3
Medical Entomology	3
Medical Readiness	3
Occupational Health & Safety	9
Public Health	16
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 15.

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 16.

Subjects/Courses Somester Hours
Subjects/Courses
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### SAFETY (9IIY)

**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.

Technical Core Maximum Semester Hours
Accident Prevention Management
Accident/Fire Investigation
AFOSH/OSHA Codes/Standards 12
Aviation/Flight Safety 12
CCAF Internship
Ground/Industrial Safety
Hazardous Materials
Hazardous Waste Management
Instructional Methodology
Safety Engineering

# Technical Electives Maximum Semester Hours Computer Science 6 Electricity/Electronics 3

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 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities
Fine arts (criticism, appreciation, historical significance), foreign language, literature,
philosophy, religion
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**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### 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.

Technical Core	. Maximum Semester Hours
CCAF Special Duty Interns	ship18
Geophysical Analysis	
Satellite Analysis Systems	6
Scientific Lab Technology.	
Scientific Measurements	

Technical Electives Maximum Semester Hours
Advanced Electronics
Algebra-Based Physics
Basic Electronics Theory/Applications
College Algebra or higher-level Mathematics
Computer Science
Computer Systems Maintenance & Operations
Principles
General Chemistry4
Meteorology
Physical Science
Soldering Techniques
Solid-State Theory/Applications
Statistics
Technical Writing

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

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 16.

Subjects/Courses Semester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
Fine arts (criticism, appreciation, historical
significance), foreign language, literature,
philosophy, religion
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**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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### SURGICAL SERVICES TECHNOLOGY (7GEA)

#### 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.

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

CCAF Internship	18
Fundamentals of Central Sterile Supply	
Operating Room Practicum	16
Operating Room Technology	16
Surgical Nursing	12

Technical Electives Maximum Semester H	Iours
Computer Science	6
Emergency Medicine	3
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 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### SURVIVAL INSTRUCTOR (2IBS)

#### **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.

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
*Teaching Internship-SERE	12

Technical Electives Maximum Semester Hours
Audiovisual Media
Computer Science
Curriculum Development
Educational/Developmental Psychology
Emergency Medicine
Guidance & Counseling
International Terrorism
Land Navigation
Mountain Travel
NREMT Emergency Medical Technician
Certification4
Parachuting
Psychology of Environmental Stress
Resistance Training
Technical Writing

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

**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 16.

Subjects/Courses Semester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
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Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
sociology
Humanities
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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

\*A 12 SHs CCAF Teaching Internship-SERE and 3 SHs of CCAF-approved instructor methodology coursework are required to complete the core requirement. See the Professional Credentialing section for information on credentialing and CCAF's Credentialing and Education Research Tool (CERT).

#### 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.

Technical Core Maximum Semester Hours
Air Cargo Procedures9
Air Transportation Principles9
Business/Transportation Law
CCAF Internship
Freight Transportation
Hazardous Materials
Household Goods Movement9
Introduction to Transportation
Motor Fleet Management & Safety
Passenger Routing/Movement
Traffic Management 15
Transportation Automated Systems
Vehicle Operations

Technical Electives Maximum Semester Hours
Business Mathematics/Statistics 3
Computer Science
Contract Management
Human Relations
Industrial Safety
Introduction to Aviation/Aeronautics
Introduction to Business
Introduction to Logistics
Physical Distribution
Principles of Accounting
Principles of Economics
Principles of Marketing
Quality Assurance
Warehouse Storage & Operations

#### Leadership, Management & Military Studies

(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 15.

**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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
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Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology
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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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

#### VEHICLE MAINTENANCE (4VKC)

#### Occupational Specialty 2T3X1, 2T3X2

**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.

Technical Core Maximum Semester Hours
Automotive Engine Computer Systems
CCAF Internship
Gas/Diesel Engine Principles8
Introduction to Business
Maintenance Scheduling
National Institute for Automotive Service Excellence
Certification16
Power Train Fundamentals
Radiator/Fuel Tank Repair
Specialized Support Vehicles15
Suspension/Steering/Brake Systems
Vehicle Body Repair/Painting8
Vehicle Electrical/Starting/Changing Systems
Vehicle Fuel/Emission Systems
Vehicle Glass, Upholstery/Trim & Hardware
Vehicle Heating/Air-Conditioning
Vehicle Integrated Management Systems
Welding

Technical Electives Maximum Semester I	Hours
Alternative Fuel/Electric-Powered Vehicle System	ıs3
Computer Science	6
Engine Lubrication/Cooling Systems	3
Engine Overhaul	3
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 15.

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 16.

Subjects/CoursesSemester Hours
Oral Communication
Speech
Written Communication
English composition
Mathematics
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
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Anthropology, archaeology, economics, geography,
government, history, political science, psychology,
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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; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

### **PROFESSIONAL CREDENTIALING...**

redentialing assists the professional development of our Airmen by broadening their knowledge and skills. Blending Air Force technical training and education with industry-based skill sets and professional credentialing processes benefits the Air Force by molding more diverse and qualified technicians to maintain critical and valuable national defense assets. Airmen benefit by being provided the education and credentials needed by highly technical Air Force career fields. Airmen will also possess highly valued skills needed by the industry when they transition from the Air Force. End result: the Air Force and industry benefit immensely by receiving highly trained, qualified, experienced and disciplined technicians – a valuable payback on investment. This section provides students with information concerning national professional credentialing opportunities related to their specific degree program and career field.

Some Air Force and civilian occupations have certain professional and technical standards. The process of meeting these standards and earning official recognition is referred to as *credentialing*. Governmental and private organizations set credentialing standards to ensure that individuals meet the standards for their profession. The term *"Credential"* refers to professional licensure or registry, or certification which documents an individual's level of competency and achievement in a specific profession.

There are two primary types of credentialing: Licensure and Certification.

*Licensure* is a credential normally issued by federal, state or local governmental agencies. A license is issued to individuals to practice in a specific occupation (i.e., medical license for doctors). Licenses are typically mandatory for employment in selected fields and federal or state laws or regulations define the standards that individuals must meet to become licensed.

*Certification* is a credential normally issued by non-governmental agencies, associations, schools or industry-supported companies. A certification is issued to individuals who meet specific education, experience and qualification requirements. These requirements are generally established by professional associations, industry or product-related organizations. Certification is typically an optional credential; although some state licensure boards and some employers may require a specific certification(s).

Credentialing is important to the Air Force and our Airmen for several reasons:

- Helps develop a more diversely skilled workforce
- Broadens professional development of our Airmen
- Validates professional knowledge and skills gained through Air Force technical education and training
- Helps prepare our Airmen meet mission challenges of the future
- CCAF awards collegiate credit to Airmen who possess certain national professional credentials that satisfy applicable technical education and program elective requirements
- Some civilian colleges and universities award credit toward academic degrees

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- Saves Air Force tuition assistance funds toward degree program completion
- Prepares Airmen for transition to civilian life
  - Federal, state or local law may require specific credentials to perform some jobs
  - Employers may require a specific credential(s) as a prerequisite for employment or pay higher salaries to credentialed employees
  - Credentials may improve promotion potential
  - Credentials demonstrate to employers that Airmen are on par with their civilian peers

Airmen should consider pursing occupational-related credentials while serving in the Air Force to increase their Air Force occupational skills, broaden their professional development and be better prepared for transition.

Students interested in pursuing professional credentials should contact the credentialing agency for information on credentials, eligibility requirements and testing procedures. Graduates of CCAF degree programs or courses accredited by credentialing agencies should contact the credentialing agency for requirements and processes.

To support documentary evidence of training, skills and practical experience, students are highly encouraged to maintain records of all previous and current education, training and qualifications.

#### **CCAF** Credit

Students may earn CCAF collegiate credit for certain national professional credentials that are approved by CCAF to satisfy applicable technical education and program elective requirements.

National professional credentials must be current in order to be awarded CCAF technical credit. Airmen who have allowed his/her credential(s) to expire or elapse are no longer certified or hold that credential. An expired credential is no longer valid and the person may no longer exercise the privileges granted of that credential. CCAF will not load national professional credentials to student records and award technical credit if the credential has expired or lapsed.

Students are responsible for contacting their education center to submit verification letters to the credential issuing agency. The agency will forward appropriate documentation to DEAL for verification and loading of credential to student records.

To determine the professional credentials that can be used in a degree program, refer to the degree plans of this catalog. To obtain a listing of all national professional credentials that are approved by CCAF for award of credit, visit <u>http://www.au.af.mil/au/barnes/ccaf/certifications.asp</u>/. Contact your base education center for procedures to apply professional credentials to your CCAF academic record. Professional credentials must be validated.

#### Waiver Process

CCAF does not have a waiver policy for CCAF-awarded credentialing programs. All published program requirements must be successfully completed. Waiver requests or exception to policies will not be accepted and/or approved.

# CCAF CREDENTIALING AND EDUCATION RESEARCH TOOL (CERT)...

ERT is a valuable resource for enlisted Airmen. The purpose of CERT is to increase awareness of professional development opportunities applicable to Air Force occupational specialties. CERT includes information related to specific AFSCs, such as:

- Career field description
- Civilian occupational equivalencies (US Department of Labor)
- CCAF degree program
- National professional credentials
- Credentialing agencies
- Professional organizations

For information concerning CCAF degree programs and national professional credentials that may be applicable to specific career fields, access CERT at <a href="http://www.au.af.mil/au/barnes/ccaf/certifications.asp/">http://www.au.af.mil/au/barnes/ccaf/certifications.asp/</a>.

The CCAF Credentialing Programs Flight is the focal point for professional credentials and programs offered by CCAF. For more information, visit <u>http://www.au.af.mil/au/barnes/ccaf/certifications.asp</u>/ or contact CCAF/DEAL at DSN 749-5020 or (334) 649-5020; E-mail <u>ccaf.deal@us.af.mil</u>.

# JOINT SERVICE AVIATION MAINTENANCE TECHNICIAN CERTIFICATION COUNCIL...



The Department of Defense (DoD) established the Joint Service Aviation Maintenance Technician Certification Council (JSAMTCC) to serve as the functional advisory body to each respective United States military service's aircraft maintenance division and the HQ Federal Aviation Administration (FAA).

The JSAMTCC is the military focal point for *FAA Aviation Mechanic - Airframe and Powerplant (A&P) Certification*. Other JSAMTCC responsibilities include: ensuring FAA's continued recognition of formal military aviation maintenance technical training and practical experience; maintaining DoD continuity with HQ FAA; managing and administering the joint-service A&P Certification Program; identifying and recommending qualified and eligible active duty, guard and reserve component personnel of the US Armed Forces to the FAA for the FAA Mechanic Certificate with Airframe and/or Powerplant ratings; and providing resources to assist technicians in meeting FAA eligibility requirements.

Resources provided in the Joint-service A&P Certification Program are designed to fill the gaps between military education, training and experience, and civil aviation industry standards.

The JSAMTCC also reviews aircraft maintenance technician training and practical experience from a FAA perspective, providing a unified assessment and recommendations to each military service and the FAA. For more information concerning the JSAMTCC, contact CCAF/DEAL at DSN 749-5020 or (334) 649-5020. Or visit <u>http://www.au.af.mil/au/barnes/ccaf/certifications.asp</u>/ or E-mail <u>ccaf.faa@us.af.mil</u>.

# AIR FORCE AIRFRAME AND POWERPLANT CERTIFICATION PROGRAM...



CAF continuously strives to increase and broaden the skills, knowledge and experiences of enlisted Airmen. The Air Force Airframe and Powerplant (A&P) Certification Program is one such effort designed to enhance professional development and skills of aircraft maintenance technicians.

The Air Force A&P Certification Program is offered to active duty, guard and reserve enlisted Airmen in select aircraft maintenance AFSCs. The program directly supports the mission of CCAF in that FAA credentialed technicians help enhance combat readiness, contributes to recruiting, assists in retention of highly skilled technicians and supports the career transition of enlisted Airmen. Furthermore, the program helps develop a more well-rounded and diverse Air Force aircraft maintenance professional.

The Air Force A&P Certification Program was developed by the Department of Defense (DoD) to streamline and improve the *FAA Aviation Mechanic* – *A&P Certification* process for the military. The program provides aircraft maintenance technicians the opportunity to pursue *FAA Aviation Mechanic* - *A&P Certification* based on training, education and practical experience as specified in Title 14, Code of Federal Regulations (CFR), Part 65.77-*Certification: Airmen Other Than Flight Crew Members*; Subpart D - Mechanics. Completing the program requirements detailed in the Air Force A&P Certification Program Qualification Training Package (QTP) will fill gaps in training and experience, ensuring technicians meet CFR Part 65.77 eligibility requirements.

Upon successful completion of the Air Force A&P Certification Program, CCAF will issue a CG-G-EAE-4 Form, *Certificate of Eligibility* and FAA Form 8610-2, *Airman Certificate and/or Rating Application*. These documents are required for individuals to obtain authorization for FAA testing from the Flight Standards District Office (FSDO).

Students are encouraged to maintain copies of past and present Career Field Education and Training Plans (CFETP), training certificates and other pertinent job qualification and training records, both military and civilian.

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**Eligibility:** Active duty, guard and reserve technicians who possess at least a 5-skill level in one of the following aircraft maintenance AFSCs are eligible to enroll:

2A0X1, 2A090, 2A2X1, 2A2X2, 2A2X3, 2A3X3, 2A3X4, 2A3X5, 2A3X7, 2A3X8, 2A390, 2A300, 2A5X1, 2A5X2, 2A5X3, 2A5X4, 2A590, 2A500, 2A6X1, 2A6X3, 2A6X4, 2A6X5, 2A6X6, 2A690, 2A691, 2A600 (except AGE), 2A7X1, 2A7X2, 2A7X3, 2A7X5, 2A790, 2A8X1, 2A8X2, 2A9X1, 2A9X2, and 2A9X3.

- Technicians who cross-trained out of aircraft maintenance are eligible to enroll provided they were awarded the 5-skill level in a AF A&P Program eligible aircraft maintenance AFSC prior to cross-training and have not been out of the aircraft maintenance AFSC more than 2 years.
- Once an individual retires, separates or is commissioned, they are no longer eligible to participate in the Air Force A&P Certification Program.

The Air Force A&P Certification Program is managed and administered by the CCAF Credentialing Programs Flight. For more information: <u>http://www.au.af.mil/au/barnes/ccaf/certifications.asp</u>/ or contact CCAF/DEAL at DSN 749-5020 / (334) 649-5020 or E-mail <u>ccaf.faa@us.af.mil</u>.

#### FAA CERTIFICATION CREDIT

CCAF awards 30 semester hours for the *FAA Aviation Mechanic - A&P Certification* and 18 semester hours for the *FAA Aviation Mechanic - Airframe or Powerplant Certification*. This credit is awarded to students enrolled in a CCAF degree program which accepts certification credit toward the program's technical education requirement. Refer to the applicable degree program for the maximum semester hours that may be used to satisfy technical education requirements.

Students possessing FAA certification should contact the base education center for procedures to report certification to CCAF/DEAL.

# PROFESSIONAL MANAGER CERTIFICATION PROGRAM....

CAF offers the Professional Manager Certification (PMC) Program to qualified Senior Noncommissioned Officers (SNCO). The PMC is a professional credential awarded by CCAF to formally recognize a senior NCO's professional accomplishments and advanced level of education and experience in leadership and management. The program provides a structured professional development track that <u>supplements</u> Enlisted Professional Military Education (EPME) and the Career Field Education and Training Plan (CFETP).

**Eligibility:** The PMC is primarily designed for Air Force SNCOs; however, enlisted Airmen (i.e. MSgt selects) who meet all program requirements are eligible. Once members retire, separate or are commissioned, they are no longer eligible for the PMC. The awarded PMC is recorded on the official CCAF academic record and transcript.

The PMC Program is managed and administered by the CCAF Credentialing Programs Flight. For more information, visit <u>http://www.au.af.mil/au/barnes/ccaf/certifications.asp</u>/ or contact CCAF/DEAL at DSN 749-5020 / (334) 649-5020 or E-mail <u>ccaf.deal@us.af.mil</u>.

# **CCAF INSTRUCTOR CERTIFICATION PROGRAM....**

CAF offers the CCAF Instructor Certification (CIC) Program for qualified instructors who teach CCAF collegiate-level credit-awarding courses at a CCAF affiliated school. The CIC is a professional credential that recognizes the instructor's extensive faculty development training, education, and qualification required to teach a CCAF course, and formally acknowledges the instructor's practical teaching experience.

The CIC Program is a three-level program consisting of three specific levels of achievement.

- CIC-I: designed to formally recognize an individual as a qualified CCAF instructor and his or her professional accomplishment.
- CIC-II: designed to formally recognize the instructor's advanced professional accomplishment beyond the CIC-I.
- CIC-III: designed to formally recognize the instructor's advanced professional accomplishment beyond the CIC-II or Occupational Instructor Certification (OIC).

**Eligibility:** Qualified CCAF instructors who meet CIC Program requirements are eligible. Once instructors leave CCAF instructor duty, they are no longer eligible for the CIC.

- A qualified instructor is a CCAF instructor who has completed the CCAF faculty development program and is assigned to a CCAF affiliated school teaching a CCAF course. The instructor may be an officer, enlisted, civil service, contractor, other-service, or foreign-service member.
- Instructor Assistants, Student Instructors, Guest Lecturers, Subject-Matter Experts, Speakers of Opportunity, approved EQILD instructors and instructors who do not teach a CCAF course are not eligible.

The awarded CIC is recorded on the instructor's official CCAF academic record and transcript.

The CIC Program replaced the CCAF Occupational Instructor Certification (OIC) Program, which officially closed on 1 January 2011.

The CIC program is managed and administered by the CCAF Credentialing Programs Flight. To obtain more information and program procedures, refer to the CCAF Campus Affiliations Policies and Procedures Guidelines (PPG) or <u>http://www.au.af.mil/au/barnes/ccaf/certifications.asp</u>/ or contact CCAF/DEAL at DSN 749-5020 / (334) 649-5020 or E-mail <u>ccaf.deal@us.af.mil</u>.

#### **CIVILIAN TEACHER CERTIFICATION**

#### **VOCATIONAL INSTRUCTOR CERTIFICATION**

Individuals interested in teaching at a vocational school or community college should contact the applicable state board of education to determine qualification and certification requirements. For more information, visit <u>http://www.ed.gov/about/contacts/state/index.html?src=ln</u>.

#### FLORIDA PROFESSIONAL EDUCATOR CERTIFICATION

Florida Statute 1012.56 allows CCAF instructors to meet some of Florida's K-12 certification requirements. The statute enables instructors to meet Florida's general knowledge, and professional preparation and teacher competence requirements if the individual:

- Taught fulltime for at least two semesters at an accredited college that awards at least an associate degree (CCAF);
- Submits Letter of Verification provided by CCAF;
- Holds at least a bachelor's degree; and
- Passes one of Florida's subject knowledge exams.

Contact the CCAF Credentialing Programs Flight to obtain a Letter of Verification. CCAF cannot provide a Letter of Verification for individuals who have not served as a CCAF instructor.

Florida Statute 1012.56 provides easier transition for CCAF instructors into a second career as a K-12 teacher in Florida. For more information, contact the Florida Troops to Teachers program manager at 1-888-358-7667 or (850) 245-5023 or E-mail troopstoteachers@fau.edu.

