The Community College of the Air Force, Maxwell AFB, 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 Commission on Colleges of the Southern Association of Colleges and Schools to award the associate degree.
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.
# Table of Contents

**Telephone & Staff Directory** ................................................................. iv
   The main CCAF telephone numbers. The staff with titles and degrees.

**Message From The Commandant** ..................................................... vii

**Message From The Superintendent** ................................................. vii

**General Information** ........................................................................ 1
   The history. The system. The advisory bodies. The policies. The education documents. The student.

**Degree Programs** ........................................................................... 13
   The Associate in Applied Science Degree. The program codes. The master list of CCAF degree programs.

**Licensure & Certifications** ............................................................... 91
   The CCAF role in certification of aircraft maintenance technicians. The certification program offered by CCAF to instructors teaching CCAF courses.

**Affiliated Schools** .......................................................................... 103
   The schools where CCAF courses are offered.

**Course Descriptions** ...................................................................... 107
   The code index. The master list of all CCAF courses.

**Terms & Acronyms** ......................................................................... 193
   The definitions.

**Index** ............................................................................................. 197
   The list of items by subject.

**Memberships** .................................................................................. 201
   The organizations where CCAF holds memberships.

This catalog is available on-line at


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**2008-2010 CCAF General Catalog**

iii
# Telephone & Staff Directory

130 West Maxwell Boulevard  
Maxwell AFB, Alabama 36112-6613  
Point of Contact: (334) 953-extension DSN: 493-extension  
Fax: (334) 953-5231/2980  
E-mail: (first name.last name)@maxwell.af.mil  

**CCAF Homepage** … www.au.af.mil/au/ccaf/

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Editor, Yolanda Alston  
(334) 953-4782, DSN 493-4782  
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Bellevue Univ
Gail Hughes ............................ Executive Secretary/Protocol
M Sgt Michael Wolfe ............................ First Sergeant
AAS, CCAF
Mr. Robert Brouillard. ............................ AU Liaison
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EdS, Chardon State College; EdD, Univ of South
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3 AAS, CCAF; BS, Alabama State Univ
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Marie Delong............................... Education Specialist
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Irene Lee ...................................... Education Specialist
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T Sgt Khaleem Shabazz........... Asst. Chief, Services Degree
Programs; AAS, CCAF
M Sgt Rita Edwards .... Chief, Technical Degree Programs
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AAS, CCAF
T Sgt David Brown .............. Program Manager
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T Sgt Ralph Brown .............. Program Manager
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T Sgt Tracey Canady .............. Program Manager
AAS, CCAF
T Sgt Larry Davidson .............. Program Manager
AAS, CCAF; BS, Park Univ
T Sgt Jose Del Pino .............. Program Manager
AAS, CCAF
T Sgt Larry Dondrea .............. Program Manager
T Sgt David Graham .............. Program Manager
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T Sgt Michael Norton .............. Program Manager
T Sgt Ryan Oyler .............. Program Manager
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T Sgt Jason Phillips .............. Program Manager
2 AAS, CCAF; FAA A&P Certification
T Sgt Stephen Segher .............. Program Manager
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T Sgt David Winegar .............. Program Manager
AAS, CCAF
T Sgt Craig Zaleski .............. Program Manager
AAS, CCAF
T Sgt Shawn Zielinske .............. Program Manager
AAS, BS, Wayland Baptist Univ
SSgt Michael Conway .............. Program Manager
AAS, CCAF
SSgt Jessica Davis .............. Program Manager
AAS, CCAF

SSgt John Glover ................................. Program Manager
AAS, CCAF
SSgt Eric Griggs ................................. Program Manager
AAS, CCAF
SSgt Juan Maldonado ............................. Program Manager
AAS, CCAF
SSgt Tywund Minter ............................ Program Manager
SSgt Jeffery Moody ................................ Program Manager
AAS, CCAF
SSgt Richard Rogers ............................. Program Manager
SSgt Jeffery Moody ................................ Program Manager
AAS, CCAF
SSgt Johnathan Smith ............................ Program Manager
AAS, CCAF

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SSgt Sylvia Bivins .................. Registrar Services
SSgt Garrett Trent .......................... Registrar Services
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BSBA & MSHRM, Faulkner Univ
Pam Corley .......................... Education Technician
Carolyn Howard .......................... Education Technician
BS, Troy Univ
James Hughes .......................... Education Technician
BS, Troy Univ
Donna Jones .......................... Education Technician
Ethel Lassie .......................... Education Technician
Debra Paggett .......................... Education Technician
AAS, CCAF
Patricia Webster .......................... Education Technician

MSgt Janice Smith .................. Chief, Technology Support
AAS, CCAF
T Sgt Roger Steele .................. NCOIC, Computer Support
T Sgt Thomas Zakrzewski ........ NCOIC, Systems Support
SSgt Elderidge Moran ........ NCOIC, Systems Maintenance
SrA Thomas Gough .......................... Client Support

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Yolanda Alston .......................... Publications
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Dennis Tomlin .......................... Webmaster/Distance Learning
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Auburn Univ
SMSgt Leonard Lee .................. Director, Campus Relations
2 AAS, CCAF; BS, Troy Univ-Montgomery
MSgt Jeff Offhaus ........ Flight Chief, Campus Relations
AAS, CCAF
T Sgt Timika Hall .......................... Regional Manager
2 AAS, CCAF; BS, Wayland Baptist Univ
T Sgt Michael Purnell ........ Regional Manager
SSgt Caleb Alvarado ........ Regional Manager
AAS, CCAF
SSgt Lamesa George ........ Regional Manager
AAS, CCAF
MESSAGE FROM THE COMMANDANT …

The Community College of the Air Force is a unique higher education institution. From the Administrative Center located at Maxwell AFB we partner with 103 affiliated Air Force schools, 82 Education Service Offices located worldwide and more than 1,500 civilian academic institutions to serve more than 333,000 Air Force active, guard and reserve enlisted personnel, making CCAF the world’s largest community college system. Our students and graduates are dedicated adult learners who proudly serve their nation’s call. CCAF’s professional team is proud of the 67 degree programs we offer to give our Air Force enlisted corps intellectual tools to further that service… one student at a time. We are the Airman’s college, educating Airmen for life.

Lt Col Raymond Staats

MESSAGE FROM THE SUPERINTENDENT …

The Community College of the Air Force is dedicated to the professional growth of enlisted Airmen in the 21st 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.

CMSgt Joseph Thornell
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. Air University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS/COC) (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, effective at the beginning of the 2004 calendar year. Community College of the Air Force (CCAF) is now a part of Air University. The Community College of the Air Force was separately accredited by SACS/COC from 1980-2004.

The History

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

The seven major Air Force training schools—the five Air Force Schools of Applied Aerospace Sciences, the USAF School of Health Care Sciences and the USAF Security Service School—provided the technical portion of CCAF’s credential when the college was activated. The program model combined the technical education offered by Air Force schools, a core of general education from 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 degree-granting authority for the college from Congress. President Gerald R. Ford signed Public Law 94-361 on 14 July 1976 authorizing the ATC commander to confer the associate degree.

A site review committee, composed of nationally recognized educators appointed by the US Office of Education (USOE), evaluated the college in October 1976. After favorable recommendations by the committee and successful public hearings in Washington DC, the Commissioner of Education certified
degree-granting authority in January 1977 before the USOE. Success of the effort can mainly be attributed to the testimony given in USOE hearings by Lieutenant General John Roberts, Chief Master Sergeant of the Air Force Thomas Barnes, Dr. Jerome Lysaught (chairman of the CCAF Advisory Committee) and Colonel Lyle Kaapke. The college awarded its first associate in applied science 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 SACS Commission on Colleges. 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 their present site at Maxwell AFB, Alabama, effective 1 April 1979. The SACS Commission on Colleges reaffirmed CCAF’s accreditation on 9 December 1986.

On 1 July 1993 the Community College of the Air Force realigned under Air University, which became the educational component of the redesignated Air Education and Training Command. However, the commander of Air Education and Training Command (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. CCAF is now accredited through Air University by the SACS Commission on Colleges until 23 June 2009.

Over the years the college has grown both in numbers and recognition. With more than 335,000 registered students, the college is the largest multicampus community college in the world. Its affiliated schools are located in 37 states, the District of Columbia, 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, and in 2005-2006 CCAF students earned 1.61 million hours of college credit. Since issuing its first degree in 1977, the college has awarded more than 308,000 associate in applied science degrees.

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.

CCAF Vision

The foremost occupational education institution--preparing the world’s best expeditionary-minded air, space and cyberspace enlisted leaders.

Core Values

The Air Force core values are:

- Integrity First
- Service Before Self
- Excellence in All We Do
General Information

The System

The Air University Board of Visitors, CCAF’s governing board, is chartered to provide independent advice and recommendations on matters pertaining to the educational, doctrinal, and research policies and activities of Air University. 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.

Administrative Center

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

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. ........................................ 16 August 1982
Col Rodney V. Cox, Jr. ............................................ 19 October 1982
Col Russell A. Gregory ............................................ 24 May 1988
Lt Col James L. Antenen .......................................... 2 April 1992
Col Paul A. Reid ..................................................... 19 June 1992
Col Tamzy J. House .................................................. 3 July 1996
Col James M. McBride ............................................. 4 March 1999
Lt Col Jeffery K. Little ............................................ 15 December 2001
Col Eric A. Ash ....................................................... 29 April 2002
Col Thomas D. Klinicar .......................................... 3 June 2005
Lt Col Raymond W. Staats ....................................... 27 July 2007

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 technician 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/DFAC, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613; (334) 953-2877 or DSN 493-2877.

Air University Board of Visitors

The Board of Visitors is chartered to provide advice, views, and recommendations on the educational, doctrinal, and research policies and activities of Air University. The board meets with and advises the Secretary of the Air Force on matters of policy regarding the mission of Air University.
The membership is selected from the fields of education, business, industry, the professions, and public service. Members normally serve annual renewable terms up to a maximum of nine years. Members are invited to serve by the Air University commander in the name of the chief of staff of the United States Air Force (USAF).

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 views and recommendations to the Air University commander. This report is then presented to the Chief of Staff, United States Air Force, and to the Secretary of the Air Force.

The Advisory Bodies

In addition to the Air University (AU) 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 encourage 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 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/DF, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613.
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 AFRS 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. The student must declare all institutions attended for course credit to be accepted in transfer if applicable to a degree program. Once a civilian college course or national test is recorded, the student is identified as a participant.

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

Degree Time Limit

Registration in all degree programs, except Instructor of Technology and Military Science (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 is pursuing a subsequent CCAF degree will be disenrolled at the end of the allotted time. A student desiring registration in another subsequent degree program may do so by submitting an Air Force Form 968, Community College of the Air Force Action Request, through the education services office or ANG/AFRC CCAF advisor.

A student enrolled in the 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.

**Transfer Credit**

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

**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 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 College and the Defense Language Proficiency Test.

**Certification, Licensure & Registry Credit**

Degree requirements may be satisfied by credit awarded for degree-relevant governmental and/or professional certification, licensure and/or registry. A student holding a degree-relevant certification, licensure and/or registry should contact the sponsoring agency, association or society to request official written verification is sent to CCAF/DFR, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613. Additional information on the Federal Aviation Administration Airframe and Powerplant certification is available on pages 97-98.

**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.

Candidacy Status & Graduation

The student’s counselor or advisor recommends candidacy status. Education services counselors, advisors or training technicians notify the student of candidacy status. After a student meets all requirements, the college notifies the student’s current education services office, or nominating training or education service office of degree completion. All degree requirements must be satisfied before separation, retirement or commissioning and a student must have been enrolled in a degree program before that date. A student 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 1 week before graduation.

“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 1 year of removal of specialty code.
♦ Degree requirements must be completed within 1 year.

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

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

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

Washback Policy

Every effort is made to ensure the student successfully completes CCAF courses by carefully designed teaching and learning activities, appropriate assessment and evaluation processes, and personal assistance. If all avenues are exhausted and academic achievement continues below acceptable limits, the student may, under some circumstances, repeat a portion or the entire course—this is 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 this action a student completes, signs and puts a statement requesting withdrawal in the Remarks of an Air Force Form 968, Community College of the Air Force Action Request, through a local base education office or ANG/AFRC CCAF advisor.

**The Educational Documents**

To initiate a record update, students must submit a SNAPSHOT/Air Force Form 968, Community College of the Air Force Action Request, through 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/DFRS, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613.

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

**Fraudulent Documents**

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

**Document Process**

When documents arrive at the administrative center, 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 needs to update records no more than once a year unless applying for an Air Force commission, before separation or retirement, or when it may result in degree completion.

Information Release

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

Transcript Request

Transcripts are mailed out 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 their transcripts from any computer through our on-line Web site at: https://www.maxwell.af.mil/au/ccaf/transcripts.asp. Through this site students may check the status of previous orders, via the “transcript history” option.

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.

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 an 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 handling fee starting at $2.00 that will be 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.degreechk.com or https://www.degreechk.com/tplus?ALUMTROSCHOOL or by phone at 1-800-646-1858 / 1-847-446-1027 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 14 days.

    **Send a written transcript request to:**
    CCAF/DFRS
    130 West Maxwell Blvd
    Maxwell AFB AL 36112-6613

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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."

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**The Student**

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

**Feedback**

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

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

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

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

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

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

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

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

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

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

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

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

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

**Theater.** Current films are normally shown daily.
This section contains the degree program requirements of the Community College of the Air Force. Degree programs are developed by Air Force technical experts and civilian or military consultants and reviewed by the Dean of Academic Affairs, 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.
DEGREE PROGRAMS

THE ASSOCIATE IN APPLIED SCIENCE DEGREE

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

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

Degree Completion Requirements

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

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>Technical Education</th>
<th>Leadership, Management &amp; Military Studies</th>
<th>Physical Education</th>
<th>General Education</th>
<th>Program Elective</th>
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<tr>
<td></td>
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<td>6</td>
<td>4</td>
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</table>

* Note: The Paralegal degree requires 18 SH 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).

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

Residency Requirement (16 semester hours)

A student must have a minimum of 16 SH 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 basic military training or coursework completed in an affiliated school or through internship credit awarded for progression in an Air Force occupational specialty.

Technical Education Requirement (24 semester hours)

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

Office symbols and DSN telephone numbers are listed on the Program Codes table starting on page 19.

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

The following criteria are used to apply courses accepted in transfer to the technical education requirement:
♦ Must be from an accredited institution or a recognized candidate for accreditation.
♦ Must be taught by faculty who meet the minimum faculty professional preparation requirements of the Commission on Colleges of the Southern Association of Colleges and Schools.
♦ Must be listed and identified in the offering institution’s general catalog.
♦ Must be collegiate course work relevant to the technical requirement.
♦ Must have been completed with the equivalent of a “C” grade or better.
♦ Must not be developmental, preparatory, remedial, refresher or review.
♦ Must not duplicate or significantly overlap another course or test applied to the degree program.

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

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

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

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

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

**Computer Science.** Hands-on use of computers in today’s work environment. Desktop computer use; mainframe computer concepts; word processing techniques; virus prevention and detection; and data security. Computer history, hardware design, computer maintenance and management of computer systems are not acceptable.

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

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

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

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

**Human Anatomy and Physiology.** Normally includes study of digestive, metabolic, nervous, muscular, endocrine, respiratory, circulatory and reproductive systems; and their application to health and hygiene.
Statistics. Basic statistical theory and application. Topics normally include descriptive statistics, probability, binomial and normal distributions, hypothesis testing, confidence intervals, correlation and simple regression, and nonparametric methods.

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

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

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

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

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

♦ Must be from an accredited institution or a recognized candidate for accreditation.
♦ Must be taught by faculty who meet the minimum faculty professional preparation requirements of the Commission on Colleges of the Southern Association of Colleges and Schools.
♦ Must be listed and identified in the offering institution’s general catalog.
♦ Must emphasize the fundamentals of management and management of human resources. Examples of acceptable courses are Principles of Management, Personnel Management, Human Resource Management, Principles of Supervision and Organizational Behavior. Examples of unacceptable courses are Small Business Management, Managerial Accounting, Financial Management, Labor and Management Relations, and other specialized management and/or business courses.
♦ Must have been completed with the equivalent of a “C” grade or better.
♦ Must not be developmental, preparatory, remedial, refresher or review.
♦ Must not duplicate or significantly overlap another course or test applied to the degree program.

Physical Education Requirement (4 semester hours)

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

General Education Requirement (15 semester hours)

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

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

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

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

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

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

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

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

**Mathematics**........................................3

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

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

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

**Humanities** ........................................3

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

**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, the 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 fundamental 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 [http://www.au.af.mil/au/ccaf/](http://www.au.af.mil/au/ccaf/) 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. Such courses as science for elementary and secondary teachers, health, nutrition, and hygiene are not acceptable.

♦ Foreign language credit earned at the Defense Language Institute or through the Defense Language Proficiency Test.

♦ A maximum of 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to the program of enrollment.
## THE PROGRAM CODES

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

<table>
<thead>
<tr>
<th>AFSC</th>
<th>Program Title</th>
<th>Program Code</th>
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## Degree Programs

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AEROSPACE GROUND EQUIPMENT TECHNOLOGY (4VAB)

Occupational Specialty  2A6X2

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

Technical Education  (24 semester hours)  A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

Technical Core  Maximum Semester Hours
Aerospace Ground Equipment Maintenance .......... 24
CCAF Internship......................................................... 18

Technical Electives  Maximum Semester Hours
Advanced Aerospace Ground Equipment
  Maintenance ......................................................... 12
  Air-Conditioning & Refrigeration ......................... 3
  Computer Science .................................................. 6
  Corrosion Control .................................................. 3
  Diesel Engine Maintenance ................................. 6
  Electricity/Electronics ......................................... 6
  Fluid Power .......................................................... 3
  General Chemistry/Algebra-Based Physics ............ 4
  Hazardous Materials ............................................. 3
  Industrial Safety ................................................... 3
  Maintenance Management .................................. 3

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

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

Program Elective  (15 semester hours)  Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
AEROSPACE HISTORIAN
(9DHK)

Occupational Specialty 3H0X1

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

Technical Education (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

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

Technical Electives ......... Maximum Semester Hours
Computer Science..........................................................6
Copyreading & Editing..................................................3
Human Communication................................................6
Leadership & Management............................................3
Logic..............................................................................3
Managerial Communications........................................3
Military Science...........................................................3
Philosophy.....................................................................3
Political Science ..........................................................3
Statistics.........................................................................6
United States History....................................................9

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

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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. See page 14, Technical Education Requirement.

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

Technical Electives Maximum Semester Hours
Computer Science ............................................................................................. 6
Emergency Medicine ........................................................................................ 3
General Biology ................................................................................................ 4
General Chemistry ............................................................................................. 8
Guidance & Counseling ..................................................................................... 3
Human Anatomy & Physiology ......................................................................... 4
Medical Readiness ................................................................................................. 3

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

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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

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

**Technical Education**  (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

#### Technical Core

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace Control &amp; Warning Systems</td>
<td>24</td>
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<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Computer Networking</td>
<td>6</td>
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<tr>
<td>Radio Communications</td>
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<td>Space Systems Operations</td>
<td>24</td>
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</table>

**Technical Electives**  (Maximum Semester Hours)

<table>
<thead>
<tr>
<th>Subject</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Astronautics</td>
<td>3</td>
</tr>
<tr>
<td>Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>Aviation/Flight Safety</td>
<td>3</td>
</tr>
<tr>
<td>Basic Electronics Theory/Applications</td>
<td>6</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>Programming Languages</td>
<td>6</td>
</tr>
<tr>
<td>Solid-State Theory/Applications</td>
<td>3</td>
</tr>
<tr>
<td>Space Propulsion</td>
<td>3</td>
</tr>
<tr>
<td>Survival Training</td>
<td>3</td>
</tr>
<tr>
<td>Technical Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

**Leadership, Management & Military Studies**

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

**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**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
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<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td></td>
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<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
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</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
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</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

**Program Elective**  (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.
DEGREE PROGRAMS

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. See page 14, Technical Education Requirement.

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

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

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

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

2008-2010 CCAF General Catalog
AIRCREW SAFETY SYSTEMS TECHNOLOGY (4VAT)

Occupational Specialty 1T1X1

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

Technical Education  (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

Technical Core  Maximum Semester Hours
Aircrew Safety Systems Principles & Procedures ............................................. 24
CCAF Internship .................................................................................................. 18
General Principles of Survival .............................................................................. 15

Technical Electives  Maximum Semester Hours
Aircrew Safety Systems Instructor ...................................................................... 3
Chemical Defense/Decontamination .................................................................. 3
Computer Science ................................................................................................ 6
Emergency Equipment ......................................................................................... 3
Parachuting ............................................................................................................ 3
Quality Assurance ................................................................................................ 3
Technical Writing .................................................................................................. 3

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

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 ............................................................................................... 3
Speech ...................................................................................................................... 3
Written Communication ......................................................................................... 3
English composition ............................................................................................... 3
Mathematics ........................................................................................................... 3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics

Social Science ...................................................................................................... 3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology

Humanities ............................................................................................................. 3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion

Program Elective  (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
AIRWAY SCIENCE
(4VEN)

**Occupational Specialty** 1C1X1, 1C2X1

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

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

**Technical Core**

<table>
<thead>
<tr>
<th>Subject/Subjects</th>
<th>Maximum Semester Hours</th>
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<tbody>
<tr>
<td>Aeronautical Laws and Regulations/Legislation</td>
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<tr>
<td>Air Navigational Aids</td>
<td>3</td>
</tr>
<tr>
<td>Air Traffic Control Principles</td>
<td>15</td>
</tr>
<tr>
<td>Air Transportation Principles</td>
<td>3</td>
</tr>
<tr>
<td>Airport Management</td>
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</tr>
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<td>CCAF Internship</td>
<td>18</td>
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<tr>
<td>Control Tower Operations</td>
<td>15</td>
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<td>Hostile Environment Techniques</td>
<td>3</td>
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<tr>
<td>Radar Approach Control</td>
<td>15</td>
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<tr>
<td>Tactical Air Command and Control</td>
<td>24</td>
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</tbody>
</table>

**Technical Electives**

<table>
<thead>
<tr>
<th>Subject/Subjects</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Flight Operations</td>
<td>9</td>
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<tr>
<td>Aviation/Flight Safety</td>
<td>3</td>
</tr>
<tr>
<td>Basic Electronics Theory/Applications</td>
<td>3</td>
</tr>
<tr>
<td>Basic Flight Operations</td>
<td>3</td>
</tr>
<tr>
<td>Climatology/Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>FAA Private/Commercial Pilot Certification</td>
<td>3</td>
</tr>
<tr>
<td>FCC General Radiotelephone Operator’s License</td>
<td>9</td>
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<tr>
<td>Technical Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

**Leadership, Management & Military Studies**

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

**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**

<table>
<thead>
<tr>
<th>Subject/Subjects</th>
<th>Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>Oral Communication</td>
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<tr>
<td>Speech</td>
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<tr>
<td>Written Communication</td>
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<tr>
<td>English composition</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Intermediate algebra or a college-level mathematics</td>
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</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography,</td>
<td></td>
</tr>
<tr>
<td>government, history, political science, psychology,</td>
<td></td>
</tr>
<tr>
<td>sociology</td>
<td>3</td>
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<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical</td>
<td></td>
</tr>
<tr>
<td>significance), foreign language, literature,</td>
<td></td>
</tr>
<tr>
<td>philosophy, religion</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
### Allied Health Sciences (7GAL)

<table>
<thead>
<tr>
<th>Occupational Specialty</th>
<th>4N0X1</th>
</tr>
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</table>

#### Degree Requirements

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

#### Technical Education

(24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

#### Technical Core

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>12</td>
</tr>
<tr>
<td>Human Anatomy &amp; Physiology</td>
<td>8</td>
</tr>
<tr>
<td>Kinesiology</td>
<td>12</td>
</tr>
<tr>
<td>Medical Assisting</td>
<td>24</td>
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<tr>
<td>Nursing</td>
<td>24</td>
</tr>
<tr>
<td>Occupational Therapy</td>
<td>24</td>
</tr>
<tr>
<td>Orthotics</td>
<td>24</td>
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</table>

#### Technical Electives

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science</td>
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<td>General Biology</td>
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<td>General Chemistry</td>
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<td>General Psychology</td>
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<td>Medical Readiness</td>
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<tr>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>Survival Training</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Leadership, Management & Military Studies

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

#### 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.

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>Oral Communication</td>
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<td>Speech</td>
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<td>Written Communication</td>
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<td>English composition</td>
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<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

#### Program Elective

(15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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 Licensure and Certification section for certification information.
AVIATION MAINTENANCE TECHNOLOGY (4VAD)

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

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

Technical Education (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

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

Technical Electives Maximum Semester Hours
Advanced Aircraft Accessory Systems Maintenance . 12
Advanced Aircraft Airframe Repair ......................... 12
Advanced Aircraft Maintenance ............................. 12
Advanced Aircraft Propulsion Maintenance ............ 12
Aircraft Aerodynamics ............................................. 3
Aircraft Composite Bonded Structures..................... 6
Aircraft Weight & Balance ...................................... 3
Aviation Safety ......................................................... 3
Avionic Systems Theory/Maintenance ................... 3
Computer Science ...................................................... 6
Corrosion Control ..................................................... 6
Electricity/Electronics ............................................. 6
Engineering Graphics/Computer Aided Drafting ...... 3
General Chemistry/Algebra-Based Physics ............. 4
Hazardous Materials/Industrial Safety .................. 3
Materials & Processes.............................................. 3
Nondestructive Inspection ................................... 3
Quality Assurance ..................................................... 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 16.

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.

2008-2010 CCAF General Catalog 31
DEGREE PROGRAMS

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. See page 14, Technical Education Requirement.

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

Technical Electives  .......... Maximum Semester Hours
Advanced Flight Operations.........................................9
Air Traffic Control Principles......................................6
Air Transportation Principles.....................................3
Aviation/Flight Safety ..............................................3
Basic Flight Operations ............................................3
Computer Science....................................................6
FAA Aircraft Dispatch Certification .............................10
FAA Private/Commercial Pilot Certification..................6
FCC General Radiotelephone Operator’s License............9
Principles of Accounting ..........................................6
Technical Writing....................................................3
Typing/Keyboarding................................................3

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

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

Program Elective  (15 semester hours)  Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
AVIATION OPERATIONS
(4VCB)

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

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

Technical Education  (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

Technical Core

<table>
<thead>
<tr>
<th>Subjects/Topics</th>
<th>Maximum Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>Aerial Gunner Principles/Procedures</td>
<td>24</td>
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<tr>
<td>Air Transportation Principles</td>
<td>6</td>
</tr>
<tr>
<td>Aircraft Loadmaster Principles/Procedures</td>
<td>24</td>
</tr>
<tr>
<td>Aviation/Flight Safety</td>
<td>6</td>
</tr>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>FAA Flight Engineer Certification</td>
<td>18</td>
</tr>
<tr>
<td>Flight Attendant Principles/Procedures</td>
<td>12</td>
</tr>
<tr>
<td>Flight Engineer, Fixed Wing</td>
<td>24</td>
</tr>
<tr>
<td>Flight Engineer, Helicopter</td>
<td>24</td>
</tr>
<tr>
<td>Flight Rules &amp; Regulations</td>
<td>3</td>
</tr>
<tr>
<td>In-flight Refueling Operations</td>
<td>24</td>
</tr>
<tr>
<td>Introduction to Aviation/Aeronautics</td>
<td>3</td>
</tr>
<tr>
<td>Survival Training</td>
<td>6</td>
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</table>

Technical Electives

<table>
<thead>
<tr>
<th>Subjects/Topics</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Flight Engineering</td>
<td>12</td>
</tr>
<tr>
<td>Aerodynamics</td>
<td>3</td>
</tr>
<tr>
<td>Aircraft Systems</td>
<td>6</td>
</tr>
<tr>
<td>Aircraft Weight &amp; Balance</td>
<td>3</td>
</tr>
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<td>Aviation Law</td>
<td>6</td>
</tr>
<tr>
<td>Climatology/Meteorology</td>
<td>6</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Electricity/Electronics</td>
<td>6</td>
</tr>
<tr>
<td>FAA Airframe &amp; Powerplant Certification</td>
<td>6</td>
</tr>
<tr>
<td>FAA Private/Commercial Pilot’s Certification</td>
<td>6</td>
</tr>
<tr>
<td>General Chemistry/Algebra-Based Physics</td>
<td>4</td>
</tr>
<tr>
<td>Human Factors in Aviation/Flight Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Human Relations</td>
<td>3</td>
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</table>

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

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

Program Elective  (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
DEGREE PROGRAMS

AVIONIC SYSTEMS TECHNOLOGY (4VHS)

Occupational Specialty 2A0X1, 2A3X1, 2A3X2, 2A5X3

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

Technical Education  (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

Technical Core  Maximum Semester Hours
Avionic Systems Theory/Maintenance ..............................................24
CCAF Internship .............................................................................18
National Center for Aircraft Technician Training
  Certification ....................................................................................12

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

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

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

Program Elective  (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
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. See page 14, Technical Education Requirement.

Technical Core Maximum Semester Hours
Bioenvironmental Protection ........................................ 8
CCAF Internship ......................................................... 18
Disaster Medicine ......................................................... 9
Introduction to Bioenvironmental Science ................... 9
Occupational Environment ........................................... 6
Occupational Health & Safety Technologist Certification ........................................ 12
Radiation Health Physics ........................................... 4
Waste Management ..................................................... 8
Water Systems Management ....................................... 6

Technical Electives Maximum Semester Hours
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 16.

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or General education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
**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. See page 14, Technical Education Requirement.

**Technical Core**  
- Association for the Advancement of Medical Instrumentation Certification ..................................12
- Biomedical Equipment Maintenance Management .....12
- CCAF Internship .........................................................18
- Diagnostic Support Equipment Systems......................12
- Diagnostic Support Radiographic Systems..................12
- Physiological Monitoring Systems ................................9
- Therapeutic Support Equipment Systems....................12

**Technical Electives**  
- Basic Electronics Theory/Applications .........................6
- Computer Science..........................................................6
- Digital Techniques..........................................................6
- Electronic Circuit Design/Analysis ...............................6
- Human Anatomy & Physiology.....................................4
- 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 16.

**Physical Education** (4 semester hours)

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

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.


**CARDIOPULMONARY LABORATORY TECHNOLOGY (7GDA)**

**Occupational Specialty**  4H0X1

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

**Technical Education**  (24 semester hours)  A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

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

**Technical Electives** ..........................  Maximum Semester Hours
Computer Science ........................................... 6
Emergency Medicine ........................................ 3
Medical Readiness ......................................... 3
Medical Terminology ...................................... 3

**Leadership, Management & Military Studies**

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

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

**Program Elective**  (15 semester hours)  Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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 accredits the Cardiopulmonary Laboratory Apprentice courses (Phase I and II). See Licensure and Certification section for certification information.
### DEGREE PROGRAMS

**COMMUNICATIONS APPLICATIONS TECHNOLOGY (2IAL)**

**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. See page 14, Technical Education Requirement.

**Technical Core**  
<table>
<thead>
<tr>
<th>Subject/Subject Area</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airborne Communications Systems</td>
<td>9</td>
</tr>
<tr>
<td>Broadcast Communications</td>
<td>24</td>
</tr>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Communications Analysis &amp; Reporting</td>
<td>24</td>
</tr>
<tr>
<td>Cryptanalysis</td>
<td>12</td>
</tr>
<tr>
<td>Foreign Technical Language/Area Studies</td>
<td>18</td>
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<tr>
<td>Imagery Analysis</td>
<td>24</td>
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<tr>
<td>Introduction to Cartography</td>
<td>9</td>
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<td>Photogrammetry</td>
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**Technical Electives**  
<table>
<thead>
<tr>
<th>Subject/Subject Area</th>
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<tbody>
<tr>
<td>Aerial Photography</td>
<td>6</td>
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<tr>
<td>Aeronautics</td>
<td>3</td>
</tr>
<tr>
<td>College Algebra or higher-level Mathematics</td>
<td>3</td>
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<tr>
<td>Communication System Operations</td>
<td>6</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
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<tr>
<td>Intelligence Collection Management</td>
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<tr>
<td>International Studies</td>
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<td>Interviewing</td>
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<td>Principles of Communication</td>
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<td>Principles of Electronics</td>
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<td>Principles of Radar</td>
<td>6</td>
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<tr>
<td>Survival Training</td>
<td>4</td>
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</table>

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

**Physical Education** (4 semester hours)

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**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**  

<table>
<thead>
<tr>
<th>Subject/Subject Area</th>
<th>Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>Oral Communication</td>
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<tr>
<td>Speech</td>
<td></td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
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<tr>
<td>English composition</td>
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<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
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</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
### COMPUTER SCIENCE TECHNOLOGY

**Occupational Specialty** 3C0X2

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

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

**Technical Core**

<table>
<thead>
<tr>
<th>Subject/Category</th>
<th>Maximum Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Computer Systems Architecture/Analysis /Design</td>
<td>12</td>
</tr>
<tr>
<td>Computer Systems Management</td>
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<tr>
<td>Programming Languages</td>
<td>16</td>
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**Technical Electives**

<table>
<thead>
<tr>
<th>Subject/Category</th>
<th>Maximum Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>College Algebra or higher-level Mathematics</td>
<td>3</td>
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<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Data Communications</td>
<td>3</td>
</tr>
<tr>
<td>Data Structures</td>
<td>3</td>
</tr>
<tr>
<td>Database Management</td>
<td>3</td>
</tr>
<tr>
<td>Discrete Math</td>
<td>3</td>
</tr>
<tr>
<td>Physics</td>
<td>6</td>
</tr>
<tr>
<td>Software Design</td>
<td>3</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
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</table>

**Leadership, Management & Military Studies**

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

**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**

<table>
<thead>
<tr>
<th>Subject/Category</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
**DEGREE PROGRAMS**

## 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. See page 14, Technical Education Requirement.

<table>
<thead>
<tr>
<th>Technical Core</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Construction &amp; Design</td>
<td>20</td>
</tr>
<tr>
<td>Carpentry/Cabinetry</td>
<td>12</td>
</tr>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>College Algebra/Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>Computer Aided Drafting</td>
<td>3</td>
</tr>
<tr>
<td>Construction Inspection/Building Codes</td>
<td>9</td>
</tr>
<tr>
<td>Drafting/Engineering Drawing</td>
<td>6</td>
</tr>
<tr>
<td>Engineering Assistant</td>
<td>20</td>
</tr>
<tr>
<td>Engineering Operations and Management</td>
<td>3</td>
</tr>
<tr>
<td>Heavy Equipment Operations</td>
<td>20</td>
</tr>
<tr>
<td>Metals Fabrication/Characteristics</td>
<td>15</td>
</tr>
<tr>
<td>Pavement Construction</td>
<td>12</td>
</tr>
<tr>
<td>Project Management/Planning</td>
<td>3</td>
</tr>
<tr>
<td>Surveying</td>
<td>12</td>
</tr>
<tr>
<td>Welding</td>
<td>9</td>
</tr>
</tbody>
</table>

**Technical Electives** | **Maximum Semester Hours** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Construction Material Estimating</td>
<td>3</td>
</tr>
<tr>
<td>General Physics</td>
<td>3</td>
</tr>
<tr>
<td>Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>Industrial/Construction Safety</td>
<td>3</td>
</tr>
<tr>
<td>Properties &amp; Strength of Materials</td>
<td>6</td>
</tr>
<tr>
<td>Soils &amp; Foundations</td>
<td>3</td>
</tr>
<tr>
<td>Technical Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

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

**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.

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td></td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
**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. See page 14, Technical Education Requirement.

