



# Inter-American Air Forces Academy (IAAFA)



# 2013 COURSE CATALOG

Lackland Air Force Base, Texas



**COMMANDANT'S MESSAGE**

“Educated societies have always placed education as the foundation of their institutions.”

*Simón Bolívar*

It is a pleasure, both for me and for the Inter-American Air Forces Academy (IAAFA), to offer our customers this catalog of courses available at our academy for calendar year 2013. The catalog's purpose is to assist host governments and Security Cooperation Offices (SCOs) in the selection and preparation of students slated to attend training. In addition, this catalog serves as a reference for the United States Air Force (USAF) and other security assistance agencies.

IAAFA is part of the USAF's Air Education and Training Command. Commanders who decide to send students can rest assured graduates are fully prepared to carry out their duties, armed with the skills outlined in this catalog and in accordance with the highest standards.

The majority of the suggestions we received during our visits to your countries have been incorporated in this catalog. IAAFA will distribute revisions or additions made to this catalog during the calendar year and they will also appear on IAAFA's web page. Please forward proposed changes to 837 TRS/SSR, 2431 Carswell Avenue, Lackland AFB TX 78236-5609.

If you wish to receive additional copies of this publication, please address your request to 837 TRS/SSR, 2431 Carswell Avenue, Lackland AFB TX 78236-5609. Furthermore, there is an electronic version of this catalog on the Internet at the following web site: <http://www.lackland.af.mil/iaafa/index.asp>. This catalog replaces the 2012 catalog; therefore, all previous editions are obsolete.

I sincerely hope the students attending IAAFA courses have pleasant, productive stays, and that the exchange of cultures and experiences will serve to further strengthen the bonds of friendship and cooperation among partner nations in the Global War on Terror.

MARC F. STRATTON Colonel, USAF  
Commandant

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## GENERAL INFORMATION

### IAAFA History

The Inter-American Air Forces Academy (IAAFA) was founded on 15 March 1943, at the request of Peru's Minister of Aeronautics, General Fernando Melgar. The academy trained 11 Peruvian students at Albrook Field, Panama Canal Zone, marking the first US aeronautics training in Latin America.

In the 1940s and 50s, the academy expanded and changed in response to potential conflicts in the Western Hemisphere and the world at large. The student load increased to 400 students per year. In 1952, the commandant established the format for today's IAAFA, emphasizing "hands-on" training, adding officer courses, and creating a "Student Support" responsible for military and athletic instruction and US cultural awareness. In response to US emphasis in Latin America, the academy changed its name from "Central and South American Air School" to "United States Air Force School for Latin America," to finally "Inter-American Air Forces Academy" in 1966.

On 30 September 1989, IAAFA closed its doors at Albrook AFS, Panama, and moved to Homestead AFB, Florida, reopening 100 days later on 9 January 1990. On 23 September 1992, following almost complete destruction by Hurricane Andrew, IAAFA relocated to Lackland AFB, Texas, once again opening its doors just under 100 days, on 11 January 1993. Today, IAAFA graduates an average of 800 students a year--quite a step up from the 11 students of 60 years ago.

### Student Selection Requirements and Prerequisites

The United States Security Cooperation Office (SCO) in the US Military Groups and host governments screen students selected to attend the academy's courses. **Unless otherwise stated all courses are available for male and female students. In particular for the Company Grade Officer Professional Development (MASL 171032) and Noncommissioned Officer Professional Development (MASL 171033) a minimum of two female students is desired.** SCO training officers **must ensure each student meets all course prerequisites as stated in the course description of this catalog.** Deviations from the minimums requirements established in this catalog must be approved on an individual basis by the IAAFA Commandant or representative. Waivers or deviations to course requirement requested must be submitted in writing through AFSAT/TO, (2021 First Dr. West, Randolph AFB TX 78150-4302) and approved by IAAFA/CC.

The SCO training officer must:

- a. Obtain the findings of an official and current physical examination from a designated medical authority for all prospective students certifying the individual is free of infectious diseases or other medical conditions, which would disqualify him/her from general military duty. The prospective trainee should receive all immunizations prescribed by the US Public Health Service as approved by the World Health Organization and must be free of active tuberculosis.
- b. Brief each selected student in accordance with AFI 16-105.