#### **TROOPS TO TEACHERS PROGRAM**

The DANTES Troops-to-Teachers Program provides a Referral Assistance and Placement service to military personnel interested in beginning a second career as a teacher in public education. The DANTES Troops-to-Teachers office will help applicants identify teacher certification requirements, programs leading to certification, financial assistance and employment opportunities. Individuals considering teaching in the public education system upon retirement or separation should contact Troops-To-Teachers at DSN 922-1111 or (800) 231-6242. Individuals may also visit <a href="http://www.dantes.doded.mil/Sub%20Pages/TTT/TTT\_Main.html">http://www.dantes.doded.mil/Sub%20Pages/TTT/TTT\_Main.html</a>.

# INSTRUCTIONAL SYSTEMS DEVELOPMENT CERTIFICATION PROGRAM ...

CAF offers the Instructional Systems Development (ISD) Certification for qualified course/curriculum developers, writers and managers who are formally assigned to affiliated schools to develop/write and manage CCAF collegiate-level credit awarding courses. The ISD Certification is a professional credential that recognizes the course/curriculum developer/writer's or manager's extensive training, education, qualifications and experience required to develop/write and manage CCAF courses.

The certification also recognizes the individual's ISD qualifications and experience in planning, developing, implementing and managing instructional systems. The program is designed to broaden faculty and professional development.

**Eligibility:** Qualified officer, enlisted, civilian and other service curriculum writers and managers are eligible for the ISD Certification. Once an individual leaves curriculum writer or manager duty, they are no longer eligible for the ISD Certification.

The awarded ISD certification is recorded on the official CCAF academic record and CCAF transcript.

The ISD Certification Program is managed and administered by the CCAF Credentialing Programs Flight. To obtain more information and program procedures, refer to the CCAF Campus Affiliations Policies and Procedures Guidelines (PPG): <u>http://www.au.af.mil/au/barnes/ccaf/certifications.asp/</u> or contact the CCAF/DEAL at DSN 749-5020 / (334) 649-5020 or E-mail <u>ccaf.deal@us.af.mil</u>.

# NATIONAL AEROSPACE TECHNICAL EDUCATION CENTER...



The National Aerospace Technical Education Center (SpaceTEC) is a National Resource Center for Aerospace Technical Education that provides skill-based, nationally recognized and industry utilized professional certifications for U. S. Aerospace Technicians. All SpaceTEC certifications are performance driven, identifying technician competencies valued by industry when competing in today's global economic environment.

The SpaceTEC Certified Aerospace Technician is also recommended by the Federal Aviation Administration Commercial Space Transportation Office as one of three certifications the Reusable Launch Vehicle (RLV) operator may use for RLV Aerospace Maintenance Technician (RAMT) training during forthcoming rating assessment processes.

Partnering institutions are affiliated with NASA centers and the DoD located in 10 states. The SpaceTEC Consortium offers Aerospace Technical Education skills training and college degrees for the U. S. aerospace industry. CCAF and the JSAMTCC recognize and support SpaceTEC initiatives.

**Eligibility:** Air Force personnel serving in aerospace or aviation occupational specialties are eligibility for the SpaceTEC Aerospace Technician Certification.

#### SPACETEC CERTIFICATION CREDIT

CCAF awards 25 semester hours for the SpaceTEC Aerospace Technician Certification. This credit is awarded to students enrolled in a CCAF degree program which accepts certification credit toward the program's technical education requirement. Refer to the applicable degree program for the maximum semester hours that may be used to satisfy technical education requirements.

For more information, contact SpaceTEC at (321) 730-1020 or visit <u>http://www.spacetec.org</u> or contact CCAF Credentialing Programs Flight at DSN 749-5020 / (334) 649-5020 or E-mail <u>ccaf.deal@us.af.mil</u>.

# NATIONAL CENTER FOR AEROSPACE & TRANSPORTATION TECHNOLOGIES...



he National Center for Aerospace & Transportation Technologies (NCATT) is a consortium of community colleges and universities offering aircraft avionics and electronics technical education programs. NCATT establish industry standards for training and certifying aircraft avionics/electronics technicians; curriculum supporting national standards; industry-developed and recognized certification program for aircraft avionics/electronics technicians; and accreditation processes for institutions meeting the established standards.

NCATT supports aircraft industry initiatives related to professional development of aircraft avionics maintenance technicians. NCATT standards in education and certification assist aircraft avionics/electronics technicians in meeting the demands of needed skills in advanced aircraft technology. CCAF and the JSAMTCC recognize and support NCATT initiatives.

NCATT Accredited Training Providers are technical schools/training centers that offer education/training programs that meet and/or exceed the NCATT standards. These providers have demonstrated a commitment to quality through an in-depth curriculum, facilities and faculty evaluation. CCAF gained NCATT accreditation in February 2010.

**Eligibility:** NCATT certification exams are not restricted to aircraft electronics/avionics technicians. Certification exams are open to all technicians regardless of career field, training, education or experience.

# **NCATT CERTIFICATION CREDIT**

CCAF awards 5 semester hours for the NCATT Aircraft Electronics Technician Certification. This credit is awarded to students enrolled in a CCAF degree program which accepts certification credit toward the program's technical education requirement. Refer to the applicable degree program for the maximum semester hours that may be used to satisfy technical education requirements.

For more information, contact NCATT at (817) 984-4738 or visit <u>http://www.ncatt.org/</u> or contact the CCAF Credentialing Programs Flight at DSN 749-5020 / (334) 649-5020 or E-mail at <u>ccaf.deal@us.af.mil</u>.

# 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. Air Force schools interested in affiliating with the Community College of the Air Force should write CCAF/DECA, 100 South Turner Boulevard, Maxwell AFB, Gunter Annex, Alabama 36114-3011; call 334-649-5069, DSN 749-5069; or Fax DSN 749-5105.

#### **AFFILIATED SCHOOLS**

Airman Leadership School Altus AFB, Oklahoma

**97th Operations Group** Altus AFB, Oklahoma

Airman Leadership School Andersen AFB, Guam

Airman Leadership School Andrews AFB, Maryland

Airman Leadership School Aviano AB, Italy

Airman Leadership School Barksdale AFB, Louisiana

Airman Leadership School Beale AFB, California

**9th Munitions Squadron** Beale AFB, California

Airman Leadership School Buckley AFB, Colorado

Airman Leadership School Cannon AFB, New Mexico

Airman Leadership School Charleston AFB, South Carolina

Airman Leadership School Davis-Monthan AFB, Arizona

55th Electronic Combat Group Davis-Monthan AFB, Arizona

Airman Leadership School Dover AFB, Delaware

**436th Operations Group** Dover AFB, Delaware

Airman Leadership School Dyess AFB, Texas

**436th Training Squadron** Dyess AFB, Texas

Airman Leadership School Edwards AFB, California Airman Leadership School Eglin AFB, Florida

Airman Leadership School Eielson AFB, Alaska

Airman Leadership School Ellsworth AFB, South Dakota

Airman Leadership School, NCO Academy Elmendorf AFB, Alaska

Airman Leadership School F. E. Warren AFB, Wyoming

20th Air Force ICBM Center of Excellence F. E. Warren AFB, Wyoming

Airman Leadership School Fairchild AFB, Washington

**193rd Engineering Installation Squadron (ANG)** Fort Indiantown Gap, Pennsylvania

Airman Leadership School Fort Meade, Maryland

Medical Education & Training Campus Fort Sam Houston, Texas

AF Office of Special Investigations Academy Glynco, Georgia

Airman Leadership School Goodfellow AFB, Texas

**17th Training Group** Goodfellow AFB, Texas

Airman Leadership School Grand Forks AFB, North Dakota

Airman Leadership School Hanscom AFB, Massachusetts

Airman Leadership School, NCO Academy Hickam AFB, Hawaii

ACC Maintenance Readiness Training Center Hill AFB, Utah

Airman Leadership School Hill AFB, Utah

#### **AFFILIATED SCHOOLS**

Airman Leadership School Holloman AFB, New Mexico

**49th Operations Group** Holloman AFB, New Mexico

AF Special Operations Air Warfare Center Hurlburt AFB, Florida

Airman Leadership School Hurlburt Field, Florida

**39th Information Operations Squadron** Hurlburt Field, Florida

**505th Training Squadron** Hurlburt AFB, Florida

Airman Leadership School Incirlik AB, Turkey

Airman Leadership School; NCO Academy Kadena AB, Okinawa, Japan

**18th Logistics Readiness Squadron** Kadena AB, Okinawa, Japan

NCO Academy Kapaun AS, Germany

Airman Leadership School Keesler AFB, Mississippi

81st Training Group Keesler AFB, Mississippi

85th Engineering Installation Squadron Keesler AFB, Mississippi

58th Special Operations Wing Kirtland AFB, New Mexico

Airman Leadership School Kirtland AFB, New Mexico

Airman Leadership School Lajes Field, Azores

Airman Leadership School Langley AFB, Virginia

Airman Leadership School Little Rock AFB, Arkansas **189th Air National Guard** Little Rock AFB, Arkansas

**314th Operations Group** Little Rock AFB, Arkansas

Airman Leadership School Luke AFB, Arizona

Airman Leadership School MacDill AFB, Florida

Airman Leadership School Malmstrom AFB, Montana

Air Force Judge Advocate General School Maxwell AFB, Alabama

Airman Leadership School Maxwell AFB, Alabama

USAF First Sergeant Academy Maxwell AFB, Gunter Annex, Alabama

Eaker College for Professional Development Maxwell AFB, Alabama

Barnes Center for Enlisted Education Maxwell AFB-Gunter Annex, Alabama

Airman Leadership School McChord AFB, Washington

Airman Leadership School McConnell AFB, Kansas

I. G. Brown TEC McGhee Tyson (ANGB), Tennessee

Airman Leadership School Joint Base McGuire-Dix-Lakehurst, New Jersey

USAF Air Expeditionary Center Joint Base McGuire-Dix-Lakehurst, New Jersey

**305th Operations Group** Joint Base McGuire-Dix-Lakehurst, New Jersey

Airman Leadership School Minot AFB, North Dakota

Airman Leadership School Misawa AB, Japan

#### **AFFILIATED SCHOOLS**

Airman Leadership School Moody AFB, Georgia

Airman Leadership School Mountain Home AFB, Idaho

Airman Leadership School Nellis AFB, Nevada

Airman Leadership School Offutt AFB, Nebraska

Airman Leadership School Osan AFB, Korea

Airman Leadership School Patrick AFB, Florida

Airman Leadership School Peterson AFB, Colorado

607th Air Control Squadron (ANG) Phoenix, Arizona

Airman Leadership School Pope AFB, North Carolina

Airman Leadership School RAF Feltwell, United Kingdom

Airman Leadership School Ramstein AB, Germany

558th Flying Training Squadron Randolph AFB, Texas

Airman Leadership School Robins AFB, Georgia

Airman Leadership School Joint Base San Antonio, Texas

**37th Training Group** Joint Base San Antonio, Texas

**356th Airlift Squadron** Joint Base San Antonio, Texas

737th Training Group Joint Base San Antonio, Texas

937th Training Group Joint Base San Antonio, Texas Airman Leadership School Scott AFB, Illinois

Airman Leadership School Seymour Johnson AFB, North Carolina

Airman Leadership School Shaw AFB, South Carolina

Airman Leadership School Sheppard AFB, Texas

82nd Training Wing Sheppard AFB, Texas

Airman Leadership School Spangdahlem AB, Germany

European Transportation Training Center Spangdahlem AB, Germany

**552nd Operation Group** Tinker AFB, Oklahoma

Airman Leadership School Tinker AFB, Oklahoma

Airman Leadership School Travis AFB, California

**60th Operations Group** Travis AFB, California

Airman Leadership School Tyndall AFB, Florida

Airman Leadership School Vandenberg AFB, California

**381st Training Group** Vandenberg AFB, California

Airman Leadership School Whiteman AFB, Missouri

Airman Leadership School Wright-Patterson AFB, Ohio

USAF School of Aerospace Medicine Wright-Patterson AFB, Ohio

Airman Leadership School Yokota AB, Japan

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. Air University-delivered courses are identified with a four letter course area designation and three digit specific course numbers. The course descriptions in this section are arranged alphabetically and then numerically with the evaluated alphabetic code.

The courses are subject to change of credit-hour value. Courses 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/DEA, 100 South Turner Boulevard, Maxwell AFB, Gunter Annex, Alabama 36114-3011. Or call (334) 649-5014 or DSN 749-5014; or fax (334) 649-5101 or DSN 749-5101.

# The Code Index

AAS	Aircraft Armament Systems
ACL	Aircrew Life Support
ACL	Aircrew Technology
ADM	Administration
AFM	Airfield Management
AGE	Aerospace Ground Equipment
AMT	Aircraft Maintenance Technology
AST	Astronautics
ATC	Air Traffic Control
AVI	Avionics
BEE	Bioenvironmental Engineering
BET	Biomedical Equipment Technology
CIV	Civil Engineering
CLT	Cardiopulmonary Laboratory Technology
CLTR	Cultural Studies (Air University)
CMR	Computer Maintenance & Repair
COM	Communications
CON	Contracts
COR	Corrosion Control
CYB	Cybersecurity
DAS	Dental Specialist
DLT	Dental Laboratory Technology
DMS	Diagnostic Medical Sonography
DPO	Disaster Preparedness
EDP	Data Systems
EDT	Education & Training
EEO	Electronic Equipment Operation
ELT	Electronics
EMT	Emergency Medical Technology
ENM	Environmental Medicine
ENV	Environmental Science
EPP	Electric Power Production
EXP	Explosives Handling & Disposal
FDS	Food Service
FHM FIN	Force Health Management Finance (Accounting)
FIP	Fire Protection
FNS	Food & Nutritional Science
FSC	Family Support Center
FTL	Foreign Technical Language
FUS	Fuels
GEO	Applied Geography
GPS	Geophysical Sciences
GRA	Graphics
HAR	Heating, Air-Conditioning & Refrigeration
HEO	Heavy Equipment Operation
HIS	Applied History
HIT	Histologic Technology
HRM	Human Resource Management
HSA	Health Services Administration
INT	Internship
ITL	Intelligence
JOU	Journalism
LAW	Law Enforcement

LEG	Legal Service
LMM	Leadership, Management & Military Studies
LOG	Logistics
MAC	Machinist
MAP	Mapping
MAT	Mathematics
MEA	Measurements
MEC	Mechanical Maintenance
MED	
MET	0,
MGT	Management & Supervision
MIL	Military Science
MKS	Marksmanship
MLT	Medical Laboratory Technology
MPH	Military Public Health
MRD	Medical Readiness
MSL	Missile Maintenance Technology
MUN	Munitions
NDT	
	0,
NUR	5
OCC OLT	Otolaryngology Technology
OPD	Orthotic Prosthesis Devices
OPT	Optometric Technology
PAV	Pavements
PER	Personnel
PHA	Pharmacology
PHE	Physical Education
PHO	Photography
PHY	Applied Physics
PLB	Plumbing
PTH	Physical Therapy
PTR	Physiological Training
QCI	Quality Assurance
RAD	Radiologic Technology
REC	Recreation
RTB	Radio & Television Broadcasting
SAF	Safety
SAN	Sanitation
SDI	Special Duty/Reporting Identifier Internship
SEC	Security
SOC	Social Services
S00	Solar Observation
SUR	Surveying
SVE	Survival Equipment
SVR	Survival & Rescue
SVS	Services
TRN	Transportation

- TVSTelevision SystemsVEMVehicle Maintenance
- WEL Welding
- 2014-2016 CCAF General Catalog

# (AAS) 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 AGE equipment and armament support equipment. Includes theory of operation, component 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 manufacturers' maintenance manuals; theory of operation; location of components; and removal, adjustment, repair, inspection, installation and trouble-isolation procedures.

# (ACL) 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, radio equipment and anti-exposure 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, 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.

# (ACT) 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, communication, 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 communication skills, safety, flying orientation, publications, aircrew coordination, life-support equipment, basic aerodynamics, aircrew training, and customs and border clearances.

#### **ACT1210 Aerial Gunner Principles and Procedures**

Comprehensive study of airborne weapon systems and aircrew duties related to the aerial gunner. Includes aircraft armament systems operation, servicing and inspection, performance of in-flight maintenance and aircrew functions under training, combat or testing conditions, forecasting ammunition requirements, and navigation waypoint identification. Strict compliance to flying, weapon and explosive safety standards in all facets of aircrew operations is emphasized. (May be repeated for credit on various aircraft)

#### ACT1211 Flight Attendant Principles/Procedures

Performs preflight, through flight and post flight inspections of aircraft emergency, cabin and galley equipment; provides passenger safety and comfort during aircraft operations; validates manifest and supervises loading and offloading of aircraft passengers and baggage; applies restraint devices to unsecured baggage and equipment; ensures access to escape exits; maintains proficiency in emergency equipment operations, procedures and egress; provides emergency medical assistance; and prepares and checks records and border clearance documents.

#### **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 Flight Engineer Ground Training

Evaluation of aircraft systems operation in both normal and emergency circumstances. Includes fault isolation techniques, operational checks, aircraft operating limitations, weight and balance computations, calculation of minimum airspeed requirements for takeoff and landing, preflight and pre-takeoff checklists and inspections, and airframe aerodynamics.

### 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.

#### ACT2214 Tiltrotor Aircraft Ground Training

Advanced tiltrotor flight performance, system familiarization, and emergency procedures. Includes power plant performance, flight control limitations/operational checks, systems trouble analysis, loading and refueling parameters, weight/balance computations, prediction of takeoff and landing performance, theory of flight, aerodynamics, airspeed measurement, preflight/pre-takeoff inspections.

# (ADM) ADMINISTRATION

### ADM1101 Typing I

Touch typing to include thorough knowledge of keyboard and operation of word processing software. Emphasizes centering, simple tables, business letter, envelopes, rough drafts and manuscripts.

#### ADM1102 Chapel Resource Management

Introduction to the organization and management of chapel resources and activities. Includes personnel management, application of principles of funds accounting, financial planning, facility management, and government contracting instruments.

#### ADM1103 Document and Publications Management

Introduction to the management of publications and documents. Emphasizes the preparation and management of all types of written communication to include proper formatting and routing procedures of official memorandums, letters, and publications. Includes forms development, design, inventory controls, and acquisition.

#### 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

Introduction to general administrative support and office management. Includes planning, coordinating, managing, sharing, and controlling data, and the proper flow and management of information in both paper and electronic mediums. Emphasizes content development, e-mail and internet management policies, plans and programs, official correspondence, suspense files, document security, official mail handling, 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.

# ADM1108 Introduction to Computer Systems and Network Management

Introduction to computer systems and network management concepts with emphasis on managing local area networks and initial diagnostics of information systems. Client Support Administration responsibilities within the network environment include management of computer hardware and software; installation and configuration of software operating systems and office automation applications, information assurance, development of web pages and management of websites.

#### ADM1109 Records Management

Management of official records utilizing automated publishing tools to create, maintain, protect, preserve and dispose of records in both paper and electronic mediums. Includes preparation of automated file maintenance and disposition plans; identifying, declaring and protecting vital records, disposition and cutoff procedures.

#### ADM 2102 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, and 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.