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

*Business Law .................................................. 3  
CCAF Internship................................................ 18  
*Contract Administration/Management.................... 12  
*Contract Law.......................................................... 6  
*Pricing & Negotiation............................................. 6  
*Principles of Government Contracting.................. 6  
*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 16.

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

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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*Courses applicable to the 24 SH business requirement for the Acquisition Professional Development (APD) Program. Also, may apply 4 SHs to the APD Program when 5-level career development course is completed and 2 SHs to the APD Program when resident Airman Leadership School, NCO Academy or USAF Senior NCO Academy is completed. See Licensure and Certification section for certification information.*
**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. See page 14, Technical Education Requirement.

<table>
<thead>
<tr>
<th>Technical Core</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Criminal Investigations</td>
<td>16</td>
</tr>
<tr>
<td>Criminal Law</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Ground Combat Skills</td>
<td>12</td>
</tr>
<tr>
<td>Fundamentals of Law Enforcement</td>
<td>9</td>
</tr>
<tr>
<td>Introduction to Security</td>
<td>6</td>
</tr>
<tr>
<td>Physical Security Concepts</td>
<td>6</td>
</tr>
<tr>
<td>Police Administration &amp; Supervision</td>
<td>6</td>
</tr>
<tr>
<td>Police Safety/Survival</td>
<td>6</td>
</tr>
<tr>
<td>Principles of Criminal Justice</td>
<td>6</td>
</tr>
<tr>
<td>Principles of Marksmanship</td>
<td>9</td>
</tr>
<tr>
<td>Special Weapons &amp; Tactics</td>
<td>8</td>
</tr>
<tr>
<td>Weapons Maintenance</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Electives</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antiterrorism</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Constitutional Law</td>
<td>3</td>
</tr>
<tr>
<td>Corrections</td>
<td>6</td>
</tr>
<tr>
<td>Criminalistics/Forensic Science</td>
<td>3</td>
</tr>
<tr>
<td>Criminology</td>
<td>3</td>
</tr>
<tr>
<td>Deployment Operations</td>
<td>12</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>4</td>
</tr>
<tr>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>General Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Instructional Methodology</td>
<td>9</td>
</tr>
<tr>
<td>Juvenile Justice</td>
<td>3</td>
</tr>
<tr>
<td>Patrol Dog Operations</td>
<td>12</td>
</tr>
<tr>
<td>Police Community Relations</td>
<td>3</td>
</tr>
<tr>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>Traffic Management/Investigation</td>
<td>6</td>
</tr>
</tbody>
</table>

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

**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.

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td>3</td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program Elective**  
(15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
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. See page 14, Technical Education Requirement.  

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

Technical Electives  Maximum Semester Hours  
Advanced Dental Hygiene ............................................ 9  
American Dental Association Dental Assistant Certification .................................................. 14  
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  

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

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

Program Elective  (15 semester hours)  Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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. See Licensure and Certification section for certification information.
DEGREE PROGRAMS

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. See page 14, Technical Education Requirement.

Technical Core Maximum Semester Hours
ADA/CDT Dental Laboratory Technician Certification ............................................................12
CCAF Internship .........................................................18
Complete Dentures ......................................................12
Construction of Removable Partial Dentures ..................12
Dental Ceramics ............................................................6
Dental Laboratory Fundamentals ..................................6
Inlays, Crowns & Fixed Partial Dentures .........................9

Technical Electives Maximum Semester Hours
Advanced Removable Prosthodontics ...............................8
Computer Science ................................................................6
Functional & Aesthetic-Fixed Prosthodontics ....................8
Medical Readiness ..........................................................3
Porcelain & Metal Ceramic Restoration .............................8

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

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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. See Licensure and Certification section for certification information.
### 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. See page 14, Technical Education Requirement.

#### 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 .................................................................................... 12
- Diagnostic Imaging Technique & Darkroom Procedures ........................................ 6
- Introduction to Diagnostic Imaging Technology .................................................... 6

#### Technical Electives Maximum Semester Hours
- Advanced Diagnostic Imaging Procedures ................................................................. 12
- Computer Science ........................................................................................................ 6
- Diagnostic Imaging Clinical Education/Internship ................................................... 12
- 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 16.

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

#### Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
Diagnosis 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. See page 14, Technical Education Requirement.

Technical Core Maximum Semester Hours
American Registry of Radiologic Technologists
   Certification ............................................................24
CCAF Internship ..........................................................18
Clinical Sonography Practicum I ......................................8
Clinical Sonography Practicum II ....................................18
Diagnostic Sonography ................................................10
Sonographic Scanning ....................................................6

Technical 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 16.

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
**Dietetics & Nutrition (7GAD)**

**Occupational Specialty** 4D0X1

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

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

**Technical Core**

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Dietary Manager/Food Protection Professional Certification</td>
<td>6</td>
</tr>
<tr>
<td>Diet Therapy</td>
<td>16</td>
</tr>
<tr>
<td>Dietetics</td>
<td>8</td>
</tr>
<tr>
<td>Dining Operations</td>
<td>6</td>
</tr>
<tr>
<td>Fitness &amp; Health</td>
<td>6</td>
</tr>
<tr>
<td>Introduction to Food Preparation</td>
<td>9</td>
</tr>
<tr>
<td>Nutrition</td>
<td>9</td>
</tr>
<tr>
<td>Nutritional Medicine Administration</td>
<td>6</td>
</tr>
<tr>
<td>Subsistence Management</td>
<td>6</td>
</tr>
</tbody>
</table>

**Technical Electives**

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Food Services</td>
<td>6</td>
</tr>
<tr>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Human Anatomy &amp; Physiology</td>
<td>4</td>
</tr>
<tr>
<td>Medical Readiness</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
</tbody>
</table>

**Leadership, Management & Military Studies**

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

**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.

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
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</tr>
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<tbody>
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<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td>3</td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
DEGREE PROGRAMS

EDUCATION & TRAINING MANAGEMENT
(2BAC)

Occupational Specialty  3S2XX, 8B100, 8B200

Degree Requirements  The journeyman (5) level must be held at the time of program completion.  8B100s must complete 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.  See page 14, Technical Education Requirement.

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

Technical Electives  
Maximum Semester Hours
Computer Science................................................6
Curriculum Development .......................................3
Educational/Developmental Psychology ....................3
General Psychology...............................................3
General Sociology ..................................................3
Public Relations................................................3
Supervision of Instruction......................................3

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

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

Program Elective  (15 semester hours)  Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.
ELECTRONIC SYSTEMS TECHNOLOGY (4VHP)

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

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

Technical Education  (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

Technical Core  ..........  Maximum Semester Hours
American Society for Quality Certified Calibration
  Technician Certification ........................................ 6
CCAF Internship.................................................... 18
Communication Systems Theory/Maintenance ........ 24
Electronic Communication-Computer Systems
  Theory/Maintenance .......................................... 24
Electronic Systems Theory/Maintenance .......... 24
Missile and Space Electronic Systems
  Theory/Maintenance .......................................... 24
Precision Measurement Equipment
  Theory/Maintenance .......................................... 24

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

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

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

Program Elective  (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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 Licensure and Certification section for certification information.
EMERGENCY MANAGEMENT
(9IMY)

Occupational Specialty  3E9X1

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

Technical Education (24 semester hours)  A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

Technical Core .................. Maximum Semester Hours
CCAF Internship ......................................................... 18
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 ......................................................... 12

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

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

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

Program Elective (15 semester hours)  Courses applying to technical education, LMMS or General education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.
**ENVIRONMENTAL SYSTEMS TECHNOLOGY (9IEY)**

**Occupational Specialty** 3E4X1, 3E4X3

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

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

**Technical Core** ............................. Maximum Semester Hours
CCAF Internship ................................................................. 18
Entomology/Pest Control ..................................................... 6
Environmental Awareness .................................................. 6
Environmental Support ...................................................... 20
Utilities Systems ............................................................... 20
Waste Management ........................................................... 3

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

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

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

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
DEGREE PROGRAMS

EXPLOSIVE ORDNANCE DISPOSAL
(4VRC)

Occupational Specialty 3E8X1

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

Technical Education (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

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

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

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

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or General education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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. See page 14, Technical Education Requirement.

#### Technical Core

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Maximum Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>Business Law</td>
<td>6</td>
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<tr>
<td>Business Mathematics</td>
<td>3</td>
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<td>CCAF Internship</td>
<td>18</td>
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<tr>
<td>Financial Analysis</td>
<td>9</td>
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<tr>
<td>Financial Principles/Management</td>
<td>9</td>
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<tr>
<td>Government Financial Systems</td>
<td>6</td>
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<tr>
<td>Microcomputer Software Applications</td>
<td>6</td>
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<tr>
<td>Military Pay &amp; Accounting</td>
<td>12</td>
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<tr>
<td>Principles of Accounting</td>
<td>6</td>
</tr>
<tr>
<td>Statistics</td>
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<td>Travel Accounting</td>
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</table>

#### Technical Electives

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Maximum Semester Hours</th>
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<tbody>
<tr>
<td>Business Finance</td>
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<tr>
<td>Computer Science</td>
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<tr>
<td>International Finance</td>
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<tr>
<td>Leadership &amp; Management</td>
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<td>Managerial Communications</td>
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<tr>
<td>Money &amp; Banking</td>
<td>6</td>
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<tr>
<td>Principles of Economics (Macro/Micro)</td>
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<tr>
<td>Principles of Marketing</td>
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</tbody>
</table>

#### Leadership, Management & Military Studies

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

### 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.

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
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<tr>
<td>Speech</td>
<td></td>
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<tr>
<td>Written Communication</td>
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<tr>
<td>English composition</td>
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</tr>
<tr>
<td>Mathematics</td>
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</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
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<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
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</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

### Program Elective (15 semester hours)

Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.

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2008-2010 CCAF General Catalog
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. See page 14, Technical Education Requirement.

Technical Core  Maximum Semester Hours  
Aerospace Vehicle Firefighting .....................................9  
CCAF Internship .........................................................18  
Emergency Response.....................................................6  
Fire Apparatus Operation ..............................................6  
Fire Department Administration....................................3  
Fire Service Rescue .......................................................9  
Hazardous Materials ......................................................8  
Introduction to Fire Science..........................................6  
Structural Firefighting .................................................12  

Technical Electives  Maximum Semester Hours  
Building Construction for Fire Protection .....................3  
Computer Science ..........................................................6  
Fire Codes & Related Ordinances .................................3  
Fire Command ...............................................................3  
Fire Hydraulics ..............................................................3  
Fire Instructor ...............................................................3  
Fire Prevention/Inspection .............................................6  
Fire Protection Systems ................................................3  
Fire/Arson Investigation .................................................3  
Firefighting Occupational Safety ....................................3  
General Chemistry.........................................................8  
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 16.

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

Program Elective  (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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 Licensure and Certification section for certification information.
HEALTH CARE MANAGEMENT  
(7GCY)  

Occupational Specialty  4A0X1  

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

Technical Education  (24 semester hours)  A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.  

Technical Core  

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Maximum Semester Hours</th>
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<tbody>
<tr>
<td>CCAF Internship</td>
<td>18</td>
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<tr>
<td>Health Care Management</td>
<td>24</td>
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<tr>
<td>Health Care Statistics</td>
<td>3</td>
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<td>Medical Care Evaluation</td>
<td>9</td>
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<tr>
<td>Medical Expense &amp; Performance Reporting</td>
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<tr>
<td>Medical Records Management</td>
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<td>Medical Resource Management</td>
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<tr>
<td>Patient Administration</td>
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<tr>
<td>Principles of Supervision/Management</td>
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<td>Registered Health Information Technician Certification</td>
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</table>

Technical Electives  

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Maximum Semester Hours</th>
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<tbody>
<tr>
<td>Computer Science</td>
<td>6</td>
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<tr>
<td>Human Anatomy &amp; Physiology</td>
<td>8</td>
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<tr>
<td>Human Resource Management</td>
<td>3</td>
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<tr>
<td>Leadership &amp; Management</td>
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<tr>
<td>Legal Aspects of Health Care</td>
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<td>Managerial Communications</td>
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<td>Medical Coding</td>
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<td>Medical Ethics</td>
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<td>Medical Readiness</td>
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<td>Medical Terminology</td>
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<tr>
<td>Medical Transcription</td>
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</tbody>
</table>

Leadership, Management & Military Studies  

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

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.  

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Semester Hours</th>
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<tbody>
<tr>
<td>Oral Communication</td>
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<tr>
<td>Speech</td>
<td></td>
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<tr>
<td>Written Communication</td>
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</tr>
<tr>
<td>English composition</td>
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<tr>
<td>Mathematics</td>
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<tr>
<td>Social Science</td>
<td>3</td>
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<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
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</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

Program Elective  (15 semester hours)  Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.  

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>See Licensure and Certification section for certification information.</td>
<td></td>
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</tbody>
</table>
DEGREE PROGRAMS

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. See page 14, Technical Education Requirement.

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

Technical Electives Maximum Semester Hours
Computer Science .................................................6
General Biology ..................................................8
General Chemistry ..............................................8
Human Anatomy & Physiology ...............................4
Medical Readiness ...............................................3

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

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
HUMAN RESOURCE MANAGEMENT (1AOY)

Occupational Specialty  3S0X1, 3S3X1, 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. See page 14, Technical Education Requirement.

Technical Core  
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<thead>
<tr>
<th>Subject/Category</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>First Sergeant Academy</td>
<td>10</td>
</tr>
<tr>
<td>Guidance &amp; Counseling</td>
<td>3</td>
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<tr>
<td>Human Relations/Interpersonal Communications</td>
<td>3</td>
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<tr>
<td>Human Resource Management/Administration</td>
<td>15</td>
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<tr>
<td>Interviewing</td>
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</tr>
<tr>
<td>Manpower/Quality Management</td>
<td>20</td>
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<tr>
<td>Organizational Behavior</td>
<td>3</td>
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<tr>
<td>Personnel Recruiting</td>
<td>15</td>
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<tr>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Marketing</td>
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<tr>
<td>Word Processing</td>
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Technical Electives  
<table>
<thead>
<tr>
<th>Subject/Category</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Ethics</td>
<td>3</td>
</tr>
<tr>
<td>Business Law</td>
<td>6</td>
</tr>
<tr>
<td>Business/Managerial Communications</td>
<td>6</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Industrial Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>Labor Relations</td>
<td>3</td>
</tr>
<tr>
<td>Leadership &amp; Management</td>
<td>3</td>
</tr>
<tr>
<td>Microcomputer Software Applications</td>
<td>6</td>
</tr>
<tr>
<td>Oral Communications</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Accounting</td>
<td>6</td>
</tr>
<tr>
<td>Principles of Economics (Macro/Micro)</td>
<td>6</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Technical Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

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

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  
<table>
<thead>
<tr>
<th>Subject/Category</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communications</td>
<td>3</td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

Program Elective  (15 semester hours)  Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
INFORMATION MANAGEMENT  
(1AUY)

Occupational Specialty  3A0X1, 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. See page 14, Technical Education Requirement.

Technical Core  .............. Maximum Semester Hours
CCAF Internship .....................................................18
CompTIA Certifications ...............................................8
Information Security ...................................................6
Information Systems Administration .............................12
Information Systems Management .................................9
Microcomputer Software Applications ............................9
Office Equipment .......................................................3
Postal Operations/Management ......................................15
Records/Publications Management ..................................6

Technical Electives  ............. Maximum Semester Hours
Business/Managerial Communications .............................6
Computer Science .......................................................6
Database Design/Management .......................................6
Desktop Publishing .......................................................
Human Resource Management ........................................3
Leadership & Management ..........................................3
Microsoft MCSE Certification ........................................8
Principles of Accounting .............................................6
Principles of Management ..........................................3
Technical Writing .......................................................3

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

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

Program Elective  (15 semester hours)  Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
### INFORMATION SYSTEMS TECHNOLOGY (0IYY)

**Occupational Specialty** 1A3X1, 1C3X1, 1C4X1, 3C0X1, 3C1XX, 3C3X1

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

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

#### Technical Core Maximum Semester Hours

- Airborne Information Systems ..................................... 24
- Broadcast Information Systems/Management .................. 15
- CCAF Internship .................................................. 15
- Command & Control Information Systems ...................... 15
- Communication Networking ....................................... 15
- Communications-Electronics Program Management .......... 12
- CompTIA Certifications ............................................ 8
- Computer Security .................................................. 6
- Computer Systems Architecture/Analysis/Design .......... 6
- Data Information Systems/Management .......................... 6
- Telecommunications Administration/Industry Regulation .... 20
- Telecommunications Technology ................................ 6

#### Technical Electives Maximum Semester Hours

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

#### Leadership, Management & Military Studies

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

#### Physical Education

(4 semester hours)

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**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.

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
**DEGREE PROGRAMS**

**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-field-related 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 (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. See page 14, Technical Education Requirement.

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

<table>
<thead>
<tr>
<th>Subject/Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult/Vocational Education</td>
<td>3</td>
</tr>
<tr>
<td>CCAF Special Duty Internship</td>
<td>18</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>3</td>
</tr>
<tr>
<td>Educational Technology</td>
<td>3</td>
</tr>
<tr>
<td>Educational/Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>Guidance &amp; Counseling</td>
<td>3</td>
</tr>
<tr>
<td>Instructional Methodology</td>
<td>12</td>
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<tr>
<td>Instructional Systems Development</td>
<td>6</td>
</tr>
<tr>
<td>Learning Theories</td>
<td>3</td>
</tr>
<tr>
<td>Supervision of Instruction</td>
<td>3</td>
</tr>
<tr>
<td>Teaching Internship</td>
<td>12</td>
</tr>
<tr>
<td>Tests &amp; Measurements</td>
<td>3</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Subject/Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircrew Instructor Flight Training</td>
<td>9</td>
</tr>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Computer-Based Instruction</td>
<td>9</td>
</tr>
<tr>
<td>Related Specialty Training</td>
<td>6</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Technical Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

**Leadership, Management & Military Studies**

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

**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**

<table>
<thead>
<tr>
<th>Subject/Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program Elective**  (15 semester hours)  Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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*Other Service Instructors and Airmen performing duty as qualified CCAF instructors in Professional Military Education (8T000) or Military Training (8B000) are exempt from the requirement to hold a career-field-related degree.**

**A 12 SH 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 Licensure and Certification section for certification information.
LOGISTICS  
(1AMY)

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

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

**Technical Education**  (24 semester hours)  A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

**Technical Core**  
- 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 ........................................................... 12
- Principles of Accounting ....................................................... 6
- Principles of Economics .......................................................... 6
- Principles of Purchasing ......................................................... 3
- Production/Operations Management ....................................... 3
- Warehouse Storage & Operations .......................................... 8

**Technical Electives**  
- Business Ethics ................................................................. 3
- Business Law ................................................................. 3
- Business Mathematics/Statistics ............................................. 3
- Computer Science .............................................................. 6
- Environmental Protection Procedures .................................... 3
- General Chemistry ............................................................. 4
- Hazardous Materials .......................................................... 3
- Industrial Safety ................................................................. 3
- Introduction to Business .................................................... 3
- Introduction to Petroleum Industry ....................................... 3
- Introduction to Transportation ............................................ 3
- Labor Relations ................................................................. 3
- Leadership & Management .................................................. 3
- Managerial Communications ............................................... 3
- Medical Readiness ............................................................ 3
- Principles of Marketing ....................................................... 6
- Quality Assurance ............................................................. 3
- Technical Writing .............................................................. 3

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

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

**Program Elective**  (15 semester hours)  Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
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. See page 14, Technical Education Requirement.

Technical Core  

<table>
<thead>
<tr>
<th>Subject/Title</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>Maintenance Management</td>
<td>3</td>
</tr>
<tr>
<td>Management Information Systems</td>
<td>12</td>
</tr>
<tr>
<td>Production Management</td>
<td>6</td>
</tr>
<tr>
<td>Scheduling &amp; Production Control</td>
<td>15</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Systems Management</td>
<td>6</td>
</tr>
<tr>
<td>Vehicle Integrated Management Systems</td>
<td>9</td>
</tr>
</tbody>
</table>

Technical Electives  

<table>
<thead>
<tr>
<th>Subject/Title</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Environmental Compliance</td>
<td>3</td>
</tr>
<tr>
<td>Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Quality Assurance</td>
<td>3</td>
</tr>
<tr>
<td>Technical Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

Leadership, Management & Military Studies  

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

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.

<table>
<thead>
<tr>
<th>Subject/Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

Program Elective  (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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, 3E4X2

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

Technical Education (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

Technical Core Maximum Semester Hours
CCAF Internship .............................................................................. 18
Electrical Power Production ................................................................. 20
Electrical Systems ............................................................................... 20
Heating Systems ................................................................................... 20
Liquid Fuel Systems ............................................................................. 20
Refrigeration & Air-Conditioning .......................................................... 20

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

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

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 ........................................................................ 3
Written Communication ................................................................. 3
Mathematics ....................................................................................... 3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics

Social Science .................................................................................... 3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology

Humanities ........................................................................................ 3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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 Licensure and Certification section for certification information.
# 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. See page 14, Technical Education Requirement.

**Technical Core**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Clinical Chemistry</td>
<td>12</td>
</tr>
<tr>
<td>Clinical Microbiology</td>
<td>9</td>
</tr>
<tr>
<td>Clinical Practicum</td>
<td>24</td>
</tr>
<tr>
<td>Hematology</td>
<td>12</td>
</tr>
<tr>
<td>Immunology/Bloodbanking/Serology</td>
<td>24</td>
</tr>
<tr>
<td>National Medical/Clinical Laboratory Technician Certifications</td>
<td>24</td>
</tr>
</tbody>
</table>

**Technical Electives**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>General Biology</td>
<td>8</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>8</td>
</tr>
<tr>
<td>Human Anatomy &amp; Physiology</td>
<td>4</td>
</tr>
<tr>
<td>Medical Readiness</td>
<td>3</td>
</tr>
<tr>
<td>Organic/Inorganic Chemistry</td>
<td>8</td>
</tr>
</tbody>
</table>

**Leadership, Management & Military Studies**

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

**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**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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 Licensure and Certification section for certification information.
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. See page 14, Technical Education Requirement.

Technical Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Drug &amp; Alcohol Abuse</td>
<td>6</td>
</tr>
<tr>
<td>Drug &amp; Alcohol Abuse Counselor Certification</td>
<td>12</td>
</tr>
<tr>
<td>Guidance &amp; Counseling</td>
<td>9</td>
</tr>
<tr>
<td>Human Growth/Lifespan Development</td>
<td>6</td>
</tr>
<tr>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>Interpersonal Communications</td>
<td>3</td>
</tr>
<tr>
<td>Mental Health Care</td>
<td>24</td>
</tr>
<tr>
<td>Psychology of Adjustment</td>
<td>3</td>
</tr>
</tbody>
</table>

Technical Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>3</td>
</tr>
<tr>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Human Anatomy &amp; Physiology</td>
<td>4</td>
</tr>
<tr>
<td>Human Biology</td>
<td>4</td>
</tr>
<tr>
<td>Medical Readiness</td>
<td>3</td>
</tr>
<tr>
<td>Nursing (Mental Health related)</td>
<td>6</td>
</tr>
</tbody>
</table>

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

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.

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td></td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
DEGREE PROGRAMS

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. See page 14, Technical Education Requirement.

Technical Core ............ Maximum Semester Hours
Advanced Machining.................................................12
Aircraft Metals Technology.......................................24
Brazing/Welding Techniques ....................................9
CCAF Internship .....................................................18

Technical Electives ...... Maximum Semester Hours
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 16.

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

Program Elective  (15 semester hours)  Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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

See Licensure and Certification section for certification information.
### MISSILE & SPACE SYSTEMS MAINTENANCE (4VAK)

**Occupational Specialty** 2M0X2

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

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

**Technical Core**

<table>
<thead>
<tr>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCAF Internship........... 18</td>
</tr>
<tr>
<td>Missile Maintenance......... 24</td>
</tr>
<tr>
<td>SpaceTEC Aerospace Technician Certification........ 24</td>
</tr>
</tbody>
</table>

**Technical Electives**

<table>
<thead>
<tr>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science........... 6</td>
</tr>
<tr>
<td>Corrosion Control........... 3</td>
</tr>
<tr>
<td>Electricity/Electronics........... 6</td>
</tr>
<tr>
<td>Engineering Graphics/Computer Aided Drafting ......... 3</td>
</tr>
<tr>
<td>Engineering Mechanics........... 3</td>
</tr>
<tr>
<td>Fluid Power........... 3</td>
</tr>
<tr>
<td>General Chemistry/Algebra-Based Physics ........... 4</td>
</tr>
<tr>
<td>Hazardous Materials........... 3</td>
</tr>
<tr>
<td>Heavy Equipment Operation/Maintenance........... 3</td>
</tr>
<tr>
<td>Industrial Safety........... 3</td>
</tr>
<tr>
<td>Maintenance Management........... 3</td>
</tr>
<tr>
<td>Materials &amp; Processes........... 3</td>
</tr>
<tr>
<td>Nondestructive Inspection........... 3</td>
</tr>
<tr>
<td>Nuclear Weapons Systems Maintenance........... 3</td>
</tr>
<tr>
<td>Quality Assurance........... 3</td>
</tr>
<tr>
<td>Technical Writing........... 3</td>
</tr>
</tbody>
</table>

**Leadership, Management & Military Studies**

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

**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**

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td></td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
### Multimedia Production Services (2IAJ)

<table>
<thead>
<tr>
<th>Occupational Specialty</th>
<th>3N0X3, 3N0X4</th>
</tr>
</thead>
</table>

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

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

#### Technical Core

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Digital/Electronic Imaging</td>
<td>12</td>
</tr>
<tr>
<td>Graphic Arts</td>
<td>24</td>
</tr>
<tr>
<td>Media Production</td>
<td>20</td>
</tr>
<tr>
<td>Photography</td>
<td>24</td>
</tr>
</tbody>
</table>

#### Technical Electives

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising Art/Design</td>
<td>6</td>
</tr>
<tr>
<td>Animation</td>
<td>3</td>
</tr>
<tr>
<td>Color Science/Theory</td>
<td>6</td>
</tr>
<tr>
<td>Commercial Art</td>
<td>6</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Desktop Publishing</td>
<td>3</td>
</tr>
<tr>
<td>Drawing</td>
<td>9</td>
</tr>
<tr>
<td>Illustration</td>
<td>6</td>
</tr>
<tr>
<td>Magazine Editing/Publishing</td>
<td>6</td>
</tr>
<tr>
<td>Typography</td>
<td>3</td>
</tr>
<tr>
<td>Visual Design</td>
<td>6</td>
</tr>
</tbody>
</table>

**Leadership, Management & Military Studies**

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

**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**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
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.  See page 14, Technical Education Requirement.

Technical Core  

Maximum Semester Hours

<table>
<thead>
<tr>
<th>Subject/Subject Area</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Munitions Operations/Inventory Management</td>
<td>24</td>
</tr>
<tr>
<td>Munitions Systems</td>
<td>24</td>
</tr>
<tr>
<td>Nuclear Weapons Systems</td>
<td>24</td>
</tr>
</tbody>
</table>

Technical Electives  

Maximum Semester Hours

<table>
<thead>
<tr>
<th>Subject/Subject Area</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Munitions Systems</td>
<td>12</td>
</tr>
<tr>
<td>Advanced Nuclear Weapons Systems</td>
<td>12</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Corrosion Control</td>
<td>3</td>
</tr>
<tr>
<td>Electricity/Electronics</td>
<td>6</td>
</tr>
<tr>
<td>Engineering Graphics/ Computer Aided Drafting</td>
<td>6</td>
</tr>
<tr>
<td>Fluid Power</td>
<td>3</td>
</tr>
<tr>
<td>General Chemistry/Algebra-Based Physics</td>
<td>8</td>
</tr>
<tr>
<td>Hazardous Materials/Environmental Management</td>
<td>3</td>
</tr>
<tr>
<td>Heavy Equipment Operation/Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>Maintenance Management</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Accounting</td>
<td>6</td>
</tr>
<tr>
<td>Reactor Technology</td>
<td>3</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Weapons Safety</td>
<td>3</td>
</tr>
</tbody>
</table>

Leadership, Management & Military Studies  

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

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

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

Program Elective  (15 semester hours)  Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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. See page 14, Technical Education Requirement.

**Technical Core**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arranging &amp; Instrumentation</td>
<td>6</td>
</tr>
<tr>
<td>Band</td>
<td>6</td>
</tr>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Chorus</td>
<td>6</td>
</tr>
<tr>
<td>Ensemble</td>
<td>6</td>
</tr>
<tr>
<td>Music History</td>
<td>6</td>
</tr>
<tr>
<td>Music Theory</td>
<td>6</td>
</tr>
<tr>
<td>Production &amp; Stage Craft Arts</td>
<td>6</td>
</tr>
</tbody>
</table>

**Technical Electives**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>6</td>
</tr>
<tr>
<td>Aural Perception</td>
<td>6</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Dance</td>
<td>3</td>
</tr>
<tr>
<td>Electricity/Electronics</td>
<td>3</td>
</tr>
<tr>
<td>Electronic Music (Synthesizers)</td>
<td>3</td>
</tr>
<tr>
<td>Fundamentals of Conducting</td>
<td>3</td>
</tr>
<tr>
<td>Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>Voice</td>
<td>6</td>
</tr>
</tbody>
</table>

**Leadership, Management & Military Studies**

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

**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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td>3</td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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. See page 14, Technical Education Requirement.

**Technical Core**

<table>
<thead>
<tr>
<th>Subject/Category</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Society for Nondestructive Testing (ASNT) Certification</td>
<td>12</td>
</tr>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Nondestructive Inspection</td>
<td>24</td>
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</table>

**Technical Electives**

<table>
<thead>
<tr>
<th>Subject/Category</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Nondestructive Inspection Techniques</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Corrosion Control</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Graphics/Computer Aided Drafting</td>
<td>3</td>
</tr>
<tr>
<td>FAA Airframe/Powerplant Certification</td>
<td>6</td>
</tr>
<tr>
<td>General Chemistry/Algebra-Based Physics</td>
<td>3</td>
</tr>
<tr>
<td>Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>Maintenance Management</td>
<td>6</td>
</tr>
<tr>
<td>Materials &amp; Processes</td>
<td>3</td>
</tr>
<tr>
<td>SpaceTEC Aerospace Technician Certification</td>
<td>6</td>
</tr>
<tr>
<td>Technical Mathematics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Leadership, Management & Military Studies**

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

**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.

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td></td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
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. See page 14, Technical Education Requirement.

Technical Core ........................................................................................................................................

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
<tr>
<td>Program Elective</td>
<td>15 semester hours</td>
</tr>
<tr>
<td>Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.</td>
<td></td>
</tr>
</tbody>
</table>

See Licensure and Certification section for certification information.
DEGREE PROGRAMS

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. See page 14, Technical Education Requirement.

Technical Core Maximum Semester Hours
Assisting the Optometrist................................. 8
General Psychology .................................................. 3
*Human Anatomy & Physiology.......................... 4
Human Eye & the Visual System.......................... 6
Introduction to Operating Room Technology......... 8
Operating Room Practicum ........................................ 8
Operating Room Technology.................................. 8
Optics................................................................. 8
Spectacles & Contact Lenses.................................. 6
Vision Classification............................................. 6

Technical Electives Maximum Semester Hours
Algebra-Based Physics ........................................ 4
Analytic Geometry............................................... 3
CCAF Internship.................................................. 18
Computer Science............................................... 6
General Biology................................................. 4
General Chemistry............................................. 4
Medical Readiness............................................. 3
Office Management........................................... 3

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

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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 Council on Optometric Education of the American Optometric Association accredits this degree program. Apprentice course graduates are eligible to take the Certified Paraoptometric Technician examination. See Licensure and Certification section for certification information.
## Degree Programs

### 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. See page 14, Technical Education Requirement.

### Technical Core  
<table>
<thead>
<tr>
<th>Course</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil Law</td>
<td>9</td>
</tr>
<tr>
<td>*Ethics</td>
<td>3</td>
</tr>
<tr>
<td>International Law</td>
<td>3</td>
</tr>
<tr>
<td>Legal Claims &amp; Tort Administration</td>
<td>8</td>
</tr>
<tr>
<td>Legal Claims &amp; Tort Investigation</td>
<td>3</td>
</tr>
<tr>
<td>Legal Research &amp; Writing</td>
<td>6</td>
</tr>
<tr>
<td>Military Justice</td>
<td>6</td>
</tr>
<tr>
<td>Non-Judicial Punishment</td>
<td>3</td>
</tr>
<tr>
<td>Paralegal Internship</td>
<td>8</td>
</tr>
<tr>
<td>Pre/Post Trial Administration</td>
<td>6</td>
</tr>
</tbody>
</table>

### Technical Electives  
<table>
<thead>
<tr>
<th>Course</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Contract Law</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Procedures</td>
<td>3</td>
</tr>
<tr>
<td>Environmental Law</td>
<td>3</td>
</tr>
<tr>
<td>Estate Planning &amp; Probate</td>
<td>3</td>
</tr>
<tr>
<td>Evidence</td>
<td>3</td>
</tr>
<tr>
<td>Family Law/Domestic Relations</td>
<td>3</td>
</tr>
<tr>
<td>Law Office Administration</td>
<td>3</td>
</tr>
<tr>
<td>Law Office Supervision &amp; Training</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate Law</td>
<td>3</td>
</tr>
</tbody>
</table>

### Leadership, Management & Military Studies
(6 semester hours) Professional military education, civilian management courses accepted in transfer and/or by testing credit. See page 16.