- c. Due to high security, brief the student that the academy is on a US military installation and the importance of abiding by the base rules and regulations.
- d. Accomplish security screening in accordance with AFI 16-105.
- e. Arrange transportation in accordance with AFI 16-105.
- f. Ensure students read the student guide (Guía Estudiantil) prior to departure.
- g. Provide 837TRS/SSR with students’ arrival information (rank, name, sex, arrival date and time) no later than one week prior to the anticipated arrival dates to plan billeting and transportation requirements.

**NOTE: Students should arrive in San Antonio no later than one or two days prior to the class start date, but no earlier.**

- h. Students will arrive directly to building 7460 (Student Support) for in-processing.
- i. The academy’s 24-hour point of contact numbers are listed below. Callers may dial the academy Toll Free line from overseas, but may still be assessed a calling charge by their in-country telephone service.

	<b>From US</b>	<b>From overseas</b>
<b>Toll free</b>	1-800-577-5926	*010-1 (800) 577-5926
<b>Commercial phone</b>	(210) 671-4406	010-1 (210) 671-4406
<b>DSN</b>	473-4406	(312) 473-4406
<b>Commercial Fax</b>	(210) 671-4799	010-1 (210) 671-4799
<b>DSN Fax</b>	473-4799	(312) 473-4799

**Academic Calendar**

The academic calendar is divided into three classes. Below is the schedule of classes:

Class A – March - May

Class B – June - August

Class C – September - December

**General IAAFA Clothing Requirements**

General clothing requirements are based on the need of each course. The following table identifies the general requirements for students attending courses at IAAFA. Review the course descriptions and specific requirements to find out if the course you are attending will be issuing additional clothing/equipment. See table 1.

<b>COURSE LENGTH</b>			
<b>Officer and Enlisted</b>	<b>12 Weeks</b>	<b>Less than 12 weeks: Graduate at end of class</b>	<b>Less than 12 weeks: Do not graduate at end of class</b>
Light blue short-sleeve shirt w/trousers or equivalent	Students must bring	Students must bring	Students must bring
Service dress (coat & tie) or equivalent	Students must bring	Students must bring	Students must bring
Mess (formal) dress (if not available, then most formal uniform)	Students must bring	Students must bring	Not Required
Battle Dress Utilities (BDU) (See Note *)	Students must bring	Students must bring	Students must bring
Flight Suit	Not Required	Students must bring (See note ***)	Students must bring (See note ***)
Combat Boots (See Note **)	Students must bring	Students must bring	Students must bring
Athletic Attire	Issued by IAAFA	Issued by IAAFA	Issued by IAAFA
Specialized Gear	Issued by IAAFA (If required)	Issued by IAAFA (If required)	Issued by IAAFA (If required)

Table 1, General IAAFA Clothing Requirements

**Note: \*The two courses receiving BDUs are: MASL 173056 – Ground Defense Leadership, and MASL 173067 – Special Reaction Team**

**\*\*All students attending the “Aircraft and Systems Training Courses” listed in page iii of this catalog will receive steal toe boots.**

**\*\*\*Pilots attending Pilot Instrument Procedures Course (PIPC, L3OZR1210640SRA) and Instructor Pilot Instrument Procedures Course (PIPC, L3OZR1210650SRA) can bring BDUs if they do not have flight suits. All other students are required to bring BDUs, fatigues, or equivalent work uniforms.**

## Physical Fitness Training (PT)

IAAFA promotes physical fitness training to support the Air Force mission. The goal of the fitness program is to motivate all students to participate in a physical conditioning program that emphasizes fitness. **Physical fitness training is mandatory for all students.**

## Grading System

Grades for courses shall be recorded by the following grades below:

Blocks with Knowledge tests	Blocks with Performance tests
70 – 100 Pass	S = Satisfactory
0 – 69 Fail	U = Unsatisfactory

## Awards

**(Note: To be eligible for the following class awards, students must attend/complete a 5-week course or longer.)**

*Commandant's Award.* This is presented to one officer and one enlisted student for overall academic achievement, leadership, military bearing, and behavior, as well as individual contributions to the academy and sports.