# (AFM) 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.

#### AFM1201 Aviation Resource Management

Introduction to aviation resource management principles. Includes operational scheduling, flight data management, aviation coding, aeronautical orders, incentive pay, flight/physiological training, flight/jump records, aircrew training with associated products, and the computer hardware/software to manage these functions.

#### 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.

#### AFM2201 Advanced Aviation Resource Management

Advanced techniques and procedures of aviation management. Includes information and automated data processing capabilities used to manage and administer aircrew/parachutist training and evaluation, flight scheduling functions, flying safety, qualifications and related functions needed to attain and maintain combat or mission readiness.

# (AGE) 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.

#### AGE1102 Auxiliary Aerospace Ground Support Equipment

Inspection, maintenance, and repair of both powered and non-powered aircraft support equipment. Includes fault isolation; hydraulic, electrical, and pneudraulic 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 both high- and lowpressure 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 both high- and lowpressure 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.

#### AGE2101 Advanced Hydraulic Test Stands

Application of advanced principles, theory, and operation of specific ground support hydraulic test stands used to operate aircraft hydraulic systems. Interpretation and use of hydraulic, fuel, lubrication, and electrical schematics and diagrams; operation; inspection; fault-isolation procedures; repair and testing of components. Emphasis placed on electrical, hydraulic, and prime mover operating theories and advanced trouble-shooting.

# AGE2103 Advance Ground Support Air Conditioner Maintenance

Application of advanced principles, theory and operation of ground support air conditioners. Emphasis on fault-isolation of electrical, engine, refrigerant, fuel, lubrication and compressor systems.

# (AMT) 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 - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant 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 required for performing account custodial duties.

#### 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

An 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 non-ballistic 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 non-ballistic aircraft canopy and ejection seat components for basic, dual, and multi-crew 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, wire maintenance, 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 - Air Force Airframe & Powerplant 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, temperature regulators, electronic temperature control units, distribution ducting and water separators. (May be repeated for credit on various aircraft - Air Force Airframe & Powerplant Program applicable course.)

#### AMT1123 Aircraft Electrical Systems Maintenance

Introduction to aircraft electrical systems, and the 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 - Air Force Airframe & Powerplant 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/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, anti-collision lighting, starting and ignition systems, and other control and warning systems inspection procedures, preventive maintenance and fault isolation are also covered. (May be repeated for credit on various aircraft - Air Force Airframe & Powerplant Program applicable course.)

#### AMT1131 Aircraft Hydraulic System Fundamentals

Comprehensive study of hydraulic and pneumatic theory, operation, and maintenance. Includes power, landing gear, brake, anti-skid, 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 - Air Force Airframe & Powerplant 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 pneudraulic system components; ultrasonic cleaning of system filters; use of bench test stands; and hose fabrication. (May be repeated for credit on various aircraft - Air Force Airframe & Powerplant Program applicable course.)

#### AMT1141 Aircraft Fuel Systems Fundamentals

Operational theory, functions, and maintenance of aircraft fuel systems. Includes engine feed and cross feed, 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 on various aircraft - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant Program applicable course.)

#### AMT1151 Helicopter Maintenance Fundamentals

An 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 Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant 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 -Air Force Airframe & Powerplant Program applicable course.)

#### AMT1163 Aircraft Engine Operation

Detailed aircraft engine operation under normal and emergency operating procedures. Includes safety precautions, pre-run checks, post-run inspections, engine limitations using weapon system trainers and simulators; and operational checkouts of installed aircraft engines. (May be repeated for credit on various aircraft - Air Force Airframe & Powerplant 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 -Air Force Airframe & Powerplant 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 multi-meters 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 non-preservation fluids. (May be repeated for credit on various power units - Air Force Airframe & Powerplant Program applicable course.)

#### AMT1166 Helicopter Engine and Transmission Maintenance

Theory of operation, purpose, and maintenance of turbine engines, semi-rigid 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 engine courses - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant 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. Provides practical 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 - Air Force Airframe & Powerplant 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 non-powered bending, radius bends, hand and machine forming, hand and pneumatic riveting, hand and pneumatic drilling, dimpling, and countersinking, and personal, work center, and chemical safety standards and applications. (May be repeated for credit on various aircraft - Air Force Airframe & Powerplant Program applicable course.)

#### AMT1182 Fundamentals of Low-Observable and Stealth Aircraft

Introduction to the 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 - Air Force Airframe & Powerplant Program applicable course.)

#### AMT1183 Aircraft Specialized Structural Repair

Technical information for sheet metal repairs to include flush, non-flush 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 - Air Force Airframe & Powerplant Program applicable course.)

#### AMT1191 Aircraft Phased Inspections

Concepts and application of the phase inspection, techniques used to perform scheduled aircraft inspections, and the 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 - Air Force Airframe & Powerplant Program applicable course.)

#### AMT1195 Preflight and Postflight Inspections

Aircraft preflight, post-flight and between flight inspections. Includes ground handling, aircraft launch and recovery procedures, safety, aircraft airworthiness inspection, engine inlet and exhaust inspection and servicing, proper use of inspection work cards, technical publications, and documentation of maintenance and inspections on aircraft forms. (May be used for credit on various aircraft - Air Force Airframe & Powerplant 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. Emphasis on 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 - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant Program applicable course.)

#### 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 - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant 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, presurization, fuel indication and in-flight refueling systems. (May be repeated for credit on various aircraft - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant 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 un-installed 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 - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant 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 semi-portable engine test facilities. (May be repeated for credit on various pieces of equipment - Air Force Airframe & Powerplant 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 post-impact fires, and estimation of engine power at impact. (May be repeated for credit on various aircraft - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant Program applicable course.)

# AMT2183 Assessment and Maintenance of Radar Absorbing Materials

Concepts, principles, and procedures for maintenance of aircraft radar absorbing materials. Includes inspection procedures and techniques, damage limitations, and removal and installation of materials. (May be repeated for credit on various aircraft--Air Force Airframe & Powerplant Program applicable course.)

# AMT2184 Assessment and Maintenance of Low Observable Material

Concepts, principles, and procedures for maintenance of aircraft low observable materials. Includes inspection procedures and techniques, damage limitations, and removal and installation of materials. (May be repeated for credit on various aircraft.)

#### 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 - Air Force Airframe & Powerplant 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 required for 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 - Air Force Airframe & Powerplant Program applicable course.)

#### 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 - Air Force Airframe & Powerplant Program applicable course).

#### AMT2198 Canopy Rigging

Advanced study and practice of removing, installing, and adjusting jettison aircraft canopies. Includes egress system safety precautions, use of maintenance safety devices, and system operational checks. (May be repeated for credit on various aircraft - Air Force Airframe & Powerplant 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 - Air Force Airframe & Powerplant Program applicable course.)

#### AMT2210 Advance Pneudraulic Repair Workshop

Application of design theory in specific aircraft pneudraulic systems. Includes application of detailed principles to determine functions and interrelationships of components using electrical/hydraulic schematics; trouble isolation; and practice in removing, installing, repairing, servicing, adjusting, inspecting, and modifying aircraft pneudraulic systems. (May be repeated for credit on various aircraft.)

#### 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 – Air Force Airframe and Powerplant 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 - Air Force Airframe & Powerplant Program applicable course.)

#### 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 – Air Force Airplane & Powerplant Program applicable course.)

#### AMT2236 Advanced Aircraft Maintenance Laboratory

Maintenance procedures and systems theory as applied to specific aircraft. Includes systems operation analysis using wiring diagrams, engineering drawings, and manufacturer's maintenance manuals; operation of flight controls, engines, and utility systems; and use of emergency procedures as necessary. Experience in ground handling; servicing; functional systems checkout; locating, removing, and replacing components; and inspection of aircraft to ensure systems are operational and airworthy. May be repeated for credit on various aircraft.

#### AMT2297 Aviation Quality Assurance

Advanced quality assurance procedures used 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 are observed and maintenance practices meet the 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.

#### AMT2298 Aviation Maintenance Supervisor

Aircraft maintenance management programs, policies and procedures for the 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, resources 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.

# (AST) ASTRONAUTICS

#### **AST2402 Introduction to Space Systems**

Space systems and mechanics and defense and satellite systems. Includes launching fundamentals, identifying orbital parameters, and understanding applicable technical language and space-tracking detection systems.

#### **AST2404 Space Systems Operations**

Discussion of the various space operations which relate to space surveillance and missile warning. Emphasis is on console operator duties and responsibilities, to include a review of alert systems, cryptographic publications, systems operability, and emergency procedures.

#### AST2405 Space Systems Event Processing

Discussion of procedures involved in performing attack warning and space track event processing,

with emphasis on security objectives and the application of strategic nuclear forces in sustaining these objectives. Includes the development of U.S. doctrine and policy, and the foreign threat doctrine.

#### 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.

# (ATC) AIR TRAFFIC CONTROL

#### ATC1403 Visual Flight Control

Aircraft characteristics and methods of identification. Includes proficiency in control procedures for heavy jets; control tower operations, equipment, and operating positions; knowledge of aviation regulations pertaining to visual flight rules (VFR); control of aircraft engaged in VFR flight; and existent security risks in an unsecured tower communication system.

#### ATC1405 Air Traffic Control Non-radar Procedures

Principles of conventional approach control operations. Includes separation standards, terminology, inter- and intra-facility 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, and 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, non-precision 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.

# (AVI) AVIONICS

#### AVI1705 Automatic Flight Control Systems Theory

Circuit analysis/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 pitotstatic 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.

#### 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, and 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.

#### 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.

#### AVI1754 Avionic Radio Communications Systems Theory

Operational characteristics of avionic communication 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 of avionics communication equipment.

#### 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 Systems. 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.

# AVI1761 Global Positioning Systems (GPS) Navigation Theory

Operational characteristics of avionic Global Positioning Systems (GPS) navigation equipment. Includes use of schematic diagrams, data flow 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.

#### 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.

#### **AVI2722 Electronic Countermeasures**

Identification and recognition of passive and active countermeasures, electronic countermeasure techniques, and data processing.

#### AVI2725 Electro-Optical Viewing System

Theory of target sensing and display using lowlight 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.

#### 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.

# AVI2732 Airborne Command Post Communication Systems

Advanced theory and operation of satellite communication systems. Includes data flow, circuit and systems analyses.

# (BEE) BIOENVIRONMENTAL ENGINEERING

#### **BEE1301 Introduction to Bioenvironmental Sciences**

Application of mathematics, physical and biological principles to personal protection. Includes measurement of illumination and ionizing and non-ionizing 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**

Collection and chemical testing of water samples, monitoring of water treatment facilities, and preparing reports with recommendations to prevent contamination.

#### **BEE1305 Waste Management**

Collection, treatment, and disposal of liquid and solidwaste 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.

#### **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.

#### **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.

#### **BEE2321 Advanced Bioenvironmental Measurements**

Extensive fieldwork in industrial hygiene, radiation and environmental quality is conducted. Field methods include chemical and physical hazards along with other environmental programs.

# (BET) 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.

#### **BET1102 Introduction to Medical Equipment**

Familiarization with maintenance and operation of medical equipment. Demonstration of proficiency with infusion pumps, hypo and hyperthermia units, infant incubators, and audiometers in a performance lab. Principles of safety, anatomy and physiology, and clinical applications are introduced.

#### **BET1103 Physiological Monitoring Equipment**

Familiarization with maintenance and operation of physiological monitoring equipment. Demonstration of proficiency with pulse oximeters, central patient monitoring systems, telemetry monitoring systems, diagnostic ultrasound doppler units, electrocardiograph units, defibrillators, fetal heart monitors, and invasive/non-invasive blood pressure monitors in a performance lab. Principles of safety, anatomy and physiology, and clinical applications are introduced.

#### **BET1104 Medical Support Equipment**

Familiarization with maintenance and operation of medical support equipment. Demonstration of proficiency with fume and laminar flow hoods, blood cell washing systems, electrolyte analyzers, electronic particle counters, chemical automixers, blood gas analyzers, blood/fluid warmers, chemistry analyzers, and centrifuges in a performance lab. Principles of safety, refrigeration, anatomy and physiology, and clinical applications are introduced.

#### BET1105 Surgical Equipment

Familiarization with maintenance and operation of surgical equipment. Demonstration of proficiency with respiration monitors, pulmonary function analyzers, volume/pressure and high frequency ventilators, electrosurgical units, and anesthesia units in a performance lab. Principles of safety, anatomy and physiology, and clinical applications are introduced.

#### **BET1106 Field Equipment Systems**

Familiarization with maintenance and operation of field equipment systems. Demonstration of proficiency with generators, field power distribution systems, expandable shelter systems, environmental control systems, oxygen storage and generation systems, field lighting systems, tactical shelters, field communications equipment, and water recovery systems in a performance lab. Principles of safety and testing procedures are introduced.

#### **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.

#### **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 Diagnostic Imaging I

Principles of diagnostic imaging, ionizing radiation, X-ray production and generation and radiation physics. Includes analysis and performance of preventive maintenance, calibration verification, and malfunction repair of radiation and X-ray generation dental panoramic X-ray systems, film processors, and mobile X-ray equipment.

#### BET2201 Diagnostic Imaging II

Identification, analysis and performance of preventive maintenance and inspections on fixed radiological X-ray systems. Includes diagnostic ultrasound units, nuclear medicine, magnetic resonance imaging, and mobile and fixed fluoroscopic X-ray systems.

#### **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

Pre-installation 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 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. Emphasis on 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 communication 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 operation, calibration, circuit analysis, troubleshooting and repair of medical laboratory systems. Includes general clinical laboratory equipment, blood gas analyzers, cell washers, hematology analyzers and plasma sterilizers.

#### **BET2409 Tomography System Clinical Applications**

Advanced clinical and practical applications for computed tomography systems. Includes clinical applications, equipment theory of operation and circuit analysis, calibration, preventive maintenance, and safe operating procedures for plasma sterilizer systems.

# (CIV) 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.

#### CIV1108 Geographic Information Systems (GIS)

Basic functions and applications of the Geographic Information System (GIS). Includes understanding and development of spatial data models, GeoBase concepts, database queries, conversion of data, metadata tools, files, ArcMap, legends and scales.

#### **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.

#### **CIV1152 Introduction to Drafting**

Introduction to basic drafting fundamentals and techniques. Includes drafting sketches, pictorial and plain views, architectural, utility, detail and basic engineering drawings; manual and Computer Aided Design and Drafting (CADD).

#### **CIV2107 Metals Layout and Fabrication**

Material estimation and layout of structural components. Includes geometric principles, tools, machines, and metal materials.

#### **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 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.

# CIV2521 Site Planning, Facility Design, Soils and Pavement Testing

Preparation of required program documents, design sketches, and architectural and structural working drawings. Analysis of engineering design documents, sizing members for required strength, cost estimating, and master planning. Includes use of mix data, preparation and testing of concrete for slump and air content, use of mixed concrete to prepare cylinder and beam test specimens, listing specific gravity and grain size, moisture states, soil classification system, compaction control, California Bearing Ratio, density determination, field identification, soil exploration, and flexible/rigid pavements.

# (CLT) CARDIOPULMONARY LABORATORY TECHNOLOGY

#### CLT1303 Fundamentals of Respiratory Therapy

An introduction to safe use of medical gases, humidification and aerosol therapy, intermittent positive pressure breathing, and pediatric ventilation. Emphasis is on use of oxygen equipment, respirators, equipment sterilization, endotracheal intubation, and prolonged ventilation.

# CLT1304 Fundamentals of Cardiopulmonary Anatomy and Physiology

Cardiovascular and pulmonary anatomy and physiology and dysfunction, intrinsic and extrinsic regulation, and acid-base physiology.

#### **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.

#### CLT1309 Introduction to Cardiopulmonary Medicine

Familiarization with basic medical terminology, anatomy and physiology, fundamentals of patient care, physiologic measurements, application of microbiology/infection control and gas physics calculations.

# 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.

#### **CLT2313 Critical Care Air Transport**

Critical care related to air evacuation and transportation of the sick and injured. Emphasis on flight operational and clinical training and altitude physiology to include stresses of flight and flight safety.

#### **CLT2314 Respiratory Care**

Administration of oxygen, mixed gas therapy and medications. Includes patient history and therapy documents, terminology, airway management, chest physiotherapy, mechanical ventilation, emergency procedures, and patient maintenance.

# (CLTR) CULTURAL STUDIES (Air University)

#### CLTR201 Introduction to Culture

Foundational course in the development of crosscultural competence in the Air Force; provides an indepth look at the concepts and domains of culture. Includes an exploration of cross-cultural communication, belief systems, family and marriage, inter-cultural relations, conflict resolution/negotiations, sport and culture, ethnocentrism and cultural relativism, and the cultural impacts on personality and behavior.

#### **CLTR202** Introduction to Cross-Cultural Communication

Foundational course in the development of crosscultural communication competence; focuses on the theories, skills, and applications necessary to effectively communicate across cultural boundaries. Explores the challenges presented by cross-cultural interaction and how they affect people, jobs, and relationships. Includes nonverbal communication, paralanguage, cross-cultural communication conflict styles, active listening, and interaction management.

# (CMR) COMPUTER MAINTENANCE & REPAIR

#### CMR1402 Diagnostic Testing

Analyzing and isolating electronic equipment malfunctions using computer programs. Includes use of technical manuals and general- and specialpurpose test equipment.

#### 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.

#### CMR1752 Computer Console Theory

Systems analysis and operation. Includes keyboard inputs, control panel functions, and logic, and circuit diagram analysis.

#### CMR2770 Computer Systems

Advanced operational theory and configuration. Includes data flow, logic, and circuit diagram analysis, system operation, and diagnosis of system malfunctions.

# (COM) COMMUNICATIONS

#### **COM1100 Communications System Operation**

Operational theory of command communications systems. Includes data and broadcast transmitting and receiving systems.

#### **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.

#### **COM1466 Communications Security Analysis**

Basic principles of communication security. Includes intelligence structure, communication 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, intraswitch and outward dialing, safety procedures, fault isolation and repair and use of 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.

#### 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.

#### **COM1801 Giant Voice Operation**

Installation and operation procedures of Giant Voice mass notification systems. Includes Electronic Installation (EI) background, infrastructure requirements, grounding and bonding, notification devices, RF transmission principles and equipment, and safety.

# COM2100 Communications Systems Operations and Maintenance

Communication systems maintenance, management, and administration; automation of record communications to include video, text, and voice; and system administration includes maintenance of wireless systems, mass alert systems and subordinate menus and hardware.

#### **COM2101 Advanced Command and Control Operations**

Command post operations and communication 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 communication 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, route markers; 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 communication 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, communication 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 digitalto-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, voice mail system and line testing.

# (CON) CONTRACTS

#### CON1618 Contract Solicitation and Award

Administration of contract solicitations, formal advertising, selection of bids, evaluation and award. Includes competition requirements, acquisition methods, compliance checks, electronic commerce, post-award procedures, and termination of purchase and delivery orders.

#### **CON1619 Government Contracting Applications**

Practical application of pre-award, award, and post-award government contracting actions through execution of simplified acquisition procedures in the contracting work center. Includes research and compliance with the Federal Acquisition Regulation, Defense Federal Acquisition Regulation Supplement and Air Force Acquisition Regulation Supplement.