### 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/Courses  

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
<tr>
<td>General Education Elective</td>
<td>3</td>
</tr>
<tr>
<td>A general education course selected from English composition, mathematics, social science, humanities, or natural science.</td>
<td></td>
</tr>
</tbody>
</table>

### 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 or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

*Must complete as part of degree program; may be applied as technical, humanities or general education elective.

This degree program is approved by the American Bar Association. See Licensure and Certification section for certification information.

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. See page 14, Technical Education Requirement.

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

Technical Electives Maximum Semester Hours
Computer Science......................................................... 6
Human Anatomy & Physiology.................................... 4
Parachuting/Scuba Diving ............................................ 6
Physical Geography...................................................... 3
Weapons Familiarization .............................................. 3

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

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.
**Occupational Specialty** 4P0X1

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

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

**Technical Core** .............................................................
CCAF Internship .........................................................18
Fundamentals of Pharmacy............................................8
Introductory Pharmacology ...........................................8
Pharmaceutical Calculations..........................................3
Pharmaceutical Preparation & Manufacture..................6
Pharmacy Technician Certification .............................17

**Technical Electives** .............................................................
Computer Science..........................................................6
Emergency Medicine.....................................................3
General Biology.............................................................4
General Chemistry..........................................................8
Human Anatomy & Physiology.......................................4
Medical Readiness............................................................3
Organic Chemistry............................................................8

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

**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** .............................................................

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td></td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td></td>
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<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

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The American Society of Health-System Pharmacists accredits the pharmacy apprentice course. See Licensure and Certification section for certification information.
**PHYSICAL THERAPIST ASSISTANT**

**Occupational Specialty 4J0X2**

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

**Technical Education (24 semester hours)** A student must complete the Air Force physical medicine apprentice course and the physical therapy practicum to satisfy the technical core requirement. A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

**Technical Core**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional Anatomy, Pathophysiology &amp; Therapeutic Procedures</td>
<td>12</td>
</tr>
<tr>
<td>Human Anatomy &amp; Physiology</td>
<td>8</td>
</tr>
<tr>
<td>Introduction to Physical Therapy</td>
<td>12</td>
</tr>
<tr>
<td>Physical Therapy Assistant Certification</td>
<td>12</td>
</tr>
<tr>
<td>Physical Therapy Clinical Arts</td>
<td>6</td>
</tr>
<tr>
<td>Physical Therapy Practicum</td>
<td>6</td>
</tr>
<tr>
<td>Physical Therapy Procedures &amp; Modalities</td>
<td>6</td>
</tr>
</tbody>
</table>

**Technical Electives**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Algebra-Based Physics</td>
<td>4</td>
</tr>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Kinesiology</td>
<td>8</td>
</tr>
<tr>
<td>Medical Readiness</td>
<td>3</td>
</tr>
</tbody>
</table>

**Leadership, Management & Military Studies**

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

**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**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Semester Hours</th>
</tr>
</thead>
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</tr>
<tr>
<td>Speech</td>
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<td>3</td>
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<td>Intermediate algebra or 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</td>
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<td>Social Science</td>
<td>3</td>
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<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
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</tr>
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</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; 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 Licensure and Certification section for certification information.
**PUBLIC AFFAIRS (2FDE)**

**Occupational Specialty** 3N0X1, 3N0X2

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

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

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

- CCAF Internship .........................................................18
- Copyreading & Editing..................................................3
- Journalism......................................................................20
- Mass Communication ..................................................20
- Media Production ......................................................10
- Photojournalism..........................................................3
- Visual Information Production/Documentation............24

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

- Advertising .................................................................3
- Broadcasting ................................................................6
- Computer Science .......................................................6
- Desktop Publishing ......................................................6
- General Psychology......................................................3
- Graphic Arts .................................................................3
- Interviewing.................................................................3
- Mass Communication Law ............................................3
- Photography .................................................................3
- Public Relations............................................................3

**Leadership, Management & Military Studies**

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

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

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
**Public Health Technology (7ECY)**

**Occupational Specialty** 4E0X1

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

**Technical Education (24 semester hours)** A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

**Technical Core**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maximum Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Communicable Diseases</td>
<td>6</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>8</td>
</tr>
<tr>
<td>Food Safety/Sanitation</td>
<td>6</td>
</tr>
<tr>
<td>Hearing Conservation</td>
<td>3</td>
</tr>
<tr>
<td>Medical Entomology</td>
<td>3</td>
</tr>
<tr>
<td>Medical Readiness</td>
<td>3</td>
</tr>
<tr>
<td>Occupational Health &amp; Safety</td>
<td>9</td>
</tr>
<tr>
<td>Public Health</td>
<td>16</td>
</tr>
<tr>
<td>Zoonotic Diseases</td>
<td>3</td>
</tr>
</tbody>
</table>

**Technical Electives**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Ergonomics</td>
<td>3</td>
</tr>
<tr>
<td>General Biology</td>
<td>8</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>8</td>
</tr>
<tr>
<td>General Physical Science</td>
<td>4</td>
</tr>
<tr>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Leadership, Management & Military Studies**

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

**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.

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td></td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
<td></td>
</tr>
</tbody>
</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
RESTAURANT, HOTEL & FITNESS MANAGEMENT (1FRS)

Occupational Specialty 3M0X1, 8A200

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

Technical Education (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

Technical Core Maximum Semester Hours
CCAF Internship ........................................................ 18
Contract Management................................................... 3
Financial Management ................................................. 3
Fitness & Health ......................................................... 6
Food & Beverage Preparation ....................................... 12
Food Service Operations/Management ......................... 6
Food Service Sanitation & Safety................................. 3
Front Office Management............................................. 3
Hotel Operations/Management..................................... 6
Human Anatomy & Physiology .................................... 4
Inventory Management................................................. 3
Mortuary Services......................................................... 3
Nutrition ..................................................................... 3
Principles of Accounting ............................................. 6
Quantity Food Production......................................... 3
Recreation/Sports Management ................................... 3
Restaurant Operations/Management ............................. 9
Sports & Fitness Instruction ........................................ 3

Technical Electives Maximum Semester Hours
Baking ........................................................................ 3
Business Law ............................................................. 3
Business/Managerial Communications ........................... 6
Computer Science ...................................................... 6
Equipment Selection/Layout/Facility Design ................. 3
Food Science ............................................................. 3
Human Relations/Customer Service ............................. 3
Human Resource Management .................................... 3
Introduction to Business ............................................ 3
Leadership & Management ........................................ 3
Occupational Safety .................................................... 3
Principles of Accounting ............................................ 3
Principles of Purchasing ............................................. 3
Recreation Safety & First Aid ..................................... 3
Services Automation ................................................... 3

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

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
SAFETY
(9IYI)

Occupational Specialty 1S0X1

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

Technical Education (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

Technical Core Maximum Semester Hours
Accident Prevention Management .......................... 18
Accident/Fire Investigation .................................. 12
AFOSH/OSHA Codes/Standards ............................. 12
Aviation/Flight Safety ....................................... 12
CCAF Internship ............................................... 18
Ground/Industrial Safety ..................................... 24
Hazardous Materials ......................................... 6
Hazardous Waste Management ............................. 6
Instructional Methodology ................................... 6
Safety Engineering ........................................... 6

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 16.

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
DEGREE PROGRAMS

SCIENTIFIC ANALYSIS TECHNOLOGY (4VES)

Occupational Specialty 9S100

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

Technical Education (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

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

Technical Electives .................................. Maximum Semester Hours
Algebra-Based Physics...........................................4
Basic Electronics Theory/Applications .......................6
College Algebra or higher-level Mathematics..............3
Computer Science.................................................6
Computer Systems Maintenance & Operations
   Principles .........................................................3
Meteorology .....................................................6
Physical Science..................................................4
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 16.

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

2008-2010 CCAF General Catalog 82
SOCIAL 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).

Technical Education  (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

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

Technical Electives .......................... Maximum Semester Hours
Abnormal Psychology ................................................................. 3
Computer Science .................................................................... 6
General Psychology .................................................................... 3
General Sociology ....................................................................... 3
Human Communication ............................................................ 3
Human Development & Learning .............................................. 3
Instructional Methodology ......................................................... 3
Interviewing Techniques ............................................................ 3
Leadership & Management ...................................................... 3
Managerial Communications ................................................... 3
Principles of Accounting ........................................................... 3
Social Work .............................................................................. 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 16.

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

Program Elective  (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
### DEGREE PROGRAMS

#### 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. See page 14, Technical Education Requirement.

<table>
<thead>
<tr>
<th>Technical Core</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>Fundamentals of Central Sterile Supply</td>
<td>8</td>
</tr>
<tr>
<td>Operating Room Practicum</td>
<td>16</td>
</tr>
<tr>
<td>Operating Room Technology</td>
<td>16</td>
</tr>
<tr>
<td>Surgical Nursing</td>
<td>12</td>
</tr>
</tbody>
</table>

**Technical Electives** | Maximum Semester Hours |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>3</td>
</tr>
<tr>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td>General Psychology</td>
<td>4</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Human Anatomy &amp; Physiology</td>
<td>8</td>
</tr>
<tr>
<td>Medical Readiness</td>
<td>3</td>
</tr>
<tr>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>Nursing</td>
<td>6</td>
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</tbody>
</table>

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

**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.

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

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

The Association of Surgical Technologists accredits the surgical service apprentice course. See Licensure and Certification section for certification information.
### SURVIVAL EQUIPMENT (4VPF)

**Occupational Specialty** 2A7X4

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

**Technical Education** (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

<table>
<thead>
<tr>
<th>Technical Core</th>
<th>Maximum Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCAF Internship</td>
<td>18</td>
</tr>
<tr>
<td>FAA Master Parachute Rigger Certification</td>
<td>3</td>
</tr>
<tr>
<td>FAA Senior Parachute Rigger Certification</td>
<td>3</td>
</tr>
<tr>
<td>Fabrication &amp; Parachute Maintenance</td>
<td>24</td>
</tr>
<tr>
<td>Parachute Rigging</td>
<td>3</td>
</tr>
<tr>
<td>Survival Equipment Inspection &amp; Maintenance</td>
<td>9</td>
</tr>
</tbody>
</table>

**Technical Electives** | Maximum Semester Hours |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Aerodynamics</td>
<td>3</td>
</tr>
<tr>
<td>Clothing &amp; Textiles</td>
<td>6</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Engineering Graphics/Computer Aided Drafting</td>
<td>4</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>Industrial Safety</td>
<td>6</td>
</tr>
<tr>
<td>Maintenance Management</td>
<td>3</td>
</tr>
<tr>
<td>Production Planning &amp; Control</td>
<td>3</td>
</tr>
<tr>
<td>Tailoring</td>
<td>3</td>
</tr>
<tr>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>Upholstery</td>
<td>6</td>
</tr>
</tbody>
</table>

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

**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**

<table>
<thead>
<tr>
<th>Subjects/Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td></td>
</tr>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>English composition</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
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<tr>
<td>Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion</td>
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</tr>
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</table>

**Program Elective** (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
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. See page 14, Technical Education Requirement.

Technical Core ............... Maximum Semester Hours
Advanced Survival Techniques .............................................. 24
CCAF Internship .................................................................. 18
Evasion & Recovery ............................................................ 9
Foundations of Education .................................................... 3
General Principles of Survival .............................................. 16
Instructional Methodology ................................................... 9
Instructional Systems Development ...................................... 3
Practice Teaching ................................................................ 6

Technical Electives .......... Maximum Semester Hours
Audiovisual Media ................................................................ 3
Computer Science .................................................................. 6
Curriculum Development ..................................................... 3
Educational/Developmental Psychology ................................ 3
Emergency Medicine .......................................................... 6
Guidance & Counseling ....................................................... 3
International Terrorism ....................................................... 3
Land Navigation ................................................................. 3
Mountain Travel ................................................................. 3
Parachuting ...................................................................... 3
Psychology of Environmental Stress ..................................... 3
Resistance Training ............................................................ 3
Technical Writing .............................................................. 3

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

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

 See Licensure and Certification section for certification information.
TRANSPORTATION (1ATY)

Occupational Specialty 2T0X1, 2T1X1, 2T2X1

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

Technical Education (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

Technical Core Maximum Semester Hours
Air Cargo Procedures ................................................... 9
Air Transportation Principles ........................................ 9
Business/Transportation Law ....................................... 6
CCAF Internship ......................................................... 18
Freight Transportation .............................................. 6
Hazardous Materials .................................................. 6
Household Goods Movement ....................................... 9
Introduction to Transportation ..................................... 6
Motor Fleet Management & Safety ................................ 9
Passenger Routing/Movement ...................................... 9
Traffic Management ................................................... 15
Transportation Automated Systems ................................ 6
Vehicle Operations ..................................................... 12

Technical Electives Maximum Semester Hours
Business Mathematics/Statistics ................................... 3
Computer Science .......................................................... 6
Contract Management ..................................................... 3
Human Relations ............................................................. 3
Industrial Safety ............................................................ 3
Introduction to Aviation/Aeronautics .............................. 6
Introduction to Business .................................................. 3
Introduction to Logistics ............................................... 3
Physical Distribution ..................................................... 6
Principles of Accounting ............................................... 3
Principles of Marketing .................................................. 3
Quality Assurance ........................................................... 3
Warehouse Storage & Operations .................................... 3

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

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 ..................................................... 3
Written Communication .................................................. 3
English composition ..................................................... 3
Mathematics ................................................................. 3
Intermediate algebra or a college-level mathematics course satisfying delivering institution’s mathematics graduation requirement—if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics.

Social Science ............................................................. 3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, sociology

Humanities ................................................................. 3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.
VEHICLE MAINTENANCE
(4VKC)

Occupational Specialty 2T3X1, 2T3X2, 2T3X5

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

Technical Education (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

Technical Core .................................. Maximum Semester Hours
Automotive Engine Computer Systems ..................... 3
Automotive Service Excellence Examination .............16
CCAF Internship .........................................................18
Gas/Diesel Engine Principles .......................................8
Introduction to Business ........................................... 3
Maintenance Scheduling ......................................... 3
Power Train Fundamentals ..................................... 3
Radiator/Fuel Tank Repair ....................................... 3
Specialized Support Vehicles ...................................15
Suspension/Steering/Brake Systems ...... 3
Vehicle Body Repair/Painting ...................................8
Vehicle Electrical/Starting/Changing Systems ..............6
Vehicle Fuel/Emission Systems ......................... 3
Vehicle Glass, Upholstery/Trim & Hardware ..............6
Vehicle Heating/Air-Conditioning ......................... 3
Vehicle Integrated Management Systems .....................7
Welding .........................................................................8

Technical Electives .................................. Maximum Semester Hours
Alternative Fuel/Electric-Powered Vehicle Systems ....... 3
Computer Science .........................................................6
Engine Lubrication/Cooling Systems ..........................3
Engine Overhaul .........................................................3
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 16.

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

See Licensure and Certification section for certification information.
WEATHER TECHNOLOGY (8FYY)

Occupational Specialty 1W0X1

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

Technical Education (24 semester hours) A minimum of 12 SHs of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance. See page 14, Technical Education Requirement.

Technical Core Maximum Semester Hours
CCAF Internship......................................................... 18
Climatology................................................................. 6
Dynamic Meteorology.................................................. 6
Operational Weather Forecasting............................... 12
Physical Meteorology ................................................. 12
Plotting Weather Maps & Charts.................................. 6
Satellite Meteorology................................................... 6
Synoptic Meteorology ................................................ 12
Thermodynamics ....................................................... 6
Weather Instruments & Observation ........................... 18
Weather Prognosis Techniques.................................... 12
Weather Station Operation........................................... 9

Technical Electives Maximum Semester Hours
Algebra-Based Physics ................................................. 4
Astronomy ................................................................. 3
Briefing Techniques................................................... 3
College Algebra or higher-level Mathematics .............. 6
Computer Science ...................................................... 6
General Chemistry ..................................................... 4
Physical Geography ................................................... 3
Technical Writing ..................................................... 3
Tropical Meteorology ................................................ 4
Upper Air Measurement .............................................. 6

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

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

Program Elective (15 semester hours) Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 SHs of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.
CERTIFICATION INFORMATION …

Certifications enhance professional development, benefiting the Air Force and Airmen. Some civilian occupations require specific certifications for employment. Airmen should consider pursuing occupational-related certifications while serving in the Air Force to broaden their professional development and be better prepared for transition.

Some certifications may be used to satisfy CCAF degree plan requirements. This section provides students with information concerning national professional certifications applicable to specific degree programs and career fields.

Students interested in pursuing certifications should contact the credentialing agency for information on certifications, eligibility requirements and testing procedures. Graduates of CCAF degree programs or courses accredited by credentialing agencies should contact the credentialing agency for certification 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 training, qualifications and education.

For information concerning CCAF degree programs and certifications that may be applicable to specific career fields, access the AFSC Education and Certification Matrix at https://augateway.maxwell.af.mil/ccaf/index.asp. A user account and login are required for access.


The Licensure and Certification Programs Branch is the focal point for professional certifications and programs offered by CCAF. For more information, contact CCAF/DFAL at DSN 493-5938 or (334) 953-5938; E-mail at ccaf.faa@maxwell.af.mil; or visit http://www.maxwell.af.mil/au/ccaf/certifications.asp.
Specific professional certifications may be used to fulfill technical education and program elective requirements in the following CCAF degree programs. Some certifications may not be applicable to all AFSCs within CCAF degree programs. Students should contact the credentialing agency for information on certification eligibility.

**Airway Science (4VEN)**

**Occupational Specialty** 1C1X1, 1C2X1

For FAA Private Pilot and Commercial Pilot certification, contact the Federal Aviation Administration, Airmen Certification Branch AFS-760, P.O. Box 25082, Oklahoma City, Oklahoma 73125; (405) 954-3261; [http://www.faa.gov/licenses_certificates](http://www.faa.gov/licenses_certificates).

For FCC General Radiotelephone Operator's License, contact the Electronics Technicians Association International, 5 Depot Street, Greencastle, Indiana 46135; 1-800-288-3824 or (765) 653-4287; [http://www.eta-i.org](http://www.eta-i.org).

Or


**Aviation Maintenance Technology (4VAD)**

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

For FAA Airframe and Powerplant certification, see page 97 or contact the Federal Aviation Administration, Airmen Certification Branch AFS-760, P.O. Box 25082, Oklahoma City, Oklahoma 73125; (405) 954-3261; [http://www.faa.gov/licenses_certificates](http://www.faa.gov/licenses_certificates).

For SpaceTEC Aerospace Technician Certification, contact the National Aerospace Technical Education Center, Mail Code: SpaceTEC, Kennedy Space Center, Florida 32899; (321) 730-1020; [http://www.spacetec.org](http://www.spacetec.org).

**Aviation Management (1AVY)**

**Occupational Specialty** 1C0XX, 1C7XX

For FAA Aircraft Dispatcher, Private Pilot and Commercial Pilot certification, contact the Federal Aviation Administration, Airmen Certification Branch AFS-760, P.O. Box 25082, Oklahoma City, Oklahoma 73125; (405) 954-3261; [http://www.faa.gov/licenses_certificates](http://www.faa.gov/licenses_certificates).

For FCC General Radiotelephone Operator's License, contact the Electronics Technicians Association International, 5 Depot Street, Greencastle, Indiana 46135; 1-800-288-3824 or (765) 653-4287; [http://www.eta-i.org](http://www.eta-i.org).

Or


**Aviation Operations (4VCB)**

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

For FAA Flight Engineer, Airframe and Powerplant, Private Pilot and Commercial Pilot certification, contact the Federal Aviation Administration, Airmen Certification Branch AFS-760, P.O. Box 25082, Oklahoma City, Oklahoma 73125; (405) 954-3261; [http://www.faa.gov/licenses_certificates](http://www.faa.gov/licenses_certificates).

**Avionic Systems Technology (4VHS)**

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

For FAA Airframe and Powerplant certification, see page 97 or contact the Federal Aviation Administration, Airmen Certification Branch AFS-760, P.O. Box 25082, Oklahoma City, Oklahoma 73125; (405) 954-3261; [http://www.faa.gov/licenses_certificates](http://www.faa.gov/licenses_certificates).

For FCC General Radiotelephone Operator's License, contact the Electronics Technicians Association International, 5 Depot Street, Greencastle, Indiana 46135; 1-800-288-3824 or (765) 653-4287; [http://www.eta-i.org](http://www.eta-i.org).

Or

For SpaceTEC Aerospace Technician Certification, contact the National Aerospace Technical Education Center, Mail Code: SpaceTEC, Kennedy Space Center, Florida 32899; (321) 730-1020; http://www.spacetec.org.

For NCATT Aircraft Electronics Technician and Avionics Install Technician Certification, contact the National Center for Aircraft Technician Training, 4801 Marine Creek Parkway, Fort Worth, Texas 76179; (817) 515-7264; http://www.ncatt.org.


For Biomedical Equipment Technician, Radiology Equipment Specialists, Clinical Laboratory Equipment Specialist and Clinical Engineer certification, contact the Association for the Advancement of Medical Instrumentation, 1110 North Glebe Road, Suite 220, Arlington, Virginia 22201-4795; (703) 525-4890; http://www.aami.org.


For Certified Calibration Technician, contact the American Society for Quality, 600 North Plankinton Avenue, P.O. Box 3005, Milwaukee Wisconsin 53201-3005; 1-800-248-1946; http://www.asq.org.

For FCC General Radiotelephone Operators License, contact the Electronics Technicians Association International, 5 Depot Street, Greencastle, Indiana 46135; 1-800-288-3824 or (765) 653-4287; http://www.eta-i.org.

Or


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**Licensure and Certification**

**Diagnostic Imaging Technology (7GDH)**

**Occupational Specialty** 4R0X1, 4R0X1C

For Radiography, Radiation Therapy and Magnetic Resonance Imaging certification, contact the American Registry of Radiologic Technologists, 1255 Northland Drive, Saint Paul, Minnesota 55120-1155; (651) 687-0048; http://www.arrt.org.

**Diagnostic Medical Sonography (7GDK)**

**Occupational Specialty** 4R0X1B

For Sonography certification, contact the American Registry of Radiologic Technologists, 1255 Northland Drive, Saint Paul, Minnesota 55120-1155; (651) 687-0048; http://www.arrt.org.

**Dietetics & Nutrition (7GAD)**

**Occupational Specialty** 4D0X1


**Electronic Systems Technology (4VHP)**

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

For Certified Calibration Technician, contact the American Society for Quality, 600 North Plankinton Avenue, P.O. Box 3005, Milwaukee Wisconsin 53201-3005; 1-800-248-1946; http://www.asq.org.

For FCC General Radiotelephone Operators License, contact the Electronics Technicians Association International, 5 Depot Street, Greencastle, Indiana 46135; 1-800-288-3824 or (765) 653-4287; http://www.eta-i.org.

Or

### Licensure and Certifications

#### Health Care Management (7GCY)

**Occupational Specialty** 4A0X1

For Registered Health Information Technician certification, contact the American Health Information Management Association, 233 N. Michigan Avenue, Chicago, Illinois 60601-5800; (312) 233-1100; [http://www.ahima.org](http://www.ahima.org).

#### Histologic Technology (7GAE)

**Occupational Specialty** 4T0X2

For Histologic Technician certification, contact the American Society of Clinical Pathologists, Board of Registry, 33 West Monroe, Suite 1600, Chicago, Illinois 60603; 1-800-267-2727; [http://www.ascp.org](http://www.ascp.org).

#### Information Systems Technology (0IYY)

**Occupational Specialty** 1A3X1, 1C3X1, 1C4X1, 3C0X1, 3C1XX, 3C3X1

For A+ and Network+ certifications, contact the Computing Technology Industry Association, 1815 S. Meyers Road, Suite 300, Oakbrook Terrace, Illinois 60181-5228; (630) 678-8300; [http://www.comptia.org](http://www.comptia.org).

For Microsoft MCSE certification, contact Microsoft Certification Programs, P.O. Box 911, Santa Clarita, California 91380-9011; 1-800-636-7544; [http://www.microsoft.com/learning/mep/mcse/default.mspx](http://www.microsoft.com/learning/mep/mcse/default.mspx).

For FCC General Radiotelephone Operator's License, contact the Electronics Technicians Association International, 5 Depot Street, Greencastle, Indiana 46135; 1-800-288-3824 or (765) 653-4287; [http://www.eta-i.org](http://www.eta-i.org).

Or


#### Medical Laboratory Technology (7GAF)

**Occupational Specialty** 4T0X1

For Medical Laboratory Technician certification, contact the American Society of Clinical Pathologists, Board of Registry, 33 West Monroe, Suite 1600, Chicago, Illinois 60603; 1-800-267-2727; [http://www.ascp.org](http://www.ascp.org).

For Clinical Laboratory Technician certification, contact the National Credentialing Agency for Laboratory Personnel, P.O. Box 15945-289, Lenexa, Kansas 66285; (913) 438-5110; [http://www.nca-info.org](http://www.nca-info.org).

#### Mental Health Services (7GAP)

**Occupational Specialty** 4C0X1

For Drug and Alcohol Abuse Counselor certifications, contact the International Certification Reciprocity Consortium, 298 S. Progress Avenue, Harrisburg, Pennsylvania 17109; (717) 540-4457; [http://www.icrcaoda.org](http://www.icrcaoda.org).

#### Metals Technology (4VLB)

**Occupational Specialty** 2A7X1

For FAA Airframe and Powerplant certification, see page 97 or contact the Federal Aviation Administration, Airmen Certification Branch AFS-760, P.O. Box 25082, Oklahoma City, Oklahoma 73125; (405) 954-3261; [http://www.faa.gov/licenses_certificates](http://www.faa.gov/licenses_certificates).

For SpaceTEC Aerospace Technician Certification, contact the National Aerospace Technical Education Center, Mail Code: SpaceTEC, Kennedy Space Center, Florida 32899; (321) 730-1020; [http://www.spacetec.org](http://www.spacetec.org).

#### Missile & Space Systems Maintenance (4VAK)

**Occupational Specialty** 2M0X2

For SpaceTEC Aerospace Technician Certification, contact the National Aerospace Technical Education Center, Mail Code: SpaceTEC, Kennedy Space Center, Florida 32899; (321) 730-1020; [http://www.spacetec.org](http://www.spacetec.org).

#### Nondestructive Testing Technology (4VXR)

**Occupational Specialty** 2A7X2

For ASNT NDT Level II and III certification, contact the American Society for Nondestructive Testing, PO Box 28518, 1711 Arlingate Lane, Columbus, Ohio 43228-0518; 1-800-222-2768 or (614) 274-6003; [http://www.asnt.org](http://www.asnt.org).

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2008-2010 CCAF General Catalog
For FAA Airframe and Powerplant certification, see page 97 or contact the Federal Aviation Administration, Airmen Certification Branch AFS-760, P.O. Box 25082, Oklahoma City, Oklahoma 73125; (405) 954-3261; [http://www.faa.gov/licenses_certificates](http://www.faa.gov/licenses_certificates).

For SpaceTEC Aerospace Technician Certification, contact the National Aerospace Technical Education Center, Mail Code: SpaceTEC, Kennedy Space Center, Florida 32899; (321) 730-1020; [http://www.spacetec.org](http://www.spacetec.org).

**Nuclear Medicine Technology**

(7ABJ)

**Occupational Specialty** 4R0X1A

For Nuclear Medicine Technology and Radiation Therapy certification, contact the American Registry of Radiologic Technologists, 1255 Northland Drive, Saint Paul, Minnesota 55120-1155; (651) 687-0048; [http://www.arrt.org](http://www.arrt.org).

**Pharmacy Technology**

(7GAH)

**Occupational Specialty** 4P0X1

For Pharmacy Technician certification, contact the Pharmacy Technician Certification Board, 1100 15th Street, NW Suite 730, Washington, DC 20005-1707; 1-800-363-8012; [http://www.ptcb.org](http://www.ptcb.org).

**Physical Therapist Assistant**

(7GAI)

**Occupational Specialty** 4J0X2

For Physical Therapist Assistant certification, contact the Board for Physical Therapy of the state in which licensure is desired; [http://www.fsbpt.org](http://www.fsbpt.org).

**Survival Equipment**

(4VPH)

**Occupational Specialty** 2A7X4

For FAA Master and Senior Parachute Rigger certification, contact the Federal Aviation Administration, Airmen Certification Branch AFS-760, P.O. Box 25082, Oklahoma City, Oklahoma 73125; (405) 954-3261; [http://www.faa.gov/licenses_certificates](http://www.faa.gov/licenses_certificates).

**Vehicle Maintenance**

(4VKC)

**Occupational Specialty** 2T3X1, 2T3X2, 2T3X5

For Automotive Service Excellence series certifications, contact the National Institute for Automotive Service Excellence, 101 Blue Seal Drive, S.E., Suite 101, Leesburg, Virginia 20175; (703) 669-6600; [http://www.asecert.org](http://www.asecert.org).
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 A&P certification. It maintains DoD continuity with HQ FAA, standardizes the FAA A&P certification process for the military and provides direction and resources necessary to fill the gaps between military training/experience and industry standards, ensuring technicians meet FAA eligibility requirements. The JSAMTCC also reviews aircraft maintenance technician training and practical experience from an FAA perspective, providing united assessment and recommendations to each military service and the FAA.

For more information concerning the JSAMTCC, visit http://www.maxwell.af.mil/au/ccaf/certifications.asp.
AIR FORCE AIRFRAME AND POWERPLANT CERTIFICATION PROGRAM…….

The Community College of the Air Force continuously strives to increase and broaden the skills, knowledge, and experiences of Air Force enlisted personnel. The Air Force Airframe and Powerplant (A&P) Certification Program is one such effort that is 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 members in select aircraft maintenance AFSCs. The program directly supports the mission of CCAF in that FAA certified technicians help enhance combat readiness, contributes to recruiting, assists in retention of highly skilled technicians and supports the career transitions of Air Force enlisted members. Furthermore, the program helps develop a more well-rounded and diverse Air Force aircraft maintenance professional.

The Air Force A&P Certification Program was by the Department of Defense (DoD) to streamline and improve the FAA A&P certification process for the military. The program provides aircraft maintenance technicians the opportunity to pursue FAA A&P certification based on training and practical experience as specified in the Code of Federal Regulation (CFR), Part 65. 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 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), aircraft maintenance AFJQSs, training certificates and other pertinent job qualification and training records, both military and civilian.

The Air Force A&P Certification Program is managed and administered by the Licensure and Certification Programs Branch. For more information, contact CCAF/DFAL at DSN 493-5938 or (334) 953-5938; E-mail at caf.faa@maxwell.af.mil; or visit http://www.maxwell.af.mil/au/ccaf/certifications.asp.
FAA Certification Credit

The Community College of the Air Force awards 30 semester hours for the FAA A&P certification and 18 semester hours for the FAA Airframe or Powerplant certification. This credit may be awarded to students if the credit applies to the technical requirement and is needed to complete program requirements. Refer to the applicable degree program for the maximum semester hours that may apply to fulfill technical core or elective requirements.

Students possessing FAA certification should contact the base education services office for procedures to report certification to the Community College of the Air Force.
OCCUPATIONAL INSTRUCTOR CERTIFICATION PROGRAM …. 

The Community College of the Air Force offers the Occupational Instructor Certification (OIC) for qualified instructors teaching at CCAF affiliated schools. The purpose of the certification is to recognize the outstanding instructor training provided to prepare instructors to teach CCAF courses. The certification also formally acknowledges instructor qualifications and experience. Qualified officer, enlisted, civilian and other service instructors are eligible for this certification.

The awarded certification is recorded on the individual’s official CCAF academic record and CCAF transcript. A certificate is issued to the individual.

The OIC program is managed and administered by the Licensure and Certification Programs Branch. For more information, contact CCAF/DFAL at DSN 493-5938 or (334) 953-5938; E-mail at ccaf.faa@maxwell.af.mil; or visit http://www.maxwell.af.mil/au/ccaf/certifications.asp.

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 and employment opportunities. Individuals considering teaching in the public education system upon retirement or separation should contact Troops-To-Teachers at DSN 922-1320 or (800) 231-6242; or visit http://www.dantes.doded.mil/dantes_web/troopstoteachers/index.asp.
The Community College of the Air Force offers the Instructional Systems Development (ISD) Certification for qualified individuals who develop CCAF courses and curriculum at CCAF affiliated schools. The purpose of the certification is to recognize the training and education required for individuals to be qualified to develop and manage CCAF collegiate courses. The certification also recognizes the individual’s ISD qualifications and experience in planning, developing, implementing and managing instructional systems. Qualified officer, enlisted, civilian and other service curriculum writers/developers are eligible for this certification.

The awarded certification is recorded on the individual’s official CCAF academic record and CCAF transcript. A certificate is issued to the individual.

The ISD Certification Program is managed and administered by the Licensure and Certification Programs Branch. For more information, contact CCAF/DFAL at DSN 493-5938 or (334) 953-5938; E-mail at ccaf.faa@maxwell.af.mil; or visit http://www.maxwell.af.mil/au/ccaf/certifications.asp.
The National Aerospace Technical Education Center (SpaceTEC) is a national consortium of aerospace industry organizations, US government and partnering educational institutions supporting SpaceTEC. Through National Science Foundation grants, SpaceTEC developed and implemented an industry-driven and government-endorsed technical education process for aerospace technicians.

The SpaceTEC initiative also includes industry-recognized Aerospace Technician certification processes with specialized concentration areas. Air Force personnel in aviation and aerospace occupational specialties are eligible to pursue SpaceTEC Aerospace Technician certification.

The National Center for Aircraft Technician Training (NCATT) is a national consortium of aviation industry organizations, US government and partnering educational institutions supporting NCATT. Through a National Science Foundation grant, NCATT developed and implemented an industry-endorsed education and professional certification process for aircraft electronics and avionics technicians to support today’s advanced technology aircraft avionics systems.

Air Force personnel in the aviation and aerospace occupational specialties are eligible to pursue NCATT Aircraft Electronics Technician (AET) certification and additional ratings.

For more information, contact NCATT at (817) 515-7264; or visit www.ncatt.org or http://www.maxwell.af.mil/au/ccaf/certifications.asp.
**AFFILIATED SCHOOLS**

The affiliated schools of the Community College of the Air Force are responsible for developing, validating and delivering CCAF courses. Their courses are subject to increases and decreases in credit-hour value based on revisions and evaluations designed to meet the immediate needs of the Air Force. The credit hours for CCAF courses entered on the student transcript reflect the semester hour value of the courses when they were completed.