*Academic Achievement Award.* This is presented to one officer and one enlisted student who maintain the highest overall academic average among all eligible attendees.

*Sports Awards.* Team and individual (officer, enlisted and/or civilians) awards are presented to members of winning teams participating in the academy's organized sports program.

*Outstanding Athlete Award.* This is presented to the outstanding athlete, officer, enlisted, and/or civilian on the basis of physical fitness using the Air Force Physical fitness assessment criteria.

*Diploma Recognition.* The Distinguished Graduate Program – The Distinguished Graduate (98% grade point average or higher) Program will recognize outstanding achievement in all graduating courses throughout the year. The Distinguished Graduate Program may recognize up to, but not to exceed 10 percent of a graduating course. Each selection is based on the whole-person concept rather than on academics or performance skills alone. All others not receiving the Distinguished Graduate award who score 95%-100% overall will graduate as Honor Graduates.

**Note: PME courses will follow the USAF Air University's award guidelines.**

**Field Studies Program (FSP)**

The FSP is a DoD program designed to provide a balanced understanding of the US culture, society, and way of life to all foreign military trainees attending courses in the US. The academy has a very active FSP. Students will have the opportunity to participate in cultural and educational events and visits to several local and state government institutions. As part of the FSP, IAAFA has an “Amistad Program.” This program involves the sponsorship of students by base and local volunteer families and allows students to become familiar with US family and cultural values. Though it is a goal of the program, not all students may be able to obtain “sponsors.”

Finally, as part of the DoD FSP activities offered at IAAFA, the academy hosts a Cultural Night during which students perform skits, music, and dance routines typical of their countries. It is beneficial for students planning to participate to bring any music, costumes, and materials to do a country presentation, and/or props necessary for their performances, as they are not readily available in San Antonio.

**Grievance Procedures**

The academy’s student grievance procedures are very clear. If any student has a grievance while at IAAFA, they can contact the student support IMSO to make a grievance at the address below. The student support IMSO will investigate the circumstances and report them to the squadron commander. The student will be notified of the resolved matter.

837 TRS/SSC  
2431 Carswell Ave  
Lackland AFB TX  
78236-5609  
DSN: 473-5593  
Commercial: (210) 671-5593

**Accompanied Students by Dependents**

Dependents are not authorized to accompany students at the academy effective immediately. If the student chooses to bring his/her dependents, the student is responsible for finding lodging accommodations off base. All academy students live on base and lodged in single quarters which are not designed for families. Long academic days and study requirements leave little available time for family matters. IAAFA cannot alter training programs to meet the specific requirements of students with dependents. If the student still desires to bring a spouse/dependent, he/she should consider the many logistical problems they will encounter (i.e., ineligibility for family to use on-base facilities, very long distances and lack of transportation, dependent’s inability to conduct daily business due to language differences, isolation/boredom, etc.)

**Base Exchange (BX) Privileges**

All students are authorized full privileges in the Base Exchange system.

### **Civilian Clothing**

Students may purchase civilian clothing at the local Base Exchange facilities. Temperatures in San Antonio fluctuate depending on the time of year. Light to medium weight clothing is appropriate year-round. A sweater or light jacket is also recommended for spring and autumn months since the temperature can drop from the mid-80s (27° C) to the mid-40s (4° C) in a matter of hours. Heavier clothing is recommended for the winter months; though again, the temperature may reach well above 60° F (16° C) during the day, low norms for winter range between 30° and 60° F (0° C and 16° C). Additionally, heavy rain may be expected during spring and fall months.