#### **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.

#### **CON2111 Contract Management**

Contract management functions; quality assurance programs; manufacturing operations; industrial materiel management; subcontract management; and contract administration, with emphasis on post-award conferences, contractors made-or-buy program requirements, contractor financing, and contract file establishment, maintenance, and disposition.

#### **CON2607 Principles of Contract Administration**

Procedures for administering contracts. Includes types of contracts, work statements, specifications and purchase descriptions, small purchase administration, quality assurance and warranties, foreign acquisitions, contract clauses and finance procedures, liquidated damages, contract modifications and disputes, contract negotiation methods, contract review and 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.

# (COR) 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 determining composition of coatings, and application of coating systems. Identification and application of aerospace equipment markings.

# (CYB) CYBERSECURITY

#### CYB1101 Cyber Defense and Countermeasures

Fundamentals of cybersecurity principles, procedures, and technologies used to identify, secure, and defend the vulnerabilities and capabilities of cyber networks. Emphasis on network warfare operations, cyber-attacks, and exploiting cyber networks.

#### CYB1102 Introduction to Cyber Law and Ethics

General principles regarding specific problems in applying legal constraints and regulations to cyberspace law areas such as federal, privacy, copyright, international, and operations. Includes an introductory study of ethics regulations and obligations that influence cyberspace operations.

#### CYB1103 Industrial Control System Security

Fundamentals of technology and protocol vulnerabilities of Industrial Control Systems (ICS)

networks. Includes theory of typical ICS applications in industries such as electric, water and wastewater, oil and natural gas, transportation, chemical, pharmaceutical, pulp and paper, food and beverage, and discrete manufacturing. Emphasizes control systems such as Distributed Control Systems (DCS) and Supervisory Control and Data Acquisition (SCADA).

#### CYB1104 Telephony Network Security

Fundamental principles to identify vulnerabilities and capabilities within a telephony network. Emphasis on public switched telephone networks (PSTN), telephone signaling, telephone switching, transmission methods, VOIP/analog networks, and cellular networks.

#### **CYB1105 Communication Network Security**

Fundamentals principles to identify vulnerabilities and capabilities within a communication network. Includes procedures to configure, defend, attack and exploit wireless, mobile, satellite, and space systems.

#### **CYB1106 Battlefield Network Security**

Fundamentals principles to identify vulnerabilities and capabilities of components within a battlefield network. Emphasis on Integrated Air Defense, Combat Support, and Tactical data link networks.

#### CYB1107 Network System Configuration

Principles and techniques to configure, install, and operate intra-networking and inter-networking devices within local and virtual area networks. Emphasis on the ability to implement access and traffic control measures on networking devices such as switches and routers.

#### **CYB1108 Network Traffic Analysis**

Introduction to the theory and processes of using ports and protocols to capture, read, and analyze network packet information. Emphasis on capturing network traffic and the methods involved to identify the applications used to include their associated ports and protocol.

#### CYB1109 Cybersecurity Laboratory

Direct application of cybersecurity principles, procedures, and technologies used to identify, secure, and defend the vulnerabilities and capabilities within cyber networks. Includes operation in a cyber network environment/scenario, mission planning, plan execution, and creating after action mission reports.

# (DAS) 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, and 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.

#### DAS2318 Advanced Dental Oral Hygiene Management

Management of 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 planning 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.

# (DLT) 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 Fundamentals of Complete Dentures**

Basic principles of complete dentures. Includes construction of occlusion rims, repair and relining techniques and impression trays, fabrication of master casts, intermediate dentures and removable prosthesis occlusion, and oral anatomy and terminology.

### DLT1319 Complete Dentures II

Nonanatomic denture occlusion; complete denture reline and repair; and fabrication of immediate dentures, surgical templates, interim acrylic removable partial denture, and soft mouth guard.

#### DLT1320 Construction of Removable Partial Dentures Part 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 Part II

Tooth arrangement on metal frameworks, wax-up and contouring of denture base, processing and finishing of acrylic portions, partial denture repair, orthodontic appliances.

# DLT1322 Construction of Inlays, Crowns and Fixed Partial Dentures Part 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 Part II

Fabrication, assembly, and soldering procedures used in construction of 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.

### **DLT1325 Dental Ceramics**

Fundamentals of full metal restorations and production of fixed dental prosthesis. Includes design principles, constructing and articulating casts, tooth morphology, occlusion of fixed prosthesis, fabrication and user maintenance performance

### **DLT1326 Dental Ceramics**

Fundamentals of fixed partial dentures and dental implants. Includes fabrication of nightguards, artificial tooth management, denture base repair, resin bonded fixed partial dentures and register of precious metals and alloys

### DLT2310 Advanced Porcelain Techniques

Advanced theory and construction of dental porcelains, porcelain crowns, metal-ceramic substructure design, ceramic alloys, intrinsic and extrinsic color modification, construction and contouring of opposing porcelain occlusions. Includes veneers, pressable ceramics and metal-free infiltration ceramics.

### DLT2314 Advanced Removable Prosthodontics

Advanced fabrication of complete dentures and orthodontic appliances. Includes demonstration of occlusion rim fabrication and articulate master cast mounting, complete/partial denture characterization, application of denture base processing/waxing and denture grinding, and dental laboratory equipment maintenance.

### **DLT2315 Functional and Esthetic-Fixed Prosthodontics**

Pouring and articulating of dies and master casts, creating functional anatomic and metal-ceramic wax-up, investing and burning out wax-up, casting metal, and applying porcelain.

# (DMS) DIAGNOSTIC MEDICAL SONOGRAPHY

# DMS2201 Diagnostic Sonography

Diagnostic sonography principles and equipment. Includes abdominal and pelvic sonography and obstetrical applications.

# DMS2202 Ultrasonic Scanning

Procedures and application of obstetrical, pelvic, abdominal, thyroid, breast, testicular and superficial structure scans.

#### DMS2301 Diagnostic Sonography Practicum

Diagnostic sonography principles and equipment. Includes abdominal and pelvic sonography and obstetrical applications.

#### DMS2302 Ultrasonic Scanning Practicum

Procedures and application of obstetrical, pelvic, abdominal, thyroid, breast, testicular and superficial structure scans.

# (DPO) 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 including 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.

#### **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, and physical and medical effects of peacetime nuclear weapon accidents, physical and medical effects, medical capabilities, and chemical and biological warfare medical defenses.

#### DPO2104 Advanced Emergency Management

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; accident response; readiness training and logistics.

#### **DPO2105 Emergency Management 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.

# DPO2107 Chemical, Biological, Radiological, Nuclear Cell Operations

Advance theory of chemical, biological, radiological and nuclear (CBRN) cell operations. Identifies proper CBRN hazard and fallout predictions by way of automated warning and prediction software systems. Includes determining dangerous levels of CBRN hazards utilizing mapping systems to triangulate and create CBRN plotting

# (EDP) DATA SYSTEMS

#### 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 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; and 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.

#### **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.

#### EDP1130 Introduction to System Software

Computer system software. Includes catalog and file management software, library editor software, utility software, Internet applications 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 online 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.

#### EDP1136 Microcomputer Software Applications

Database, spreadsheet, graphical and wordprocessing software applications. Includes operating systems, graphical presentations, and database management applications.

#### EDP1139 Computer System Familiarization

Computer hardware and software, data processing, electronic forms management, network protocols and standards, network and communication programming concepts, and basic world wide web fundamentals.

#### **EDP1140 Contracting Computer Applications**

Introduction to basic components and functions of contracting databases utilizing basic software applications. Includes data input, retrieval and manipulation, word processing, and excel spreadsheets.

#### 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.

#### EDP1207 Software Engineering II

Principles of software development. Includes fundamentals of Visual Basic, error trapping and debugging, use of dialogue boxes, use of arrays in Visual Basic, functions found in Windows libraries, looping techniques, and file processing.

#### EDP1601 Cyber Surety

Fundamentals of network and telecommunication systems security. Includes firewalls, network protocols, operating systems, intrusion detection tools, web proxies and emission security. Analyzes security scans; defines and eliminates risks.

#### 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.

#### 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.

#### 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.

# EDP2208 Senior Leader Communication Systems Network Operations

Theory of local area network operations for all line replaceable units in the Senior Leader Communication Systems Secure/Non-Secure LAN (SLCS). Includes power distribution, equipment location and operation/purpose of SLCS.

#### EDP2209 CISCO Networking

Introduction to concepts required to configure, install, and operate CISCO routers and switches within LAN and WAN environments, including VoIP and wireless networks.

#### 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.

#### 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.

# (EDT) EDUCATION & TRAINING

#### 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.

#### **EDT2000 Instructor Intervention**

Instructor risk management intervention skills in risk management in the training environment. Includes principles of identifying risks associated with training activities, maintaining safety in the training environment, stress innoculation, motivational training, and the instructor's role in mentoring peers and students

#### 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.

#### EDT2111 Military Training Leader

Prepares military training leaders to advise and counsel technical school students on training and

personal problems. Includes core values, military training and discipline, operational risk management, physical conditioning, counseling and guidance, human behavior, group dynamics, first aid and cardio-pulmonary resuscitation.

#### EDT2112 Academy Military Training NCO

Prepares Air Force Academy military training personnel to instruct, evaluate and supervise Air Force cadets on military training issues. Includes core values, military standards, discipline, counseling, human relations, mentoring, professional development, flight management and administration, dormitory instruction, safety, and drill and ceremony procedures.

#### EDT2201 Supervised Teaching

Observing, participating, and teaching in area of specialization under the supervision of an experienced faculty member. Includes classroom preparation and management and the integration of technology in various phases of the curriculum.

#### EDT2202 Curriculum Development

Curriculum development and employment of a variety of technologies to research and plan instruction. Includes matching of instructional tools and resources to satisfy instructional needs.

#### EDT2203 Teaching Qualification

Test administration, measurement tools, preparation and use of audio visual aids, student counseling, behavior intervention, faculty evaluation programs and establishment of subject matter competency.

#### EDT2204 CCAF ISD Internship – Planning and Analysis

Comprehend and conduct the Planning and Analysis phase of the curriculum ISD process. Encompasses needs assessments, target audience profiles, task analysis, learning analysis and resource analysis. Includes analyzing occupational data and develop cost benefits analysis, instructional budgets and schedules and instructional system management plans.

#### EDT2205 CCAF ISD Internship – Design and Development

Comprehend and conduct the Design and Development phase of the curriculum ISD process. Selection of appropriate instructional media and methodology, as well as develop objectives and tests, instructional materials and validation plans. Includes conducting instructional system tryouts by utilizing training management systems and/or software.

# EDT2206 CCAF ISD Internship – Implementation and Evaluation

Comprehend and conduct the Implementation and Evaluation phase of the curriculum ISD process. Implementing instructional system functions, to include instructor and training preparation, and also perform instructional delivery. Includes interpretation of internal and external evaluation data, and utilizing evaluation data to make necessary changes to the instructional system.

#### 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.

#### EDT2804 Principles and Methods of Teaching

Selection of teaching methods, organization of materials, and preparation of written plans with behavioral objectives. Includes fundamentals of instructional systems development, principles of evaluation, and practice in employing teaching interview, experiential, case study, guided discussion, demonstration-performance, and lecture teaching methods. Emphasizes improvement in communicative skills.

#### EDT2805 Instructor Methodology

Introduction to the principles of teaching and teaching strategies. Includes instructional systems development, learning theory, principles of evaluation, effective visual support, concept and principle teaching, and methods of instruction to include guided discussion, teaching interview, demonstrationperformance, case study, and lecture.

### 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.

### EDT2808 Evaluation of Instruction

Principles and methods of evaluating instruction in the classroom. Includes presentation and evaluation of case study, teaching interview, demonstration-performance, and experiential teaching methods. Students evaluate communicative skills, instructional techniques and adaptation to various student styles in the classroom.

### 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.

### EDT2813 Instructional Methodology

Fundamentals of teaching emphasizing proficiency in specialized skills such as technical course writing, tests and measurements, objectives and tests and programmed instruction. Includes selection of teaching methods, training supervision, instructional systems development, academic counseling, learning process, effective study methods, and audiovisual aids.

### 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.

### 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.

### 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.

### EDT2848 Teaching Internship - SERE

Survival, evasion, resistance, and escape (SERE) teaching internship. Observing, participating, and teaching under the supervision of an experienced instructor supervisor. Includes lesson planning, teaching lecture and demonstration-performance instruction, evaluation methods and techniques, student performance critique, academic counseling, and preparation and use of instructional aids. Students demonstrate the ability to present and perform primary survival principles, methods and skills.

### EDT2850 Aircrew Instructor Flight 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 techniques under actual flight conditions through observation and performance.

### EDT2908 Advanced Training Management

Advanced training management applications for Training Managers with responsibilities on facilitating various training requirement events. Includes development of instructional systems, capacity, and course modeling; management of automated training systems; course scheduling and programming actions; and production analysis

## (EEO) ELECTRONIC EQUIPMENT OPERATION

### EEO1201 Aircraft Control and Warning Operations I

Manual operating principles at plan position indicator, surveillance (plotter, teller, and recorder), and status clerk. Includes duties and functions of each position and proficiency in radarscope and plotting operations.

### EEO1206 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.

### EEO1207 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.

# EEO1212 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.

### EEO1213 Airborne Warning and Control Systems

Basic air surveillance console switch action operations necessary to effectively use computerized, multisensory 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.

### 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.

### **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 communication 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 communication capabilities, system interface, and procedures required to accomplish early warning missions.

## (ELT) ELECTRONICS

### ELT1102 Modulator Equipment

Operational theory, logic, and circuit diagram analysis, preventive and corrective maintenance, and troubleshooting; includes use of general/special purpose test equipment and technical manuals.

### **ELT1103 Satellite Communications Systems**

Operational theory and logic, and circuit diagram analysis. Includes security and use of technical manuals.

### 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 and 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.

### ELT1108 UHF/VHF AM Transmitters and Receivers

Theory of operation and maintenance of UHF/VHF ground-to-air single channel AM radios. Includes introduction to signal flow, schematic diagrams, alignments, preventive maintenance, and troubleshooting/repair.

### ELT1109 Unmanned Aerial Vehicle Systems

Fundamental principles of unmanned aerial vehicle systems. Includes operations and maintenance of flight control, fuel, electrical, environmental, and landing gear systems.

### 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**

Introduction to P-N junctions, transistor operation, amplifiers, coupling and waveshaping circuits, integrated circuits, digital 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.

# 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.

### ELT1223 Cryptographic Systems and Devices

Principles of secure communication systems. Includes use of electronic cryptographic devices; encrypted teletypewriter, data, and narrow- and wide-band secure voice terminals; system configurations; and 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, 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.

### ELT1437 System Troubleshooting

Overall system troubleshooting. Includes alignment, adjustment, self-tests and performance checks.

### 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 Communication Theory

Digital data communication 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

Launch control center, facilities and support systems. Operational theory, logic, and circuit diagram analysis, and preventive and corrective maintenance. Includes general- and specialpurpose test equipment and technical manuals.

### ELT1501 Electrical Power Generation and Distribution

Operation, troubleshooting, inspection, and maintenance principles of AC and DC power generating systems, associated equipment, and electrical power distribution systems.

### **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.

### **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, and passive ultrasonic), and system checkout and troubleshooting.

### 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, 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.

### **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.

### ELT1744 Radar System Circuits

Theory of operation and circuit analysis using logic symbols, schematics, and block diagrams. Includes bench test, repair, and alignment of module boards and components.

### **ELT2105 UHF Radio Communications**

Analysis of UHF multichannel radio transceivers. Includes performance testing, troubleshooting, alignments and adjustments using associated test equipment.

### ELT2106 Mobile Communications Systems Maintenance

Communications centrals. Includes nomenclature classification, equipment features, operational modes, malfunction analysis, field repairs, supply procedures and safety.

### ELT2112 Radio Equipment Theory

Principles of HF, VHF, and UHF communication equipment. Includes performance laboratory in troubleshooting and repair of HF, VHF, and UHF mobile and portable communication 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.

### ELT2123 HF Receivers

Operation and circuit and functional analysis of HF receivers.

### ELT2125 Radio Transceivers

Operation, maintenance, and circuit functional analyses of universal radio equipment transceivers.

### ELT2129 Instrument Landing System

Operation 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 videoprocessing circuits, antenna azimuth processing circuits, and radar control circuits.

### ELT2138 Ground Tactical Air Navigation Theory

Introduction to flight facilities equipment systems theory. Includes circuit functional analysis of ground tactical air navigation systems using test equipment and technical data.

### ELT2140 Very High Frequency Omni Range (VOR) Transmitter

Theory of operation and maintenance of VOR ground station major assemblies. Includes antenna system theory, radiated signals/errors, computer commands, control indicator theory, transmitter operation/alignments, monitor operation, and system troubleshooting.

### ELT2202 Electronics Quality Assurance

Advanced quality assurance procedures to detect and analyze maintenance management deficiencies, determine cause, and recommend corrective action. Students develop skills to evaluate maintenance activities and personnel to ensure safety procedures are observed and maintenance practices meet the highest standards. Includes written policies, managerial communications, directives and technical manuals, evaluation processes, inspection categories, deficiency analysis, management of electronics installation project evaluations, training effectiveness evaluations, logistics, and research and investigation of component failures and manufacturer defects.

### 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.

### 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.

### 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.

#### 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, 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, 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.

#### 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, conformal coating removal and replacement of solid-state components.

# ELT6778 Communications Control Console and Landline Selector Control

Maintenance of communication console control group and landline selector control group. Includes equipment operation, circuit analysis, alignments and adjustments, and fault isolation.

#### ELT6791 Mobile Communications Systems Maintenance

Communications centrals. Includes nomenclature classification, equipment features, operational modes, malfunction analysis, field repairs, supply procedures and safety.

#### ELT7737 Radio (Air and Ground 50KHz)

VHF/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.

### ELT7762 Digital Selective Identification

Functional and logic diagram analyses of digitized selective identification feature system. Includes encoder and decoder, and fault isolation.

### ELT7767 Radar Identification Equipment

Functional and circuit analysis of identification equipment (air traffic control and friend or foe); includes analysis of transmitter, receiver, control circuits, power supply, and system maintenance.

## (EMT) 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

An 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.

### EMT2101 Emergency Medical Technician - Paramedic

Theory and techniques of advanced emergency medical care. Includes emergency pharmacology, drug calculations, and pararescue specific medications. Medical emergencies including obstetrical, gynecologic, neonatal, psychological, behavioral, and combat stress related. Prepares student to challenge National Registry Emergency Medical Technician - Paramedic examination.

### 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.

## (ENM) ENVIRONMENTAL MEDICINE

### **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.

# 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.

## (ENV) 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.

# (EPP) ELECTRIC 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. Including 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, communication 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 post operation procedures.

# EPP1507 Generator Set Operation and Aircraft Arresting Barriers

Operating characteristics and configuration of aircraft arresting system, generator set associated equipment, and 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.

### 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.

### EPP2506 Emergency Airfield Lighting System

Installation, operation and maintenance of the Emergency Airfield Lighting System during contigency operations. Includes the installation and maintenance of precision approach, threshold and taxiway lighting systems; mobile generator power supply, voltage regulator unit and control panel operations; and system packaging with trailers, cable reels and containers for rapid deployment.