Becoming an affiliated school and part of the CCAF system is a voluntary process. Any Air Force school interested in affiliating with the Community College of the Air Force should write CCAF/DFCA, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613; call 334-953-7322, DSN 493-7322; fax 493-5009 or E-mail ccaf.dfca@maxwell.af.mil.
Airman Leadership School
Alpena, Michigan

97 Operations Group
Altus AFB, Oklahoma

Airman Leadership School
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

Air Force Combat Munitions School
Beale AFB, California

Airman Leadership School
Beale AFB, California

USAF School of Aerospace Medicine
Brooks AFB, Texas

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

55 Electronic Combat Group
Davis-Monthan AFB, Arizona

94 Operations Group
Dobbins ARB, Georgia

Airman Leadership School
Dover AFB, Delaware

436 Training Squadron
Dyess AFB, Texas

Airman Leadership School
Dyess AFB, Texas

Airman Leadership School
Edwards AFB, California

Airman Leadership School
Elmendorf AFB, Alaska

Airman Leadership School
Ellsworth AFB, South Dakota

NCO Academy, Airman Leadership School
Elmendorf AFB, Alaska

ICBM Center of Excellence School
F. E. Warren AFB, Wyoming

Airman Leadership School
F. E. Warren AFB, Wyoming

66 TRS Instructor Training Flight
Fairchild AFB, Washington

Airman Leadership School
Fairchild AFB, Washington

USAF Expeditionary Center
Fort Dix, New Jersey

211 Engineering Installation Squadron
(ANG)
Fort Indiantown Gap, Pennsylvania

Airman Leadership School
Fort Meade, Maryland

AF Office of Special Investigations
Glynco, Georgia

17 Training Group
Goodfellow AFB, Texas

Airman Leadership School
Grand Forks AFB, North Dakota

Airman Leadership School
Hanscom AFB, Massachusetts
<table>
<thead>
<tr>
<th>NCO Academy, Airman Leadership School</th>
<th>Airman Leadership School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hickam AFB, Hawaii</td>
<td>Langley AFB, Virginia</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Airman Leadership School</td>
</tr>
<tr>
<td>Hill AFB, Utah</td>
<td>Lajes Field, Portugal</td>
</tr>
<tr>
<td>ACC Logistics Support</td>
<td>189 Airlift Wing</td>
</tr>
<tr>
<td>Hill AFB, Utah</td>
<td>Little Rock AFB, Arkansas</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>314 Operations Group</td>
</tr>
<tr>
<td>Holloman AFB, New Mexico</td>
<td>Little Rock AFB, Arkansas</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>505 Training Squadron</td>
</tr>
<tr>
<td>Hurlburt Field, Florida</td>
<td>Luke AFB, Arizona</td>
</tr>
<tr>
<td>18 Logistics Readiness Squadron</td>
<td>Airman Leadership School</td>
</tr>
<tr>
<td>Kadena AB, Okinawa, Japan</td>
<td>Luke AFB, Arizona</td>
</tr>
<tr>
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<td>Airman Leadership School</td>
</tr>
<tr>
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<td>MacDill AFB, Florida</td>
</tr>
<tr>
<td>NCO Academy</td>
<td>Airman Leadership School</td>
</tr>
<tr>
<td>Kapaun AS, Germany</td>
<td>Maxwell AFB, Alabama</td>
</tr>
<tr>
<td>81 Training Group</td>
<td>Airman Leadership School</td>
</tr>
<tr>
<td>Keesler AFB, Mississippi</td>
<td>Maxwell AFB, Alabama</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>College for Professional Development</td>
</tr>
<tr>
<td>Keesler AFB, Mississippi</td>
<td>Maxwell AFB, Alabama</td>
</tr>
<tr>
<td>58 Operations Group, Special Operations Command</td>
<td>College for Enlisted Professional Military Education</td>
</tr>
<tr>
<td>Kirtland AFB, New Mexico</td>
<td>Maxwell AFB-Gunter Annex, Alabama</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Airman Leadership School</td>
</tr>
<tr>
<td>Kirtland AFB, New Mexico</td>
<td>Washington</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>McConnell AFB, Kansas</td>
</tr>
<tr>
<td>Lackland AFB, Texas</td>
<td>305 Operations Group</td>
</tr>
<tr>
<td>37 Training Group</td>
<td>McGuire AFB, New Jersey</td>
</tr>
<tr>
<td>Lackland AFB, Texas</td>
<td></td>
</tr>
<tr>
<td>356 Airlift Squadron</td>
<td></td>
</tr>
</tbody>
</table>

**2008-2010 CCAF General Catalog**
### Affiliated Schools

<table>
<thead>
<tr>
<th>Affiliated School</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airman Leadership School</td>
<td>McGuire AFB, New Jersey</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Minot AFB, North Dakota</td>
</tr>
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<td>Misawa AB, Japan</td>
</tr>
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</tr>
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<td>Mountain Home AFB, Idaho</td>
</tr>
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<td>Nellis AFB, Nevada</td>
</tr>
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<td>Offutt AFB, Nebraska</td>
</tr>
<tr>
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<td>Osan, Korea</td>
</tr>
<tr>
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<td>Patrick AFB, Florida</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Peterson AFB, Colorado</td>
</tr>
<tr>
<td>107 Air Control Squadron (ANG)</td>
<td>Phoenix, Arizona</td>
</tr>
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<td>Pope AFB, North Carolina</td>
</tr>
<tr>
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<td>Port Clinton, Ohio</td>
</tr>
<tr>
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<td>RAF Feltwell, United Kingdom</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Ramstein AB, Germany</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Randolph AFB, Texas</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Robins AFB, Georgia</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Scott AFB, Illinois</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Seymour Johnson AFB, North Carolina</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Shaw AFB, South Carolina</td>
</tr>
<tr>
<td>82 Training Wing</td>
<td>Sheppard AFB, Texas</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Spangdahlem AB, Germany</td>
</tr>
<tr>
<td>52 Logistics Readiness Squadron</td>
<td>Spangdahlem AB, Germany</td>
</tr>
<tr>
<td>552 Operation Group</td>
<td>Tinker AFB, Oklahoma</td>
</tr>
<tr>
<td>Airman Leadership School</td>
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</tr>
<tr>
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<td>Travis AFB, California</td>
</tr>
<tr>
<td>60 Operations Group</td>
<td>Travis AFB, California</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Tyndall AFB, Florida</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>USAF Academy, Colorado</td>
</tr>
<tr>
<td>381 Training Group</td>
<td>Vandenberg AFB, California</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Vandenberg AFB, California</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Whiteman AFB, Missouri</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Wright-Patterson AFB, Ohio</td>
</tr>
<tr>
<td>Airman Leadership School</td>
<td>Yokota AB, Japan</td>
</tr>
</tbody>
</table>
Course Descriptions

COURSE DESCRIPTIONS …

This section contains the codes and descriptions of the Community College of the Air Force courses that are segments of Air Force-conducted courses. Courses are identified by seven-character codes; for example, AAS1204. The three letters identify a course area (in the example, AAS represents Aircraft Armament Systems) while the four digits identify the specific course within that area. The course descriptions in this section are arranged alphabetically and then numerically with the evaluated alphabetic code.

Community College of the Air Force courses are subject to changes of credit-hour value. They are continually evaluated and revised, as necessary, to meet the immediate needs of the Air Force. The credit hours entered on the CCAF transcript reflect the value of the courses when they were completed. The transcript is the only official and reliable indicator of an Airman’s accomplishments in terms of courses completed and semester hours earned. Direct your questions regarding courses not listed in this catalog to CCAF/DFA, 130 West Maxwell Boulevard, Maxwell AFB, Alabama 36112-6613. Or call (334) 953-2874 or DSN 493-2874; or fax (334) 953-2980 or DSN 493-2980.
# Course Descriptions

## The Code Index

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAS</td>
<td>Aircraft Armament Systems</td>
</tr>
<tr>
<td>ACL</td>
<td>Aircrew Life Support</td>
</tr>
<tr>
<td>ACT</td>
<td>Aircrew Technology</td>
</tr>
<tr>
<td>ADM</td>
<td>Administration</td>
</tr>
<tr>
<td>AFM</td>
<td>Airfield Management</td>
</tr>
<tr>
<td>AGE</td>
<td>Aerospace Ground Equipment</td>
</tr>
<tr>
<td>AMT</td>
<td>Aircraft Maintenance Technology</td>
</tr>
<tr>
<td>AST</td>
<td>Astronautics</td>
</tr>
<tr>
<td>ATC</td>
<td>Air Traffic Control</td>
</tr>
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<td>AVA</td>
<td>Audiovisual Arts</td>
</tr>
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<td>Avionics</td>
</tr>
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<td>Bioenvironmental Engineering</td>
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<td>Biomedical Equipment Technology</td>
</tr>
<tr>
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<td>Carpentry</td>
</tr>
<tr>
<td>CIV</td>
<td>Civil Engineering</td>
</tr>
<tr>
<td>CLT</td>
<td>Cardiopulmonary Laboratory Technology</td>
</tr>
<tr>
<td>CMR</td>
<td>Computer Maintenance &amp; Repair</td>
</tr>
<tr>
<td>COM</td>
<td>Communications</td>
</tr>
<tr>
<td>CON</td>
<td>Contracts</td>
</tr>
<tr>
<td>COR</td>
<td>Corrosion Control</td>
</tr>
<tr>
<td>CYT</td>
<td>Cytology</td>
</tr>
<tr>
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<td>DLT</td>
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</tr>
<tr>
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<td>Diagnostic Medical Sonography</td>
</tr>
<tr>
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<td>Disaster Preparedness</td>
</tr>
<tr>
<td>EDP</td>
<td>Data Systems</td>
</tr>
<tr>
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<td>Education &amp; Training</td>
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<tr>
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<tr>
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</tr>
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</tr>
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<tr>
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<td>Law Enforcement</td>
</tr>
<tr>
<td>LEG</td>
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</tr>
<tr>
<td>LMM</td>
<td>Leadership, Management &amp; Military Studies</td>
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</tr>
<tr>
<td>MGT</td>
<td>Management &amp; Supervision</td>
</tr>
<tr>
<td>MIL</td>
<td>Military Science</td>
</tr>
<tr>
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</tr>
<tr>
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<td>Medical Laboratory Technology</td>
</tr>
<tr>
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<td>Military Public Health</td>
</tr>
<tr>
<td>MRD</td>
<td>Medical Readiness</td>
</tr>
<tr>
<td>MSL</td>
<td>Missile Maintenance Technology</td>
</tr>
<tr>
<td>MUN</td>
<td>Munitions</td>
</tr>
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<td>Nondestructive Testing</td>
</tr>
<tr>
<td>NMT</td>
<td>Nuclear Medicine Technology</td>
</tr>
<tr>
<td>NUR</td>
<td>Nursing</td>
</tr>
<tr>
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<td>Orthotic Prosthesis Devices</td>
</tr>
<tr>
<td>OPT</td>
<td>Optometric Technology</td>
</tr>
<tr>
<td>PAV</td>
<td>Pavements</td>
</tr>
<tr>
<td>PER</td>
<td>Personnel</td>
</tr>
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<td>Pharmacology</td>
</tr>
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<td>Physical Education</td>
</tr>
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<td>Photography</td>
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<td>Applied Physics</td>
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<td>PLB</td>
<td>Plumbing</td>
</tr>
<tr>
<td>PTH</td>
<td>Physical Therapy</td>
</tr>
<tr>
<td>PTR</td>
<td>Physiological Training</td>
</tr>
<tr>
<td>QCI</td>
<td>Quality Assurance</td>
</tr>
<tr>
<td>RAD</td>
<td>Radiologic Technology</td>
</tr>
<tr>
<td>REC</td>
<td>Recreation</td>
</tr>
<tr>
<td>RTB</td>
<td>Radio &amp; Television Broadcasting</td>
</tr>
<tr>
<td>SAF</td>
<td>Safety</td>
</tr>
<tr>
<td>SAN</td>
<td>Sanitation</td>
</tr>
<tr>
<td>SDI</td>
<td>Special Duty/Reporting Identifier Internship</td>
</tr>
<tr>
<td>SEC</td>
<td>Security</td>
</tr>
<tr>
<td>SOC</td>
<td>Social Services</td>
</tr>
<tr>
<td>SOO</td>
<td>Solar Observation</td>
</tr>
<tr>
<td>SUR</td>
<td>Surveying</td>
</tr>
<tr>
<td>SVE</td>
<td>Survival Equipment</td>
</tr>
<tr>
<td>SVR</td>
<td>Survival &amp; Rescue</td>
</tr>
<tr>
<td>SVS</td>
<td>Services</td>
</tr>
<tr>
<td>TRN</td>
<td>Transportation</td>
</tr>
<tr>
<td>TVS</td>
<td>Television Systems</td>
</tr>
<tr>
<td>VEM</td>
<td>Vehicle Maintenance</td>
</tr>
<tr>
<td>WEL</td>
<td>Welding</td>
</tr>
</tbody>
</table>
Course Descriptions

(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 non-nuclear air munitions from internal and/or external suspension components. Includes operation and maintenance of internal and external suspension components stressing explosive and ground safety, care and use of hand tools, and use of applicable handling equipment.

AAS1203 Aerospace Ground Equipment Handling, Support and Maintenance
Maintenance and use of powered and nonpowered aerospace ground equipment and armament support equipment. Includes theory of operation, component location, removal, adjustment, repair, inspection, installation and trouble-isolation procedures.

AAS1204 Aircraft Armament Launch Ejection Systems
Direct application of maintenance practices to electrical, pneumatic and mechanical subsystems. Includes theory of operations, malfunction analysis, trouble-isolation procedures, system operation, and repair, adjustment, removal and installation of components.

AAS2200 Advanced Aircraft Automatic Weapons Laboratory
Theory of operation and maintenance of specified automatic gun systems. Includes support and handling equipment, testers, and care and use of hand tools. (May be repeated for credit on various aircraft.)

AAS2201 Advanced Aircraft Armament Systems Maintenance Laboratory
Maintenance procedures and systems theory as applied to specific aircraft. Includes system operation analysis using wiring diagrams, engineering drawings and manufacturer’s maintenance manuals; theory of operation; location of components; and removal, adjustment, repair, inspection, installation and trouble-isolation procedures.

(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, and antixposure 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

2008-2010 CCAF General Catalog
109
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, communications, pneumatic, engine, electrical, air-conditioning and pressurization, and oxygen systems as well as aircraft ground-handling and servicing procedures.

**ACT1206 Air-Refueling Flying Training**

Supervised practical application of air-refueling operator duties. Includes use of life-sustaining equipment, operation of refueling boom and related equipment, application of navigation principles, and handling in-flight emergencies under actual flying conditions.

**ACT1207 Aircrew Qualification**

Concepts, principles and procedures required for performance of aircrew duties. Includes security, aircrew member discipline, personal affairs, oral communications skills, safety, flying orientation, publications, aircrew coordination, life-support equipment, basic aerodynamics, aircrew training, and customs and border clearances.

**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, throughflight and postflight inspections of aircraft emergency, cabin and galley equipment; provides passenger safety and comfort during aircraft operations; validates manifest and supervises loading and unloading 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.
Course Descriptions

ACT2204 HC-130 Flight Engineer Ground Training
Evaluation of HC-130 aircraft systems operation in both normal and emergency circumstances. Includes trouble-isolation techniques, operational checks, operating limitations, weight and balance computations, prediction of takeoff and landing performance requirements, theory of flight, aerodynamics, airspeed measurement, pre-takeoff checklists, and preflight inspections.

ACT2205 Flight Engineer Flying Training
Flight instruction on normal and emergency airborne procedures. Includes navigation, aerial cargo delivery, air refueling, search intercept and night flying. Emphasizes weight and balance adjustments, fuel management, monitoring of aircraft instruments, and in-flight normal and emergency procedures.

ACT2207 Flight Engineer Aircraft Systems Familiarization
Location, description, normal and emergency operation; inspection of fuel, oxygen, pneumatic, hydraulic, lighting, warning, electrical, environmental control, egress, engine, fire extinguishing, flight control, automatic flight control and instrument systems; and use of emergency equipment, emergency signals and emergency evacuation routes.

ACT2208 Advanced Flight Performance Planning
Calculation of aircraft ground run, takeoff, climb, cruise, and emergency performance data using current environmental conditions, gross weight and load factors.

ACT2209 Trainer, Simulator and Flying Training
Ground and airborne operational procedures in cockpit procedural trainer, flight simulator and aircraft. Includes inspections, flight performance, aircraft systems, crew communications and emergency procedures.

ACT2213 Intelligence Trainer, Simulator and Flight Training
Ground and airborne operational procedures in task trainer, flight simulator and aircraft. Includes inspections, console operation, mission procedures, data reporting, crew communications and emergency procedures.

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/retakeoff inspections.

(ADM) ADMINISTRATION

ADM1101 Typing I
Touch typing to include thorough knowledge of keyboard and operation of machine parts. Emphasizes centering, simple tables, business letters, envelopes, rough drafts and manuscripts.

ADM1102 Chapel Management
Organization and management of chapel activities. Includes standard office practices, written communications, public relations, application of principles of funds accounting, preparation of budgets and publicity materials, and management of property and equipment.

ADM1104 Administrative Communications
Management of written communications. Includes preparation of official letters, messages and administrative orders as well as suspense control of written communications.

ADM1106 Information Management
General administrative support and office management. Includes typing and keyboarding, microcomputer, word processing, computer security, career progression, plans and programs, administrative communications, publications, records and forms management, official correspondence, suspense files, document security, mail handling, electronic messages, Air Force orders, awards and decorations, performance reports, telephone procedures, and quality assurance.

ADM1108 Introduction to Computer Systems and Network Management
Introduction to computer systems and network management with emphasis on managing local network functions. Includes responsibilities within the network environment, workgroup management,
Course Descriptions

network concepts, creating and managing user email accounts, troubleshooting print management problems, development of web pages, management of web sites, and information systems safety procedures.

ADM2102 Advanced Chapel Management
Organization and management of chapel activities. Includes techniques for chapel supply management, use of applicable mechanized output products, budget management, control of chapel equipment, supply management, performance ratings, decorations, on-the-job training, funds accounting, preparation of budgets, publicity materials, professional communications and other supervisory duties.

ADM2106 Advanced Information Management
Integrated definition language modeling to analyze processes and improve efficiency. Includes information warfare doctrine and philosophy, contingency operations, resource management, quality improvement, computer network operating and distribution systems, and network operation management. Emphasizes student interaction, team learning, and exchange of viewpoints and experience.

ADM2107 Postal Supervisor
Technical skills and management techniques required for supervision of military postal center operations. Includes administration of postal management information system, postage meter monitoring, money order transactions, integrated retail terminals, mail security, search and seizure, and postal incident reporting.

(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 powered and nonpowered 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 high- and low-pressure hydraulic system components; and use of hydraulic fluid testing equipment.
Course Descriptions

AGE1105 Air Compressors
Theory of operation and maintenance of rotary and reciprocating air compressors; interpretation and use of airflow and electrical schematics and diagrams; operation, fault-isolation procedures, inspection, testing, prime mover repair, adjustment, and repair of high- and low-pressure system components; and use of hydrostatic test equipment.

AGE1106 Bomb-Lift Equipment
Systems and components used in bomb lifts and munitions handling trailers. Includes performance of operational checks, inspections, load testing, fault-isolation, and maintenance of hydraulic, electrical and mechanical subsystems.

AGE1107 Diesel Engine Maintenance
Operating characteristics and malfunction analysis of diesel engines; fuel system components; governing, cooling and lubricating systems; and associated power plant accessories.

AGE1108 Basic Ground Support Equipment Electricity and Electronics
Basic electricity fundamentals; Ohm’s law, series, parallel and series parallel circuits; inductive and capacitive circuits, transformers, principles of single- and three-phase motors and motor controls, resonance, and filters. Includes circuit analysis using electronic test equipment.

AGE1109 Gas Turbine Engines
Theory of operation and maintenance of gas turbine engines; interpretation and use of airflow, electrical, lubrication, fuel and pneumatic schematics; operation; inspection; fault-isolation procedures; repair and testing of components; pneumatic load testing; and remote control use of pneumatic analyzers.

AGE1110 Introduction to Ground Heaters
Theory of operation and maintenance of diesel and electric ground support heaters; interpretation and use of electrical, lubrication and airflow diagrams and schematics; and operation, inspection, carbon monoxide testing and fault-isolation procedures.

AGE1111 Introduction to Ground Support Air-Conditioners
Theory of operation and maintenance of specific diesel and electric ground support air-conditioners; interpretation and use of airflow, refrigerant, fuel, lubrication, and electrical schematics and diagrams; operation; inspection; fault-isolation procedures; and repair and testing of components. Includes removal, evacuation and charging of refrigerant.

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—AF A&P program applicable course.)

AMT1105 Aircraft Maintenance Fundamentals
Basic aircraft systems theory and operation principles, operation and care of ground support equipment, aircraft familiarization, maintenance documentation, maintenance safety precautions, and technical manual usage. Includes identification, selection, use and care of common hand tools, torque wrench procedures, and safety wiring. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1106 Aircraft Familiarization and Flight-Line Operations
Introduction to aircraft ground operation hazards, movement, associated flight-line safety procedures, weight and balance, aerodynamics, regulations, hardware, aircraft servicing and inspection concepts. Includes principles of corrosion control. (May be repeated for credit on various aircraft—AF A&P program applicable course.)
Course Descriptions

**AMT1107 Air Force Technical Manuals**
Air Force technical order system, aircraft technical manuals, job guides, and fault isolation manuals for aircraft systems and components. Includes servicing, inspections, removal, repair, replacement, overhaul instructions, and interpretation of schematics and wiring diagrams. (May be repeated for credit on various aircraft.)

**AMT1108 Air Force Technical Order System Management**
Introduction to managing Air Force Technical Order System accounts, and how to post changes, revisions and rescissions to maintain current and accurate technical order libraries. Includes automated systems management and documentation to perform account custodial duties.

**AMT1110 Transport Aircraft Cargo Configuration**
Theory of operation of aircraft configuration systems. Includes hands-on instruction for configuring aircraft for aeromedical litter support, container delivery, aerial delivery, troop drop and logistics pallets.

**AMT1114 Aircrew Egress Systems Fundamentals**
Introduction to aircrew egress systems. Includes operational theory, maintenance and ground safety procedures; use of ground support equipment, hand tools, aircraft hardware and safety devices; principles and operation of ballistic and nonballistic aircraft escape system components; and handling, storage and care of explosive components. (May be repeated for credit on various aircraft.)

**AMT1115 Aircrew Egress Systems Maintenance**
Application of theory in removal, replacement, adjustment, and rigging of ballistic and nonballistic aircraft canopy and ejection seat components for basic, dual and multicrew module escape systems. Includes inspection, repair, corrosion control, operational checks, fault isolation procedures, and basic, intermediate and advanced aircraft escape systems. (May be repeated for credit on various aircraft.)

**AMT1121 Aircraft Electrical Fundamentals**
Fundamentals of electricity, electrical circuitry and system components related to aircraft maintenance specialist. Principles, theories, and concepts of alternating and direct current. Includes magnetism, electrical terms, symbols, circuit construction, Ohm’s law, electrical measuring equipment, interpreting electrical schematics, and nickel cadmium and lead acid battery fundamentals. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1122 Aircraft Environmental Systems Maintenance**
Aircraft cabin pressurization and air-conditioning systems. Includes an overview of theory of operation, repair of system components, operational checks, servicing procedures, fault isolation, cabin leakage checks, bench testing and calibration of components; and inspection and maintenance of cabin pressure regulators, heat exchangers, flow control valves, temperature regulators, electronic temperature control units, distribution ducting and water separators. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1123 Aircraft Electrical Systems Maintenance**
Introduction to aircraft electrical systems, and application of direct and alternating current generation and distribution systems for specific aircraft. Includes familiarization, inspection, operational checks on generators, transformers, rectifiers, inverters, control panels, frequency sensing relays, distribution busses, normal and emergency lighting, and aircraft subsystem electrical components. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1124 Aircraft Control and Warning Systems**
Analysis of aircraft and engine control and warning systems principles. Includes fire-detection and overheat systems, antiskid normal and emergency braking system, landing gear warning system, takeoff warning system, master warning and caution panel, interior and exterior lighting systems, touchdown relays and weight on wheels switches, thunderstorm lighting, anticollision lighting, starting and ignition systems, and other control and warning systems inspection procedures, preventive maintenance and fault isolation. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

**AMT1131 Aircraft Hydraulic System Fundamentals**
Comprehensive study of hydraulic and pneumatic theory, operation, and maintenance. Includes power, landing gear, brake, antiskid, steering, flight control, and other hydraulic systems and components; normal and emergency operations, inspection, and servicing procedures; repair, removal and installation of components; adjustments and operational checkout procedures; and use of schematic diagrams. (May be repeated for credit on various aircraft—AF A&P program applicable course.)
AMT1132 Aircraft Hydraulic Systems Maintenance
Intermediate-level maintenance for hydraulic component repair. Includes construction features, purpose, theory of operation, disassembly, inspection, repair, and reassembly of hydraulic pumps, pressure regulators, valves, reservoirs, accumulators, actuators, brake assemblies, shock struts, steering control units and other aircraft pneumatic system components; ultrasonic cleaning of system filters; use of bench test stands; and hose fabrication. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1141 Aircraft Fuel Systems Fundamentals
Operational theory, functions and maintenance of aircraft fuel systems. Includes engine feed and crossfeed, transfer, defueling, dump, scavenging, in-flight refueling, quantity indication, and vent pressurization systems. Emphasizes maintenance procedures with safety precautions and human factors. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1142 Aircraft Fuel Systems Maintenance
Comprehensive study of integral, bladder, and externally mounted fuel tank systems and maintenance procedures. Includes use of special tools and equipment; selection of appropriate aircraft hardware; use of manufacturer’s technical manuals; fault isolation; component removal, repair and installation; tank entry procedures; leak detection; corrosion control; selection and application of sealants; and fuel cell testing. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1151 Helicopter Maintenance Fundamentals
Introduction to helicopter airframe, systems, engines and flight-line maintenance procedures. Includes basic practices, tools, ground handling, equipment, inspections, troubleshooting, and removal and replacement of components; landing gear, electrical, fuels, utility, hydraulics and flight controls systems; and transmission and main and tail rotor. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1152 Helicopter Semirigid Flight Controls
Identification, purpose, and theory of operation of helicopter flight controls, semirigid rotor systems and system components; and procedures and techniques with practical experience used in rigging, adjusting, removing, repairing, replacing, servicing and balancing flight control system components. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1154 Helicopter Flight-Line Maintenance
Comprehensive study of helicopter flight-line maintenance procedures, operations and safety practices. Includes ground safety devices, servicing of aircraft systems, aircraft launch and recovery, towing and jacking, performance of scheduled inspections, and system operational checks. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1161 Turbine Engine Theory and Principles
Basic engine theory of operation, system integration, construction breakdown, and aircraft and engine specific features; use of tools and maintenance materials to include common hand tools, torque wrenches and micrometers; identification of aircraft hardware, lock-wiring techniques and safety devices; identifies purpose and locations of engine main bearings, seals and major internal components of the engine; and removal and replacement of components and servicing. (May be repeated for credit on various engines—AF A&P program applicable course.)

AMT1162 Turbine Engine Inspection and Repair
Turbofan and turbojet construction, inspection, fault isolation, and repair of ignition, lubrication, fuel, starter, compressor bleed and pneumatic systems; engine removal and installation; conditioning, and servicing of installed engines; spectrometric oil sampling; disassembly inspection, repair, and reassembly of powerplant and accessories; and preservation for storage. (May be repeated for credit on various engines—AF A&P program applicable course.)
Course Descriptions

AMT1163 Aircraft Engine Operation
Detailed aircraft engine operation under normal and emergency operating procedures. Includes safety precautions, prerun checks, postrun inspections, engine limitations using weapon system trainers and simulators; and operational checkouts of installed aircraft engines. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1164 Turbine Engine Blade Blending
Engine blade blending procedures according to aircraft and engine technical manuals. Emphasizes student knowledge and performance of proper tool usage and blending techniques. (May be repeated for credit on various engines—AF A&P program applicable course.)

AMT1165 Auxiliary Power Unit Systems
Theory of operation of gas turbine compressor power (GTCP) auxiliary power systems. Includes removal and replacement of engines and subsystems and troubleshooting and fault isolation using multimeters and other supporting equipment. Emphasizes normal and emergency operation of the GTCP system and subsystems, technical data and safety precautions; and removal and installation of engines from shipping containers with preservation and depreservation fluids. (May be repeated for credit on various power units—AF A&P program applicable course.)

AMT1166 Helicopter Engine and Transmission Maintenance
Theory of operation, purpose, and maintenance of turbine engines, semirigid helicopter rotors, and fully articulated rotor transmission and drive systems and components. Emphasizes performance assessments for removal and replacement of engines, rotor heads, main gearboxes and selected components; servicing procedures; rigging of engine controls; final adjustments; performance checks; and fault reporting. (May be repeated for credit on various helicopter engines—AF A&P program applicable course.)

AMT1167 Aircraft Throttle Rigging
Fundamentals of throttle control rigging, cable installation and adjustment, system maintenance, and alignment. Includes corrosion control and treatment, evaluation of engine system components, operational checks, fault isolation, and repair; use of special tools and support equipment; application of safety; and use of manufacturer’s technical manuals. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1168 Aircraft Engine Flight-Line Maintenance
Advanced theory of operation of the turbine engine and function of engine components. Includes fault isolation, overhaul, and testing procedures with hands-on disassembly, inspection, repair, reassembly, and operational checkout of engines and accessories; and rigging and adjustment of fuel, oil, electrical and propeller systems performed on operational aircraft engines. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1170 Aircraft Propeller Inspection and Repair
Theory, operation, and control of aircraft propellers and related systems. Includes inspection, removal, replacement, repair and maintenance of propeller systems with experience in balancing of blades, hubs, and testing and operational checks of hydraulic and electrical standard propellers. (May be repeated for credit on various aircraft - AF A&P Program applicable course)

AMT1181 Aircraft Structural Maintenance Fundamentals
Airframe structures, sheet metal composition and identification, rivet composition and identification, hand tools, technical orders, drafting, interpreting technical drawings, flat pattern and metal layouts, and shop mathematics. Emphasizes fabrication techniques to include machine setup and operation, powered and nonpowered bending, radius bends, hand and machine forming, hand and pneumatic riveting, hand and pneumatic drilling, dimpling, and countersinking, and personal, work center, and chemical safety standards and applications. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1182 Fundamentals of Low- Observable and Stealth Aircraft
Introduction to history, principles, and theory of low-observable and Stealth aircraft design. Includes radar imagery, radar cross-section theory, radar signatures, radar signature reduction techniques and other related advanced Stealth technology issues. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1183 Aircraft Specialized Structural Repair
Technical information for sheet metal repairs to include flush, nonflush and substructural aircraft damage restoration. Emphasizes special fastener identification, composition, installation and removal;
cable identification, composition and manufacturing; aircraft tubing identification, composition and manufacturing; and control surface balancing techniques and procedures. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1191 Aircraft Phased Inspections
Concepts and application of phase inspection, techniques to perform scheduled aircraft inspections, and maintenance procedures. Includes use of inspection work cards, maintenance manuals, drawings, wiring schematics, special test and diagnostic equipment, lubrication equipment, safety precautions, assembly and rigging various aircraft systems, and maintenance records and forms documentation procedures. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT1195 Preflight and Postflight Inspections
Aircraft preflight, postflight and between-flight inspections. Includes ground handling, aircraft launch and recovery procedures, safety, aircraft airworthiness inspection, engine inlet and exhaust inspection and servicing, use of inspection work cards, technical publications, and documentation of maintenance and inspections on aircraft forms. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2117 Advanced Aircrew Egress Systems Maintenance
Comprehensive study of advanced aircrew egress systems theory and maintenance procedures. Includes component location, removal, replacement, rigging, adjustment, repair, inspection and fault isolation procedures. (May be repeated for credit on various aircraft.)

AMT2121 Advanced Aircraft Environmental Systems Maintenance
Advanced study of aircraft environmental systems theory for specific aircraft and associated equipment. Emphasizes component location, fault isolation, servicing, repairing, testing and inspecting aircraft environmental systems. Includes bleed air manifold distribution, cabin pressurization, air-conditioning, under floor heat, gaseous and liquid oxygen systems, neo-electrostatic applications, anti-ice systems, and fire-extinguishing systems. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2122 Advanced Aircraft Electrical Systems Maintenance
Advanced aircraft electrical systems theory and operation of associated test equipment. Includes generation and distribution of alternating and direct current and primary, secondary, and emergency electrical systems. Emphasizes circuit analysis, wire maintenance, fault-isolation procedures, system operation, repair, adjustment, removal, installation of components, functional checkout, bench checking and testing, and inspection procedures. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2131 Advanced Aircraft Hydraulic Systems
Advanced principles and design of specific aircraft hydraulic systems. Includes application of principles to determine functions and interrelationships of components using electrical and hydraulic schematics, fault isolation, and practice in removing, installing, repairing, servicing, adjusting, inspecting and modifying aircraft hydraulic systems. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2132 In-flight Refueling Systems Maintenance
Advanced maintenance procedures for removal, installation, rigging, and adjustment of in-flight refueling boom and receptacles, and associated equipment. Includes system operational checkout and fault isolation procedures. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2141 Advanced Aircraft Fuel Systems Maintenance
In-depth maintenance procedures and configuration of integral, bladder, auxiliary and externally mounted fuel systems. Includes fault isolation, leak source and path analysis, corrosion prevention, sealant preparation and application, repair and maintenance procedures, operational checkout, inspection, and storage; and engine feed, fuel transfer, scavenge, refuel, defuel, dump, vent, pressurization, fuel indication and in-flight refueling systems. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2151 Advanced Helicopter Airframe and Systems Maintenance
Advanced theory of operation, component identification and trouble-isolation procedures. Includes practical experience in removal and replacement of electrical, instrument, fuel and hydraulic system components; operation, inspection and maintenance of utility systems; removal, disassembly, reassembly, and adjustment of rotors.
and hubs; removal and replacement of transmission and drive systems; operation troubleshooting, replacement and rigging of flight controls; repair of landing gear systems; and scheduled inspections. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2161 Advanced Turbine Engine Maintenance
Advanced turbine engine theory and operational maintenance. Includes engine removal and replacement, related aircraft systems operation and fault isolation, testing and adjustment, repair of installed, and uninstalled engines; hands-on evaluations pertaining to disassembly, reassembly, inspection, preservation and depreservation; corrosion identification and control; and flight-line and shop engine support equipment, engine trimming and trending diagnostics. (May be repeated for credit on various engines—AF A&P program applicable course.)