### **Meals**

Meals are provided for students at a base dining facility. All enlisted students that do not receive Temporary Living Allowance (TLA) through IAAFA must pay for their meals. All officer students, regardless of funding status, pay for their meals. All other students sign a cashier's log for daily meals and charges, which are reimbursed through the respective FMS, IMET, INL, or 10-04 channels. Students attending courses taught by security forces will need to make a one-time payment of approximately \$20-\$30 for SRT course and \$80-\$100 USD for the Ground Defense Skills (GDS) course to cover the cost of Meals-Ready-To-Eat (MRE) during their field training phases. Due to the requirement in advance for MREs, this amount will be collected at the beginning of the class. Students must be prepared for the cash outlay shortly after arrival. This is in addition to the funds referenced in the following paragraph.

### **Open-Bay-Dormitories**

IAAFA is now providing "Free" dormitory space for E-4s (Males only) and below. In order for country to take full advantage of the free dormitory it's imperative and required that each country provide a Country Liaison Officer (CLO) to accompany their students.

### **Funds**

Officers and enlisted personnel under IMET sponsorship will receive a living allowance to cover meals and incidental expenses as per DOD 5105.38M, Chapter 10, *unless otherwise indicated by the International Travel Orders (ITO)*. SCO training officers must ensure all students know their pay, allowances, and obligations to the US government are due prior to their departure. IAW AFI 16-105, International Military Students (IMS) should have in their possession upon entry into the US sufficient funds to cover expenses for a minimum of 30 days. First payment after arrival may take up to 4-weeks (holidays not included).

### **Baggage**

Students are authorized a baggage allowance per DOD 5105.38M, Chapter 10, when travel is paid by IMET. Baggage must accompany the student. For portions of the travel funded by the host country, the baggage allowance is determined by the host country or current airline limits. ***IAAFA WILL NOT BE RESPONSIBLE FOR EXCESS BAGGAGE. In addition, IAAFA cannot store or mail any excess baggage left behind due to overweight violations.***

### **Firearms Policy**

No students will be permitted to import firearms into the US while on an ITO from the USAF.

### **Smoking Policy**

All work centers, billeting/lodging rooms, and most recreational facilities at Lackland AFB are smoke-free. Smoking is allowed in designated areas only.

### **Mail**

Student mail should be addressed as follows:

Rank/Name of Student  
PCS #2/IAAFA/Country  
2220 Andrews Ave, Unit 362800  
Lackland AFB TX 78236-3628

### **Leave and Absence**

Students desiring to take leave or drive back to their home countries upon completion of training must have authorization included in their ITOs.

### **Medical Care/Insurance Policy**

Students will receive medical care IAW AFI 16-105, reimbursable through respective IMET, FMS, INL, or 10-04 channels. Eyeglasses are not provided. If student wears prescription glasses please remind them to bring a second set just in case they lose/break them. **IMPORTANT:** Please refer to “General” section, Student Selection Requirements and Prerequisites, paragraph “a”, concerning medical screening of students prior to attendance at IAAFA.

**Insurance Policy:** Students with a medical insurance policy will provide a copy to the ISM upon arrival at the academy. A copy of the policy is placed in their academy records to ensure prompt medical care is provided and billing is charged to their insurance provider.

### **Dental Care**

Students will only receive **EMERGENCY treatment** dealing with extraction and the relief of pain in accordance with AFI 16-105.

### **Driver’s License**

Consult with the Students Affair Section upon arrival at IAAFA.

### **Applicable Directives and Manuals**

DoDM 5105.38, Security Assistance Management Manual (SAMM)  
AFI 16-103, Managing the Defense English Language Program  
AFI 16-105, Joint Security Assistance Training (JSAT) (Inter-Service)  
Education and Training Course Announcements, <https://etca.randolph.af.mil/>  
AETCI 36-2203, Technical and Basic Military Training Development  
AETCI 36-2215, Training Administration  
IAAFA OI 36-5, Student Conduct and Disciplinary Standards

## COURSES

### Background

Courses offered are based on historical needs (i.e., courses are kept from year to year), US strategic objectives as described in the US Southern Command Theater Engagement Plan, and customer country requirements. Customer countries can request new courses directly to IAAFA by two means: as honorary directors of the academy, air forces commanders can contact the academy directly, and also through the System of Cooperation Among the American Air Forces' (SICOFAA) Human Resources, A3 Operational Committee. Final decision on development and implementation of new courses occurs during the IAAFA Curriculum Review Advisory.