# (EXP) 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.

### 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.

# (FDS) FOOD 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.

## FHM (FORCE HEALTH MANAGEMENT)

### FHM1100 Hearing Conservation

Introduction to the mechanics of hearing, anatomy of the ear, physics of sound, and types and causes of hearing loss. Familiarization with audiometric testing equipment including operation, calibration, and testing techniques. Proper selection and fitting of hearing protection. Disposition of patients and records. Course includes certification as "Hearing Conservationists" by the Council for Accreditation in Occupational Hearing Conservation (CAHOC).

### FHM1101 Physical Examination and Medical Standards

Principles, policies, procedures, and administration of military physical examinations. Introduction to medical qualification standards for military service and worldwide duty. Includes proper documentation, review of medical records, and physical serial profile reports.

## (FIN) FINANCE ACCOUNTING

### **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.

### **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.

### **FIN1201 Accounting Principals**

Financial and managerial accounting principles. Includes basic financial statement preparation, the accounting cycle, and current and long term liabilities.

### **FIN1202 Federal Funds**

Federal budget systems used by DoD. Includes accounting structure and computer codes, general governmental accounting systems, general ledger accounting systems, reporting procedures, and practical experience determining funds availability.

### FIN1203 Fiscal Law and Financial Management

Basic concepts of business law, fiscal law, financial management, ethics, and legal problems. Includes governmental budgetary and proprietary accounting.

### FIN1204 Cost 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.

### FIN1205 Travel and Relocation Accounting

Computation of travel allowances. Includes permanent change of station, dependent travel entitlements, dislocation allowance, temporary duty pay, and leave accounting for travelgenerated leave.

### FIN1206 Finance Customer Support - Active Military

Introduction to military pay systems and accounts. Includes direct deposit pay, financial statements, address changes, computation of basic and special pay, tax tables, and allowances for housing, subsistence, clothing, and family separation. Including fundamentals of communication.

### FIN1207 Finance Customer Support - Reserve Forces

Computation of pay for Reserve Forces personnel. Includes accounting procedures for annual training, inactive duty training, and retirement pay. Including fundamentals of communication.

### FIN1208 Overseas Duty Pay and Allowances

Accounting procedures for overseas military duty. Includes temporary lodging, overseas housing, and cost of living allowances and computation of duty status.

### FIN2113 Financial Management Supervision and Leadership

Supervisory responsibilities and managerial oversight within the finance office environment. Includes leadership philosophy, mentorship, employee development, manpower management, and deployment manager duties.

### FIN2119 Accounting Liaison Web Based

Organization and functions of accounting and finance liaison principles. Includes office and various web accounting systems used at the base-level.

### 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.

# FIN2134 Advanced Resource Management Accounting Systems

Organization and functions of base-level accounting and finance office and various accounting systems used in base-level accounting.

## (FIP) 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.

### 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.

### FIP2102 National Incident Management Systems 300/400

Fundamentals of intermediate/advanced Incident Command System as it applies to multiple jurisdictional agencies to include: identifying performance requirements, resource management, applying incident principles and objectives, development of written action/demobilization plans and options related to major/complex incident management, and development of area command organization and activation of a multi-agency coordination system.

### 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.

### 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.

# FIP2820 History of Terrorism and Weapons of Mass Destruction

Identifies the principles of terrorism, current threats, and history of weapons of mass destruction as it applies to constantly changing world events.

# (FNS) 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

Practical application of nutrition in population health. Emphasis on body mass index calculations, performance nutrition, aviation nutrition, dietary programs and supplements, and advanced dietary counseling.

### **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.

# (FSC) 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.

## (FTL) 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.

### 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 on 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: resident language course or demonstrated proficiency.

### FTL1413 Intermediate Technical Serbo-Croatian

Application of technical vocabulary and language used to describe military equipment, operations and control procedures. Emphasis on development of skills necessary to translate oral communications and written materials. Prerequisite: completion of resident language course or demonstrated proficiency.

## (FUS) 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/modified Panero and Pritchard hydrant system; includes loading/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/IV Phillips system; motor vehicle fueling system; principles of troubleshooting, inspecting and operating; and procedures for tank entry and deactivating fuel systems. Includes identification of cryogenic product hazards, and procedures for cryogenic product issue/receipt and Fuels Mobility Support Equipment set up/tear down.

### 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.

### FUS1512 Fuels Force

Application of Fuels Operational Readiness Capability Equipment (FORCE) system. Includes in set-up, operation, servicing of common and special manual valves, flow indicators, sensing units, filtration systems, and inspection procedures.

### 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.

### FUS2101 Cryogenic Fundamentals

Principles of cryogenics and production of industrial gases. Includes pressure characteristics, temperature effects, refrigeration methods, safety and environmental concerns, technical orders, inspection forms, gas cylinders and quality control.

### FUS2102 Oxygen and Nitrogen Plant Components

Advanced operation and maintenance of oxygen and nitrogen plant components and support equipment. Includes cryogenic fuel system concepts, functions, relationships, temperatures and settings, advanced propulsion concepts, air purifiers, air separators and schematics.

### FUS2103 Oxygen and Nitrogen Plant Operation

Principles of plant operation. Includes cryogenic operations, concepts of flow controls from start-up to shutdown, preventive maintenance, electrical schematics, troubleshooting and repair.

### 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, and cloud point analysis.

### FUS2504 Air-Transportable Hydrant Refueling Systems

Operation and maintenance of various airtransportable 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, fuels 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.

### FUS2607 Fuels Management

Application of advanced techniques for planning, organizing, and coordinating fuels activities involving personnel, facilities and equipment.

## (GEO) 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.

### **GEO1406 Third World Country Studies**

Geographic, political, and military aspects of Middle Eastern, Far Eastern, Latin American, and African countries.

## (GPS) 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.

### **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.

# (GRA) GRAPHICS

### GRA1102 Media Selection

Introduction to the principles of media. Includes media selection and familiarization, the advantages and disadvantages of each type of media, and the application of media design and development.

### **GRA1800 Introduction to Graphics**

Care and use of graphic arts equipment and materials, plus establishment and use of comprehensive art files.

### **GRA1803 Drawing and Illustration Techniques**

Line and tone media techniques; includes selection of mediums for illustration, color techniques, basic forms, perspectives, sketch and shape descriptions, layouts, compositions, landscapes, cartoons, and caricatures.

### **GRA1806 Computer Automated Graphics**

Theory and basic operation of computer automated graphics. Includes familiarization and use of hardware and software.

### **GRA1807 Multimedia Presentations**

Multimedia applications and tools to create multimedia projects for online and offline presentations. Includes digital video, audio editing, animation, and Web page development.

## (HAR) 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 airconditioning 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.

### 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; airpurification, 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.

# 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.

# (HEO) 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 maintenance for various types of construction equipment. Includes sweepers, tractortrailers, 5-ton dump trucks, loaders, industrial tractors, graders, backhoes, dozers, distributors and pavers.

# (HIS) 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.

### 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.

## (HIT) 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.

### HIT2302 Histopathology Procedures

Introduction to histopathology, laboratory/environmental safety, mission, organizational structure, and patient/professional relations. Includes publications, administration, medical materiel procedures and terminology, and laboratory calculations.

### HIT2303 Histologic Specimens and Slide Processing

Principles and techniques of using microtome and cryostat and sectioning, staining, and mounting slides. Includes fixation, decalcification, tissue dehydration, and embedding.

### HIT2304 Autopsy

Identification of major organ groups and techniques for performing autopsies.

### HIT2305 Histologic Practicum

Practical application in identifying microscopic tissue types and performing administrative

procedures, tissue processing, microtomy, decalcification, autopsies, gross surgical procedures, and specimen filing.

## (HRM) HUMAN RESOURCE MANAGEMENT

### HRM1001 Introduction to Human Resource Management

Introduction to personnel management, business communications, administrative functions and the selection, classification, and evaluation process. Includes elements required for training, placement, reassignment, promotion, separation of personnel, pay procedures, performance evaluations, and techniques for scheduling and conducting meetings.

# HRM1002 Introduction to Human Resource Information Systems

Principles, functions, and techniques of entering and retrieving data from a military personnel data system. Includes data maintenance procedures and methods, computer output products and data utilization.

### HRM2101 Manpower and Personnel Base Level Systems

Manpower and personnel base level computer system functions and operations. Includes personnel accountability during deployment or exercise situations; accessing the system and the main module functions; overview of contingency reports and program configuration; file creation and message preparation; and the role of personnel support for contingency operations.

### HRM2105 Personnel System Data Management

Personnel data system orientation, equipment configuration, network architecture, user management, communications interfaces, and retrieval of data. Includes table and password management, UNIX system administration, construction of queries for retrieval of data, and security administration procedures.

### HRM2106 Military Justice System

Analysis of history and evolution of military law and military justice system. Special emphasis on US Constitution, Uniform Code of Military Justice and Manual for Courts-Martial. Includes 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.

### HRM2107 Unit Administration

Management of unit personnel and the implementation of procedures to ensure compliance with military standards, protocol, written correspondence and directives. Orchestrates the proper use of computer products containing sensitive information on unit personnel. Administers the assignment of special duties and the minimization of unit absenteeism. Processes unit grievances and inquires. Investigates all alleged medical conditions which affect on a member's ability to report for duty. Ensures unit personnel understand their obligations for dependent care. Schedules and monitors commander's calls: enforces Privacy Act issues: responds to security police reports and handling of damage to private property, unit property, or government property.

### HRM2108 Quality Force Management

Principles and procedures for achieving and maintaining a quality workforce. Enforcement of unit policies associated with dormitory management, individual financial responsibility, professional military education, retention programs, the military weight control program, derogatory information files, other disciplinary actions and administrative separation of personnel from the military.

### HRM2109 Human Resource Preventive Interventions

Principles of human resource management. Includes policies and procedures regarding orientation and guidance of newcomers to the workforce; counseling referrals to various agencies; purpose of morale, welfare, and recreation programs; policies and procedures for control of drug and alcohol abuse; maintenance of discipline using prevention-correction punishment methods; and workplace relationships.

### **HRM2110** Deployment Issues

Analysis of the first sergeant's roles and responsibilities during a deployment processing line and application of human resource management skills in a deployment scenario. Concentration on military law, quality force issues and administrating unit specific policies at the Aerospace Expeditionary Force employment sites.

### HRM2201 Salesmanship

Sales fundamentals and the importance of personal qualifications required for effective

selling. Includes advertising, recruiting aids, the sales interview and closing the sale. Sales performance is evaluated using simulated prospects.

### HRM2202 Human Resource Selection Methods & Techniques

Principles and procedures for personnel recruitment, selection and placement. An in-depth view of sound selection and evaluation practices, including statistical concepts and tools and techniques essential to effective selection and evaluation programs. These tools and techniques may include, but are not limited to, advertising, recruiting aids, speech deliveries, interviews, test evaluations, eligibility processing, placement and legal considerations.

### HRM2203 Human Resource Information Systems

Hardware, software and basic personnel file maintenance. Includes application software, databases and time and activity management.

### **HRM2204** Compensation and Benefits

Salary compensation, education, training, advancement and retirement benefits. Includes advancement through promotion and commissioning programs, travel, recreation and family services.

### HRM2205 Advanced Human Resource Management

Advanced policy and procedures of human resource management. Includes customer service management; support program referrals; career enhancement; adverse administrative actions; management of automated systems; and contingency operations.

## (HSA) 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.

### HSA2315 Medical Readiness Planning

Introduction to planning, exercises, readiness training, National Disaster Medical system, status of resources, and unit medical training system.

# (INT) INTERNSHIP

### INT3000 Internship - Apprentice

Successful completion of apprentice training requirement of Air Force dual channel on-the-job training (OJT) program. A performance-based program, focused on a specific occupational specialty 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 the Air Force dual channel on-the-job training (OJT) program. A performancebased program, focused on a specific occupational specialty includes a minimum of 6 months' satisfactory experience at apprentice level, completion of comprehensive Air Force career development course 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 the Air Force dual channel on-thejob training (OJT) program. A performance-based program, focused on a specific occupational specialty includes a minimum of 18 months' satisfactory, full-time performance in a craftsman specialty, a comprehensive Air Force career development course with a proctored closed-book examination or other approved written training materials needed to increase knowledge of career field beyond the journeyman level, completion of management training through airman leadership school, and supervisor's recommendation for advancement to craftsman level.

# (ITL) INTELLIGENCE

## ITL1101 Intelligence Fundamentals

Mission and organization, intelligence cycle, libraries, administration and data-handling systems. Emphasizes recognition of document security, operations security and communication 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 Laboratory

A comprehensive laboratory designed to improve intelligence skills proficiency through the employment 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.

### ITL1106 Communication Signals Collections and Processing

Collection and processing of automated and remote international communication signals. Includes an overview of principles of security, classification requirements, and intelligence community operations.

## ITL1107 Digital Network Intelligence

Fundamentals of digital network exploitation. Introduction to internet and transmission technologies, communication networks, and collection and targeting concepts. Includes information on authorities and restrictions governing intelligence components.

# ITL1108 Intelligence, Surveillance, and Reconnaissance Fundamentals

Fundamentals of Intelligence, Surveillance, and Reconnaissance (ISR) operations to include history, facts, and terminology; traditional and non-traditional ISR operations; ISR operations planning and Air

Operations Center structure, purpose, products and teams; battle management procedures, processes and tools; Processing, Exploitation, and Dissemination (PED) and Tasking, Collection, Processing, Exploitation and Dissemination (TCPED); and Distributed Common Ground System (DCGS) enterprise architecture.

### 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 post-mission operations.

### ITL1202 Geospatial Intelligence Fundamental

Basic principles of Geospatial Intelligence and related technology. Facts, terms, capabilities, and limitations of the Electromagnetic Spectrum, Electro-Optical, RADAR, Infra-Red, Spectral, motion Geospatial Sensors and platforms used. Includes imagery exploitation and analysis theory.

### 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.

### ITL1403 Data Transmission System

Identification and analysis of tactical and strategic data transmission systems. Determination of command-level and service component use of system.

### ITL1404 Signal Analysis

Use of oscilloscope and sonograph for specific purpose of radio signal analysis, and analyzing, identifying and recording communications.

### ITL1503 Imagery Analysis I

Exploitation and analysis of multi-sensor imagery to determine traditional orders of battle to include military ports/ bases, facilities, aircraft and weapon systems; and non-traditional orders of battle to include infrastructure, facilities, and lines of communication.

### ITL1507 Imagery Analysis II

Addresses exploitation and analysis of multi-sensor imagery to include using imagery titling and mensuration techniques and exploiting support data for tactical applications.

# ITL1508 Intelligence Surveillance and Reconnaissance Platforms and Sensors

Introduction to Intelligence Surveillance and Reconnaissance (ISR) collection platforms and sensor systems used for the collection and exploitation of intelligence data. Includes capabilities, limitations, roles, tactics, utilization and tasking for ISR platforms and sensors.

### 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.

### ITL1603 Predictive Battlespace Awareness

Fundamentals of Predictive Battlespace Awareness (PBA) and Intelligence Preparation of the Battlespace (IPB). Includes concepts of theater level command and control, joint forces operations; and Intelligence, Surveillance, and Reconnaissance (ISR) capabilities.

### ITL1902 Introduction to Cyrptanalysis

Statistical considerations in determining cryptographic system; includes unilateral frequency distribution, diagraphic frequency distribution, and discriminant indicators encryption system.

## 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.

### ITL2102 Critical analysis of Intelligence Data

Advanced intelligence analysis. Includes application of critical and creative thinking, analytic methodology, structured analytic techniques, and advanced intelligence estimating and reporting skills to extrapolate intelligence problems and create decision point products and other intelligence reports.

### ITL2401 Voice Intelligence Collection

Aural recognition and comprehension of foreign language voice communications, communication procedures, and weapons systems parameters unique to various nations.

## ITL2402 Airborne Intelligence Collection

Application of operational procedures relating to the collection of communications and electronic intelligence. Includes ground preparation; operation of aircraft interphone and keyboard equipment; 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.

# (JOU) JOURNALISM

### JOU1101 Basic Journalism

The history, philosophy, ethics, and practices of the press in preparing multimedia communications. Includes an introduction to the techniques of communication through printed, oral, graphic, radio and television media to support preparation of news releases, articles, photographs and broadcasts.

### JOU1102 News Writing for Print

Fundamentals of news writing. Includes structural components of a news story, research, writing style and evaluating news. Authors various types of news copy for external release.

### **JOU1103 Newspaper Production**

Application of photojournalism, news, sports and feature writing techniques. Emphasis is placed on editing, layout and design for newspaper or magazine production.

### JOU1104 Radio and Television Writing

Applied script writing for radio and television spot announcements, newscasts and features. Includes writing and editing applications in broadcast journalism, formatting techniques and the importance of sound and visual effects on the presented material.

## JOU1105 Public Affairs

Theory, concepts and principles of public affairs. Includes the fundamentals of foreign and domestic policy; state, local, and federal governments; international relations; US foreign policy; foreign country study and the functions of overseas governmental agencies.

## (LAW) LAW ENFORCEMENT

## LAW1801 Marksmanship Laboratory

Qualification training in the use of 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, lawful and physical apprehension, restraint

techniques, searches and seizures, patrol operations to include enforcement of traffic laws, operation of speed detection equipment, resource protection, self-aid buddy care, arming and use of force, accident scenes, crisis intervention and air base ground defense.

### LAW1853 Police Safety and Survival Tactics

The essentials of individual defensive techniques with application experiences in weapons familiarization, control and retention, disarming suspects, use of chemical restraints, handcuffing techniques, building entries, use of cover and concealment, and baton defense. Includes review of the vulnerabilities of armed personnel and their relationship to mental states of awareness. Exercises include realistic and simulated environments.

### LAW1901 Fundamentals of Security Forces

Fundamental concepts of law enforcement and security operations required for the protection of Air Force resources. Includes skills and techniques needed to perform patrol tactics, self awareness and safety, domestic violence issues and various types of responses to priority resources.

### LAW2102 Security Forces Evaluations and Measurement

Principles and techniques of assessing unit's effectiveness by evaluating training, personnel and procedures; and inspecting functional areas. Includes methods, procedures and evaluative instruments to determine achievement of operational goals.

### LAW2201 Criminal Law

The nature of criminal law and its application to law enforcement and the judicial system; and definitions and concepts, elements of crime, defenses, and criminal responsibility in the context of the criminal justice system and rules of evidence.

### 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 collision causes, preparation of reports and records, traffic engineering and control techniques, research and development, and use of speed-measuring devices and breathalyzer units.

### LAW2824 Principles of Traffic Collision Investigation

Analysis and application of advanced techniques used to gather facts and determine causes of traffic collisions. Includes review of traffic safety procedures; preparation of field sketches, diagrams, and traffic violation and collision investigation reports and forms; and techniques used to teach traffic collision investigation to other policemen.

### LAW2829 Protective Service Operations

Advanced techniques required to protect personnel and resources through assessment of principal threat. Includes application of advanced procedures (route/site surveys, identification of potential hazards and safe haven), practical exercises on foot and motorized escorts, and employment of antiterrorism techniques.

### 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.

### LAW2843 Criminal Investigations

Fundamentals of criminal investigation in the field. Emphasis on the analysis of special techniques and procedures in crime-scene processing, collecting and preserving physical evidence, interviews and interrogations, sources of information, advisement of rights, felony crimes, surveillance and case preparations.