AMT2162 Turbine Engine Fiber-optic Borescope
Fiber-optic borescoping. Includes use, handling, and storage of Olympus, General Electric, or other flexible and rigid digital borescoping devices; inspections on engine sections and modules to include fan section, core section, turbine section and combustion chamber. Emphasizes performance on rigid and flexible borescope inspections as intended for flight-line or shop maintenance. (May be repeated for credit on various engines—AF A&P program applicable course.)

AMT2163 Turbine Engine Test Cell Maintenance
Advanced operator maintenance and preparation of engines for testing. Includes prestart checks; engine operation; and fault isolation using vibration, temperature, and pressure data to determine serviceability or isolate engine problems; and service adjustments and use of portable and semicontrollable engine test facilities. (May be repeated for credit on various pieces of equipment—AF A&P program applicable course.)

AMT2164 Aircraft Turbine Engine Accident and Incident Analysis
Turbine engine construction and design differences required for accident and incident investigation and analysis of engine accessory failures. Includes fuel and oil system contamination, compressor and turbine section damage and failure, material failure, accident cause factors, identification and analysis of compressor, turbine and bearing failures, identification of in-flight and postimpact fires, and estimation of engine power at impact. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2165 Turbine Engine Starting and Secondary Power Subsystems
Advanced maintenance and fault isolation of various engine-starting systems. Includes analysis of the jet fuel starter, central gearbox, accessory drive gearbox and the airframe mounted accessory drive; starter and accessory drive electrical systems; servicing of the major components; and use of test equipment to isolate and correct system malfunctions. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2182 Advanced Aircraft Composite Repair
Advanced composites to include cutting, trimming, drilling, countersinking, liquid shimming and installation of advanced composite structures. Emphasizes advanced training in aramid fiber and graphite structures, skin and core repairs, advanced composite repairs, and in-shop safety procedures; and visual inspection methods and tap testing, damage evaluation and classification, moisture removal, and programmable hot bond curing equipment. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

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—AF A&P Program applicable course.)

AMT2191 Intermediate Aircraft Maintenance
Advanced maintenance procedures and systems operational theory. Includes removal, replacement, repair, rigging, and operational checkout of airframe accessories, primary and secondary flight controls, landing gear, throttle, canopy, and other related systems; use of special tools, and test and diagnostic equipment; and systematic use of maintenance manuals, drawings, and wiring schematics during fault isolation, inspection and aircraft modification. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2192 Aircraft Weight and Balance - General
Theory and methods used to control aircraft loading and center of gravity location. Includes weight and
Course Descriptions

balance terminology; principles of force and movement acting on a free body; weight and balance computations and algebraic formulas; methods, procedures, equipment and safety precautions when weighing aircraft to determine center of gravity location; and loading calculations using manufacturer’s loading charts, load adjuster slide rules and scientific calculators. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2195 Advanced Aircraft Maintenance
Advanced aircraft systems operation theory and maintenance procedures. Includes system operation analysis, use of wiring diagrams, engineering drawings, manufacturer’s maintenance manuals, and special tools and equipment; rigging techniques and operational checkout of flight controls, landing gear, powerplant, hydraulic, electrical, environmental and airframe systems components; ground handling; fault isolation; and inspection concepts to ensure aircraft safety and airworthiness. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2198 Canopy Rigging
Advanced study and practice of removing, installing and adjusting jettisonable aircraft canopies. Includes egress system safety precautions, use of maintenance safety devices and system operational checks. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2199 Aircraft Landing Gear and Door Rigging
Advanced procedures for fault isolation, adjustment, and operational checkout of aircraft landing gear and door sequencing systems; and use of special tools and equipment. Emphasizes adherence to technical data and instructions provided in maintenance manuals. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2219 Aircraft Flight Control Systems Maintenance
Advanced maintenance and operation of primary and secondary flight control systems. Includes operational checks, rigging and adjustment, and hydraulic power systems of primary flight control systems for ailerons, rudders, stabilators and elevators, and secondary flight control systems for flaps, slats and speed-brakes. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2220 Aircraft Transition Training and Familiarization
Airframe transition training for skilled aircraft maintenance technicians converting from one aircraft to another. Includes general aircraft egress and/or ejection safety procedures, aircraft safe for maintenance identification, specific airframe engine, electrical, pneudraulic, environmental control, fuel, and related systems. (May be repeated for credit on various aircraft—AF A&P program applicable course.)

AMT2228 Advanced Aircraft Fault Isolation
Advanced procedures and techniques used for fault isolation in aircraft malfunction situations. Includes aircraft technical data, fault isolation charts, and reading and interpretation of aircraft wiring diagrams and system schematics. (May be repeated for credit on various aircraft - AF A&P program applicable course.)

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 first-line maintenance supervisors. Includes supervisory principles, aircraft safety, corrosion control, ground servicing procedures, engine operation, operational checkouts, fault isolation, ground-handling procedures, inspection
course descriptions

concepts, and flight safety. (May be repeated for credit on various aircraft.)

AMT2299 Advanced Aviation Maintenance Management

Aviation maintenance organizational structure. Includes concepts of production management, resource management, quality control and assurance, labor hour and cost accounting, material deficiency and product quality deficiency reporting, training documentation, and Core Automated Maintenance Systems.

AMT2301 Aviation Production Superintendent

Advanced aircraft maintenance management and flight-line operation procedures. Includes establishing maintenance priorities, directing maintenance actions, and developing monthly and weekly maintenance plans; cannibalization procedures and supply system management; disaster preparedness, exercise scenarios, emergency war order and contingency planning; and determining and reporting aircraft mission capability and airworthiness status.

(AS) Astronautics

AST2402 Introduction to Space Systems

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

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 spacetrack 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.

(AC) 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 existing security risks in an unsecured tower communication system.

ATC1405 Air Traffic Control Nonradar Procedures

Principles of conventional approach control operations. Includes separation standards, terminology, inter- and intrafacility coordination, and procedures for control of aircraft without use of radar equipment.

ATC1406 Air Traffic Control Radar Procedures

Principles of approach control radar operations and equipment. Includes simulated operations employing situations requiring use of terminology, identification procedures, separation and basic control instructions for aircraft in a terminal radar environment.

ATC1408 Air Traffic Control Fundamentals

Weather briefing procedures, observations, and reports and application of aeronautical charts. Includes instrument approach procedure charts, standard terminal arrival route charts, visual and instrument flight rule supplements, terminal instrument procedures and basic theory of flight and aircraft performance characteristics.

ATC2405 Airspace Management

Design, coordination and management of airspace required for Air Force operational training activities. Includes national airspace system, categories of airspace, military training route program, military operations areas, airspace and air traffic control criteria.

ATC2407 Terminal Instrument Procedures

Development of terminal instrument procedures. Includes applications of trigonometry and analytic geometry, elements of airspace design and utilization, nonprecision approach and radar procedures, textual development, administrative techniques and planning criteria for airspace area design and utilization.
Course Descriptions

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.

(AVA) AUDIOVISUAL ARTS

AVA2405 Visual Information Management
Visual information support center management techniques; identification of effective work center administration, workload planning and production cost accounting; development of effective resource controls; analysis of quality and production control procedures; and implementing programs designed to foster effective customer relations.

AVA2802 Audiovisual Methods
Designing and developing audiovisual materials for training. Includes learning theories and communications process, media selection and operation of production and playback equipment, development of visual materials, application of writing principles for audiovisual packages, development of audio narratives, construction of audiovisual storyboards, and production of audiovisual lessons.

(AVI) AVIONICS

AVI1705 Automatic Flight Control Systems Theory
Circuit analysis and operation of pitch, yaw, and roll axis channels and stability augmentation system.

AVI1706 Automatic Flight Control Systems Maintenance
Trouble analysis, adjustment, and repair of automatic flight control systems and components. Includes principles of navigation systems and use and maintenance of associated test equipment.

AVI1707 Fundamentals of Avionic Systems
Principles of avionic maintenance, hardware care, use of special tools, and repair of wiring and solderless connectors.

AVI1708 Engine Instrument Maintenance
Operational theory, functional analysis, troubleshooting procedures, adjustment and calibration of aircraft engine instruments. Emphasizes maintenance and inspection of tachometer, oil pressure, fuel flow, pressure ratio and fuel quantity systems.

AVI1709 Integrated Flight and Navigational Instrument Maintenance
Operation, analysis, and maintenance of integrated flight and navigational instruments. Includes magnetic compasses, transmitter indexing and calibration, optical transfer, electrical swing, and flight director systems.

AVI1710 Flight Instrument Maintenance
Operation, analysis, and maintenance of pitot-static and vertical scale indicating systems, mechanical airspeed indicators, altimeters, air data computers, computer modules, sensors and automatic attitude reporting systems.

AVI1717 Avionic Maintenance Management
Principles of supply systems and avionic maintenance management, procedures for maintenance inspections, and evaluation of maintenance activities.

AVI1726 Avionic Manual Test Station Operation
Principles and operation of manual test stations and test equipment used to maintain avionic systems.

AVI1727 Avionic Manual Test Station Maintenance
Practical experience in maintenance of manual test stations. Includes user calibration and limited maintenance.

AVI1729 Integrated Avionic Systems Theory
Operational characteristics of integrated avionic systems. Includes technical descriptions, theory of operation and circuit analysis of integrated avionic systems.

AVI1730 Integrated Avionic Systems Laboratory
Maintenance and troubleshooting of integrated avionic systems. Includes operational checkout, malfunction detection, maintenance of system components, alignment and application of circuit analysis techniques.

AVI1731 Avionic Radar Systems Theory
Operation and maintenance of monopulse helical scan radar, power supply, transmitter, receiver and indicating circuits.
**Course Descriptions**

**AVI1732 Avionic Radar Systems Maintenance**  
Avionic radar trouble analysis and maintenance procedures. Includes detailed data flow and logic analysis of transmitter, receiver, antenna, indicating, ranging, tracking and synchronization circuits.

**AVI1733 Weapons Control Systems Maintenance**  
Operational theory and detailed circuit analysis of weapons control system. Includes analysis, checkout and fault isolation of test equipment used in malfunction isolation techniques.

**AVI1734 Optical Sighting Systems**  
Theory and circuit analysis of optical systems. Includes analysis, checkout, fault isolation and use of special test equipment.

**AVI1735 Avionic Radar Navigation Systems Theory**  
Inertial navigation systems theory and detailed circuit analysis of stable platforms and computers. Includes integrators, accelerometers, gyroscopes and resolvers.

**AVI1736 Avionic Radar Navigation Systems Maintenance**  
Circuit analysis, alignment and adjustment of avionic inertial and radar navigation equipment, and use of special and general test equipment.

**AVI1737 Avionic Terrain-Following Radar**  
Detailed circuit analysis of transmitter, receiver, antenna, power supply, computer, and indicator; and trouble analysis using wiring diagrams and test equipment.

**AVI1738 Electronic Warfare Systems Theory**  
Comprehensive electronic warfare systems and equipment theory. Includes infrared, panoramic receivers, recoding, radar homing and other electronic warfare subjects.

**AVI1739 Basic Electronic Warfare Systems Maintenance Laboratory**  
Analysis, alignment and adjustment of electronic warfare equipment, and use of special and general test equipment.

**AVI1740 Electronic Warfare Systems Maintenance Laboratory**  
Troubleshooting, repair, cable fabrication, soldering techniques and wiring diagram analysis of electronic warfare systems.

**AVI1741 Automatic Test Station Operation**  
Terminal operation, equipment hookup, testing, troubleshooting procedures, and use of equipment in performing diagnostic testing on a wide variety of avionic equipment.

**AVI1742 Automatic Test Station Maintenance**  
Operational checkout, troubleshooting and repair of automatic test stations used to maintain avionic equipment.

**AVI1743 Avionic Inertial Navigation Systems Theory**  
Principles, theory and concepts applicable to airborne inertial navigation system. Includes system data flow and analysis.

**AVI1744 Avionic Inertial Navigation Systems Maintenance**  
Inspection, adjustment, performance testing, malfunction analysis and corrective maintenance of inertial navigation system.

**AVI1746 Avionic Sensor Systems Laboratory**  
Circuit analysis, troubleshooting, disassembly, repair, reassembly and calibration of sensor control equipment.

**AVI1747 Infrared Sensors Theory**  
Principles, characteristics and functional analysis. Emphasizes circuit analysis using wiring diagrams and logic symbols.

**AVI1748 Infrared Sensors Maintenance**  
Functional analysis and maintenance of infrared sensors. Includes operational checkout, alignment, troubleshooting and repair using both specialized and standardized test equipment.

**AVI1749 Laser Systems Theory**  
Principles and applications of laser system. Includes block diagram analysis and use of related test equipment.

**AVI1750 Laser Systems Maintenance**  
Functional analysis and maintenance of laser systems. Includes operational checkout and troubleshooting using both specialized and standard test equipment.

**AVI1752 Introduction to Maintenance Test Equipment**  
Operation and use of standard test equipment. Includes multimeters, vacuum tube voltmeters, AC and DC differential voltmeters and frequency measuring devices.
Course Descriptions

AVI1754 Avionic Radio Communications Systems Theory
Operational characteristics of avionic communications equipment. Includes use of schematic diagrams, data flow, and detailed circuit analysis of receiver and transmitter systems.

AVI1755 Avionic Radio Communications Systems Laboratory
Operational testing, adjustment, inspection, malfunction analysis and maintenance.

AVI1756 Avionic Radio Navigation Systems Theory
Operational characteristics of avionic radio navigation equipment. Includes use of schematic diagrams, data flow, and detailed circuit analysis of navigational receiver and transponder systems.

AVI1757 Avionic Radio Navigation Systems Laboratory
Operational testing, adjustment, inspection, malfunction analysis and maintenance.

AVI1759 Airborne Warning and Control System Familiarization
Introduction to Airborne Warning and Control System. Includes power distribution, cooling systems, and use of safety and security procedures and technical publications.

AVI1760 Intercommunication System
Operating characteristics, circuit analysis and troubleshooting procedures of typical aircraft intercommunication system. Includes block diagram and detailed circuit analysis.

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.

AVI2717 Doppler Navigation Systems
Systems theory of Doppler navigation systems. Includes detailed analysis of transmitter, receiver, antenna, indicator, computer, and frequency tracker circuitry using wiring diagrams and test equipment.

AVI2718 Airborne Early Warning Radar
Search radar principles and applications. Includes circuit analysis of stabilization, inertial, height finder and indicator systems through use of schematic diagrams.

AVI2719 Avionic Search Radar
Circuit analysis, operational checks, and adjustments of monopulse helical scan radar. Includes transmitters, receivers, indicators, antennas, power supplies, and flexible waveguides.

AVI2720 Avionic Track Radar
Phase and amplitude monopulse radar transmitting, receiving and ranging circuits. Includes troubleshooting and alignment of all components.

AVI2721 Avionic Forward-Looking Radar
Data flow and systems analysis. Includes application of search and navigation radar principles and techniques peculiar to forward-looking radar, inspection, performance testing, alignment and repair.

AVI2722 Electronic Countermeasures
Identification and recognition of passive and active countermeasures, electronic countermeasure techniques, and data processing.

AVI2723 Radar Homing and Warning Systems
Principles of radar homing and warning systems. Includes functional diagram analysis and maintenance procedures.

AVI2725 Electro-optical Viewing System
Theory of target sensing and display using low-light television, holography, and computer-aided graphic processing to detect and display targets. Includes
operational checkout, alignment, troubleshooting and repair of electro-optical viewing system using specialized and standard test equipment.

AVI2726 Radar Mapping
Principles, theory, and wiring diagram analysis of side-looking radar system used in radar mapping. Includes detailed analysis of receiver, transmitter, timing, antenna stabilization and power distribution circuitry.

AVI2727 Avionic Camera Systems Maintenance
Advanced camera systems alignment. Includes camera controls, photographic sensitive controls, image motion controls and camera magazines.

AVI2728 Data Display Systems
Circuit analysis through use of logic symbols and schematics. Includes troubleshooting and bench checks.

AVI2729 Maintenance and Operation of Aircraft Test Equipment
Certification, repair, and operation of avionic test equipment used in troubleshooting, repair, and alignment of aircraft electrical components and test benches.

AVI2730 Advanced Avionic Systems
In-depth avionic systems principles, characteristics, and uses; newest electronic innovations and repair techniques. Includes maintenance procedures and capabilities, limitations and techniques in employment of avionic systems.

AVI2731 Digital Interfacing 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 and physical and biological principles to personal protection. Includes measurement of illumination and ionizing and nonionizing radiation.

BEE1302 Bioenvironmental Protection
Concepts of acoustics; analysis of generation, measurement and control of noise; principles of ventilation; and respiratory protection

BEE1303 The Occupational Environment
Principles of occupational health and toxicology, establishment of case files, environmental pollution detection and control, and use of detection devices to determine level of exposure to hazards.

BEE1304 Water Systems Management
Collecting and chemical testing water samples, monitoring water treatment facilities, and preparing reports with recommendations to prevent contamination.

BEE1305 Waste Management
Collection, treatment, and disposal of liquid and solid-waste materials.

BEE2101 Introduction to Ergonomics
Anticipation, recognition, evaluation and control of ergonomic hazards. Includes discussion of health effects, recognition of risk factors, methods of evaluation, standards and criteria, control of principles and methods, administrative controls, personal protective equipment, field surveys, and other current issues in ergonomics.

BEE2102 Bioenvironmental Engineering
Planning, organizing, implementing and evaluating bioenvironmental engineering activities. Includes
contract management, equipment accounts, budgeting, work controls, applied statistics, drinking water surveillance, water pollution, hazardous materials and waste management, air pollution, ergonomics, review and control of case files, and management of occupational health programs.

**BEE2300 Environmental Protection**
Interpretation of standards and criteria applicable to environmental pollution control; implementation and evaluation of air, water, noise and solid-waste pollution surveys; and preparation of reports containing recommendations for control measures to comply with Environmental Protection Agency standards.

**BEE2313 Hearing Conservation**
Measurement of auditory risk, automatic audiometer monitoring, selection and issue of personal ear protection devices, methods of monitoring noise exposure, and management of hearing conservation program.

**BEE2316 Hazardous Waste Operations**
Evaluation and control of hazardous waste operations and remediation activities at hazardous waste sites according to Occupational Safety and Health Administration standards.

**BEE2319 Bioenvironmental Engineering Readiness**
Medical readiness training program development and management. Includes peacetime and wartime plans; nuclear weapon accident response; hazardous material accident response; and medical aspects of nuclear, biological and chemical warfare.

**BEE2320 Ionizing Radiation Management**
Radiation protection development and management. Includes radioactivity and principles of radiation, interaction with matter, biological effects of radiation, external and internal dosimetry, radiation instrumentation, and transportation and disposal of hazardous materials.

**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.

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**(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, pneumdraulics 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 Introduction to Diagnostic Imaging**
Principles of diagnostic imaging, ionizing radiation, X-ray production, generation and radiation physics. Includes equipment operation theory and safety, clinical and practical applications, related physiology, calibration, repair, external operation, internal electronic circuitry of mobile radiographic systems, film processor systems, dental laser and filmless imaging systems.

**BET2201 Intermediate Diagnostic Imaging**
Equipment operation theory for the maintenance of mobile fluoroscopic systems, fixed imaging systems and high-frequency imaging systems. Includes related physiology, practical and clinical application, calibration, repair, external operation, and internal electronic circuitry.

**BET2202 Biomedical Equipment Practicum**
General maintenance practices and associated duties of a biomedical equipment repair shop. Includes troubleshooting, isolation and repair, or replacement of defective components, modules and circuit boards according to manufacturer’s specifications; and identifying facts and statements concerning clinical applications, related physiology and complete specific maintenance tasks on a wide variety of medical systems and units.

**BET2322 X-ray System Technology**
Preinstallation surveys; procurement, installation and calibration of X-ray systems; radiographic and fluoroscopic principles; and Bureau of Radiological Health Compliance testing.

**BET2401 Managerial Functions in Biomedical Equipment**
Biomedical equipment manager responsibilities, workload and manpower management, administration of contractual and financial matters, employee development, maintenance and supervision of equipment, safety programs, and information management.

**BET2402 Advanced Field Medical Support Systems**
Emergency shelter preparation and power generation. Includes diesel generator units and field electrical systems. Emphasizes lighting, environmental control and X-ray systems.

**BET2404 Computer-Based Medical Systems**
Conceptual and practical applications for advanced computer-based medical systems. Includes peripherals, networks and microprocessors.

**BET2405 Telemedicine**
Clinical applications, functions, and benefits of a picture-archiving and communications system. Includes systems operations, preventive maintenance, inspection, calibration, troubleshooting, and repair of hardware and software related to a variety of telemedicine computer operating systems.

**BET2406 Advanced Diagnostic Imaging Systems**
Advanced clinical and practical applications, related physiology, modalities, equipment operations theory,
Course Descriptions

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.

(CAR) CARPENTRY

CAR2801 Advanced Roofing Repair
Roof construction. Includes selection of materials, tar kettle operation and inspection, and removal and repair of damaged roofs.

(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 material 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.

CIV2107 Metals Layout and Fabrication
Material estimation and layout of structural components. Includes geometric principles, tools, machines and metal materials.

CIV2509 Soil Engineering and Pavements
Principles of soil identification. Includes listing specific gravity and grain size, moisture states and soil classification system, compaction control, California Bearing Ratio, density determination, field identification, soil exploration, and flexible and rigid pavements.

CIV2517 Architectural and Structural Design
Preparation of required program documents, design sketches, and architectural and structural working drawings. Includes use of mix data; preparation and testing of plastic concrete for slump and air content; and use of mixed concrete to prepare cylinder and beam test specimens.

CIV2519 Civil Engineer Management
Civil engineering force management, resources and training. Includes advanced topics in environmental 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.

(CL) 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.

CLT1305 Introduction to Cardiovascular Diagnostic Principles
Practice in invasive diagnostic cardiac catheterization; physical principles governing such noninvasive cardiovascular diagnostics as electrocardiography, echocardiography, apex and phonocardiography, stress testing, and vectorcardiography; and interpretation and management of electrocardiographic arrhythmia.

CLT1306 Introduction to Pulmonary Diagnostic Principles
Fundamentals of gas laws and respiratory dynamics; and assessment of pulmonary functions making use of spirometry, diffusion, lung volume, airway resistance, flow and volume loops, compliance and blood gases.

CLT1307 Introduction to Respiratory Therapy
Principles of medical gases, 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. Emphasizes 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.
(CMR) COMPUTER MAINTENANCE & REPAIR

CMR1402 Diagnostic Testing
Analyzing and isolating electronic equipment malfunctions using computer programs. Includes use of technical manuals, and general- and special-purpose test equipment.

CMR1741 Peripheral Equipment
Operational theory, logic and circuit diagram analysis, and preventive and corrective maintenance. Includes use of general- and special-purpose test equipment, and technical manuals.

CMR1746 Computer Maintenance
Operational theory, logic and circuit diagram analysis; preventive and corrective maintenance; and troubleshooting. Includes use of general- and special-purpose test equipment, and technical manuals.

CMR1748 Video Monitor Principles
Operational theory of cathode-ray tube and associated circuits, logic and circuit diagram analysis; corrective and preventive maintenance; and troubleshooting. Includes use of hand tools, general- and special-purpose test equipment, technical manuals, and applicable safety procedures.

CMR1752 Computer Console Theory
Systems analysis and operation. Includes keyboard inputs, control panel functions, and logic and circuit diagram analysis.

CMR2101 Automated Systems Operation
Overview of computer fundamentals involving computer operating systems, computer system configuration, networking principles, and database management for local and wide area network environment. Includes operational theory of digital switching equipment, modems, data transmission principles, Ethernet bridge components, multiplexing devices, and associated signal and data processing hardware.

CMR2102 Automated Systems Maintenance
Analysis of computer network and system equipment operation to identify, isolate, and repair faulty hardware and software using diagnostic tests, debugging and troubleshooting techniques, general- and special-purpose test equipment, specific system and software manuals, and associated spare equipment.

CMR2711 Timing and Control Systems
Operational theory, logic and circuit diagram analysis; preventive and corrective maintenance; and troubleshooting. Includes use of general- and special-purpose test equipment, and technical manuals.

CMR2714 Data Processing Equipment
Operational theory, logic and circuit diagram analysis; preventive and corrective maintenance; and troubleshooting. Includes use of general- and special-purpose test equipment, and technical manuals.

CMR2733 Data-Display Equipment
Operational theory, logic and circuit diagram analysis; preventive and corrective maintenance; and troubleshooting. Includes use of hand tools, general- and special-purpose test equipment, technical manuals, and applicable safety procedures.

CMR2751 Input and Output Control
Principles of data flow and timing. Includes logic and circuit diagram analysis, and diagnosis of system malfunctions.

CMR2770 Computer Systems
Advanced operational theory and configuration. Includes data flow, logic and circuit diagram analysis, system operation, and diagnosis of system malfunctions.

CMR2782 Disk Storage Systems
Operational theory, logic and circuit diagram analysis; preventive and corrective maintenance; and troubleshooting. Includes use of general- and special-purpose test equipment, and technical manuals.
(COM) COMMUNICATIONS

COM1100 Communications System Operation
Operational theory of command communications systems. Includes data and broadcast transmitting and receiving systems.

COM1101 Key System Installation and Maintenance
Principles of operation, circuit analysis, installation, and fault isolation of key systems and associated equipment. Includes safety procedures, technical publications and use of hand tools and general- and special-purpose test equipment.

COM1400 Electronic Communications Theory
Transmitter and receiver systems. Includes electronic principles, transmission lines and antennas.

COM1403 Radio Communications Theory
Transmitter principles, receiver tuning and operation, antenna, wave propagation, and communications procedures.

COM1404 Communications Network Equipment Operation
Network equipment operating techniques and procedures for ensuring continuity, reliability and speed of service; operation of relay station equipment; and concepts of operation of technical control facilities.

COM1432 Ground Electronic Digital Timing Systems
Receivers, oscillators, counters, amplifiers, indicator units and associated power supplies. Includes theory of operation, functional applications, logic and schematic diagram analysis, malfunction isolation, corrective maintenance, and alignment procedures.

COM1433 Airborne Radio Operations
Operation of various airborne radio communications systems and related electronic equipment.

COM1439 Electronic Digital Communications Control Systems
Frequency shift converters, wire-line modulators and demodulators, digital-to-digital converters, control interfacing, radio modulators and demodulators, and associated power supplies. Includes theory of operation and functional applications, logic and schematic diagram analysis, malfunction isolation, corrective maintenance, and alignment procedures.

COM1466 Communications Security Analysis
Basic principles of communications security. Includes intelligence structure, communications procedures, equipment and applied electronics.

COM1467 Command and Control Communications Countermeasures
Concepts and issues; identification of threats, capabilities, criticality, and vulnerability for both tactical and strategic command, control and communications; and interrelated responsibilities of communications intelligence and operations.

COM1468 Command Post Fundamentals
Operation of voice and data information systems, and procedures used for command and control reporting.

COM1713 Telephone Fundamentals
Principles of telephony and sound. Includes security, safety, maintenance management procedures, and use of general- and special-purpose test equipment and technical publications.

COM1714 Electronic Telephone Switching
Four-wire communications, radio signaling, safety procedures, fault isolation, and repair and use of hand tools and general- and special-purpose test equipment.

COM1717 Introduction to Telephone Switching Systems
Principles of telephone operation, switching system fundamentals, basic circuit analysis, safety and use of technical publications.

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.
Course Descriptions

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.

COM2100 Communications Systems Operations and Maintenance
Communications systems maintenance, management and administration; automation of record communications to include video, text and voice; and system administration to include maintenance of system, and subordinate menus and hardware.

COM2101 Advanced Command and Control Operations
Command post operations and communications security requirements. Includes development of operational checklists, control of classified information, physical security, communications, and supervision and training responsibilities.

COM2412 Systems Planning and Engineering
Propagation predictions, interference factors and path reliability for various communications systems. Includes site planning, selection, surveying and use of system design parameters.

COM2708 Antenna Installation
Antenna construction, elementary surveying, lightning protection, guy fabrication and installation, and erection of antenna support poles.

COM2723 Cable Testing
Maintenance of cable system records, strip maps and route markers; and use of frequency generators, multimeters and Wheatstone bridge. Includes location and tracing of buried cable, fault location, excavation and backfilling procedures, insulation resistance measurement and calculation, and use of safety and communications security procedures.

COM2725 Cable Construction and Installation
Aerial cable specifications in staking pole lines and distributing lines; erecting poles, guying, bracing and anchoring; suspension strand installation; lashing aerial cable; terminal and stepping pole installation; and installation of buried cable. Includes use of technical publications, maintenance schemes, cable records, diagrams, cable car and safety procedures.

COM2733 Tactical Air Control Network Operations
Management of tactical air missions, communications operations and weapons systems. Includes weather report analysis.

COM2734 Satellite Communications Operation
Theory associated with technical aspects of satellite communications operation control and hypothetical problem-solving situations.

COM2736 Introduction to Digital Switching Systems
Theory of telephone operation and call progression using applicable technical manuals. Includes digital-to-analog and analog-to-digital conversions, time division multiplexing, peripherals, power equipment, and alarm circuits.

COM2737 Digital Switching Systems
Basic principles of log utility module; translations used in call progression, and use of digital switching systems, database facilities and data tables.

COM2738 Digital Switching Systems Maintenance
Manual and automatic testing, inspection, troubleshooting, and operation of digital switching equipment.
Course Descriptions

COM2739 Communications Network Evaluation
Systems analysis. Includes applicable mathematics, transmission line theory, signal distortions, line conditioning, digital theory, multiplexing, modulation, and computer and switching systems.

COM2740 Communications Network Testing
Practical approach to systems analysis. Includes use of general- and special-purpose test equipment, and technical manuals.

COM2741 Digital Switching Systems Administration
Introduction to duties and responsibilities of systems administrator, interpretation of reports, and record documentation. Includes fundamentals of transmission lines and line testing.

(CON) CONTRACTS

CON1616 Introduction to Contract Administration
Procedures for contracts, purchase requests, sole source justifications, and contract sources; includes small business program purchase procedures, functions of systems management branch, automated file lists, and maintenance of contract files.

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, purchase descriptions, small purchase administration, quality assurance, warranties, foreign acquisitions, contract clauses, finance procedures, liquidated damages, contract modifications and disputes, contract negotiation methods, contract review, termination, contract pricing and accounting procedures.

CON2616 Base-Level Service Contracting
Advanced service contracting policies, contract requirements and surveillance planning. Includes case study on how to conduct job analysis, develop contract surveillance checklists and evaluate contractor performance.

(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 determination of composition of coatings, application of coating system and identification of aerospace equipment markings.

COR2501 Corrosion Control Laboratory
Application of preservatives and surface preparation. Includes protection from environmental factors, measuring effects of temperature and humidity, analysis of corrosive factors, use of toxins and caustic agents, and compatibility of materials.
Course Descriptions

(CYT) CYTOLOGY

CYT1101 Cytology
Introduces cells and changes caused by disease conditions; determines typical cells through systematic microscopic slide examination; stains cytology specimens; examines body fluids; interprets cytological changes; prepares smears, cell blocks and microporous filters; and refers abnormal findings to pathologist for review.

(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, 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
Managing periodontal maintenance program, identifying administrative tasks, documenting periodontal status, charting, health and safety concerns, and professional and patient relations.

DAS2319 Advanced Dental Oral Hygiene Clinical Skills
Didactic and clinical skills necessary in treatment and maintenance of periodontal disease through radiographic exams, referrals for oral lesions, scaling and root 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 Complete Dentures I
Fabrication of master casts, base plates and occlusion rims; mounting of casts; selection and arrangement of artificial teeth; and final wax-up, contouring, processing and finishing of complete dentures.

DLT1319 Complete Dentures II
Nonanatomic denture occlusion; complete denture reline and repair; and fabrication of immediate dentures, surgical templates, interim acrylic removable partial denture and soft mouthguard.

DLT1320 Construction of Removable Partial Dentures I
Principles of dental survey and design, casting of metal removable partial dentures, preparation and fabrication of metal frameworks from wax-up, and casting through finishing.

DLT1321 Construction of Removable Partial Dentures II
Tooth arrangement on metal frameworks, wax-up and contouring of denture base, processing and finishing of acrylic portions, partial denture repair, and orthodontic appliances.

DLT1322 Construction of Inlays, Crowns and Fixed Partial Dentures I
Occlusion, creation of stone casts and dies, use of wax additive technique, and casting and finishing of gold alloys.

DLT1323 Construction of Inlays, Crowns and Fixed Partial Dentures II
Fabrication, assembly and soldering procedures used constructing inlays, crowns, fixed partial dentures and acrylic resin crowns.

2008-2010 CCAF General Catalog
133
Course Descriptions

DLT1324 Dental Ceramics
Metal ceramic single unit restorations; wax-ups, casting, and finishing of metal substructure; and application, firing, contouring, and glazing of porcelain.

DLT2310 Porcelain and Metal Ceramic Restorations
Advanced theory and construction of dental porcelains, porcelain jacket crowns, substructure design, ceramic alloys, intrinsic and extrinsic color modification; building and contouring of opposing porcelain occlusions to include extensive bridgework.

DLT2314 Advanced Removable Prosthodontics
Survey and design, articulation, tooth arrangement, processing and recovery of complete and partial dentures, orthodontics appliance, and hard night guard.

DLT2315 Functional and Esthetic-Fixed Prosthodontics
Pouring and articulating dies and master casts, creating functional anatomic and metal-ceramic wax-up, investing and burning out wax-up, casting metal, and applying porcelain.

(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 include wartime threat assessment, defensive measures, chemical and biological protective equipment, and chemical agent detection and decontamination; and control center operations to include warfare agent, hazard and fallout prediction.

DPO1105 Nuclear, Biological and Chemical Cell Operations
Familiarization with nuclear, biological and chemical cell operations. Includes report and warning organization, messages, mapping, chemical hazard prediction and fallout predictions.

DPO1106 Emergency Operations
Notification, response, withdrawal and recovery phases of emergency operations. Includes major accidents, both nonnuclear and radiological, and natural disaster operations.