### Human Rights Training

All students receive Human Rights training during their attendance at IAAFA.

### Course Design

- a. **First Level Courses.** Courses are designed for entry-level training in the respective career field and are designed to complement in-country training programs. They cover the fundamental skills and knowledge to enable the student to perform on the job under the supervision of an experienced individual. Graduates are semi-skilled and can progress to the fully-skilled level by undergoing on-the-job training.
- b. **Advanced Courses.** These courses are designed to train individuals in specific systems primarily at the specialist or supervisor level. *Note:* Students scheduled to attend these courses must have completed, as a minimum, a basic course in the related field or have at least two years of practical experience in the specialty in addition to meeting all other prerequisites.

### Course Numbers

IAAFA uses the AETC course numbering system which includes a 15-digit course number (example is L3AZR1234560SRA). This numbering system will be used throughout the catalog and to identify each course, except PME courses. The last letter in the course number identifies the revision of the course. The MASL number will be used in the course number (ex. L3AZR1234560SRA). Use the MASL numbers in all communications between IAAFA and AFSAT.

### Graduation Requirements

Students achieving a cumulative grade of 70% or above (80% for pilot courses) will have completed their respective courses successfully and will receive a diploma at a graduation ceremony. Those who do not achieve the minimum of 70% may be returned to their country with a letter of attendance and a letter explaining the failure with recommendations for additional training. Students must attend the graduation banquet to receive a diploma.

**PROFESSIONAL MILITARY EDUCATION**

COURSE NUMBER	COURSE NAME	LENGTH
MASL D171032 (E-IMET) Mobile Course MASL: D309054	Inter-American Squadron Officer School (ISOS)	8 Weeks
<b>STUDENT LOAD:</b> MIN: 18      MAX: 28		

**1. Course Description:** This course is the program taught at the USAF Squadron Officer's School (SOS) at Maxwell AFB, which prepares USAF captains for increased leadership responsibilities and is their next step in the Professional Military Education (PME) ladder. The curriculum is developed by the Squadron Officer College under USAF Air University guidelines. After completing this course, officers will have acquired new tools to enhance their leadership skills. Graduates will have practiced new problem-solving, critical thinking, teambuilding and mentoring techniques in order to lead and motivate personnel to accomplish the mission. Course activities challenge each student to apply newly learned principles successfully and to influence group dynamics, cohesion, and effectiveness in a positive manner. ISOS is a course for officers, who had or will complete their own Air Force academic requirements for promotion to the rank of major; or as a required course for promotion, if the academic structure of their country is similar to that of USAF.

## 2. Course Requirements:

2.1. Eligibility: Officers in the grade of O-3 or equivalent as well as civilians equivalent to the Department of Defense grade of GS-9 and above (consult MILGROUP for grade equivalency). Graduates of in-residence Squadron Officer School, Maxwell AFB, AL (MASL D171003) are not eligible to attend. Student must have basic computer knowledge in order to accomplish writing and briefing assignments as well as electronic readings related to curriculum.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity required for field team building and leadership activities. Student will be expected to be in good physical condition which includes 3 mile runs, sit-ups and pushups. ISOS standards are provided below for reference. Run times below are for the 3 mile distance. Sit-up and Push-up standards are based on "good" performance in the 1-minute Air Force physical fitness test events.

ISOS Fitness Standards (Updated 11 May 07)								
MALE	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
Run	28:00		29:30		31:11		34:00	
Sit-Ups	48	46	44	42	39	37	35	32
Push-Ups	49	45	40	35	31	27	25	24
FEMALE	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
Run	32:30		34:00		38:00		39:00	
Sit-Ups	44	40	35	33	30	28	26	23
Push-Ups	31	28	26	21	15	13	12	11

2.3. **Uniform/Equipment:** See General Clothing Requirements in General Information section. May bring own running shoes. USAF officers must bring their Service and Mess dress.