### LAW2845 Advanced Principles of Security Forces

Comprehensive examination of law enforcement and security operations. Includes advance study of traffic laws, operation of speed detection equipment, use of force/confrontation management, and air base defense operations.

### LAW2846 Information Security

Protection of information critical to the Air Force mission and the security of the United States. Includes identification, classification, downgrading, declassification, marking, protecting and destroying classified material and information.

# (LEG) LEGAL SERVICE

### LEG2107 Legal Office Management

Law library management, legal research, staff judge advocate and noncommissioned officer-incharge relations, office budgets, on-the-jobtraining, USAF judiciary, human relations, and paralegal utilization and practical exercises for effective oral and written communicative skills and civil service employee matters.

### LEG2111 Introduction to Civil Law

An introduction to law for the paralegal. Includes career progression as a paralegal; ethics; preventive law; legal assistance; powers of attorney and wills; law office administration and law libraries; and administrative separations, inquiries and investigations.

### LEG2112 Legal Claims and Tort Investigation

Fundamentals of claim and tort investigation, legal procedures and the Armed Forces Claims Information Management System. Includes legal research, techniques for investigating incidents and accidents, witness statements and special research assignments involving accident and hospital recovery claims.

### LEG2113 Legal Claims and Tort Administration

Procedures for processing general claims and tort litigation. Includes the Military Personnel and Civilian Employees' Claims Act, claimant interviewing and documentation for processing claims, insurance recovery, depreciation, salvage procedures, settlement letters and use of the Armed Forces Claims Information Management System.

### LEG2114 Nonjudicial Punishment

Nonjudicial punishment and the Uniformed Code of Military Justice. Includes jurisdiction and sufficiency of evidence, elements of proof, supplementary actions and the Automated Military Justice Analysis and Management System. Using case studies, students determine appropriate punitive article(s) and prepare a nonjudicial punishment action from offer through legal sufficiency.

### LEG2115 Pre- and Post-trial Administration

Pre- and post-trial procedures and administration. Includes interviewing and handling of victims and witnesses, types of courts-martial, records of trial, action and court-martial order, appellate review and use of the Automated Military Justice Analysis and Management System.

### LEG2116 Legal Research and Writing I

Introduction to legal research and writing techniques. Identify basic facts on legal publications, categories of legal literature, case citation, methods of research and instruments used in legal research and writing. Includes manual and computer-assisted research, drafting legal memoranda and legal reviews.

### LEG2118 Paralegal Ethics I

Introduction to ethics and ethical responsibilities of the Air Force paralegal. Emphasis is on institutional, legal and personal ethics. Includes basic facts on Attorney-Client Privilege, safeguarding privileged and confidential information, authorized and unauthorized legal practices, Joint Ethics Regulation, and standards of Conduct for Government Employees.

### LEG2211 Advanced Civil Law

Advanced instruction in civil law for the paralegal. Includes unfavorable information files, discharge of officer and enlisted personnel, environmental law, and line of duty and report of survey case files. Joint services ethic regulations and professional responsibilities of a paralegal in accordance with Air Force Rules of Professional Conduct and Air Force Standards for the Administration of Criminal Justice are emphasized throughout the course.

### LEG2212 Advanced Claims Administration

Principles and procedures for management of Air Force claims funds. Includes claims investigation, medical malpractice claims, hospital recovery claims, detection of fraudulent claims, and property damage tort claims.

### LEG2213 Operations and International Law

Concepts of international law and legal support of domestic and deployed military operations. Includes basic facts, principles and concepts of air and sea law, foreign criminal jurisdiction cases, fiscal law, contingency contracting, and various international agreements and conventions that govern armed conflict and other military operations.

### LEG2214 Legal Research and Writing II

Advanced legal research and writing. Emphasis on the use of the law library and computerized research tools, preparation of accurate, wellwritten legal memoranda, research and analysis of published opinions. Includes preparation of legal reviews, case briefs and analysis and summary of property damage tort claims.

### **LEG2215 Military Justice**

Nonjudicial punishment, court-martial charges and specifications, trial procedures and the Automated Military Justice Analysis and Management System. Includes pretrial procedures, investigative techniques, witness interviews, lawful search and seizure, confessions, rights to counsel, and post-trial procedures.

### LEG2216 Law Office Supervision and Training

Supervisory skills, techniques, and training management within the legal office environment. Includes mentoring, conflict management, the Paralegal Career Field Education and Training Plan and on-the-job training, determination of training needs, development of training standards, and management of related automated products and individual training records.

### LEG2217 Estate Planning

Fundamentals of estate planning to include, terminology, document drafting such as wills and health-care related documents, ethics in estate planning and use of estate planning software and applications.

### LEG2218 Paralegal Ethics II

Advanced ethics and ethical responsibilities of the Air Force paralegal. Emphasis is on institutional, legal and personal ethics. Includes application of Attorney-Client Privilege, safeguarding privileged and confidential information, authorized and unauthorized legal practices, Joint Ethics Regulation, standards of Conduct for Government Employees, and ethics in estate planning.

## (LMM) LEADERSHIP, MANAGEMENT & MILITARY STUDIES

### LMM1101 Leadership and Management I

Leadership role and responsibilities of journeymen; theories, techniques, and practical application of leadership and followership; supervision; management; problem solving; conflict resolution; concepts of human behavior; global diversity; standards of discipline; counseling and interpersonal relationships; mentoring; group dynamics; team development; ethics and core values; evaluation of enlisted personnel; time management; stress management; substance abuse; and current social issues.

### LMM1102 Managerial Communications I

Principles of oral and written communications for Airmen; theories and concepts of communications; factors influencing the communication process; speaking techniques such as oral presentations; and principles of effective writing.

### LMM1103 Military Studies I

Combat leadership and professionalism; air and space expeditionary force fundamentals; national security and strategy; foreign terrorism; joint and multinational forces; code of conduct; law of armed conflict; dress and appearance; drill and ceremonies; customs and courtesies; and personal readiness.

### LMM2121 Leadership and Management II

Role and responsibilities of the supervisor. Includes human resource development; diversity; team dynamics; performance, change, and conflict management; discipline; time and stress management techniques; substance abuse; operational risk management; and organizational leadership skills to include situational leadership, problem solving and the functions of management.

### LMM2122 Managerial Communications II

Principles of oral communications and effective writing for the supervisor. Includes planning, organizing, formatting, and supporting oral and written communication; overcoming barriers to effective communication; and effective speaking skills.

### LMM2123 Military Studies II

Air Force history and culture, wellness, standards of conduct, national security, and the role of the noncommissioned officer within the military profession. Includes national strategy, global instability, and military operations.

### 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.

# (LOG) 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.

### LOG1103 Contingency Response Training Basic

Introduction to logistics processes and terminology, basic command structure, predeployment briefing procedures, Contingency Response Group rapid response and operations, Air base/air-field operations and skills needed to support a joint/combined military environment. Includes a basic-level understanding of the mission, roles, core capabilities, limitations, organization, and operating environments of the Contingency Response Group.

### LOG1201 Materiel Storage and Distribution

Principles of handling and storing property, warehouse types, layout and design, storage aid systems, and material handling equipment. Includes warehouse validations, inventory processes, hazardous commodity management, and inspection procedures to determine identity, condition and shelflife.

### LOG1202 Logistics Automated Systems

Processing transactions and performing system inquiries using supply automated systems and associated interfaces. Includes computer security practices, file interrogation, issue requests, backorders, receipts, shipments, turn-ins and other item record updates.

# LOG1401 Medical Logistics Management Storage and Distribution

Introduction to supply chain management, warehouse storage and distribution. Includes customer service functions, manual medical treatment facility catalog records, catalog search record creation, source of supply, review of assets, process and storage requirements, warehouse security, materiel storage and serviceability, issue procedures, controlled medical items, personal protective equipment, and hazardous material storage.

# LOG1501 Expeditionary Medical Readiness and War Reserve Material

Introduction to Medical Readiness Training (MRT). Provides emergency medical readiness and deployment skills training for the field hospital environment. Includes War Reserve Material (WRM) and Assemblage Management (AM) roles and responsibilities, definitions, allowance standards and Expeditionary Medical Support (EMEDS).

### LOG1601 Logistic Maintenance Support

Interpreting automated records and file maintenance; includes rejects and inquires, repair cycle, bench stock, issue procedures, and inventory.

### 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 Practices 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.

### LOG1701 Introduction to Medical Logistics

Principles of supply discipline, information protection polices and measures, and the Defense Medical Logistics Standard Support (DMLSS) system.

### LOG801 Specialized Operations in Medical Logistics

Introduction to specialized operations in the supply chain cycle. Includes Medical Material Quality Control (MMQC) processes, transactional history, equipment maintenance, and personal computer operations.

### LOG2101 Advanced Logistics Planning

Advanced logistics planning techniques. Includes wartime and contingency planning, logistics command and control systems, and deployment management.

### LOG2103 Contingency Response Training Advanced

Practical application of logistics processes and terminology, advanced command structure, predeployment briefing procedures, Contingency Response Group rapid response and operations, Air base/air-field operations and skills needed to support a joint/combined military environment. Includes advanced-level understanding of the mission, roles, core capabilities, limitations, organization, and operating environments of the Contingency Response Group.

### LOG2601 Introduction to Planning and Programming

Logistics planning techniques and concepts. Includes types and composition of plans, mobility planning, logistics center operation and planning for contingency, war reserve material and crisis actions.

### 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.

### 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.

### LOG2611 Automated Asset Sourcing

Methods and procedures for sourcing of missionessential assets using standard base supply system interfaces to query and analyze local, lateral and depot assets. Includes monitoring and updating status, interrogation of various automated systems, web-based customer account tracking and web visual logistics information processing.

### LOG2620 Contingency and Wartime Support

Strategic material management during wartime contingencies. Includes wartime processing procedures, special requisitions, and manning and reporting actions using concepts from combat supply management and weapons system management information systems, and combat follow-on supply systems using war reserve material, deployable assets and war-readiness spares kits.

## (MAC) 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.

### **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 for use in computer-aided manufacturing. Includes technical mathematics,

programming and multidimensional milling techniques.

## (MAP) 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.

## (MAT) 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.

### 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 their application to electronics. Includes algebraic expressions, solution of equations, word problems and trigonometric functions.

## (MEA) 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.

### **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.

## (MEC) 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.

### 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.

## (MED) 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.

### MED1305 Human Anatomy and Physiology

Characteristics and functions of human body systems including: musculoskeletal, circulatory, respiratory, digestive, nervous, reproductive, immune, and urinary systems.

### **MED1306 Medical Service Fundamentals**

Basic medical service knowledge and skills in patient care, physical exams, visual screening, administrative functions and aerospace medicine. Includes an overview of Air Force Medical Doctrine, Aerospace Medical Service Apprentice scope of practice, and aspects of Air Expeditionary Force medical service.

## (MET) METEOROLOGY

### **MET1403 Weather Fundamentals**

Introduction to career field duties, organizational structure, standard and tactical weather communications, effects of atmospheric conditions on military operations, weather sensors, and sensor principles.

### **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 communication 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.

# 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.

### **MET1808 Weather Maps and Charts**

Analysis 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.

### **MET1809 Weather Forecasting Products**

Interpretation of meteorological bulletins, products and codes. Includes observations, forecasts, space bulletins, numerical prediction products and cross sections.

### MET2102 Automated Weather Data-Handling System

Operation and management of automated weather data-handling system; includes man-machine interface, loop/sequences, composites, graphic editing alerts, tables, plot models, command sequences, data types, and products.

### **MET2103 Field Weather Operations**

Installation and operation of tactical weather equipment and performance of weather related duties under simulated conditions. Establishment of encampment and perimeter defenses and simulation of actions necessary to protect resources.

### **MET2801 Weather Radar Operation**

Principles and operation of weather radar system. Emphasizes interpretation of weather radar echoes.

### MET2805 Weather Analysis Laboratory

Analysis of upper level and surface weather maps; includes application of basic concepts of analysis, wind pressure relationships, elements of frontal theory, geostrophic and gradient wind exercises, hydrostatic equation, and vertical sounding data.

### 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.

### **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.

### **MET2819 Satellite Picture Interpretation**

Application of principles of satellite tracking, picture gridding, and interpretation of satellite imagery and meteorological phenomena.

### **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.

### **MET2826 Space and Solar Forecasting**

Utilization of space and solar data to develop solar event forecasts, advisories, and warnings. Includes Proton, shock arrival and geomagnetic events. Integration of various solar products to develop routine solar forecasts. Includes geomagnetic, sunspot, HF/UHF and high altitude radiation. Knowledge of data resources and procedures for anomaly assessment.

### **MET2827 Mesoscale Meteorology**

Identification of atmospheric stability, mass continuity theory, convective and non-convective severe weather. Includes analysis of skew-t charts and radar products.

### MET2828 Macroscale Meteorology

Identification of atmospheric motion, dynamics, long waves, jet streams, satellite imagery, and analysis of these features. Includes principles of model products, as well as, recording and encoding weather observations.

## (MGT) MANAGEMENT & SUPERVISION

# 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.

### MGT1601 Automated Maintenance Data Systems

Introduction to Core Automated Maintenance Systems (CAMS), Integrated Maintenance Data Systems (IMDS), and other associated maintenance data systems for job scheduling, status determination, and documentation management. Includes initialization, microcomputer processing, file structure, timesharing, query language processor retrievals, report generation, reject management, and database management.

### **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; engine documentation duties; 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.

#### MGT2601 Maintenance Systems Management

Concepts, data systems, creating reports, forecasting manpower requirements, scheduling aerospace vehicle and equipment needs, 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/concepts of electronic communication system maintenance and personnel management. Major focus on required documentation and publications, understanding configuration controls, hardware quality control and tracking, support resources, hardware engineering and installation, organizational design specifications, mobile communication systems, wide-area network usage, command and control systems, unique functional organizations and mission needs, and personnel training and supervision.

## (MIL) 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.

### MIL1204 Contingency Operations – Pre-Deployment

Wartime contingency operations and procedures. Includes introduction to joint military forces/operations, counterinsurgency doctrine, theater rules of engagement, fundamentals of survival in deployed environment, weapons familiarization and live fire, basic tactical movements, and aspects of regional culture and language.

### 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, communication 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.

### MIL2702 Special Military Studies

Analysis of foreign and domestic forces denial and deception techniques, specialized warfighting concepts, and counternarcotics 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.

### **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.

## (MKS) MARKSMANSHIP

### MKS1104 Combat Arms Instructor

Fundamentals of teaching emphasizing proficiency in technical course writing, tests and measurements, programmed instruction, instructional systems development and academic counseling. Includes the

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adult learning process, effective study methods, audiovisual aids, automated teaching systems, techniques of dry and live fire supervision, coaching, and firearms range operations and safety.

### MKS1105 Initial Marksmanship Laboratory

Initial qualification in the use of handguns, shotguns, rifles, machineguns and grenade launchers. Includes basic nomenclature, capabilities and characteristics of specific weapons; operator care, cleaning and maintenance; application of marksmanship fundamentals, weapons safety and clearing procedures; and types of ammunition.

### MKS2101 Marksmanship Laboratory

Indepth knowledge and functions of handguns, shotguns, rifles, automatic weapons, grenade launchers and night vision devices. Includes basic nomenclature, capabilities and characteristics of specific weapons; operator care; application of marksmanship fundamentals, weapons safety and clearing procedures; and ammunition types and uses.

### **MKS2102 Firearms Maintenance**

Operation and maintenance of handguns, shotguns, rifles, automatic weapons, grenade launchers, and night vision devices. 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.

## (MLT) 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; antigenantibody 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.

### **MLT1307 Medical Laboratory Fundamentals**

Introductory medical laboratory procedures, regulatory guidelines and accreditation standards. Includes phlebotomy, specimen processing and shipment, clinical chemistry theory, safety precautions, accident reporting, professional conduct and ethical standards.

### MLT2302 Clinical Laboratory Procedures

Medical materiel 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.

## (MPH) MILITARY PUBLIC HEALTH

### MPH1100 Introduction to Public Health

Fundamentals of public health operations. Introduction to medical intelligence, biostatistics and public health metrics. Also includes briefing techniques and written communication as they relate to public health responsibilities.

### MPH1101 Biological and Physical Sciences

Fundamentals of microbiology and chemistry as they apply to the field of public health. Introduction to medical terminology, ethics, and record entries. Applied concepts of the Health Insurance Portability and Accountability Act of 1996.

### MPH1102 Principles of Communicable Disease Control

Terminology, detection, and control of communicable diseases including tuberculosis, viral hepatitis, HIV/AIDS, and sexually transmitted diseases. Investigation of animal bite incidents and epidemiological events. Development of education and training programs.

### MPH1103 Principles of Food Safety and Sanitation

Introduction to food safety, chemistry, preservation, storage, and foodborne pathogens. Roles and responsibilities in food facility evaluations, subsistence inspections, hazardous food recalls, and foodborne illness outbreaks in accordance with the Food and Drug Administration (FDA) Food Code.

### MPH1104 Occupational Medicine/Industrial Hygiene

Introduction to the workplace environment with emphasis on the health and safety of the industrial

### worker. Principles of toxicology, industrial operations, hazard communication, material safety data sheets, reproductive health, occupational illness/injury reporting and investigation, industrial case files, and personal protective equipment. Familiarization with chemical and physical occupational hazards as well as Air Force and OSHA regulations.

**COURSE DESCRIPTIONS** 

### MPH1105 Medical Entomology

Theory of entomology and its importance in public health and transmission of diseases. Principles of biology and control of mosquitoes, arthropods, ticks, rodents, mites, roaches, fleas, lice, and other pests or vectors of medical significance. Familiarization with surveillance and trapping methods; packaging and shipment of specimens. Concepts of personal protection and military quarantine activities.

## (MRD) MEDICAL READINESS

### MRD1300 Basic Medical Readiness

Relationship of human body systems to triage, treatment and transportation of casualties.

### MRD1301 Advanced Medical Readiness

Under isolated field conditions, theory of medical concepts and problems, maintenance of medical supplies, assembly and use of medical equipment, administration and maintenance of drugs, theory of treatment, protocol and patient transportation, and communications in emergency situations.

### 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.

### MRD1303 Expeditionary Medical Readiness Course

Introduction to expeditionary medical support and establishment of field medical facilities. Includes concept of operations; casualty movement; security; medical aspects of nuclear, biological, and chemical warfare; communication systems; and a comprehensive casualty flow training exercise.

### **MRD2101 Medical Decontamination**

Advanced instruction on removal and neutralization of nuclear, biological, and chemical (NBC) agents on wartime casualties before admittance to a medical treatment facility. Includes roles in triage; lifesaving NBC casualty care techniques; facility operations;

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peacetime and wartime site selection and set up, and field training performance to include inventory, assembly, operating, and cleanup of the medical decontamination facility.

### MRD2110 Expeditionary Medical Support

Introduction to expeditionary medical support and establishment of field medical facilities. Includes concept of operations; casualty movement; security; medical aspects of nuclear, biological, and chemical warfare; communication systems; and a comprehensive casualty flow training exercise.

## (MSL) 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 semitrailers 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 doorlocking 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 semitrailers and tractors, crane, winches, and hoists; and use of test equipment to ensure correct installation of electric and hydraulic systems.