DPO1350 Disaster Medicine
Medical responsibilities, medical capabilities, physical and medical effects of peacetime nuclear weapon accidents, physical and medical effects, medical capabilities, and chemical and biological warfare medical defenses.

DPO2102 Advanced Disaster Preparedness
Wartime and peacetime operations. Includes threat analysis and readiness postures; nuclear, biological and chemical control center operations; passive defense; readiness mobility program; chemical and biological warfare defense; live agent training; command and control; readiness flight management; major accident response; readiness training; and logistics.

DPO2103 Disaster Preparedness Refresher
Advanced operational procedures and techniques. Includes new equipment; emergency information system; threat updates; and nuclear, chemical, biological and conventional warfare defense concepts and operations.
(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.

EDP1113 Data Processing, Inquiry and Retrieval Systems
Basic functions and characteristics of computer systems; operations performed by computer components from input through output; procedures for data entry, inquiry and retrieval; and methods required to construct, input and retrieve data from computer using format statements.

EDP1116 Operational Systems Utilities
Characteristics and application of systems utilities. Includes system security and use of operational publications.

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
Large-scale computer system software. Includes catalog and file management software, library editor software, utility software and time-sharing procedures.

EDP1131 Principles of Maintenance Management Information Systems
Information processing and analysis. Includes preparing and inputting data and analyzing output data, file maintenance procedures, system familiarization, subsystems, structures, Air Force on-line data system, system troubleshooting procedures, and processing techniques.

EDP1132 Computer System Familiarization
Functions of computer systems. Includes knowledge of computer security, electronic data processing, forms management, terminology and organizational alignment.

EDP1136 Microcomputer Software Applications
Microcomputer and software application. Includes operating system, word processing, spreadsheet 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.

EDP1201 Communications Computer Operator
Theory and operation of automatic digital network message equipment for receiving and sending messages. Includes message traffic routing, encryption, optical card reader, optical scan unit, nine-track tape, paper tape, and procedures for receipt and distribution of hard copy messages.

EDP1202 Software Engineering
Principles for developing software package to maximize software life cycle. Emphasizes problem solving, algorithm design and user interface.

EDP1203 Principles of Database Applications
Principles and techniques of database design, utilization and maintenance using commercial software on personal and mainframe computers; and use of SQL, tables, and indexes to create queries and reports.

EDP1204 Introduction to Logistics Automated Data System
Introduction to standard base supply system that emphasizes operation and maintenance of automated data system. Includes initialization, remote processing, interfacing microcomputers, file structure, time-sharing, query language processor retrievals, report generation, production control and reject management.

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.

EDP2135 Database Management
Application of data access methods for input and output operations. Includes coding, executing and debugging language programs.
Course Descriptions

EDP2136 Database Design
Advanced techniques. Includes terminology, design considerations, file structure and handling, and database documentation requirements.

EDP2152 Systems Design
Techniques and concepts of design based on state-of-the-art hardware and software computer systems. Includes security, control and audit features; construction of decision logic tables; top-down structured programming design; and project development.

EDP2178 Data Retrieval Systems
Advanced techniques for writing and inputting computer inquiry statements. Includes coding, data retrieving and data analysis to solve given management problems.

EDP2183 Advanced Computer Networking
Theory of computer-to-computer communications. Includes terminology and network configuration principles.

EDP2185 Advanced Computer Systems Analysis and Design
Computer systems development; includes data-processing system concepts, computer systems development life cycle, system feasibility studies, state-of-the-art computer technology, computer system design concepts, top-down structured design, and design documentation.

EDP2195 Job Control Language
Production of single-step, two-step and multistep jobs. Includes functions, features, execution, modification, and analysis of in-stream and cataloged procedures.

EDP2201 Computer System Administrator
Overview of hardware, software and operating systems; and use of system software, database, networking, editor and security software to customize operating environment to meet needs of using organization.

EDP2202 Advanced Logistics Automated Data System
Advanced techniques in standard base supply system. Includes distributed communications architecture, transaction processing, database concepts and integrity, processing management, microcomputers, programming and debugging techniques, and report generation.

EDP2206 UNIX Operating System
Introduction to UNIX operating system. Includes file system, shell, standard editor, network services and shell programming.

EDP2207 Network System Administrator
Local area network installation and operations. Includes local area network, wide area network, terminology, protocols, Windows environment, mail system, network administration functions, and hardware database management for users and passwords.

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.

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.
Course Descriptions

EDT1501 Instructional Principles and Techniques
Learning process. Includes application of communicative skills, instructional methods and aids, developmental approach, and instructional systems development.

EDT1803 Instructor Fundamentals
Principles of lesson planning, various methods of instruction, use of instructional aids, and construction and administration of evaluations. Includes learning theories. (Instruction suited to flight simulator, airborne, field and conventional classroom environments.)

EDT1804 Fundamentals of Speech
Principles of effective speaking. Includes organization and delivery using acceptable platform mannerisms and constructive, and effective use of visual aids.

EDT1808 Development and Management of Training Programs
Application of methods for determining training requirements. Includes analyzing training data and directives, administering career development programs, determining job classification and conducting staff visits to assist in setting up effective training programs.

EDT1809 Use of Computers in Training
Application of computers in training and instructional programs. Includes training files management, instructional system development and use of computer-assisted instruction principles in classroom environment.

EDT1811 Computer-Based Instruction Development
Principles of constructing computer-based instruction using system software commands.

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.

EDT2113 Military Training Instructor Practicum
Hands-on flight management of basic trainees under the supervision of military training instructor staff or assigned trainer appointed and trained by military training instructor staff.

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.

EDT2801 Instructional System Development
Systems analysis training requirements, criterion objectives, teaching steps and measurement devices, and planning, developing, validating, conducting and evaluating instruction.

EDT2802 Development and Management of Instructional Systems
Concepts and philosophies of training and educational process, and development and management techniques for effective instructional systems and educational programs.

EDT2803 Applied Instructional System Development
Practical exercises in development and evaluation of an instructional system; and education and training requirements, objectives and tests, plan and validation of instruction, and evaluation of a completed instructional system.

EDT2806 Basic Counseling
Comprehension of human behavior. Includes adjustment mechanisms and different considerations in academic and nonacademic counseling, application of various counseling approaches, use of referral agencies, documentation, and follow up.
Course Descriptions

EDT2807 Tests and Measurements
Test item construction. Includes development and correlation of objectives and standards; test item analysis; examination of characteristics of reliability, validity, comprehensiveness and differentiation; measurement errors; test administration and proctoring; and test critique.

EDT2809 Supervision of Instruction
Course control documents and instructional system development, management of student academic programs, and measurement and evaluation of student and instructor performance.

EDT2810 Advanced Technical Instruction
Modern instructional trends and innovations, analysis of problems relating to teaching methodology, and application of video recorders in practice teaching exercises.

EDT2813 Instructional Methodology
Fundamentals of teaching emphasizing proficiency in specialized skills such as technical course writing, tests and measurements, programmed instruction, training supervision, instructional system development and technical academic counseling. Includes learning process, effective study methods, and audiovisual aids such as single-concept films and automated teaching systems.

EDT2814 Practice Teaching
Supervised application of teaching techniques and instructional methodology in regularly scheduled classes.

EDT2823 Technical Writing
Techniques that enhance skills and knowledge in writing technical training materials. Includes review of basic grammar and English composition with practical exercises in researching, organizing and writing technical materials.

EDT2839 Correspondence Course Development
Preparation of correspondence course materials. Includes writing behavioral objectives, developing review exercises, preparing and using illustrations, using copyrighted material, and researching, planning and writing correspondence courses.

EDT2840 In-flight Instructor Training
Prepares personnel for duties as an in-flight instructor, improves student instructor knowledge of aircraft systems and ability to instruct the systems in a formal aircraft and classroom environment, and enhances student instructor understanding of various instructional techniques under actual flight conditions through observation and performance.

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 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.

EDT4102 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. Emphasizes improvement in communicative skills.

EDT4104 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
Course Descriptions

techniques and adaptation to various student styles in the classroom.

**ELECTRONIC EQUIPMENT**

**EEO1201 Aircraft Control and Warning Operations I**

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

**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.

**EEO1208 Semiautomatic Ground Environment Surveillance Operations**

Apprenticeship and practical application in data handling for electronic warfare duties as radar inputs and countermeasures technician. Includes a review of typical radar inputs and tracking methods employed in air surveillance and countermeasures operations.

**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 and multisensor systems. Includes detecting, identifying, and tracking surface and airborne objects; manual and automatic transfer of air defense information; basic sensor system employment; and combating electronic warfare.

**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.

**ELT1101 Electric Motor Principles**

Theory and operation of electric motors, application of test equipment and job safety; and connection and disconnection, and operation of motors and maintenance procedures under hazardous operating conditions.

**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 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.

**ELT1203 Solid-State Principles**
Semiconductor physics; theory of P-N junctions and multijunction devices; analysis of amplifier configurations and characteristics; and operation and feedback of audio, video, IF and RF amplifiers.

**ELT1210 Basic Electronic Principles and Circuits**
Basic electronics, electrostatics, and series, parallel and series-parallel circuits; and changing currents, inductance, capacitance, inductive and capacitive circuits, transformers, resonance and filters. Includes circuit analysis using electronic test equipment.

**ELT1211 Basic Electronic Circuits**
Principles of triode, tetrode, pentode, multiunit and multielement vacuum tube; and introduction to P-N junctions, transistor operation, transistor amplifiers, coupling and wave-shaping circuits, power supplies, sinusoidal and relaxation oscillators, hand tools and soldering techniques. Includes circuit fabrication using electronic fundamentals trainer and malfunction analysis using electronic test equipment.

**ELT1219 Electronic Cryptographic Systems Maintenance Depot**
Milliwatt and microwatt logic, block diagram and circuit analysis, and operation of and component replacement for digital data encryption and decryption devices. Includes input and output modules, power supplies, message indicators, clock start modes, synchronization circuits, special test equipment and use of hand tools for depot level repair.

**ELT1221 Tempest Problems and Solutions**
Installation, inspection and corrective maintenance procedures for cryptographic facilities to ensure suppression of undesirable emanations.

**ELT1223 Cryptographic Systems and Devices**
Principles of secure communications systems. Includes use of electronic cryptographic devices; encrypted teletypewriter, data, and narrow- and wide-band secure voice terminals; system configurations; and emanation suppression techniques.

**ELT1224 Data Transmission Techniques and Equipment**
Principles, methods and media of data transmission. Includes system timing, error control systems, and patch and test facilities.

**ELT1249 Emanation Suppression Techniques**
Characteristics of data processing equipment; causes of emanations; testing techniques; equipment interfacing; emanation analysis; narrow- and broadband test scan and correction factors; and use of oscilloscope, spectrum analyzer, impulse generator, signal generator and recording oscillograph.

**ELT1251 Tempest Analyst**
Introduction to secure communications, message and voice processors, channel matrices, and analytical computation tools. Includes instrumentation and analysis of recorded data and emanation suppression techniques.
Course Descriptions

ELT1259 Introduction to Electronics
Electronic circuits and their use in various electronic systems. Includes power supplies, solid-state devices, digital techniques, digital mathematics and basic troubleshooting.

ELT1262 Metrology Measurement Principles
Tracing and verifying precision measurement equipment standards, publications, forms and supply management.

ELT1264 Electromagnetic Pulse Detection Unit
Theory of electromagnetic pulse and electrostatic discharge effect upon electronic devices. Includes electromagnetic and electrostatic emission protective devices.

ELT1282 Multiplexer Maintenance
Operation, logic, and malfunction analysis and repair of multiplexer and demultiplexer equipment. Includes delay compensator, synchronizer monitor logic analysis, system troubleshooting, and use of hand tools and general test equipment.

ELT1430 Power Supply Analysis and Maintenance
Block diagram, circuit and malfunction analysis of power supplies. Includes replacement of components and circuit boards.

ELT1431 Speech Processing Circuits Maintenance
Block diagram, circuit, and malfunction analysis of cryptographic speech processing and switching circuits. Includes replacement of components and circuit boards.

ELT1434 Receiver Circuits Maintenance
Block diagram, circuit and malfunction analysis of receiver circuits. Includes replacement of components and circuit boards.

ELT1437 System Troubleshooting
Overall system troubleshooting. Includes alignment, adjustment and performance checks.

ELT1439 Narrow-Band Communications Theory
Evaluation of narrow-band (HF, VHF, UHF) telecommunication systems. Includes characterization of technical capabilities and limitations, theory and principles of operation, techniques for link performance assessment and propagational path prediction and analysis, and measurement procedures for technical evaluation of worldwide Defense Communications System.

ELT1451 Fiber-optic Cable Installation and Maintenance
Installation, splicing and maintenance procedures for fiber-optic cables and associated equipment, and use of specialized test equipment.

ELT1452 Satellite Communications Group Maintenance
Analysis of satellite communications terminal tracking and control systems. Includes maintenance, calibration, repair, and inspection of servo-electronic, monitor, control equipment and alarm systems.

ELT1453 Missile System Electronic Analysis
Signal flow analysis and applications to integral aerospace systems. Includes loop data-flow analysis, operation of standard test equipment, troubleshooting, safety and use of maintenance publications.

ELT1455 Communications Systems Theory
Principles of multiplexing, tunable microwave and tropospheric scatter systems. Includes performance laboratory to emphasize analysis, troubleshooting, maintenance and repair using standard test equipment.

ELT1456 Digital Data Communications Theory
Digital data communications systems theory. Includes functional and circuit analysis of transmitters, receivers, power supplies, data reception and detection circuits, and receiver timing and detection circuits.

ELT1457 Missile Launch Control Facility Maintenance
Operational theory, logic and circuit diagram analysis, and preventive and corrective maintenance. Includes general- and special-purpose test equipment, and technical manuals.

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.

ELT1538 Uninterruptible Power Supply Circuits
Principles of logic and control circuits. Includes annunciator, synchronization and digital control;
Course Descriptions

rectifier leg module assembly; charge limit control; inverter control; gate timing; inverter gate firing module; alarm annunciator; AC and DC protection; reverse transfer control; static switch control and preventive maintenance.

ELT1544 Security and Intrusion Detections
Principles of operation of control units, monitoring and display equipment, audible alarms, sensors (mechanical, capacitance proximity, vibration, ultrasonic motion magnetic weapons, passive ultrasonic), and system checkout and troubleshooting.

ELT1547 Energy Management and Control Systems Theory
Equipment configuration, and theory and operation of energy management and control systems.

ELT1701 AC Circuits
Fundamentals of alternating current. Includes motors, generators, meter movements, inductance, inductive reactance, capacitance, capacitive reactance, frequency spectrum and use of oscilloscope.

ELT1702 DC Circuits
Fundamentals of direct current. Includes series, parallel, and series-parallel resistive circuits, magnetism and relay operation.

ELT1712 Basic Solid-State Theory
Solid-state power supplies and amplifiers. Includes P-N junctions, transistors, rectifiers, filters, limiters and clampsers, and power, special and wide-band amplifiers.

ELT1713 Transmitter and Receiver Systems
Basic analysis of transmitter and receiver circuits, transmission lines, waveguides, antennas, cavity resonators, microwave oscillators, frequency control and automatic gain control circuits, crystal mixers, and parametric amplifiers. Includes schematic interpretation and troubleshooting techniques.

ELT1714 Solid-State Applications
Fundamental principles of solid-state applications in wave generation. Includes basic, pulsed and blocking oscillators; multivibrators; and time-based generators.

ELT1716 Standard Test Equipment Laboratory
Operational theory, function, and use of low-frequency generators, multimeters, electronic counters, frequency converters, audio oscillators, vacuum tube voltmeters, oscilloscopes and differential voltmeters.

ELT1717 Special Test Equipment Workshop
Operation and maintenance of test equipment used to maintain automatic programming and control equipment. Includes schematic analysis, and operation and maintenance of computer programming set and power supply.

ELT1719 Sensing Systems Maintenance I
Functional descriptions, technical characteristics, installation and operation procedures, block diagram and circuit analysis, preventive maintenance, and troubleshooting procedures of wind and temperature dew point measuring equipment.

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.
Course Descriptions

ELT1772 Wave Generation and Shaping
Principles and applications of wave-generating and shaping devices. Includes limiters, clampers, oscillators, blocking oscillators, multivibrators, time-base generators and sweep generators.

ELT1784 Microprocessor Fundamentals
Introduction to integrated and microprocessor logic circuits. Includes analysis of microcomputer systems and hardware and software considerations.

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

ELT2113 Ground Radio Theory
Principles of transmitters, receivers, audio and data intercept consoles, and automatic switchboard principles as applied to ground radio system.

ELT2114 Radio Maintenance Laboratory
Trouble analysis and fault isolation of subunits of transmitter, receiver and control sites.

ELT2120 Tropospheric Radio Systems
Operation, and circuit and functional analyses of tropospheric scatter radio terminals.

ELT2123 HF Receivers
Operation, and circuit and functional analysis of HF receivers.

ELT2125 Radio Transceivers
Operation, and circuit and functional analyses of universal radio equipment transceivers.

ELT2127 VHF Transceivers
Operation, and circuit and functional analyses of VHF transceivers.

ELT2129 Instrument Landing System
Operation, and circuit and functional analyses of instrument landing system. Includes familiarization with ground check procedures and flight inspection recordings.

ELT2136 Video Processing
Circuit analysis of normal and moving target video-processing circuits, antenna azimuth processing circuits and radar control circuits.

ELT2137 Satellite Ground Station Equipment
Maintenance of satellite ground station equipment. Includes alignment, adjustment procedures, and troubleshooting techniques using standard and specialized test equipment.

ELT2138 Ground Tactical Air Navigation Theory
Introduction to flight facilities equipment operational theory. Includes, circuit functional analysis of ground tactical air navigation systems using test equipment and technical data.

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.
Course Descriptions

ELT2408 Frequency Management Equipment Maintenance
Problems associated with high-frequency signal propagation. Includes analysis principles, frequency selection based on propagation analysis, equipment operation, detailed circuit analysis, preventive maintenance, and troubleshooting of transmitter, receiver and spectrum analyzer components of frequency management equipment.

ELT2704 Meteorological Radar System
Operational theory and circuit analysis of meteorological radar system. Includes inspection, installation, calibration, alignment, performance checks, troubleshooting and repair procedures, and use of applicable test equipment.

ELT2710 Test Equipment Laboratory
Practical experience in use of precision measurement equipment. Includes waveform measuring devices and spectrum analysis.

ELT2733 Logic and Circuit Analysis
Digital logic and analysis of computer circuits. Includes basic circuits, adders, registers, and coder and decoders.

ELT2739 Radar Transmitter Maintenance
Circuit analysis and repair of radar transmitters.

ELT2740 Radar Receiver Maintenance
Circuit analysis and repair of radar receivers.

ELT2765 Digital Principles
Solid-state fundamentals. Includes principles of logic circuits, amplifiers, multivibrators and digital voltmeters.

ELT2775 Multiplex Switching
Logic analysis of solid-state digital switching system. Includes troubleshooting and repair.

ELT5714 Specialized Instrumentation
Operational theory and application of special instrumentation principles. Includes principles of video recording, closed-circuit television, and microwave and laser systems.

ELT5717 Radar Data Display Circuits
Operational theory, application, and maintenance of precision-timing circuits, wave-shaping devices, sweep generation circuits, video-processing circuits and cathode ray tubes. Includes troubleshooting and fault analysis using multimeters, vacuum tube voltmeters and dual trace oscilloscopes.

ELT5728 DC and Low-Frequency AC Measurement
Introduction to metrology of voltage, current and power. Includes knowledge of instrument calibration standards, precision voltage and current measurement, differential voltmeters, thermal converter meters, vacuum tube voltmeters, voltmeter calibration system, resistance voltage dividers, ratio transformers, resistance bridges, measurement of capacitance and inductance, reactance bridges, low-frequency signal generators, function generators, and synchronization test equipment.

ELT5771 Automatic Tracking Radar Theory I
Principles of transmitters, antennas and RF groups, receivers, and range and angle-tracking systems.

ELT5800 Advanced Electromechanical Systems Laboratory
Auxiliary generator set operation and repair and applicable use of electrical wiring diagrams and engineering drawings to determine component operation, analyze circuitry and visualize system interrelationships. Includes prime mover, AC and DC generators and controls, and practice in maintenance, inspection, trouble isolation, servicing, load banking and adjustments.

ELT5802 Integrated Circuit Analysis
Theory of integrated and discrete circuit characteristics; circuit analysis of logic modules and diagrams; conversions between number systems with bases 2, 8 and 10; binary coded decimals; and Boolean algebra.

ELT5805 Advanced Missile Maintenance Laboratory
Diagram analysis, troubleshooting, alignment, calibration and inspection of missile systems. Extensive practice in circuit analysis using detailed wiring diagrams and test equipment to isolate, identify and correct malfunctions at component level.

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
Communications control console group and landline selector control group maintenance. Includes
Course Descriptions

equipment operation, circuit analysis, alignments and adjustments, and fault isolation.

ELT6779 UHF Radio Communications
Analysis of UHF multichannel radio transceivers. Includes performance testing, troubleshooting, alignments and adjustments using associated test equipment.

ELT6783 Communications Equipment Testing and Data Analysis
Intensive performance laboratory using a variety of test equipment in data validation, systems analysis, and technical evaluation required in maintenance management and upgrading of worldwide Defense Communications Systems.

ELT6791 Mobile Communications Systems Maintenance
Communications centrals. Includes nomenclature classification, equipment features, operational modes, malfunction analysis, field repairs, supply procedures and safety.

ELT6794 Command Post Maintenance
Analysis of specialized modems, alarms and command synchronizers for satellite communications command operations. Includes theory of operation, block diagram analysis, and operation and maintenance systems.

ELT7724 Analysis of Functional Circuits of Transmitters
Amplitude and frequency modulation; includes theory of transmission lines, waveguides, resonant cavities, antennas, and pulse modulation.

ELT7737 Radio (Air and Ground 50KHz)
VHF and UHF communications equipment principles. Includes troubleshooting and repair of VHF and UHF communications equipment.

ELT7750 Ground Navigational Maintenance
Operation and circuit analysis of ground-based timer synchronizer, monitor, receiver and transmitter units. Includes preventive maintenance and troubleshooting of systems using technical data.

ELT7759 System Timing, Transmitter and Receiver
Circuit analysis, alignment, and troubleshooting of transmitter and receiver master timing system. Includes digital techniques.

ELT7762 Digital Selective Identification
Functional and logic diagram analyses of digitized selective identification feature system. Includes encoder and decoder, and fault isolation.

ELT7767 Radar Identification Equipment
Functional and circuit analyses 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
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

EMT2101 Emergency Medical Technician - Paramedic
Course Descriptions

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.

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.

(ENV) ENVIRONMENTAL MEDICINE

ENM1303 Epidemiology
Terminology, detection and control of communicable diseases.

ENM1305 Occupational Medicine and Industrial Hygiene
Measurement of occupational health hazards and use of personal equipment to minimize exposure to radiation, respiratory and hearing hazards.

ENM1310 Medical Entomology
Theory of entomology and its importance in public health and transmission of diseases.

ENM1311 Operational Entomology
Epidemics, vector bionomics and vector-borne diseases as they affect military; surveillance, prevention and control of vector-borne diseases; and information, intelligence and field operations.

ENM2302 Advanced Epidemiology
Investigation, control and prevention of communicable diseases. Includes medical entomology, maintenance of public health standards and food safety.

ENM2304 Advanced Occupational and Public Health Management
Introduction to Food and Drug Administration food code, epidemiological concepts, occupational and public health principles and programs, management principles and trend analysis.

ENM2306 Public Health Emergency and Disaster Operations
Didactic and field training in public health preventive medicine for emergency and disaster operations. Emphasizes role of public health personnel in responding to disasters and complex humanitarian relief efforts; role of federal, state and local governments in contingency planning and operations; field supplies, equipment, sanitation and hygiene; chemical and biological monitoring and decontamination procedures; methods of ensuring safe food and water in field conditions; disease vector investigation and surveillance techniques; and site selection and setup.

(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.
Course Descriptions

(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. Includes cooling, starting, lubrication, intake, exhaust, governor and fuel.

EPP1503 Equipment and Pole Climbing
Pole-climbing techniques using hot line tools and protective equipment, crossarm installation and removal, pole step installation, and civil engineering management procedures. Includes operations, communications security, general safety practices and pole-top rescue techniques.

EPP1504 Construction of Overhead Electrical Distribution Systems
Electrical prints and staking sheets for pole location, framing, setting and erection techniques using anchors and guys. Includes insulated boom dielectric testing, pole grounding, inspection of substation fences and vegetation control; installation of lighting system, distribution transformers and service drops using safe clearance procedures and conductor support devices; maintenance on electrical switchgear and equipment; emergency transformer connections; conductor splices; de-energized conductor transfers; and line and aerial bucket operation and maintenance.

EPP1505 Underground Distribution Systems Maintenance
Maintenance and inspection of underground electrical distribution system and manhole equipment. Includes fabricating and testing in-line splices, installing direct burial cable, replacing underground cable, tape termination techniques, and termination point inspection and testing.

EPP1506 Operation and Maintenance of Mobile Generator Sets
Generator set wire diagrams and automatic start, power transfer and no-break power systems. Includes troubleshooting techniques and preoperation, single unit operation, and postoperation procedures.

EPP1507 Generator Set Operation and Aircraft Arresting Barriers
Operating characteristics, configuration of aircraft arresting system, generator set associated equipment, power plant generator operation, problem analysis, and diesel engine tests and maintenance.

EPP1508 Wiring Methods
Wiring diagrams, electrical terms and symbols, conduit application and bending techniques; and branch circuit construction, switch and outlet installation and troubleshooting techniques using test equipment and safety procedures per national electrical code guidelines.

EPP1509 Electrical Special-Purpose Systems
Maintenance; troubleshooting; and repair of transformers, voltage regulators, battery banks and chargers, and emergency lighting systems. Includes dining hall and domestic appliances.

EPP2100 High-Voltage Cable Testing and Splicing
Cable construction, splicing procedures, requirements for various underground systems, causes of underground cable failure and related preventive procedures, tape and hybrid splices, lead transition, tape termination, and separable insulated connectors.

EPP2501 Generator Set, Switchgear, and Governor Operation and Maintenance
Operation, care, and maintenance of generator sets, equipment and components, gas turbine and diesel generators, hydraulic and electric governors, and automatic start and transfer switchgear.

EPP2503 Transportable Distribution Systems
Set up, maintenance, troubleshooting and repair procedures for electrical distribution systems and secondary distribution centers under field conditions. Includes use of electrical plant schematics, test equipment and safety practices.

EPP2504 Electrical Distribution Systems
Maintenance of hot line tools and advanced troubleshooting procedures for electrical distribution systems. Includes voltage regulator maintenance with application of electrical theories; replacement of single-phase lines, three-phase running corners, vertical construction, insulators on horizontal construction, crossarms using auxiliary sidearms, and crossarms and poles on dead ends; and changing straight line crossarm to double dead end and double crossarms on angles.
Course Descriptions

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 contingency 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.

EXP1705 Nuclear Explosive Weapons Maintenance
Application of safety practices. Includes weapons maintenance, storage, handling, assembly, inspection and preparation for shipment.

EXP1706 Explosive Ordnance Disposal Orientation
Explosive ordnance disposal mission and history. Includes associated mathematical formulas, munitions identification, publications, nonelectrical firing procedures, and base recovery and chemical operations.

EXP2101 Advanced Explosive Ordnance Disposal
Management skills and operations training for explosive ordnance disposal craftsman. Includes base recovery after attack plans, emergency off-base response, explosive ordnance reconnaissance and environmental protection considerations.

(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

FIN1107 Basic Accounting
Accounting principles with practice in preparing accounting reports and transactions, types of journals, posting to accounts, charting accounts, and
Course Descriptions

preparation of vouchers, inventories and cash controls.

FIN1108 Financial Management
Basic concepts of business law, contracting, finances, accounting, reporting, insurance and legal problems.

FIN1109 Budgeting
Planning, programming and budgeting system within the federal government. Includes the federal budget cycle, influence of foreign currency, fiscal control, management controls and reports, and fiscal year closeouts.

FIN1113 Introduction to Financial Analysis
Financial statement analysis. Includes preparation of financial statements, and horizontal, vertical and ratio analyses.

FIN1116 Automated Accounting Systems
Concept and operation of automated accounting systems. Includes analysis of source documents, system output, coding and processing of accounting transactions.

FIN1119 Financial Planning
Basic principles of financial planning. Includes development of fund requirements for personnel, nonpersonal services, materiel and travel budget functions.

FIN1122 Introduction to Accounting and Finance
Functions and responsibilities of accounting and finance systems used in governmental operations.

FIN1123 Travel Pay Accounting
Computation of travel allowances. Includes permanent change of station, dependent travel entitlements, dislocation, temporary duty, movement of mobile homes and leave accounting for travel-generated leave.

FIN1124 Paying and Collecting Procedures
Policies and procedures for payment and collection of funds. Includes pay agent and cashier operations, check payments, foreign payments, and accounting systems used for payment and collection functions.

FIN1125 Military Pay Accounting
Policies and procedures for military pay system. Includes determination of pay entitlements, deductions, allowances and leave; and preparation and control of military pay documents pertaining to each type of pay transaction.

FIN1126 Government Funds and Systems
Treasury funds and accounting systems used by DoD. Includes accounting structure and computer codes, general governmental accounting system, general ledger accounting system and reporting procedures, and practical experience in addressing and posting internal accounting records, batch processing and nonremote direct input of data for accounting records.

FIN1201 Accounting Principles
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 travel-generated 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.

FIN1207 Finance Customer Support - Reserve Forces
Computation of pay for Reserve Forces personnel. Includes accounting procedures for annual training,
Course Descriptions

inactive duty training, and retirement pay. 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.

FIN2114 Automated Accounting
Advanced computerized methods. Includes applications, data elements and codes, established records, remote operations, batch and interface processing, accounting and finance outputs, and system recovery procedures.

FIN2115 Advanced Automated Materiel Systems
Computerized materiel accounting system. Includes categories and sources of inventory, local procurement, disbursement transactions, issues, turn-ins, receipts of materiel, accounting and finance adjustments, system failure and recovery, and practical application to materiel systems.

FIN2116 Cost and Economic Analysis
Application of concepts and techniques of cost and economic trend analysis. Includes data collection methods; establishment of cost, performance and operational standards; and analysis of cost, fiscal and related accounting reports to develop cost and economic trends and performance indicators.

FIN2119 Resource Management Accounting System

FIN2122 Advanced Accounts Control
Management of major treasury funds. Includes analysis of authorization process, methods to control public funds, availability periods and status of appropriations, components in expenditure and collection accounting, general accounting procedures for receipts (general, special, trust), deposits and reimbursement (revolving, open), and refund accounts.

FIN2123 Advanced Pay
Policies and procedures for payment of personnel. Emphasizes management functions and responsibilities associated with compensation systems. Includes terms of pay, deductions from pay, collections, leave accounting and management of quality assurance programs.

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

(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
Course Descriptions

aerial rescue firefighting vehicles, and live training fires on various aircraft.

**FIP1807 Fire-Protection Fundamentals**

Fire-protection mission, organization and publications; occupational health and safety; quality principles; portable fire extinguishers; and fire ground basics, behavior, alarm communications center, and prevention and readiness. Includes fire-protection contingency responsibilities.

**FIP2100 Advanced Fire Alarm Systems**

Operation and maintenance of fire alarm and suppression systems, and development of related inspection checklists. Includes practical experience in connecting, testing, troubleshooting, and repairing electrical and electronic portions of representative fire-detection, alarm and suppression systems.

**FIP2101 Advanced Hazardous Materials**

Advanced principles of hazardous materials. Includes incident management system, hazardous materials mitigation, use of monitoring devices and other competencies necessary to perform as a hazardous materials technician or incident commander.

**FIP2807 Hazardous Materials**

Protection of hazardous and explosive materials; includes firefighting techniques, propellants used in rockets and missiles, planning for disasters, use of special purpose equipment, and security education programs.

**FIP2808 Fire Service Rescue**

Principles of rescue. Includes use of protective clothing and equipment, emergency first aid and rescue tools; aircraft fundamentals; building construction; egress system; pressure suits; and rescue vehicles and equipment.

**FIP2810 Firefighting Vehicle Systems**

Inspection and operation of special-purpose vehicles. Includes fuel, electrical, air, hydraulics, heating and cooling, drive train assembly and firefighting systems; and operator maintenance on aircraft rescue firefighting and rescue vehicles.

**FIP2815 Fire-Prevention Inspecting**

Advanced analysis of various functions of technical services branch of fire-protection organization. Includes building and facilities engineering and design criteria for installed and portable fire-protection systems, funding and programming, and administrative and inspection procedures.

**FIP2818 Supervisory Firefighter**

Supervisory fire-protection duties and responsibilities. Includes firefighting tactics and strategies; command and control using incident management system, aircraft emergency entry, budgeting, manning and quality fire-protection programs; and extensive use of ground and simulator exercises for performance of various crew duties.

**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 Diyetic Therapy**

Medical and dietetic terminology, nutrition, food nutrients, digestive system, recommended dietary allowances, applied clinical nutrition, patient interview and diet instructions.

**FNS2304 Nutritional Medicine Administration**

Nutritional medicine management and procedures. Includes menu planning and development, subsistence requirements, operating Nutrition

**(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.
(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 development of skills necessary to translate oral communications and written materials. Prerequisite: resident language course or demonstrated proficiency.

FTL1412 Intermediate Technical Persian-Farsi
Application of technical vocabulary and language used to describe military equipment, operations and control procedures. Emphasizes development of skills necessary to translate oral communications and written materials. Prerequisite: completion of resident language course or demonstrated proficiency.

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 and modified Panero and Pritchard hydrant systems. Includes loading and offloading facilities, filters and separators, gauges, valves, and strainers.

FUS1507 Fuel Subsystems (Mechanical)
Operation, inspection and maintenance of fuel mechanical subsystems. Includes tanks, filtration

2008-2010 CCAF General Catalog
152
Course Descriptions

equipment, meters, and loading and offloading equipment.

FUS1508 Specialized Fuel Systems and Tank Entry
Identification of components of Type III Phillips system; motor vehicle fueling system; principles of troubleshooting, inspecting and operating; and procedures for tank entry and deactivating fuel systems.

FUS1509 Fuel Hydrant and Air-Transportable Systems
Operation and maintenance of permanently installed hydrant and air-transportable systems. Includes Panero and Pritchard hydrant and application of hydrant accounting relative to transferring, receiving, issuing and defueling.