### **MSL1211 Missile Familiarization**

Knowledge of missile assembly, weapons systems 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.

#### MSL2206 Missile Maintenance Laboratory

Missile and weapons systems 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.

## (MUN) 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. 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 procedures. Includes cleaning, painting, marking, 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 accountability systems. Includes allocations, munitions accountability (automated and manual), files maintenance, custodial support and concepts and procedures for document control, stock control, inventory procedures and supply discipline.

### **MUN1208 Munitions Inspection Procedures**

Conventional munitions inspection procedures. Includes munitions serviceability determinations; civilian, DoD and Federal Aviation Administration shipments; manufacture's modifications; issue and turn-in inspections; and ammunition disposition requests.

### **MUN2201 Reentry Systems Maintenance**

Advanced operation and maintenance of specific 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.

### 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.

## (NDT) 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 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 the 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.)

# 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 maintenance of atomic emission spectrometer and atomic absorption spectrophotometer equipment. (AF A&P program applicable course.)

## (NMT) 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.

### NMT1300 Applied Nuclear Medicine Mathematics

Mathematics applicable to nuclear medicine; includes fundamental algebra, logarithms, graphing, calculations of doses of radionuclides, and statistics.

### NMT1301 Applied Nuclear Physics

Basic units and mass energy relationships, quantum theory, nuclear structure, physical characteristics and modes of radioactive decay, electromagnetic radiation.

### NMT1302 Applied Nuclear Medicine Chemistry

Basic chemistry as it applies to nuclear medicine; includes basic definitions and conversions, electron configuration, inorganic nomenclature, and balancing chemical reactions.

### NMT1303 Radiation Safety

Introduction to radiation safety; includes shielding requirements, nuclear regulatory commission license, personnel dosimeter, and radiation accidents and casualties.

### NMT1304 Radiation Instrumentation for Nuclear Medicine

Scintillation spectrometer calibration, operating principles of scintillation gamma camera, radionuclide counting systems of liquid scintillation, speck and alternate imaging modalities, semiconductor detectors, and quality control.

### NMT1305 Radiopharmacy

Introduction to radiopharmaceuticals, quality control, radioactive equilibrium, and radionuclide generators.

### NMT2319 Computer Applications in Nuclear Medicine

Imaging, data reduction, functions, and programming language in nuclear medicine.

#### NMT2320 Clinical Diagnostic Imaging

Procedures and techniques for diagnostic imaging. Includes quality control, preventive maintenance, collimation, counting statistics, image acquisition parameters, and data analysis.

#### NMT2321 Nuclear Laboratory Procedures

Clinical analysis of human blood cells and plasma. Includes volume and mass measurements, Schillings test, radioassays, radioimunoassays, quality control of assay procedures, and laboratory equipment.

#### NMT2322 Clinical Radiopharmacy

Measurements, calculations, quality control, and interpretations for nuclides, technetium, iodine, chromium, cobalt, xenon, gallium, indium, and thallium. Includes diagnostic and therapeutic applications, administration of radiopharmaceuticals and primary thyroid therapy applications with radioactive iodine.

### NMT2323 Clinical Radiation Safety

Application of radiation safety techniques, quality control, and Nuclear Regulatory Commission requirements for a licensed laboratory. Includes labeling procedures, warning signs for radionuclide storage, waste disposal and decontamination of personnel, equipment, and space.

#### **NMT2324 Administrative Procedures**

Procedures for ordering radionuclides, equipment, and supplies; scheduling patients for films; and recording/filing reports.

#### NMT2325 Didactic Review

Lectures and examinations in clinical nuclear medicine areas requiring demonstrated knowledge. Includes clinical procedure updates and didactic review of basic science.

## (NUR) NURSING

### NUR1101 Urology

Genitourinary anatomy and physiology, medical terminology, surgical/urologic equipment instrumentation, and care and handling of urology patients. Includes treatment of voiding disorders, causes and treatment modalities, and procedures of assisting in urologic surgery.

#### NUR1103 Otolaryngology

Functions and responsibilities of clinical and surgical assistant to an otolaryngologist. Includes audio evaluations; maintenance and care of specialized otolaryngolic instruments and equipment; diagnosis and treatment of common ear, nose and throat disorders; and pre- and postoperative patient care. Emphasizes procedures and administrative management.

### NUR1105 Neuroanatomy and Physiology

Neuroanatomy and neurophysiology of the human body as it relates to neurology; neurological disorders and how they affect neurodiagnosis.

### NUR1106 Electroneurodiagnostic Procedures

Concepts of basic electricity; implementing, analysis and administration of electroneurodiagnostic procedures. Includes instumentation, wave pattern interpretation, electroencephalographics, evoked potentials and clinical application

### NUR1107 Neurology Clinical Internship

Clinical application of electroneurodiagnostic procedures. Includes practice of instumentation, wave pattern interpretation, electroencephalographics, and evoked potentials.

### NUR1108 Genitourinary Diseases and Disorders

Exploration of the developmental stages of male and female genitourinary systems, common congenital anomalies, classification and treatments of urinary tract obstructions, infections, and disorders of the external male genitalia. Includes cancers of the genitourinary system, understanding tumors, testing and treatment.

### NUR1109 Urology Clinical Practicum

Clinical practice of procedures in urology. Includes urologic radiography, urologic laboratory, minor procedures and urologic surgery.

#### NUR1110 Urologic Testing Procedures

Introduction to radiology, radiographic and ultrasonic techniques and their uses specific to urology. Includes theory and practice in performing urine tests, seminal fluid analysis, and basic laboratory testing in a urology clinic.

#### 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

Basic knowledge and skills needed to perform patient care. Includes anatomy and physiology, primary care optimization, infection control, interpersonal relationships and customer service. Focus on inpatient care and nursing technologies.

#### NUR1319 Intermediate Nursing

Intermediate nursing knowledge and skills in nutrition/elimination, specimen collection, medication administration, and intravenous therapy in normal duty and contingency operations.

#### 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.

#### 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.

#### 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. 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 lifesupport procedures, crisis management, psychopharmacology, 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.

#### NUR1350 Inpatient Unit Practicum

The use of theory and clinical experience to emphasize the practice of daily inpatient care. Includes admission and discharge procedures, patient assessment, wound management, intravenous therapy, lifting and transport techniques, interpretation and transcription of preoperative and postoperative instructions, and medication administration.

#### NUR1351 Outpatient Unit Practicum

The use of theory and clinical experience to emphasize the practice of outpatient procedures. Includes scheduling, recording of vital signs, soft tissue and musculoskeletal injury management, specimen collection, annual physical health assessment, medication administration, and medical materiel logistics.

#### NUR1352 Introduction to Surgical Technology

Introduction to the roles and responsibilities of the Surgical Technologist. Includes familiarization of the surgical suite, operating room lay-out, preoperative preparation of the patient, legal and ethical aspects of surgery, patient rights, computer literacy, safety, and risk management. Fundamentals of human anatomy and physiology with identification of structures, interrelationships of systems, and cellular/organism physiology.

#### NUR1353 Surgical Supplies and Equipment

Introduction to surgical equipment and supplies to include surgical pharmacology and anesthesia. Includes the function, assembly, use, and care of equipment in the surgical environment.

#### NUR1354 Non-Sterile Duties of the Surgical Technologist

Theory and practice in positioning the surgical patient, completing skin preparation, care and handling of surgical specimens, preparation of the operating room, monitoring fluid loss/replacement and carrying out the functions of the assistant circulator including use of forms and documentation.

#### NUR1355 Sterile Duties of the Surgical Technologist

Theory and practice in surgical hand scrubbing, gowning and gloving, duties of the scrub technologist including sterile field/instrument setup, preparation and handling of sharps, performing counts, and surgical draping.

#### NUR1356 Surgical Service in a Clinical Setting

Practical surgical service procedures and related requirements encountered in a clinical setting. Performs the duties and responsibilities of the Sterile (scrub) and Non-sterile (circulator) during a simulated appendectomy.

# 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.

# NUR2325 Organization and Administration of Aeromedical Evacuation

Introduction to aeromedical evacuation operations, aircraft capabilities and configurations. Includes crew responsibilities, patient safety, loading, classification and documentation.

#### NUR2326 Aeromedical Evacuation Equipment

Fundamentals of aeromedical evacuation equipment. Includes traction devices, spinal stabilization devices, restraints, manual resuscitators, oxygen analyzers, respirators, ventilators, and other life support equipment.

#### NUR2327 Epidemiology Prevention & Infection Control

Skills needed to develop, manage, and evaluate an infection control program based on Joint Commission on Accreditation of Healthcare Organizations standards, Center for Disease Control guidelines, and Air Force procedures.

#### 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.

#### 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.

#### NUR2342 Aeromedical Evacuation Contingency Operations

Cognitive and performance based instruction on aeromedical evacuation system, mobilization and command structure, casualty management and movement, communication and information system, and coordination center responsibilities as related to contingency operations.

#### NUR2350 Health Promotion and Fitness

Development and management of health promotion programs. Includes population health principles, tobacco cessation, fitness and nutrition, appointment processing, weight and body fat measurement, marketing and office administration.

#### NUR2351 Emergency Medical Technician Basic (EMT-B)

Fundamentals of EMT-B as a first responder. Includes pre-hospital care, transporting patients, anatomy and physiology with a focus on patient assessment and appropriate interventions in various rescue scenarios, including trauma, extrication, medical emergencies, behavioral and environmental emergencies including special populations such as children and elderly. Course prepares students with knowledge/skill required to successfully complete the National Registry of Emergency Medical Technicians (NREMT) written exam/practical skills lab.

# (OCC) 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.

# (OLT) OTOLARYNGOLOGY TECHNOLOGY

#### OLT2306 Clinical Technology and Practicum

Special emphasis placed on clinical examinations, diseases of head and neck, emergencies and functional problems of ear, nose, and throat, and dysfunction of eustachian tube; includes clinic procedures, administration, and design; related pharmacology and microbiology; related radiography, radiotherapy, and radioisotopes; photography in otolaryngology; and local anesthesia, otoneurology, electronystagmography, and equipment nomenclature; also includes patient counseling, patient history taking, cancer patient follow-up, and clinical practicum.

# (OPD) 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.

#### **OPD1303 Principles of Upper Extremity Orthotics**

Anatomy, physiology, kinesiology, components, materials, and clinical applications of lower extremity orthoses, with emphasis on design, fit, and function of orthoses for the hand, wrist, and arm.

#### **OPD1304 Principles of Lower Extremity Orthotics**

An introductory study of the anatomy, physiology, and kinesiology, components, materials, and clinical applications of lower extremity orthoses. Emphasis is on design, fit, and function of orthoses for the hip, leg, knee, ankle and foot.

#### **OPD1305 Principles of Spinal Orthotics**

An introductory study of the anatomy, physiology, and kinesiology of the spine and pelvis orthoses. Emphasis is on design, fit, and function of orthoses for the lumbar, thoracic, and cervical vertebrae.

#### **OPD2101 Orthotics Management**

Advanced knowledge and skills necessary to perform as an orthotic craftsman. Includes patient and professional relations, supervision, safety and management of resources and medical materials. Proficiency in the selection, fabrication, fitting and modification of the Boston Scoliosis Orthosos Module is required.

# (OPT) OPTOMETRIC TECHNOLOGY

#### **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 Optometrist Practicum**

The practicum includes the applications of tonometry, visual fields and eye safety measures, and fitting of contact lenses.

#### **OPT1306 Optometry Fundamentals**

Introduction to the roles and responsibilities of an optometric technician. Includes identifying and reporting safety and security issues, review of ethical concepts and professionalism, patient information documentation procedures, and familiarization of medical record systems.

#### **OPT1307 Ocular Anatomy and Physiology**

Introduction to anatomy and physiology of the eye. Includes basic identification and treatment of common ocular injuries and disorders.

# (ORT) ORTHOPEDIC

#### **ORT1101 Introduction to Orthopedic Care and Surgery**

Overview of orthopedic medical terminology, anatomy of appendicular portions of the body, and articulations within the skeletal/muscular system. Introduces fracture principles, orthopedic emergencies, basic pharmacology, and radiologic views and orthopedic diseases/disorders. Includes orientation to orthopedic surgical techniques, asepsis and the surgical environment, basic instrumentation and equipment, and principles/application of the sterilization process.

#### **OPT1102 Orthopedic Techniques with Lab**

Introduction to musculoskeletal systems with emphasis on gross anatomy laboratory. Includes splinting and casting techniques as related to treatment of orthopedic injuries with emphasis on principles, concepts and practices pertaining to cast room protocols, instrumentations, assessment and treatment of splinting problems, advanced application of splints for upper and lower extremities, basic orthotics and ambulatory training, principles of traction and age-specific care.

# (PAV) PAVEMENTS

#### **PAV1507 Rigid Pavements**

Tasks associated with construction and maintenance of rigid pavements.

#### **PAV1508 Flexible Pavements**

Tasks associated with construction and maintenance of flexible pavements.

# (PER) 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, accountability, predeployment planning, operation of microcomputers, field condition procedures and redeployment.

#### PER2108 Manpower Management

Concepts of manpower organization. Includes measurement methods, development of manning tables, management advisory studies, authorization routines and manpower reports.

#### 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.

# (PHA) 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.

#### PHA1309 Pharmacy Clinicals

Inpatient and outpatient pharmaceutical procedures in a clinical setting. Includes sterile and nonsterile

compounding, medication dispensing in outpatient/inpatient settings, crash cart maintenance, supply and inventory procedures, utilization of pharmacy reference library and dosage calculations.

#### **PHA1310 Pharmacy Calculations**

Introduction to the metric, avoirdupois, and apothecary systems of measurement and the calculations used in pharmacy practice. Includes ratio and proportion, dosage determinations, percentage preparations, reducing and enlarging formulas, dilution and concentration, specific gravity, and flow rates. Required to correctly perform calculations to prepare a medication order.

#### 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.

# (PHE) PHYSICAL EDUCATION

#### PHE1000 Physical Education and Wellness

Basic concepts and principles of wellness. Includes physical fitness, nutrition, sexually transmitted diseases, suicide awareness and prevention, sexual assault prevention and response, self-aid/buddy care, healthy lifestyles, and an introduction to the Air Force fitness program using drill, calisthenics, and running.

#### 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.

# (PHO) 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.

#### PHO1408 Fundamentals of Photography

Characteristics of sensitized materials, camera familiarization, appropriate procedures for setting proper film exposure, processing exposed film, print finishing, handling of negatives, principles of photographic optics, composition, filters, and lighting.

#### PHO1409 Advanced Principles of Photography

Laboratory principles and procedures for photocopying, spotting, enlarging, printing of copy negatives, and use of chemistry for various emulsions.

#### PHO1414 Photoprocessing Quality Control

Fundamentals of continuous processing methods and equipment. Includes chemical process control, sensitometry, densitometry and analysis of film characteristics.

#### PHO1457 Photographic Assignments

Theory and procedures for applied photographic assignments. Includes lighting techniques, filters and portrait, passport, identification, aerial and industrial photography.

#### PHO1458 Photojournalism

Journalistic techniques, communicative composition, photo layout, and public relations. Includes practical work in writing captions and news, techniques of sports photography, developing a picture story,

photographing small groups, and constructing photo features.

#### PHO1500 Basic Motion Picture Photography

Introduction to the principles of motion picture photography. Includes camera operation, film selection, handling of sensitized material, camera shutters and exposures, optics and the uses of motion pictures.

#### **PHO1501 Motion Picture Photography**

Framing, composition, basic sequencing and reestablishment techniques. Includes performance of screen direction, arrangements, cutaway techniques, use of filters and exposure meters and assembly of film.

#### PHO2405 Color Film Processing

Introduction to color film emulsions, color process control, plotting characteristic curves, exposing and processing color film and color slide duplication.

#### PHO2406 Color Printing

Internegative film, masking, and creating black and white and color prints from color negatives. Includes chemical analysis, use of densitometer, and photographic quality assurance.

#### PHO2417 Digital Imagery

Introduction to the technology and use of computers for photographic purposes. Emphasis is on the creative use of the computer to develop and execute aesthetic solutions to photographic digital problems. Includes use of digital camera systems, imaging software, scanners, and digital printers.

#### 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.

# (PHY) APPLIED PHYSICS

#### PHY1422 Applied Technical Physics

Physics survey. Includes basic principles, atomic structure, quantitative processes, interactions, transformations, principles of radiation, detectors, and measurement techniques.

# (PLB) 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, firesuppression 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.

# (PTH) PHYSICAL THERAPY

#### PTH1305 Introduction to Physical Therapy

Introduction to fundamentals, principles and practices of physical therapy. Includes role of physical therapist, basic patient care skills, patient positioning and transfers, body mechanics, mobility aids, wheelchair management, activities of daily living, and development of communication skills. Explores the psychosocial aspects of patient/client and the health care practitioner.

# PTH1311 Introduction to Anatomy, Physiology and Kinesiology

Introduction to the science of human motion, theories of biomechanics, and muscle/joint structure and function. Includes foundational knowledge of anatomy and kinesiology of the spine, hip, pelvis, knee, ankle, foot, shoulder, elbow, forearm, wrist, and hand/body regions.

#### PTH1312 Therapeutic Exercises and Procedures

Basic principles and clinical skills for instruction and supervision of therapeutic exercises. Includes range of motion, flexibility, strengthening exercises, and clinical skills for soft tissue and joint mobilization for patients with musculoskeletal disorders. Procedural interventions include postural alignment/deviations; spinal, lower, and upper extremity orthotics; human locomotion and abnormal gait patterns; running shoe prescription and wound care.

#### PTH1313 Introduction to Clinical Pathophysiology

Introduction to common neurological disorders, medical disease processes, and musculoskeletal diseases and injuries. Includes the etiology, risk factors, signs and symptoms, physical therapy treatment options and precautions. Disease processes include the Pathophysiology of Arthritic, Diabetic Oncology, Prenatal, Postpartum, Pediatric and Neurological disorders, and Cardiovascular and Respiratory diseases

#### PTH1314 Clinical Screening, Rehabilitation and Therapeutic Modalities

Develops clinical and management screening skills to include fundamental principles of therapeutic modalities for patients with musculoskeletal disorders, neurological disorders, upper or lower extremity amputation and medical disease processes. Includes "hands-on" performance training for neurorehabilitation, wound and burn care, edema control and examinations utilizing a therapeutic approach.

#### PTH2401 Physical Therapy Practicum

Supervised practice under a licensed physical therapist or physical therapist assistant in clinical settings and rotations with emphasis on neurological, geriatric, pediatric and cardiac treatment concepts.

# (PTR) 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.

#### 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.

#### PTR2351 High-Pressure Chamber Operations

Compressor operation and maintenance; control panels; air storage and breathing gas systems; system inspection, maintenance, and repair; and crew duties during practice dives to different ocean depths.

#### PTR2352 Aerospace Physiology Management

Management of an aerospace physiology unit. Advanced theory on flight operations & management of High Altitude Airdrop Mission Support (HAAMS), High Altitude Reconnaissance Mission Support (HARMS), Parachute Familiarization Training (PFT), and decompression sickness. Includes safety programs, ground and space mishaps and course curriculum development.