FUS1511 Aerial Bulk Fuel Delivery
Principles of loading and unloading bulk fuel delivery systems used in cargo aircraft.

FUS1601 Operation of Mechanical Fuel Dispensing Systems
Extensive practice in operating various refueling systems that receive, issue, and transfer fuel; systems include mechanical, hydrant, and portable units. Includes application of petroleum product quality control 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 air-transportable fueling systems that receive, issue and transfer fuel. Includes implementing petroleum product quality control procedures.

FUS2601 Quality Control of Aircraft Fuels
Application of quality assurance principles. Includes identification of contamination sources; sampling methods and use of equipment; laboratory hygiene and safety standards test intervals; and practice in testing for solids, water, conductivity, fuel system icing inhibitor, potential hydrogen odor and flashpoint.

FUS2602 Fuel Storage Facilities Maintenance
Application of complex maintenance techniques and repair procedures for filtration equipment, electrical controls, pumps and conventional hydrant fuel systems.

FUS2603 Fuel Stock Fund Accounting
Application of stock fund accounting principles. Includes facilities operation, inventory management, implementing administration procedures, quality assurance of facilities operation and implementing management information system using remote computer terminals.

FUS2607 Fuels Management
Application of advanced techniques for planning, organizing, directing, and coordinating fuels activities involving personnel, facilities and equipment.

FUS2608 Petroleum Tank-Cleaning Supervision
Supervision of tank-cleaning operations; tank acceptance, precleaning and safety equipment inspections; procedures for tank entry, cleaning and return to service; and analysis of tank preventive maintenance records and “as build” drawings.
Course Descriptions

(GEO) APPLIED GEOGRAPHY
GEO1406 Third World Country Studies
Geographic, political, and military aspects of Middle Eastern, Far Eastern, Latin American, and African countries.

(GOV) APPLIED GOVERNMENT
GOV1403 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.

(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
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 air-conditioning systems, and air balancing.

HAR1106 Domestic and Commercial Refrigeration
Maintenance, troubleshooting and repair of cold storage and small commercial systems. Includes cooling towers, evaporative condensers, water pumps, and air-compressing equipment with
Course Descriptions

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; air-purification, refrigeration and air separator systems; cryotainers; gas storage cylinders; purity testing; and quality control.

**HAR2107 1.5 Ton Oxygen and Nitrogen Plant Operation**
Principles of plant operation. Includes concepts of flow controls and inspections and maintenance of expansion engines.

**HAR2108 Industrial and Indirect Expansion Systems**
Theory of operation; determining equipment operation efficiency; maintenance and troubleshooting package liquid chiller, centrifugal, and absorption air-conditioning systems and cascade applications; and adjustment of related equipment controls.

**HAR2110 Heating, Ventilation and Air-Conditioning System Control**
Advanced operation, maintenance, and troubleshooting techniques for pneumatic controls to include their transmission system and components, electric, and electronic controls; analysis of thermodynamics and psychometrics on equipment design; and schematics and use of calibration equipment on various system configurations.

(HBM) **HYPERBARIC MEDICINE**

**HBM2301 Hyperbaric Chamber Operations and Maintenance**
Hyperbaric chamber design, operation, and maintenance and facility safety codes.

**HBM2304 Hyperbaric Training for Health Care Technicians**
Physiological problems associated with diving and decompression procedures; management and treatment of decompression sickness; arterial gas embolism; management of gas gangrene, carbon monoxide poisoning and disorders treated with hyperbaric therapy; and hyperbaric chamber operation and safety procedures.
Course Descriptions

(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, tractor-trailers, 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.

(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 data maintenance procedures and methods, UNIX system administration, construction of queries for retrieval of data, and security administration procedures.

HRM2106 Military Justice System

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 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
Course Descriptions

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.

HSA2314 Medical Expense and Performance Reporting
Terminology, personnel utilization data, collection, expense assignment and coding systems used in the management of medical resources.

HSA2315 Medical Readiness Planning
Introduction to planning, exercises, readiness training, National Disaster Medical system, status of resources, and unit medical training system.
Course Descriptions

(INT) INTERNSHIP

INT3000 Internship - Apprentice
Successful completion of apprentice training requirement of Air Force dual channel on-the-job training (OJT) program. Includes completion of career field fundamentals and basic principles through technical training, demonstration of job proficiency of task outlined in specialty training standard, and supervisor’s recommendation for advancement to apprentice level.

INT5000 Internship - Journeyman
Successful completion of fully skilled journeyman training requirements of Air Force dual channel OJT program. Includes a minimum of 6 months’ satisfactory experience at apprentice level, completion of comprehensive Air Force career development course with a closed-book proctored examination or other approved written training materials needed to increase knowledge of career field beyond apprentice level; minimum of 12 months’ satisfactory full-time performance in a journeyman specialty, and supervisor’s recommendation for advancement to journeyman level.

INT7000 Internship - Craftsman
Successful completion of craftsman training requirements of Air Force dual channel OJT program. Includes a minimum of 18 months’ satisfactory full-time performance in a craftsman specialty, comprehensive Air Force career development course with a proctored closed-book examination on skill area and/or management requirement and/or formal craftsman training, completion of management training through airman leadership school, and supervisor’s recommendation for advancement to craftsman level.

(ITL) INTELLIGENCE

ITL1101 Intelligence Fundamentals
Mission and organization, intelligence cycle, libraries, administration and data-handling systems. Emphasizes recognition of document security, operations security and communications security.

ITL1102 Analysis and Reporting of Intelligence Data
Identification of essential elements of information, selection of reporting vehicle, and production of concise, timely and technical summaries.

ITL1103 Intelligence Operations Lab
Comprehensive laboratory of intelligence operations scenarios.

ITL1104 Basic Morse Code
Recording international Morse code, typing and computer keyboard familiarization, theory of radio wave propagation, radio communications, and operational security. Includes recognition and reporting of various types of distress signals.

ITL1105 Morse Interceptor
Interception, copying and processing transmissions keyed in international Morse code. Includes computer-based recording, storing and forwarding; transcribing signals through varying degrees of interference; frequency search missions; frequency measurement; and maintenance of operation logs.

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.

ITL1201 Airborne Intelligence Operations
Procedures relating to airborne command, control and communications. Includes pre-mission preparation, aircraft system operation, mission objective orientation, crew coordination, airborne battle staff support for electronic combat, weapons systems, and targeting and postmission operations.

ITL1301 Aircrew Intelligence Training
Aircrew intelligence using available resources and presentation media to present aircrew intelligence training in evasion and escape, survival and rescue, and enemy capabilities.

ITL1401 Electronic Signal Exploitation
Analysis of electronic signals to obtain electronic intelligence. Includes technical documents, computerized data for management and analysis, and potential for electronic intelligence usage in electronic combat.

ITL1402 Radio Communications Analysis
Computerized data in analysis of radio communications network administration. Includes determining network organization, operation and types of related communications.

ITL1403 Data Transmission System
Identification and analysis of tactical and strategic data transmission systems. Determination of
Course Descriptions

command-level and service component use of system.

ITL1501 Orientation to Imagery Interpreters

Various forms of imagery, photographic, space radar and advanced sensor systems; fundamental interpretation of various imagery forms to determine significant cultural and manmade points of reference; and use of related equipment types to assist in evaluation process.

ITL1503 Photographic Interpretation I

Analysis of photographs to determine structural characteristics of industrial transportation, power and housing facilities.

ITL1507 Photographic Interpretation II

Photographic interpretation of military facilities and equipment. Includes analysis of capability, activity and camouflage, and concealment and deception techniques.

ITL1601 Mission Planning and Support

Target determination and analysis of threat parameters, and selection and plotting of mission tract using all available intelligence data.

ITL1602 Conventional Weapons Application

Use of computer-assisted weaponry 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 Cryptanalysis

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

ITL2401 Voice Intelligence Collection

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

ITL2402 Airborne Intelligence Collection

Application of operational procedures relating to collection of communications and electronic intelligence. Includes ground reparation; aircraft system components to include interphone equipment, keyboard equipment and operation; briefing on emergency procedures; and performance of preengagement, engagement and postengagement operations.

ITL2504 Multisensor Analysis

Multispectral analysis of designated system capabilities to counter specific DoD intelligence problems. Includes special operations, denial and deception, low-intensity conflict, and possible solutions.

ITL2505 Theory and Fundamentals of Electromagnetic Spectrum Sensors

Electromagnetic spectrum and light table orientation; 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 tiling 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 use of revolvers, shotguns, automatic handguns and rifles. Includes nomenclature, capabilities and characteristics of specific weapons; operator care, cleaning and maintenance procedures; application of marksmanship fundamentals; weapons safety practices; analysis of force policies; clearing procedures and function checks; and ammunition types and uses.

LAW1803 Fundamentals of Law Enforcement
Legal and procedural aspects of police operations, physical apprehension and restraint techniques, searches and seizures, procedures for lawful apprehensions, patrol operations to include enforcement of traffic laws, operation of speed detection equipment, resource protection, emergency first aid, weapons safety, arming and use of force, confrontation management, antihijacking and accident scenes, crisis intervention, and antiterrorism and airbase ground defense operations.

LAW1850 Patrol Dog Training Techniques
Training and conditioning techniques used to prepare both military working dog and handler to work effectively as a team. Includes operant conditioning, dog obedience, controlled aggressiveness, health checks and first aid for dogs, and maintenance and care of dog, kennel and associated support equipment.

LAW1851 Patrol Dog Operations
Specialized training techniques designed to prepare military working dog team to perform a variety of police functions. Includes vehicle and foot patrols; tracking, detecting and alerting; area searches; gunfire conditions; concepts of utilization (airbase ground defense, security, law enforcement duties); and preparation and maintenance of required records, reports and forms.

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.
Course Descriptions

LAW2811 Traffic Planning and Management
Analysis of police traffic functions and services, traffic patterns, and traffic movement in response to emergency situations. Includes theory of traffic control and safety procedures, analysis of traffic trends and accident causes, preparation of reports and records, traffic engineering and control techniques, research and development, and use of speed-measuring devices and breathalyzer units.

LAW2815 Fundamentals of Special Investigations I
Analysis and application of special agent responsibilities. Includes ethical standards, prosecutorial jurisdiction, investigative thought process, apprehension policies and preparation of investigative plan, detachment and individual operations, surveillance, professional liaison, and use of spot reports, case briefings and reports of investigation.

LAW2817 Behavioral Science Study of Sources and Interviews
Analysis of techniques and psychological aspects of interviewing. Emphasizes interrogation process that includes preparation for interviews and interrogations, administering oaths, use of interrogation techniques, appreciation of the relationship between investigator’s attitude and effective interviews, and postinterview and investigation requirements.

LAW2818 Investigative Techniques
Application of methods and techniques used to conduct investigations and covers photographic and scientific aids to investigation. Includes practical exercises in observation and description; surveillance; collection and preservation of evidence; apprehension, search and seizure; crime scene searches; and firearms training.

LAW2819 Principles of Traffic Accident Investigation
Analysis and application of advanced techniques used to gather facts and determine causes of traffic accidents. Includes review of traffic safety procedures; preparation of field sketches, diagrams, and traffic violation and accident investigation reports and forms; and techniques used to teach traffic accident investigation to other policemen.

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 in foot and motorized escorts, and employment of antiterrorism techniques.

LAW2836 Military Working Dog Supervisors
Advanced training for military working dog supervisors in preparation for positions as kennel masters. Includes management of military working dog sections; maintenance and care of dog, kennel, and associated equipment; and conditioning, proficiency training and use of dog teams.

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.

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-in-charge relations, office budgets, on-the-job-training, USAF judiciary, human relations, and paralegal utilization and practical exercises for effective oral and written communicative skills and civil service employee matters.
Course Descriptions

LEG2111 Introduction to Civil Law and Ethics
An introduction to law and ethics 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. The Automated Military Justice Analysis and Management System and the Armed Forces Claims Information Management System are used throughout the course.

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 and settlement letters.

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 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, and appellate review.

LEG2116 Introduction to Legal Research
Introduction to legal research techniques. Identify basic facts on legal research, legal publications, and categories of legal literature; case citation and methods of research; conduct manual and computer-assisted research.

LEG2211 Advanced Civil Law and Ethics
Advanced instruction in civil law and ethics 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 International Law
Concepts of international law and status of forces agreements. Includes Air Force operations in the aerospace environment, basic concepts and fundamental principles of various conventions governing armed conflict, and support of deployment operations.

LEG2214 Legal Research and Writing
Legal research using the law library and computerized research tools; preparation of accurate, well-written legal memoranda; research and analysis of published opinions; preparation of legal reviews and 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.
Course Descriptions

(LMM) LEADERSHIP, MANAGEMENT, & MILITARY STUDIES

LMM1101 Leadership and Management
Leadership role and responsibilities of journeymen; theories, techniques, and practical application of leadership and followership; supervision; management; stress management; problem solving; concepts of human behavior; standards of discipline; effective counseling techniques; evaluation of enlisted personnel; and current social issues.

LMM1102 Managerial Communications
Principles of oral and written communications for airmen, theories and concepts of communications, factors influencing communications process, and speaking techniques such as oral presentations, and principles of effective writing.

LMM1103 Military Studies
Organization, mission and history of Air Force, dress and appearance, drill and ceremonies, customs and courtesies, respect for flag, military deterrence, democratic process, code of conduct, and personal readiness.

LMM2121 Leadership and Management II
Role and responsibilities of craftsman and supervisor. Includes concepts of human behavior; standards of discipline, effective counseling techniques, methods of orienting new personnel, principles of motivating individuals within groups, evolution of management theory, personnel management skills, and applied problem-solving techniques in management, social relations and labor relations.

LMM2122 Managerial Communications II
Principles of oral and written communications applicable to technician and supervisor. Includes planning and organizing for effective communications by applying principles and theories of oral presentations, analyzing methods for improving listening, lessening barriers to effective communications, and effective writing principles.

LMM2123 Military Studies II

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.
Course Descriptions

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, pre-deployment 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 shelf-life.

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.

LOG1601 Logistic Maintenance Support
Interpreting automated records and file maintenance; includes rejects and inquiries, 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 practice in turn-in procedures, records maintenance and special procedures.

LOG1608 Stock Fund Management
Management and control of inventories; analysis of stock fund management reports and listings; interrelationships of accounting and finance, base supply and supported organizations; relationship of stock fund transactions and monetary records; satellite procedures; reporting procedures; interface of accounting and finance and supply computer records; and preparation of general support operating program.

LOG1609 Introduction to Medical Materiel
Introduction to supply discipline. Includes principles and concepts of property accounting by computer systems, and use of medical materiel publications and computer terminals.

LOG1610 Supply Data Records and Documents
Document control maintenance; includes establishing and maintaining master record and computer output products.

LOG1611 Medical Stock Control
Stock control procedures peculiar to medical materiel. Includes issues, inventory control, requisitioning, maintenance of due-in and due-out files, and receipts resulting from requisitions.

LOG1612 Medical Asset Management
Principles of storage and warehousing. Includes potency dated items, controlled medical items, quality assurance, inventory stratification, turn-ins, disposition of medical materiel, physical inventories and quality control after daily processing cycle.

LOG2101 Advanced Logistics Planning
Advanced logistics planning techniques. Includes wartime and contingency planning, logistics command and control systems, and deployment management.

LOG2103 Contingency Response Training Advanced
Practical application of logistics processes and terminology, advanced command structure, pre-deployment 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.
Course Descriptions

LOG2601 Introduction to Planning and Programming
Introduction to logistics planning techniques. Includes types of plans, composition of plans, mobility planning and logistics center operation.

LOG2602 Automated Logistics Plans Management
Advanced techniques, principles, functions, and methods of entering data into and retrieving data from a computer for logistics plans. Includes data maintenance procedures, methods, and purposes as well as uses of retrieved data and computer output products.

LOG2603 Logistics Management
Management practices that ensure effective and economic accomplishment of group and project objectives of entire field of logistics.

LOG2604 Electronic Communications Programs Management
Principles of planning, programming and implementing electronic communications systems. Includes techniques and procedures for determining manpower and budgetary requirements, construction planning at all levels of command, monitoring program implementation, managing systems and records, and administering minor changes to ongoing programs.

LOG2605 Supply System Management and Analysis
Understanding supply computer system, customer support procedures, materiel management, financial management and supply management analysis. Includes extensive use and analysis of management reports and listings.

LOG2606 Mission of Medical Materiel Management
Mission objectives, organization and responsibilities of medical materiel function. Includes property responsibility and supply discipline, concepts and principles of automatic data processing, quality assurance, turn-ins, reserve assets inventory, inventory adjustments, property disposition, quality control, and corrective actions.

LOG2607 Data Records and Document Control
Establishing, revising and updating master record; catalog change actions; validation of records; computer products; and maintenance of document files.

LOG2611 Automated Asset Sourcing
Methods and procedures for sourcing of mission-essential 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.

LOG2613 Expendable Asset Management
Concepts of supply support objectives to include stockage policies, requisitioning requirements, Air Force stock fund, and visibility/control processes.

LOG2620 Contingency and Wartime Support
Strategic materiel management during wartime contingencies. Includes wartime processing procedures, and manning and reporting actions using concepts from combat supply management and weapon system management information systems, and combat follow-on supply systems using war reserve materiel, 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 straight, shoulder, taper, filing, parting, knurling, boring, external and internal threading, tool grinding, center alignment, facing and center drilling, drilling, and reaming.

MAC2101 Intermediate Computer Numerical Control
Intermediate-level computer numerical control machine operations in computer-aided manufacturing. Includes technical mathematics, programming and multidimensional milling techniques.
Course Descriptions

(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
Mathematical principles and its application to electronics. Includes algebraic expressions, solution of equations, word problems and trigonometric functions.

MAT2103 Applied Statistics
Application of statistical techniques and principles to maintenance, manpower or general management data. Includes statistical inference, trend analysis, hypothesis testing, tests for significance, correlation coefficients, and statistical analysis and application of such statistical techniques as T-Test, Chi-Square, Cochran C Test and Spearman Rank Correlation Coefficient.

(MEA) MEASUREMENTS

MEA2707 Optical Measurements
Theory of geometry of reflection and refraction. Includes lens system, optical tooling instruments, and optometric and special devices.

MEA2716 Precise Time and Frequency Calibration Systems
Advanced precise time and frequency calibration. Includes measurements, standards and time-transfer methods.

MEA2717 Microwave Theory and Application
Theory of microwave measurements, microwave mathematics, transmission lines, signal generators, laboratory equipment, microwave impedance concepts and microwave systems analysis.

MEA2718 Fixed-Frequency Microwave Measurements
Advanced fixed-frequency microwave power measurement, attenuation measurement and spectrum analysis.

MEA2720 Applied Physical Measurements I
Introductory physical, linear, and angular measurements and their technical applications.

MEA2721 Applied Physical Measurements II
Principles of physical measurements. Includes temperature, mass weight, force density, viscosity and flow, and pressure measurements.

MEA2722 Applied Physical Measurements III
Principles of physical measurements. Includes rotary motion, torque, humidity, sound and vibration measurements.

MEA2724 Engine Measurement Systems
Theory, operation, alignment, and calibration of jet engine equipment and test stands. Includes theory and calibration techniques using block diagrams.

(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.

MEC2208 Ground Heater Maintenance
Application of advanced principles, theory and operation of ground heaters. Includes service
Course Descriptions

inspections, operating procedures, safety precautions, trouble isolation and repair of system components. (May be repeated for credit on various ground heaters.)

MEC2213 Diesel Engine Overhaul
Advanced diesel engine maintenance. Includes disassembly, inspection and maintenance of engine components; reassembly; and servicing and operational checks.

MEC2501 Diesel Generator Maintenance Laboratory
Troubleshooting, repair and maintenance of diesel-powered generating equipment.

MEC2504 Maintenance of Aircraft Arresting Systems
Theory and practical training in operating principles and maintenance of friction and hydraulic arresting mechanisms used in modern aircraft arresting systems. Includes training on engaging and arresting mechanisms.

MEC2505 Advanced Gas Turbine Engine Maintenance Laboratory
Theory and maintenance procedures applied to specific auxiliary gas turbine engines. Includes theory of operation, air and fluid flow, control features and inspection, trouble isolation, and servicing, testing and installation procedures.

(MED) Medical Assistant

MED1305 Human Anatomy Physiology
Characteristics and functions of human body systems including: musculoskeletal, circulatory, respiratory, digestive, nervous, reproductive, immune, and urinary systems.

(MET) Meteorology

MET1802 Meteorology and Weather Instruments
Elementary meteorology providing a foundation for understanding and observing weather elements. Includes applied concepts in using temperature, humidity, pressure, wind, cloud height instruments; weather radar; and communications equipment.

MET1803 Weather Observation
Practice in observing weather elements; making instrument evaluations; encoding and recording weather observations of sky conditions, cloud forms, atmospheric phenomena, visibility and obstructions, wind, temperatures, humidity, pressure and precipitation; and classification of storm echoes received on storm detection equipment.

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.

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,
Course Descriptions

fronts and pressure systems; and preparation and presentation of weather briefings.

MET2807 Operational Weather Forecasting
Subjective and objective forecasting techniques for flight paths and terminals, use of Teletype and facsimile data plus current data from functional weather equipment and radar for analysis and forecasting exercises. Emphasizes developing forecasting techniques and identifying parameters associated with severe weather.

MET2809 Central Weather Facility
Theories and techniques of weather analysis and forecasting in a simulated weather station environment. Includes operational mission duties of weather map analysis, forecasting, development of specialized products, and development and presentation of weather briefings.

MET2817 Tropical Meteorology
Identification and analysis of tropical weather data from wind field to establish a sound basis for tropical forecasting. Includes applicable streamline isotach techniques of direct kinematic analysis, tropical meteorology, and application of theoretical, climatological and empirical analytic methods.

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.

(MGT) MANAGEMENT & SUPERVISION

MGT1108 Data Collection and Analysis
Collecting and extracting data from man-hour reporting systems, vehicle integrated management system documentation, on-equipment and off-equipment maintenance transaction reports, and preparing data for statistical analysis.

MGT1109 Overview of Maintenance Systems Analysis and Scheduling
Maintenance concepts, policies and procedures. Includes career progression, security, publications, Air Force supply system, safety precautions, and Air Force Occupational Safety and Hazard program.

MGT1110 Introduction to Maintenance Scheduling
Introduction to time compliance technical order system; responsibilities and duties of various organizations connected with maintenance activities; automated products, time cards, slides, logs, and records to plan, schedule, track and/or report maintenance actions. Emphasizes use of computer terminal.

MGT1116 Maintenance Management
Management responsibilities for maintenance and maintenance production activities, system concepts and responsibilities, inspection concepts, and various centralized and decentralized maintenance activities.

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, time-sharing, query language processor retrievals, report generation, reject management, and database management.

**MGT2107 Integrated Management System**
Advanced organizational and functional responsibilities; system description and operation; data input documentation and conversion; file update; determining data maintenance procedures, methods and purposes; and use of retrieved data and computer output products.

**MGT2114 Vehicle Integrated Management System**
Automated management system, procedures for data input, maintenance file update, maintenance data retrieval, and use of performance indicators on daily, weekly and monthly computer products to determine vehicle maintenance effectiveness.

**MGT2120 Engine Manager**
Advanced preparation for a base engine manager position. Includes data processing fundamentals; specific data for loading, updating and maintaining comprehensive engine management system; recovery procedures; and use of remote terminal devices.

**MGT2206 Maintenance Control and Analysis Craftsman**
Controlling maintenance scheduling, and analyzing and reporting vehicle and equipment status. Includes troubleshooting system errors using the on-line vehicle integrated management system, applicable software and related publications.

**MGT2212 Advanced Maintenance Management**
Detailed analysis of vehicle maintenance structure. Includes supervisory responsibilities, self-inspection system, maintenance programs, material and maintenance control functions, environmental awareness, and requirements for manpower, budgeting, mobility, contingencies and training.

**MGT2600 Management Applications, Functions and Techniques**
Management principles and techniques, organizational assessment skills, supervisory and leadership techniques, and application of principles to planning and scheduling use of resources.

**MGT2601 Maintenance Systems Management**
Concepts, data systems, creating reports, forecasting manpower requirements, scheduling aerospace vehicle and equipment needs, and managing supply forms and producing generation flow plans, maintenance plans and engine tracking procedures.

**MGT2963 Electronic Communications Programs Management**
Introduction to principles of planning, programming and implementing electronic communications systems. Includes techniques and procedures for determining manpower and budgetary requirements, construction planning at all levels of command, monitoring program implementation, management of systems and records, and administration of minor changes to ongoing programs.

**MGT2964 Advanced Communications-Electronics Maintenance Management**
Techniques and concepts of electronic communications system maintenance and personnel management. Emphasizes required documentation and publications, understanding configuration controls, hardware quality control and tracking, support resources, hardware engineering and installation, organizational design specifications, mobile communications systems, wide-area network usage, command and control systems, unique functional organizations and mission needs, and personnel training and supervision.

**(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.

**MIL1302 Offensive and Defensive Forces**
Force components, functions, and capabilities of foreign offensive and defensive forces. Emphasizes weapons systems and methods of employment.
Course Descriptions

MIL1402 Air Defense
Principles of territorial air defense stressing command, control, communications and warning procedures as well as map reading relating to plotting of airborne aircraft locations.

MIL1403 Tactical Air Operations
Tactical air operations stressing command and control. Includes ground attack, aerial interdict 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 counternarcotic operations. Includes study of special operations forces, US Government and DoD functions relating to special operations, and domestic and international legal theory relative to military operations.

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.

MIL2901 Strategic Electronic Systems
Analysis of strategic telecommunication systems, defensive radar facilities, and strategic space and electronic warfare systems.

(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 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. In depth 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.

MKS2101 Marksmanship Laboratory
In depth 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
Course Descriptions

Manual cell counts; erythrocyte sedimentation rate; erythrocyte and leukocyte maturation; sickle cell testing; blood coagulation, grouping, typing and compatibility testing; detection and identification of atypical antibodies; hemolytic disease of newborn; donor services; antigen-antibody reactions; serological testing procedures for autoimmune diseases and infections; and laboratory management and administration.

MLT1305 Clinical Chemistry
Elements of basic chemistry; quality control; use of glassware and balances; pipetting techniques; laboratory math; metric conversions; solution calculations; venipuncture techniques; specimen analysis for electrolytes, renal and liver functions; and protein, glucose and enzyme testing using automated and manual spectrophotometric principles, and urinalysis chemical analysis.

MLT1306 Clinical Microbiology
Elements of basic microbiology, quality control, bacteriological techniques, bacteria cultivation from clinical material, antimicrobial susceptibility, parasite identification, fungal examinations, overview of viruses and rickettsia, laboratory asepsis and sterilization techniques, microscopic urinanalysis, 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
Introduction to the field of public health. Familiarization with relationships of local, state, and federal public health agencies; occupational safety and health agencies; and the USAF medical mission. Basic concepts of biostatistics and public health metrics.

MPH1101 Biological and Physical Sciences

MPH1102 Principles of Communicable Disease Control

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 food borne illness outbreaks in accordance with the Food and Drug Administration (FDA) Food Code.
Course Descriptions

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.

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 being admitted to a medical treatment facility. Includes roles in triage; lifesaving NBC casualty care techniques; facility operations, and site selection, set up and recovery.

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 hand lift 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 door-locking mechanism; combination locks; vibration detection systems; personnel access control and associated electrical circuitry; electric, mechanical and hydraulic operated vault doors up to 100 tons in size; cagetype elevators; hydraulic and electric actuator systems and support equipment; and associated test equipment.

MSL1207 Suspension and Test Equipment
Function, operation, and maintenance of leak test equipment, purging equipment and systems, suspension systems and mechanisms, power and
Course Descriptions

monitoring circuitry, installation and removal of saffing 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 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
System familiarization and troubleshooting; manufacturer’s maintenance manuals and technical data; removal and replacement of access panels for adjustment of mechanical subsystems; and replacement of components; experience in electrical checkout of ordnance circuits; and inspection and maintenance of environmental and RF interference shielding.

(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 with. Emphasizes control procedures, inspection and explosive safety.

MUN1202 Nuclear Weapons Systems
Nuclear weapons career field maintenance functions and familiarization with nuclear weapons systems. Includes principles of nuclear weapons, nuclear weapons publications, practicing nuclear standards and application of nuclear security.

MUN1203 Operation and Function of Nuclear Weapons
Operation and function of components of specific nuclear weapons. Includes preparation for strike, disassembly, limited life-component exchanges, weapons buildup, inspections and application of emergency procedures.

MUN1204 Nuclear Weapons Maintenance
Standard specifications for nuclear weapons, operation and maintenance of special tools, measurement of defects, packaging, and general repair prevention. Includes cleaning, painting, making, and surface repair and prevention.

MUN1205 Weapons Movement
Familiarization and operator maintenance on cargo vehicles, tow vehicles, ground power units and general munitions trailers. Includes initial and periodic inspections and lift vehicle operations.

MUN1206 Munitions Inventory Procedures
Nuclear and conventional munitions supply system. Includes security, maintenance support, property accounting (automated, manual), files maintenance storage, and concepts and procedures for issue, turn-
Course Descriptions

in, shipping, receiving, stock replenishment, inventory control and supply discipline.

**MUN1208 Munitions Inspection Procedures**
Conventional munitions inspection procedures. Includes munitions serviceability determinations; civilian, DoD and Federal Aviation Administration shipments; manufacturer’s modifications; issue and turn-in inspections; and ammunition disposition requests.

**MUN2201 Reentry Systems Maintenance**
Advanced operation and maintenance of space reentry systems. Includes functions, shroud operation, deployment module, reentry system final buildup, preparation and packaging for transport, and application of safety and security procedures.

**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 Occupational Safety and Health standards. (AF A&P program applicable course.)

**NDT1104 Fundamentals of Magnetic Particle Inspection**
Basic theory of magnetic particle inspection and how magnetizing currents are used in magnetic particle testing. Includes use of wet and dry materials, equipment operation, interpretation of indicators, inspection techniques, and performance of inspections. (AF A&P program applicable course.)

**NDT1105 Fundamentals of Ultrasonic Inspection**
Basic theory of ultrasonic inspection and how principle of sound generation is used in ultrasonic inspection. Includes straight and angle beam testing, sound wave propagation, calibration and use of equipment, Snell’s Law, inspection techniques, equipment maintenance, ultrasonic standards and performance of ultrasonic inspections. (AF A&P program applicable course.)

**NDT1106 Fundamentals of Eddy Current and Bond Testing Inspection**
Basic theory of eddy current and bond testing inspections, electromagnetic principles, formulas and inspection techniques used in eddy current inspections. Includes phase amplitude and impedance testing, identification and inspection techniques of conventional and advanced composites, and eddy current equipment calibration and inspections on composite materials. (AF A&P program applicable course.)

**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.)
Course Descriptions

NDT2104 Advanced Oil Analysis and Spectrometric Results
Principles of spectrometric oil analysis. Includes analysis of wear patterns, types of failures, sources of wear and nonwear metals in oil wetted systems, interpretation and evaluation of analytical data in oil analysis case histories, and operation and maintenance of atomic emission spectrometer and atomic absorption spectrophotometer equipment. (AF A&P program applicable course.)

(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.

(NUR) NURSING

NUR1101 Urology
Anatomy, medical terminology, and care and handling of urology patients. Prepares technicians to assist with management of urology clinics and assist physician in treatment of patients with urologic conditions or injuries.

NUR1102 Electroneurodiagnostics
Neuroanatomy and neurophysiology of the human body as it relates to neurology; concepts of basic electricity; neurological disorders and how they affect neurodiagnosis; instrumentation and troubleshooting of electroencephalogram and evoked potential average; interpretation of basic wave patterns, normal variants, artifacts, and abnormal patterns and waveforms; and clinical guidelines used in electroneurodiagnosis. Includes introduction to nerve conduction, electromyography, video monitoring, telemetry and polysomnography.

NUR1103 Otolaryngology
Functions and responsibilities of clinical and surgical assistant to an otolaryngologist. Includes audio evaluations; maintenance and care of specialized otolaryngologic instruments and equipment; diagnosis and treatment of common ear, nose and throat disorders; and pre- and postoperative patient care. Emphasizes procedures and administrative management.

NUR1304 Fundamentals of Patient Care
Human anatomy and physiology, medical terminology, interpersonal relations and human needs, patient needs, basic nursing techniques, and cardiopulmonary resuscitation.

NUR1318 Basic Nursing
Infection control; patient movement, safety, comfort and hygiene; specimen collection; nutrition and elimination; vital signs; and pre- and postoperative care.

NUR1319 Intermediate Nursing
Medications and fluid therapies; basic wound care; cardiorespiratory procedures; skeletal and immobility procedures; obstetric, neonatal and pediatric care; eye, ear, nose and throat care; patient care planning; and basic cardiac life-support procedures.

NUR1324 Introduction to Operating Room Technology
Anatomy and physiology, medical terminology, safety, surgical supplies and equipment, anesthesia, pre- and postoperative patient care, and transportation and positioning of surgical patient.

NUR1325 Operating Room Technology
Microbiological basis for sterilization, asepsis and disinfection of operating room; and scrubbing, gowning and gloving in this environment.

NUR1326 Operating Room Practicum
Practicum in scrub and circulator duties, preparation of surgical patient, and professional ethics.
Course Descriptions

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

NUR1334 Mental Health Evaluations
Principles and techniques of interviewing, documentation of initial mental health screening, social histories, and administration and scaling of mental health tests.

NUR1336 Mental Health Administration
Introduction to Air Force mental health programs and basic administrative functions. Includes family advocacy, humanitarian reassignments and deferments, and personnel reliability programs.

NUR1337 Mental Health Clinical Experience
Techniques of caring for alcohol rehabilitation center patients and mental health inpatients and outpatients.

NUR1338 Operating Room Nursing Practicum
Clinical experience in scrub and circulating technician duties in orthopedic, general, and obstetric and gynecologic surgery.

NUR1339 Fundamentals of Central Sterile Supply
Practicum in operation of equipment used in central sterile supply.

NUR1340 Introduction to Substance Abuse Counseling
Programs, policies and administrative procedures likely to be encountered when counseling substance abusers. Emphasizes substance abuse identification, drug testing, prevention and intervention, cultural awareness, and basic theory and skills needed to provide for clients.

NUR1341 Introduction to Mental Health Services
Mental health procedures and documentation, psychological testing methods, emergency life-support procedures, crisis management, pharmacology, and role-playing exercises demonstrating ability to appropriately handle client scenarios likely to be encountered in mental health services profession.