#### PTR2353 Human Performance Operations

Physiological stresses and human performance implications in aviation, space operations, and deployment environments. Emphasis is on expertise needed to consult and train on human performance in aircraft mishaps. Includes principles of crew resource management, situational awareness, airfield operations, and basic flight procedures.

# (QCI) QUALITY ASSURANCE

#### QCI2202 Quality Assurance

Advanced quality assurance procedures used to detect and analyze maintenance management deficiencies, determine causes, and recommend corrective actions; includes comprehensive interpretation of standard publication and technical manual systems, personnel evaluations, inspection categories, management evaluations, deficiency

analysis, oral and written communications, and activity inspections.

# (RAD) 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.

#### **RAD2308 Clinical Mammography**

Introduction and historical development of mammography, screening and educational programs for patient. Includes aseptic techniques/sterilization procedures; quality control testing; and proficiency training in clinical imaging, augmented breasts, localization methods for biopsy and breast specimen radiography.

#### 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.

# (REC) RECREATION

### **REC1102 Fitness and Health**

Methods used in measuring physical fitness, determining nutrition requirements, evaluating human physiology, analyzing exercise physiology and managing health resources.

# (RTB) RADIO & TELEVISION BROADCASTING

#### RTB1101 Film/Video Lighting

Concepts and application of principles of lighting to various systems. Skills developed in both studio and remote location through lecture and application with primary emphasis on video production.

#### **RTB1102 Film/Video Editing**

Concepts and principles of post-production editing. Includes film and video-editing techniques,

equipment, progression, and sequencing with primary emphasis on video production.

#### **RTB1400 Introduction to Television Production**

Various aspects of production; includes equipment use, direction techniques, control room responsibilities, floor management, color and black-and-white lighting techniques, studio operation, special effects, telecine theory, script analysis, and camera operation.

#### **RTB1500 Introduction to Radio Production**

Fundamentals of radio production. Includes equipment use, direction techniques, studio and control room operation, audio editing, programming and production, and broadcast standards.

#### **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.

#### **RTB1803 TV Production**

Advanced special effects and video-editing techniques; includes planning and producing TV productions, single and multiple concepts, dramatization techniques, and final product analysis.

#### **RTB1805 Electronic Field Production (EFP)**

Setup and operation of electronic field production equipment under controlled and uncontrolled conditions; includes body braces and tripods, handheld operations, lighting requirements, pictorial continuity; operator maintenance; and practice with EFP video-editing systems.

# (SAF) 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 handtool 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 flightline safety.

#### SAF1812 Safety Management I

Basic philosophy of accident prevention. Includes safety program manning, principles of learning, operational risk management, hazard reporting and abatement, human factors, safety education and training reference materials and safety plans and programs; recognition, avoidance and prevention of job-related hazards; conducting meetings, writing reports, and organizing and presenting material.

#### 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 accident prevention with emphasis on inspection, classification, mishap investigation and reporting. Recognition of hazards and design of elimination techniques through knowledge of accident prevention controls.

#### SAF2807 Advanced Safety Management

Safety standards pertaining to hazardous materials management, confined spaces, lockout and tagout procedures. Emphasizes inspection preparation and reporting, and 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.

# (SAN) 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.

# (SDI) 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.

# (SEC) SECURITY

#### SEC1804 Fundamentals of Ground Combat Skills

Analysis of airbase defense operations and instruction in subjects such as fire control and distribution measures, prisoner-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, counter surveillance, hostage survival, threat conditions, aircraft familiarization and individual protective measures.

#### SEC1856 Antiterrorism

Introduction to the basic theories of international, domestic and cyber terrorism. Emphasizes increasing awareness of terrorist operations, surveillance detection, hostage survival, individual protection measures, threat conditions and explosive awareness with demonstration. Includes the use of resent case studies to help present an understanding of installation antiterrorism and force protection measures.

#### SEC2850 Intrusion Detection Equipment Operator

Understanding the characteristics, capabilities, limitations and vulnerabilities of associated sensor subsystems, small permanent communication and display segment equipment. Emphasis placed on the technical orders, system operation and control of response forces.

#### SEC2851 Closed-Circuit Television Operator

Understanding the characteristics, capabilities, limitations and vulnerabilities of perimeter surveillance and system closed-circuit television equipment. Emphasis placed on troubleshooting, system operations and television monitoring to prevent unauthorized entry into controlled areas.

#### SEC2853 Organization of Base Defense Forces

Leadership, organization and management of US military security forces. Emphasis on the legal and procedural aspects of police operations. Includes evaluation of base threat analysis, preparation of security response options, and practical exercises in deployment of security forces in response to various hostile threat scenarios.

#### SEC2855 Support Weapons Qualification

Application and knowledge of mortars, recoil rifles, heavy machineguns, and/or grenade launchers; including nomenclature, characteristic capabilities of specific weapons systems, operator care and cleaning maintenance, weapons safety, tactical employment, forward observation and firedirection center of operations (mortar courses only). Emphasis on ammunition types and uses, practical exercises involving crew drills for gunners, assistant gunner ammunition bearers and live firing qualification.

#### SEC2856 Ground Defense Leadership and Management

Analysis and application of logistical and tactical planning for employment of security forces 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. Includes increasing awareness of terrorist operations, application of special weapons and team concepts in tactical situations.

#### SEC2857 Tactical Marksmanship Laboratory

Employment of fire team, squad, and flight weapons in tactical situations with emphasis on types and classes of fire and methods of engagement for personnel and materiel targets.

#### 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, communication modules, tripods, sensors, power supply systems, annuciator systems and thermal imagers.

# (SOC) SOCIAL SERVICES

#### SOC1101 Introduction to Chaplain Corps

Introduction to processes and functions of the Chaplain Corps. Includes duties and responsibilities of chaplain assistants, religious observances, faith group tenets, religious sensitivity and accommodation, chapel facility types and nomenclature, religious program planning, liturgies and rites, support worship, and spiritual care.

#### SOC1102 Chaplain Corps Readiness

Fundamentals of religious support in contingency operations. Includes development of deployed ministry plan, support for field religious observances, control center operations, unit visitation, religious cultural awareness, and religious leader engagement.

#### SOC1103 Crisis Support

Introduction to the principles, policies, and techniques required for conducting crisis response. Includes analysis of individual communication styles, conflict management strategies, rules of confidential communication, crisis intervention counseling, traumatic stress response, and resiliency principles.

#### SOC1104 Intercultural Competence

Foundation course on diverse values and communication styles in a culturally complex

environment. Application of communication and negotiation skills used in multi-cultural settings. Topics include religions, military culture, food and health concerns in an intercultural setting, and culture shock.

#### SOC1208 Applied Counseling Techniques

Counseling interviews; includes transactional analysis, group counseling, crisis intervention, telephone counseling, awareness of basic human needs, value clarification techniques, and conducting practice counseling sessions.

#### SOC1209 Introduction to Equal Opportunity

Introduction to equal opportunity advisor skills and the human relations climate. Includes selfawareness and social concepts such as socialization, perception, motivation theory, diversity, race and ethnic studies, and human relations. Emphasis on Equal Opportunity Advisors' roles and responsibilities.

#### SOC1210 Equal Opportunity Problem Solving

Equal Opportunity conflict resolution and prevention. Includes knowledge and application of mediation techniques, confidentiality and ethical standards, military complaint policies and procedures, and organizational assessments.

#### SOC1504 Social Issues

Analysis of the signs and impact of various social issues to military readiness. Emphasizes racism, power and privilege, sexism, prejudice and discrimination, extremism, and sexual harassment.

# SOC1610 Equal Employment Opportunity (EEO) Fundamentals

Prepares personnel for roles and responsibilities as an Equal Employment Opportunity (EEO) counselor. Includes the EEO complaints process and resolution, Federal personnel procedures, workplace harassment, EEO inquiries, and EEO laws for personnel with disabilities.

# (SOO) 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.

# (SUR) SURVEYING

#### SUR1501 Fundamentals of Surveying

Surveying principles, theories, practices and management using manual, automated and Global Positioning System surveying equipment. Distance and direction measurement, establish horizontal and vertical control, and compute horizontal and vertical angles. Perform traverse and grading computations and instrument adjustment. Perform topographic surveying requirements, site reconnaissance, and perform and compute construction layout requirements. Utilize Global Positioning System surveying equipment and accessories. Upload/download, process, and convert survey data.

#### 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.

# (SVE) 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 anti-exposure 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.

# (SVR) 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.

#### 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 fire craft 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.

#### 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 searchand-rescue operation.

#### 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.

# (SVS) SERVICES

#### SVS1101 Introduction to Services

Introduction to Services operations and programs with emphasis on economic operation and customer satisfaction. Includes principles of financial management, customer service techniques, protection of assets, safety standards, and career progression.

#### SVS1102 Introduction to Food Services

Fundamentals of food service operations. Includes management of subsistence requirements, storage and inventory procedures, accounting and reporting systems, kitchen safety, sanitation and hygiene practices, menu planning, Air Force Recipe System, weights and measurement conversions, customer relations, progressive cooking, waste prevention, demonstration of proper food preparation and serving line techniques.

#### SVS1103 Lodging Fundamentals

Principles of lodging operations and management. Includes front desk procedures, sundry sales, guest reservations, contract lodging, protocol, and familiarization with the lodging management software

#### SVS1104 Services Readiness

Fundamentals of services support in contingency operations. Includes readiness in base services principles such as contingency feeding, accounting, fitness and recreation, lodging shelters and assignments, force beddown, search and recovery procedures, mortuary affairs operations, and mess kit laundry.

#### SVS1105 Fitness and Sports Management

Introduction to fitness and sports management. Includes fitness facility operations, staff training requirements, fitness and sports equipment maintenance, fitness improvement and sports programs, physical conditioning and training exercises with emphasis on calisthenics, cardiovascular, selectorized, and free weights equipment familiarization, injury prevention, and overview of the major muscle groups and musculoskeletal system.

#### 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.

# (TRN) TRANSPORTATION

#### **TRN1604 Air Passenger Management**

Flight schedules and publications, aircraft identification, preparation of air passenger

documents, passenger reservations/scheduling, and transportation funding procedures.

#### **TRN1605 Air Passenger Processing and Services**

Processing and manifesting air passengers and baggage, operation of passenger and baggage handling equipment, terminal announcements, passenger handling techniques, and good customer relations.

#### **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 non-hazardous 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.

#### 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.

#### **TRN1618 Surface Transportation of Dangerous Materials**

Introduction to traffic management and terminal service for rail, motor vehicle, and water transportation. Includes special problems related to movement of dangerous materials.

#### **TRN1619 Cargo Preparation**

Packing and preservation principles for general, special, and hazardous cargo storage and shipment. Includes handling of hazardous materials, operation and maintenance of shop tools for the fabrication of shipping containers, safety procedures, and operation of material handling equipment.

#### **TRN1620 Airlift of Dangerous Materials**

Inspection, certification, and safety supervision in transporting cargo; includes discrepancy reporting, compatibility planning, and special handling requirements.

#### **TRN1622 Cargo Processing and Documentation**

Techniques, principles, and computer methods of processing air cargo. Includes understanding

requirement for mail, dangerous cargo and special equipment.

#### **TRN1631 Traffic Management**

Understanding the administration function of traffic freight, personal property and passenger management. Includes materiel, and storage of personal property, passenger movement, and automatic data processing management 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 post flight duties of aircraft loadmaster. Includes positioning aircraft, determining load arrangement, aircraft preparation, preflight and in-flight briefings of passengers, aircraft preparation, and post flight inspection of aircraft.

#### TRN1641 Loadmaster Tactical Delivery/C-130 Aircraft

Tactical delivery of equipment/personnel by aircraft crewmembers; includes assembly/inspection of cargo load and emergency procedures.

### **TRN1642 Vehicle Operator Course**

Fundamental principles of vehicle operating procedures unique to special purpose vehicles. Includes unusual environments, special configurations applicable for use of these vehicles; safety procedures for trailer towing, convoying and off-road situations.

#### **TRN1644 Shipment Planning**

Procedures for handling and transporting cargo economically and effectively. Includes standard transportation movement procedures, consolidation and routing of freight shipments. transportation and movement procedures, consolidation of shipments, and routing of freight shipments.

#### **TRN1648 Air Passenger and Cargo Management**

Transportation responsibilities, resources, and management of Military Airlift System (MAS). Special responsibilities of each transportation subdivision, safety, types of aircraft, airlift systems, military air terminals and manning and resources for operation. MAS capability to respond in war and peacetime.

#### **TRN1650 Operator Maintenance/Vehicle Specifications**

Introduction to vehicles, their specifications and configurations. Identify simple facts, specifications and procedures using tow hitch, pintle hook, wrecker/recovery, equipment and basic operator maintenance

#### **TRN1801 Basic Combat Convoy Course**

Introduction to ground operations during wartime contingencies. Includes convoy operations, ground operations, field communications, weapon fire control measures, weapon range estimation, surveillance, night observation devices, land navigation, combat lifesaving techniques, and urban reaction operations.

#### **TRN1802 Transportation Combat Readiness and Resources**

Introduction to transportation deployment operations and wartime contingency planning. Includes resource management accounting systems, war reserve materials, manpower and personnel processes, airlift validations and air expeditionary force planning.

### TRN2602 Aircraft Cargo Loading

Principles, techniques, and methods of cargo load planning. Includes loading/offloading; use of cargo loading system; cargo tiedown requirements for general, vehicular, and special cargo; and weightand-balance computations.

#### TRN2611 Airlift/Terminal Operations and Management

Principles of logistics mission and role of contingency airlift in support of materiel and personnel movement; includes various types of airlift operations, aerial port organizational structure, and managerial support of daily activities.

#### TRN2612 Advanced Traffic Management

Movement of cargo and passengers using modern traffic management automated systems. Includes resolution of case problems, budgeting, planning, and scheduling.

#### **TRN2621 Motor Vehicle Fleet Management**

Organization, manpower, and public law in motor vehicle fleet management and operation; includes managerial decisions for lease or purchase of vehicles, contingency planning, fleet analysis and safety/accident prevention.

# 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.

# **TRN2627 Aerial Port Operations**

Principles of aerial port operations; includes the command level functions and their relationship with aerial port functions and automated systems; basic responsibilities of capability forecasting; basic functions of information control, cargo palletization, shoring, restraints and load planning; passenger/baggage handling procedures and documentation; and customer service, terminal security, aircraft services, and airlift scheduling.

# TRN2628 Transportation of Personal Property

Policies and procedures for movement of personal property. Includes entitlements; counseling of personnel; management and selection of carriers; packing, storage, and tracking of household goods; contract management; second destination funding; quality control responsibilities; and report generation using the Transportation Operational Personal Property Shipping System.

# **TRN2702 Airlift Operations Planning**

Understanding the development of individual and joint operation plans. Includes interservice operations, airlift weight capabilities, war planning, shipment identification priorities, correction of transportation and/or materiel shortfalls in mobility operations.

# TRN2801 Advanced Combat Convoy Operations

Convoy operations during wartime contingencies. Includes ground operations; field communications; weapon fire control measures; weapon range estimations; surveillance; night observation devices; land navigation; combat lifesaving techniques; and urban reaction operations.

# (TVS) TELEVISION SYSTEMS

# 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.

# (VEM) 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.

## VEM1104 Welding Operations

Knowledge, skills, and theories necessary to perform varied types of welding, such as, oxyacetylene, electric, shielded metal arc, gas metal arc, gas tungsten arc, and plasma cutting. Includes Air Force Occupational Safety and Health standards and job safety procedures.

## VEM1501 Combustion Engines

Principles for operation and care of gasoline and diesel engines; includes emission, fuel/air, cooling, and lubrication systems; engine assembly/disassembly; and engine tune up 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.

# VEM1503 Power Train Fundamentals

Operational principles of clutches, standard and automatic transmissions, torque converters, hydraulic systems, universal joints, propeller shafts, axles, differentials, transfer cases, and steering systems.

# VEM1505 Accessory Equipment Repair

Window and door regulator alignment and adjustment, trim hardware and automotive glass replacement, and removal, repair and replacement of upholstery. Armor removal and installation. 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.

#### VEM1523 Diesel Engine Maintenance

Diesel engine principles emphasizing maintenance and tune up and operating principles of distributor and multiple pump-type fuel systems.

#### 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.

# VEM1525 Operation and Maintenance of Refueling Vehicles

Vehicle winterization procedures, static reels, and pressure controls, as well as bottom load, heater, power take-off and throttle interlock, fuel supply, filter fuel metering, defueling, evacuation, and hose reel systems.

#### 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.

#### VEM1531 Vehicle Winterization and Corrosion Control

Preparation of vehicles for storage, shipment, and inclement weather. Includes corrosion control, wrapping procedures, 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.

#### **VEM2501 Electromechanical Circuits and Systems**

Automotive test equipment to inspect, service, test, adjust, and troubleshoot engine starting, ignition and charging circuits.

#### 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.

#### VEM2511 Hybrid Vehicles Service and Technology

Operation and maintenance of hybrid vehicles. Includes hybrid vehicle principles and concepts, electrical theory, regenerative braking, High Voltage Traction Batteries (HVTB), Electronically Controlled Continuously Variable Transmissions (eCVT), and safety.

# (WEL) WELDING

#### WEL1501 Oxyacetylene Welding

An overview of 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
- 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 (AFSC).
- Air Force Specialty Code (AFSC) the alphanumeric identifier of occupational specialty of Airmen and skill level: unskilled (1 level), apprentice (3 level), journeyman (5 level), craftsman (7 level) or superintendent (9 level).
- AGE, Aerospace Ground Equipment
- 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
- AU-ABC, Air University Associate-to-Baccalaureate Cooperative
- 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 program, submitted final documents to the college and are recommended for award of the associate in applied science degree.

# **TERMS & ACRONYMS**

- **Catalog of registration** is the edition of the catalog current at the time students register 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 applied toward degree completion.
- CCAF, Community College of the Air Force
- CLEP, College-Level Examination Program
- Commandant is the 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
- FEMA, Federal Emergency Management Agency
- GEM, General Education Mobile
- 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.
- ISD, Instructional Systems Development

ITMS, Instructor of Technology and Military Science

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 (AFSC), Special Duty Identifier (SDI) and Reporting Identifier (RI).
- 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 eligibility.

- **Proficiency (P) credit** is awarded to Air Force enlisted personnel who complete Tri-Service or DoD *initial skills* career education/technical training and demonstrates apprentice level competency. Students demonstrate learning objective knowledge and skill competency through a minimum of 15 months of supervised performance. Awarded proficiency credit is CCAF degree-applicable credit.
- **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.

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

## **TERMS & ACRONYMS**

**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.

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- Alabama Association of Collegiate Registrars through Air University
- American Association of Collegiate Registrars and Admissions Officers through Air University
- American Association of Community Colleges through Air University
- American Council on Education through Air University
- American Technical Education Association
- Aviation Technical Education Council
- Council for Higher Education Accreditation through Air University
- Southern Association of Colleges and Schools through Air University
- Southern Association of Collegiate Registrars and Admissions Officers through Air University
- Joint Services Aviation Maintenance Technician Certification Council
- National Aerospace Technical Education Center
- National Center for Aircraft Technician Training

This publication has been reviewed and approved by the preparing agency according to current directives on policy, essentiality, propriety and quality.

#### **Memberships**