NUR1342 Allergy-Immunology
Vaccination procedures; methods of properly administering intradermal, subcutaneous and intramuscular injections; pollen counting; allergen identification; composition of various vaccines; mechanisms of anaphylaxis and shock; and pharmacology of various drug groups.

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.

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.

NUR2327 Infection Control And Epidemiology
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.
Course Descriptions

Includes needs assessment, instructional program design and methodology, and correlation with Joint Commission on Accreditation of Healthcare Organizations and American Nurse Association.

NUR2331 Nursing Management
Development of supervisory and communicative skills needed to manage medical personnel and resources. Includes medical supply system, staff development, legal considerations, safety programs, and professional and patient relations.

NUR2334 Operating Room Administration
Human and fiscal management of surgical environment, time management, supervision and resource management. Emphasizes staff development, professional and patient relationships, quality, and medical readiness.

NUR2335 Mental Health Interventions
Mental health intervention for psychiatry, psychology, family advocacy and substance abuse prevention. Includes certification process for substance abuse counselors; practical application in treatment planning, development and implementation; and documentation of patient care.

NUR2350 Health Promotion and Fitness
Instruction to assist personnel conduct and manage a health promotion program. Training includes: population health principles; tobacco cessation; fitness and nutrition; appointment processing; weight and body fat measurement; marketing; and office administration.

(ODP) Orthotic Prosthesis Devices

OPD1301 Introduction to Orthotics
Medical ethics and terminology, emergency medical care, history of orthotics, professional and patient relationships, principles of life support, administrative procedures, and selected orthotic nomenclature.

OPD1302 Anatomy, Physiology and Kinesiology of Orthoses
Principles of body systems and functions and mechanics of upper and lower extremities, spine and pelvis.

OPD1303 Orthotic Devices
Principles and identification of orthotic devices used on upper and lower extremities, spine and pelvis; evaluation of patient requirements; and selection of orthotic devices.

OPD1304 Orthotic Tools and Fabrication
Introduction and practicum in use of hand tools and shop machines used in assembling orthotic appliances.

OPD1305 Orthotic Methods and Materials
Principles and tools used in orthotic laboratory; interpreting prescriptions; performing tracing, measuring and casting procedures; design and fabrication of appliances from measurements, patterns and positive casts; preparation of patient and fitting of devices; and adjustments and repairs.

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

OPT1301 Introduction and Basic Optics
Basic geometrical and ophthalmic optics.

OPT1302 Visual Acuity and Its Correction
Anatomy and physiology of visual system, eye as an optical instrument, visual acuity measurement, and spectacle selection, ordering, repair and verification procedures.

OPT1303 Assisting the Optometrist
Applications of tonometry, visual fields and eye safety measures, and fitting of contact lenses.

OPT1304 Vision Classification
Military visual standards and visual exams, depth perception, phoria, accommodation, near point of convergence, and color vision testing.

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.
Course Descriptions

OPT1307 Ocular Anatomy and Physiology
Introduction to anatomy and physiology of the eye. Includes basic identification and treatment of common ocular injuries and disorders.

(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, predeployment planning, operation of microcomputers, field condition procedures and redeployment.

PER1111 Sales Fundamentals
Principles of merchandise advertising. Includes knowing value of good community relations, use of publicity materials, selection of sales techniques, sales record keeping and customer screening.

PER1119 Introduction to Personnel Management
Basic management and administrative functions. Includes selection, training, placement, classification, evaluation, reassignment, promotion, separation of personnel, pay procedures, performance evaluations, and scheduling and conducting meetings.

PER2103 Personnel Data Systems
Principles and functions of techniques and methods of entering data into and retrieving data from personnel data system. Includes data maintenance procedures and methods, use of retrieved data, and computer output products.

PER2108 Manpower Management
Concepts of manpower organization. Includes measurement methods, development of manning tables, management advisory studies, authorization routines and manpower reports.

PER2112 Unit Personnel Administration
Management of unit personnel, procedures for ensuring compliance with standards, procedures for protocol, written correspondence, enforcement of directives, personnel management computer products, assignment of special duties, unauthorized absences and handling of complaints and inquiries. Includes line-of-duty determinations, dependent care responsibilities, and functional relationships between units and personnel office and principles and procedures for monitoring commander's call; Privacy Act; responding to security police reports; and handing private property, unit property, or damage of government property.

PER2121 Organizational Evaluation and Development
Methodologies for evaluating and improving effectiveness of organizations. Includes familiarization of functional chronology, review and analysis of work performance processes, feasibility studies and planning, standards development, cost analysis and comparison, training requirements, and productivity enhancement.

PER2612 Resource Management
Principles of resource management. Includes policy and procedures regarding orientation and guidance of newcomers to work force; counseling referrals to various agencies; purpose of morale, welfare and recreation programs; and policy and procedures for control of drug and alcohol abuse, maintenance of discipline using prevention-correction punishment method and relationships shared with senior key personnel.
Course Descriptions

(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.

PHA1308 Pharmaceutical Preparations and Their Manufacture
Properties, preparation and incompatibilities of various pharmaceutical substances; pharmaceutical compounding techniques in laboratory; reduction and enlargement of formulas; specific gravity; percentage preparations; concentration and dilution; allegation; and temperature conversion.

PHA1309 Pharmacy Practicum
Inpatient and outpatient pharmaceutical procedures. Includes computerized information systems, sterile and nonsterile compounding, dispensing of medication and logistical procedures.

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
Course Descriptions

negatives, and use of chemistry for various emulsions.

PHO1412 Color Photography
Principles of color printing and processing; includes exposing and processing of negatives, reversal emulsions, duplicating slides. Analysis of finishing techniques.

PHO1414 Photoprocessing Quality Control
Fundamentals of continuous processing methods and equipment. Includes chemical process control, sensitometry, densitometry and analysis of film characteristics.

PHO1451 Continuous Processing
Analysis of quality of continuous processing methods; aerial photography and processor systems; continuous processor cleaning, startup, certification, and shutdown procedures; use of equipment to sensitometrically certify processor and mission film; and monitoring processor during actual operation.

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.
Course Descriptions

(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, fire-suppression systems and components, and backflow prevention.

PLB1507 Water and Waste Distribution Systems
Waste, water supply and building distribution systems. Includes fire-suppression, deluge, sound suppression, hazardous waste water, installation of water heaters, safe work practices; steel pipe and copper tubing assembly, corrosion identification and control, and application of fraud, waste and abuse information.

PLB2502 Backflow Prevention Devices
Theory, operation, maintenance and testing of plumbing backflow prevention devices. Includes records and logs of actions taken.

PLB2503 Fire-Suppression System Maintenance
Advanced testing, inspecting, maintaining and repairing of fire-suppression systems (excluding electrical). Includes inspection and operational checks, principles of operation, and troubleshooting and repair of fire sprinkler and other fire-suppression systems.

(PTH) PHYSICAL THERAPY

PTH1309 Physical Therapy Clinical Arts
Selected physical therapy treatment procedures and modalities in clinical practicum and administration and communications.

PTH1310 Functional Anatomy, Pathophysiology and Therapeutic Procedures
Basic concepts and principles of therapeutic exercise, and in-depth functional anatomy of axial skeleton and upper and lower extremities as they relate to disease and treatment approaches.

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.

PTR1302 Respiratory and Circulatoy Physiology
Physiological impact of ascent, acceleration, spatial disorientation and compression changes; and recognition of body heat imbalance, hypoxia, shock and other low-pressure chamber reactions.

PTR1303 Life-Support Equipment Systems
Operation and maintenance of systems used to sustain aircrew members in flight oxygen storage system, breathing apparatus, pressure demand regulators and masks, ejection seats, parachutes, helmets, pressure suits and survival equipment, and participation in low-pressure chamber flights.

PTR2350 Hyperbaric Physiology and Therapy
Nitrogen narcosis, oxygen toxicity, air embolism, carbon monoxide poisoning, gas gangrene, mechanical effects of compression and decompression, and application of treatment tables and therapy.

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. Includes information management system, symptoms and treatment of decompression sickness, and career progression.
(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.

RAD2306 Diagnostic Ultrasound
Diagnostic ultrasound principles and equipment. Includes abdominal and pelvic sonography and obstetrical applications.

RAD2307 Ultrasonic Scanning
Procedures and application of obstetrical, pelvic, abdominal, thyroid, breast, testicular and superficial structure scans.

RAD2308 Clinical Mammography
Introduction and historical development of mamography, 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.
Course Descriptions

(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 EFP 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 hand tool hazards; protective equipment and procedures for machine guarding, hazard identification, safety color coding and use of industrial shop safety surveys. Includes practical exercises in shop layout and resolving problems in storage, construction and flight-line safety.

SAF1812 Safety Management I
Basic philosophy of accident prevention. Includes safety education and training reference materials and safety plans and programs.

SAF2101 Flight Safety Management
Flight safety management and airfield safety operations. Includes history of flight safety, mishap classification and prevention, hazard abatement, and inspection, evaluation and reporting programs.

SAF2604 Accident Prevention Management
Philosophy of weapons accident prevention, safety and transportation. Emphasizes inspection, classification, and mishap investigation and reporting.
Course Descriptions

SAF2805 Safety Management II
Methods used in education and training relating to safety and accident prevention. Includes development and maintenance of related administrative materials and implementing safety plans and programs.

SAF2807 Advanced Safety Management
Safety standards pertaining to operation, transportation, and disposal of conventional and nuclear munitions and missiles. Emphasizes inspection preparation and reporting as well as mishap investigation and reporting.

(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.

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 concepts and principles with instruction in subjects such as fire control and distribution measures, prisoner-of-war processing, early warning devices, land navigation, camouflage, and threats against resources. Includes application of tactical communications, associated support equipment and field training disciplines.

SEC1805 Special Weapons and Tactics
Application of special weapons. Includes nomenclature, capabilities, and characteristics of slap flares, hand grenades, claymore mines and antitank weapons; employment of individual and team concepts in tactical situations; patrol techniques used in a combative environment; and principles of urban survivability.

SEC1806 Introduction to Security
Introduction to fundamental concepts of security operations required in protection of Air Force physical and personnel resources. Includes instruction in basic duties and responsibilities of security specialists, types and uses of tactical and mobile
Course Descriptions

patrol teams, security reporting and alerting systems, physical security safeguards, alarm systems, building and area search procedures, and introduction to security police automated system.

SEC1855 Specialized Mobile Security Functions
Concepts of worldwide mobile operations. Emphasizes practical application of defensive tactics and techniques. Includes the use of force continuum, international relations, explosive devices, lethal and nonlethal weapons, defensive tactics, terrorism, information sources, countersurveillance, hostage survival, threat conditions, aircraft familiarization and individual protective measures.

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 recent case studies to help present an understanding of installation antiterrorism and force protection measures.

SEC2850 Intrusion Detection Equipment Operator
Analysis of characteristics, capabilities, limitations, and vulnerabilities of associated sensor subsystems and small permanent communications and display segment equipment. Emphasizes technical orders, system operation and control of response forces.

SEC2851 Closed-Circuit Television Operator
Analysis of characteristics, capabilities, limitations and vulnerabilities of perimeter surveillance and system closed-circuit television equipment. Emphasizes application of troubleshooting, system operation and television monitoring to prevent unauthorized entry into controlled areas.

SEC2853 Organization of Base Defense Forces

SEC2855 Support Weapons Qualification
Mortars, recoiless rifles, heavy machineguns and/or grenade launchers; nomenclature, characteristics capabilities of specific weapons systems; operator care; cleaning maintenance; weapons safety; tactical employment; forward observation; fire-direction center operations (mortar courses only); ammunition types and uses; practical exercises involving crew drills for gunners, assistant gunners ammunition bearers; and live firing qualification.

SEC2856 Ground Defense Leadership and Management
Analysis and application of logistical and tactical planning for employment of security police units engaged in ground defense operations for US installations located in hostile areas. Includes concepts, principles and organization for distributed area defense. Emphasizes leadership of combat elements, patrol planning procedures and integration of defense forces.

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, communications modules, tripods, sensors, power supply systems, annuciator systems and thermal imagers.

(SOC) SOCIAL SERVICES

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 individual and group behavior, communications, discrimination, dynamics of power and major ethnic groups.

SOC1210 Equal Opportunity Problem Solving
Equal opportunity problem resolution and prevention. Includes knowledge and application of education and publicity programs, counseling referral agencies, preventive planning, and program evaluation.
Course Descriptions

(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
Distance and direction measurements, horizontal control, traverse computation, and transit adjustment.
SUR1502 Construction Surveys
Basic topographic mapping, road layouts, profile and cross-section surveys, vertical road alignments, earthwork computations, grade stakes, building layouts, and utility surveys.

(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 antiexposure flight suits.

SVE1105 Survival Equipment Orientation
Introduction to survival equipment operations and practices. Includes identifying basic facts relating to Air Force Office of Safety and Health safety practices, operations security, use of Air Force publications, Air Force supply system, maintenance management, inspection systems, shop and maintenance practices, and environmental issues.

(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.
SVR1301 Land and Water Survival Techniques
Survival techniques and equipment necessary for protecting aircrew technicians, patients and passengers against perils inherent in entering a land or water environment after ditching or crash landing.
SVR1501 General Principles of Survival
Survival techniques for a temperate environment. Includes procurement of plant and animal food, food preparation and preservation, preparation and use of water, signaling and communications, campsites, shelter construction, firecraft, burden carrying, and classroom and field location instruction.
SVR1801 Special Survival Techniques
Survival techniques in arctic, coastal, open seas, tropical, mountain and desert environments. Includes identifying and determining survival conditions, personal protection, sustenance, environmental medical techniques, signaling and communications, recovery and egress procedures, shelter craft and firecraft unique to special environments, and classroom and field location instruction.
SVR1803 Map and Compass
Map reading and use of compass for navigation in wilderness areas. Includes position determination, travel preparation, use of natural aids to navigation,
Course Descriptions

route selection, application of travel techniques, and classroom and field location instruction.

SVR1804 Mountain Travel
Travel techniques required in mountainous terrain. Includes mountain climbing and patient evacuation equipment; mountaineering techniques; navigation principles; establishment of trail camps; trip preparation; shelter and campsite selection and construction; emergency bivouac; water and food procurement, preparation and preservation; and classroom, outdoor tower and mountainous field location instruction.

SVR1805 Psychology of Environmental Stress
Stresses encountered in prisoner-of-war environments. Includes resistance to exploitation; international agreements relative to captivity and camp organization; application of escape-and-evasion techniques; and Communist history and theory, interrogation and indoctrination procedures, and group resistance in captivity.

SVR1806 Search-and-Rescue Operations
Signaling and communications, guiding and directing recovery and rescue operations, coordinating activities with civilian and military agencies, techniques of management, operations, and tactics employed in air-ground search and rescue. Includes pickup devices, egress from fixed- and rotary-wing aircraft, pyrotechniques, litter and patient handling, coordination of activities with other agencies, and classroom and field location instruction using actual equipment.

SVR1810 Fundamentals of Parachuting with Scuba Equipment
Practical use of parachutes and scuba gear; minimum of eight jumps to include day, night, tree, rough terrain, and water jumps in full scuba gear.

SVR1818 Pararescue Indoctrination
Pararescue techniques. Includes medical terminology, anatomy, treatment of temperature-related injuries, medical kits, mountain indoctrination and diving physics.

SVR1819 Evasion and Recovery
Principles and practices of evasion and recovery. Includes use of clothing and equipment; procurement of food and water; application of methods of signaling; evasive traveling; provision of fire, shelter, medicine and hygiene; and responsibilities during a search-and-rescue operation.

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 food production, mortuary services, fitness and recreation and hotel/motel operations. Includes customer service techniques, employee relations, accounting, budgeting and quality assurance. May include field operations.

SVS1102 Introduction to Food Services
Introduction to quantity food service functions. Includes principles of nutrition, sanitation, menu planning, kitchen and storeroom documentation, progressive cooking, waste prevention procedures, customer relations, and safety and food service specific computer operations.

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.
Course Descriptions

**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 nonhazardous cargo including passengers.

**TRN1610 Aircraft Load Planning**
Palletized and nonpalletized cargo planning with special consideration to weight, bulk and properties. Includes preinspection of aircraft loading equipment, loading and restraining cargo for flights.

**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**
Regulations for military 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 methods of processing air cargo including special and dangerous cargo, and mail.

**TRN1631 Traffic Management**
Administrative management of freight, traffic, personal property, and passengers; includes movement of materiel, transportation and storage of personal property, passenger movement, and automatic data processing.

**TRN1638 Aircraft Systems Familiarization and Operations - C-5 Loadmaster**
C-5 auxiliary power unit operation, hydraulic and kneeling systems, and forward and aft door operation. Includes preoperation inspection, trouble-isolation techniques, operational checks, operating limitations and use of synthetic trainers.

**TRN1640 Cargo Aircraft Operations**
Ground operations, preflight, in-flight and postflight duties of aircraft loadmaster. Includes positioning aircraft, determining load arrangement, aircraft preparation, preflight and in-flight briefings of passengers, aircraft preparation, and postflight inspection of aircraft.

**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 to use of these vehicles; and safety procedures pertaining to trailer towing, convoying, and off-road uses.

**TRN1644 Shipment Planning**
Procedures for handling and transporting cargo economically and effectively; includes military standard transportation and movement procedures, consolidation of shipments, and routing of freight shipments.

**TRN1645 Shipping and Receiving Procedures**
Principles of shipping/receiving freight cargo. Includes interpretation of rates of compensation paid for detention of a ship, rail freight car, or other conveyance during loading/unloading beyond scheduled time of departure; bills of lading; and cargo acceptance.
Course Descriptions

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.

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 tie down requirements for general, vehicular, and special cargo; and weight-and-balance computations.

TRN2603 Air Passenger Service Procedures
Application of computers in movement of passengers and baggage by the single passenger reservation system. Emphasizes the need for good customer relations.

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.

TRN2618 Mobile/Strategic Aerial Operations
Mobile or strategic aerial port operations during wartime contingencies, deployment, responsibilities, mobility work centers and plans systems, joint inspections, and concentrated aircraft load planning.

TRN2620 Mobility Management
Management of mobility operations; including planning process, system development, combat readiness, and acquisition and use of human/materiel resources.

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
Development of individual and joint operations plans. Includes interservice operations, gross airlift capabilities, war planning, identification, and correction of shortfalls in transportation and/or materiel, mobility operations, and enhancement and funding of airlift operations.
Course Descriptions

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.

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. 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.

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.

VEM2502 Electronic Diagnosis and Engine Analysis
Universal diagnostic equipment; includes chassis dynamometers, ignition scopes, and portable testers to analyze engine operation.
Course Descriptions

VEM2505 Vehicle Test Equipment
Use of test equipment necessary to troubleshoot various engine components. Includes oscilloscope, timing light, dwell meter, exhaust gas analyzer, hydrometer, growler, cooling system analyzer, generator bench, load testers, and special equipment for testing diodes, voltage regulators and distributors.

VEM2508 Advanced Special Support Vehicles
Maintenance of firefighting, refueling and other special-purpose vehicles. Includes troubleshooting, disassembly, reassembly and replacement of hydraulic, pneumatic and electrical systems; use of tools, test equipment and publications; and safety procedures.

VEM2509 Advanced Automotive Maintenance
Maintenance principles using tools, portable testers, publications and safety procedures to inspect, troubleshoot and repair automotive systems. Includes gas and diesel engines, power trains and replacement of inoperative vehicle system components.

WEL1501 Oxyacetylene Welding
Introduction to oxyacetylene welding. Includes operation and maintenance of welding equipment; identification of beads, lap joints and tee joints of carbon steel; position welding; cutting ferrous metals; silver and lead soldering; brazing steel and gray cast iron; fusion welding of ferrous castings; and forging metals.

WEL1502 Metallic Arc Welding
Basic metallic arc welding. Includes operation and maintenance of equipment; selection of electrodes; building up flat surfaces, fillet welds and butt joints; and interpreting drawings and symbols.

WEL1503 Inert Gas Shielded Welding
Introduction to welding of edge, butt and tee joints of heat and corrosion resistant ferrous, aluminum, magnesium and titanium alloys.

WEL1513 Heat Treatment
Fundamental principles of heat treatment. Includes identification and classification of metals, analyzing hardness and testing and evaluating heat treatment of all aluminum and ferrous metals.
TERMS & ACRONYMS …

A&P, Airframe and Powerplant
AC&W, aircraft control and warning
ACE, American Council on Education
AETC, Air Education and Training Command
AFOSH, Air Force Occupational Safety and Health
AFRC, Air Force Reserve Command
AFSC, Air Force specialty code
AGE, aerospace ground equipment

Air Force specialty codes are alphanumeric identifiers of occupational specialties of airmen and their skill levels: unskilled (1 level), apprentice (3 level), journeyman (5 level), craftsman (7 level) or superintendent (9 level).

Air Force specialty is a group of related Air Force occupations that require common qualifications and are identified by title and code, the Air Force specialty code.

Airman refers to both male and female enlisted personnel.

AMT, aircraft maintenance technician
ANG, Air National Guard
APD, Acquisition Professional Development

Armed Services Vocational Aptitude Battery (ASVAB) consists of prerequisite tests for USAF enlistment and is a factor in occupational assignment.

ASCP, American Society of Clinical Pathologists
ATC, Air Training Command
AU, Air University

AWACS, airborne warning and control systems

Board of Visitors (BOV) collectively reviews policies and operations that are forwarded to the Secretary of the Defense through the AETC commander, and guides CCAF actions.

CAD, computer-aided design

Candidates for graduation are students who—before commissioning, retiring or separating—have completed all requirements for their degree program, submitted final documents to the college and been recommended for award of the associate in applied science degree.

Catalog of registration is the edition of the catalog current at the time students 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 at Maxwell AFB, Alabama, is an institution of higher learning dedicated to the enlisted members of the United States Air Force. The college is accredited through Air University by the Commission on Colleges of the Southern Association of Colleges and Schools to award the associate degree in applied science degree.

**CLEP, College-Level Examination Program**

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

**FAR, federal aviation regulation**

**FCC, Federal Communications Commission**

**FEMA, Federal Emergency Management Agency**

**GER, general education requirement**

**ICC, International Certification Commission**

**Internship** is a performance-based and documented system that may include a correspondence course; documented on-the-job training; and a closed book, proctored examination, all based on an Air Force specialty.

**ITMS, Instructor of Technology and Military Science**

**IVD, interactive videodisc**

**JSAMTCC, Joint Service Aviation Maintenance Technician Certification Council**
**TERMS & ACRONYMS**

LMMS, leadership, management and military studies

MWR, morale, welfare and recreation

NCO, noncommissioned officer

**Occupational specialty codes** are alphanumeric identifiers of Air Force enlisted occupational specialties. There are three types of occupational specialty codes—Air Force specialty code, special duty identifier and reporting identifier.

OIC, occupational instructor certification

OJT, on-the-job training

OSHA, Occupational Safety and Health Administration

Policy Council is a governing body that develops academic policies that are endorsed by the Board of Visitors. The council is composed of representatives from all elements of the CCAF system.

Primary Air Force specialty code (PAFSC) is what CCAF uses to determine degree program eligibility.

Proficiency (P) credit is awarded to Air Force enlisted personnel who have completed tri-service or Department of Defense initial skills technical training and demonstrate journeyman level competency.

Program managers are occupational specialists who evaluate permanent student records and progress reports, review courses from affiliated schools, develop degree programs relevant to occupational specialties and work with education services personnel in advising students.

Programmatic accreditation is official recognition by national professional organizations in such fields as business, health, law and engineering and provides quality assurance concerning educational preparation of members of a profession or occupation.

Progress report (PR) is an internal worksheet reflecting a student’s record, including credits applied toward degree completion and cannot be used as an official education record.

Registered student is an individual currently registered in a CCAF degree program.

Reporting identifier (RI) is an alphnumeric occupational specialty code for an enlisted occupational specialty not included in the AFSC structure.

Residency is the requirement that at least 16 semester hours of CCAF credit be applied toward a CCAF degree.

RF, radio frequency

RIP, report on individual personnel

SACS, Southern Association of Colleges and Schools

SATCOM, satellite communications

Separated student is an individual who has been withdrawn from a degree program due to commissioning, retirement or separation.

SH, semester hour

SOON, Solar Observing Optical Network
Special duty identifier (SDI) is an alphanumeric occupational specialty code assigned to airmen who, on a semipermanent or permanent duty basis, perform tasks that do not provide a normal career progression pattern and are unrelated to any Air Force specialty.

Subsequent degree is a CCAF degree earned after award of the first CCAF degree.

TACAN, tactical air navigation

Technical core are those courses directly related to a student’s field of study.

Technical elective is a course that is beneficial but not essential toward a student’s field of study.

Transcript is the official educational record of a student.

USAF, United States Air Force

VFR, visual flight rules

Withdrawn applies to a student who has been removed from active student status because of administrative reasons or a personal request.
**INDEX**

### A

- Accreditation, 1, 2
- Acronyms, 193
- Administration, 3, 108, 111
- Administrative Center, 3, 4, 8, 9
- Admission, 6, 9
- Advanced Standing, 7
- Advisory Bodies, 5
- Aerospace Historian, 21, 24
- Aerospace Physiology Instructor, 21, 25
- Affiliated School, 2, 4, 5, 7, 103
- Affiliated Schools Advisory Panel, 5, 11
- Air & Space Operations Tech, 19, 26
- Air Education and Training Command, 193
- Air Force Specialty Code, 19, 193
- Air Force Specialty, 193
- Air Traffic Control, 108, 120
- Aircraft Armament Systems Tech, 20, 27
- Aircraft Armament Systems, 108, 109
- Aircraft Maintenance Tech, 108, 113
- Aircrew Life Support, 108, 109
- Aircrew Tech, 108, 110
- Airfield Mgt, 108, 112
- Airway Science, 19, 29, 92
- Algebra, 15
- Algebra-Based Physics, 15
- Allied Health, 21, 30
- Allied Health Sciences, 21, 30
- Applied Government, 108, 154
- Applied Geography, 108, 154
- Applied History, 108, 156
- Applied Physics, 108, 180
- Armed Services Vocational Aptitude Battery, 6
- Astronautics, 108, 120
- Audiovisual Arts, 108, 121
- Aviation Maintenance Tech, 31, 92
- Aviation Management, 19, 32, 92
- Aviation Operations, 19, 33, 92
- Avionic Systems Tech, 19, 34, 92
- Avionics, 108, 121

### B

- Bioenvironmental Engineering Tech, 21, 35, 93, 108, 124
- Biology, 15
- Biomedical Equipment Tech, 21, 36, 93, 108, 125
- Board of Visitors, 3, 4, 5, 193

### C

- Calculus, 17
- Calculus-Based Physics, 17
- Candidacy Status, 8
- Candidates for Graduation, 8, 193
- Cardiopulmonary Laboratory Tech, 21, 37, 108, 128
- Carpenter, 108, 127
- Catalog Change, 7
- Certification, 7
- Change
  - Degree Program, 7
  - Catalog, 7
- Chemistry, 15
- Civil Engineering, 108, 127
- Code Index, 108
- College Algebra, 15
- Commandant, vii, 3, 4, 5
- Communications Applications Tech, 19, 38
- Communications, 108, 130
- Computer Maintenance & Repair, 108, 129
- Computer Science Tech, 20, 41
- Computer Science, 15
- Construction Tech, 21, 40
- Contracts Mgt, 22, 41
- Contracts, 108, 132
- Core Values
  - AF, 2
- Corrosion Control, 108, 132
- Course Descriptions, 107
- Criminal Justice, 21, 42
- Cytology, 108, 133
INDEX

D
Data Systems, 108, 135
Degree
  Associate in Applied Science, 1, 2
  Completion Requirement, 7 6
  Program, 1, 3, 6, 7, 9
  Subsequent, 6
  Time Limit, 6
Dental Assisting, 22, 43, 93
Dental Laboratory Tech, 22, 44, 93, 108, 133
Dental Specialist, 108, 133
Diagnostic Imaging Technology, 22, 45
Diagnostic Medical Sonography, 22, 46, 93, 108, 134
Dietetics & Nutrition, 21, 47, 93
Disaster Preparedness, 108, 134
Disenrollment, 194
Document
  Fraudulent, 9
  Process, 9
  Update, 10

E
Education & Training, 108, 136
Education & Training Mgt, 22, 48
Education Services Advisory Panel, 5, 13
Electronic Equipment Operation, 108, 139
Electronic Power Production, 108, 147
Electronic Systems Tech, 20, 49, 93
Electronics & Telecommunications, 14
Electronics, 108, 139
Emergency Management, 21, 50
Emergency Medical Tech, 108, 145
Entrance Requirements, 6
Environmental Medicine, 108, 146
Environmental Science, 108, 146
Environmental Systems Tech, 21, 51
Explosive Ordnance Disposal, 21, 52
Explosives Handling & Disposal, 108, 148

F
FAA Certification Credit, 97, 98
Family Support Center, 108, 151
Feedback, 11
Finance, 108, 149
Financial Mgt, 22, 53
Fire Protection, 108, 150
Fire Science, 21, 54
Food & Nutritional Science, 108, 151
Food Service, 108, 148
Force Health Management, 108, 148
Foreign Technical Language, 108, 152
Forms
  AF Fm 968, 6, 9
  AF Fm 2096, 8
  Fraudulent Document, 9
  Fuels, 108, 152

G
General Biology, 17
General Chemistry, 17
General Education, 16, 17
General Information, 1
General Psychology, 17
General Sociology, 17
Geophysical Sciences, 108, 154
Grading Policy, 6
Graduation, 8
Graphics, 108, 154

H
Health Care Mgt, 21, 55, 94
Health Services Administration, 108, 157
Heavy Equipment Operation, 108, 156
Histologic Tech, 22, 56, 94, 108, 156
History, 1
Homepage, iv, 11
Human Anatomy, 17
Human Resources Mgt, 21, 57, 108, 156
Humanities, 17
Hyperbaric Medicine, 108, 155

I
Information Mgt, 22, 58
Information Release, 10
Information Systems Tech, 19, 59, 94
Instructor of Tech & Military Science, 60

2008-2010 CCAF General Catalog
198
Intelligence, 108, 158
Internship, 108, 158

J

Journalism, 108, 159

L

Law Enforcement, 108, 160
Leadership, Mgt & Military Studies, 108, 163
Legal Service, 108, 161
Licensure, 7, 91
Logistics, 20, 61, 108, 163, 164, 165

M

Machinist, 108, 165
Maintenance Production Mgt, 20, 62
Management & Supervision, 108, 168
Mapping, 108, 166
Marksmanship, 108, 170
Mathematics, 17, 108, 166
Measurements, 108, 166
Mechanical & Electrical Tech, 21, 63
Mechanical Maintenance, 108, 166
Medical Assistant, 108, 167
Medical Laboratory Tech, 22, 64, 108, 170
Medical Readiness, 108, 172
Memberships, 201
Mental Health Services, 21, 67, 94
Metals Tech, 20, 66, 94
Meteorology, 108, 167
Military Public Health, 108, 171
Military Science, 108, 169
Missile & Space Systems Maintenance, 20, 67, 94
Missile Maintenance Tech, 108, 172
Mission
   CCAF, 2
Munitions Systems Tech, 20, 69
Munitions, 108, 173, 174
Music, 21, 70

N

“No Fault” Exception, 8
Nondestructive Testing Tech, 20, 71, 94
Nondestructive Testing, 108, 174
Nuclear Medicine Tech, 22, 72, 108, 175
Nursing, 108, 175

O

Occupational Instructor Cert, 99
Occupational Specialty Codes, 195
Ophthalmic Tech, 22, 73
Optometric Tech, 108, 177
Oral Communication, 17
Orthotic Prosthesis Devices, 108, 177
Other Service School, 7

P

Paralegal, 22, 74
Pavements, 108, 178
Personnel, 108, 178
Personnel Recovery, 19, 75
Pharmacology, 108, 179
Pharmacy Tech, 22, 76, 95
Photography, 108, 179
Physical Ed, 16, 108, 179
Physical Therapist Assistant, 21, 77, 95
Physical Therapy, 108, 181
Physiological Training, 108, 181
Physiology, 15
Plumbing, 108, 181
Policies, 4, 5, 6
Policy Council, 5, 11, 195
Primary AFSC, 195
Proficiency (P) Credit, 9, 195
Program Elective, 18
Program Manager, 195
Programmatic Accreditation, 195
Progress Report, 195
Psychology, 15
Public Affairs, 21, 78
Public Health Tech, 21, 79

Q

Quality Assurance, 108, 182

R

Radio & Television Broadcasting, 108, 183
Radiologic Technology, 108, 182
Recreation, 108, 183
Registered Student, 195
Registration, 6
Reporting Identifier, 19, 195
Residency Requirement, 14
Residency, 195
Restaurant, Hotel & Fitness Mgt, 21, 80

S

SACs, 1, 2, 195
Safety, 19, 108, 183
Sanitation, 108, 184
Scientific Analysis Tech, 22, 82
School
  Affiliated, 2, 7, 9, 11
  DoD, 7
  Other Service, 7
  Training, 1
Security, 108, 184
Separated Student, 195
Services, 108, 187
Simler, 1, 3
Social Science, 17
Social Services, 21, 83, 108, 185
Sociology, 17
Solar Observation, 108, 186
Special Duty Identifier, 19, 196
Special Duty/Reporting Identifier Internship, 108, 184
Staff Directory, iv
Statistics, 17
Student
  Behavior, 11
  Feedback, 11
  Record, 9, 10
  Separated, 195
  Services, 11
Subsequent Degree, 196
Surveying, 108, 186
Survival & Rescue, 108, 186
Survival Equipment, 85, 95, 108, 186
Survival Instructor, 19, 86

T

Technical Core, 196
Technical Education, 14
Technical Elective, 196
Telephone Directory, iv

Television Systems, 108, 190
Terms, 193
Time Limit to Complete Degree, 6
Training School, 1
Transcript Request, 10
Transfer Credit
  By Examination, 7
  Certification, 7, 9
  DoD, 7
  Licensure, 7, 91
  Other Service School, 7
  Registry, 7
Transportation, 20, 87, 108, 187
Trigonometry, 16
Troops to Teachers, 99

U

Updating Document, 10

V

Vehicle Maintenance, 20, 88, 95, 108, 190
Vision
  CCAF, 2

W

Waiver Process, 8
Washback Policy, 8
Weather Tech, 19, 89
Welcome, vii
Welding, 108, 191
Withdrawal, 9, 196
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