**3. Other Information:** Students are required to make a current job/current events presentation; therefore, it is highly encouraged to bring support material, preferably in electronic form (i.e. maps, history, tourism, current events).

**4. Intermediate Military Objectives:** This course supports the following USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12 and USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
MASL D171033 (E-IMET) Mobile Course MASL: D309034	Inter-American Noncommissioned Officer Academy (INCOA)	8 Weeks
<b>STUDENT LOAD:</b> MIN: 8      MAX: 14		

**1. Course Description:** This course is the USAF Noncommissioned Officers Academy (NCOA) course which prepares NCOs for more advanced leadership and management responsibilities. It is the next level of Professional Military Education (PME) designed for those assuming senior NCO leadership positions. The curriculum is developed by the Barnes Center for Enlisted PME under the USAF Air University guidelines. Instruction is directed at the improvement of leadership skills. Students learn time and stress management, concepts of human behavior, as well as implementing quality in the workplace. This course includes the following units of instruction: profession of arms, leadership, and communication.

**PROFESSION OF ARMS** - These lessons are all designed to increase student comprehension on how our professional mindset and behaviors promote airmanship and national security. The lessons covered include: National Strategy, Projection of Airpower, Terrorism, Air Force Culture, Wellness and Standards of Conduct.

**LEADERSHIP** - The Leadership and Management area develops the skills necessary to fulfill supervisory responsibilities for the NCOs current rank and to prepare the NCO for future responsibilities, while bridging the gap to the next level of PME. The subjects covered are human behavior, team building, leader influence, time management, problem solving, stress management, change and conflict management, functions of management, discipline, human relations, performance management, and feedback.

**COMMUNICATION** - Designed to increase student knowledge of successful learning, barriers to communication, preparing to communicate, effective writing, effective speaking, interpersonal communication skills, and bullet statements.

## 2. Course Requirements:

2.1. Eligibility: Noncommissioned Officers in the grades equivalent to USAF Staff Sergeant (E-5) through Master Sergeant (E-7). Graduates of USAF NCO Academy (MASL 171007) are not eligible to attend. Civilian equivalents may attend with prior coordination. Familiarization with Microsoft Internet Explorer, Microsoft Word, PowerPoint and Excel programs is highly recommended.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Must meet minimum physical requirements established by individual country's directives.

2.3. Uniform/Equipment: See General Clothing Requirements in General Information section.

**3. Other Information:** Students are required to make a country presentation; therefore, it is highly encouraged to bring support material (i.e. transparencies, maps, history, tourism, current events).

**4. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12 and USNORTHCOM/TCP  
objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

**OPERATIONS AND SUPPORT TRAINING COURSES**

COURSE NUMBER	COURSE NAME	LENGTH
(MASL 121064) L3OZR1210640SRB	Pilot Instrument Procedures	11 Weeks
<b>STUDENT LOAD:</b> MIN: 6                      MAX: 10		

**1. Course Description:** This course helps prepare pilots for flying missions under Instrument Meteorological Conditions (IMC) and in accordance with Instrument Flight Rules (IFR). It will teach both Federal Aviation Administration (FAA) and International Civil Aviation Organization (ICAO) rules and procedures. Students will learn the use of various charts, navigational aids, and instrument flight procedures, to include basic fundamentals and planning of international flight plans. As there is no actual flight training involved, and application is taught via flight simulators, graduates of this course will still be required to apply these procedures in their respective weapon systems with an experienced instructor or evaluator in order to be fully qualified for instrument operations.

**2. Course Requirements:**

2.1. Eligibility: This course is designed for ranks of O-1 through O-5, police or civilian equivalent. Students must be a current and qualified pilot in his/her primary aircraft, must have flown within the 6 months preceding attendance and must have a minimum of 200 hours of fixed or rotary wing experience after their formal flying course. The candidate should have a minimum of 20 hours of instrument flight time.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: No hearing or speech impediments.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements, students are encouraged to bring flight suits and flight boots.

**3. Other Information:** Students are encouraged to bring examples of home field instrument approach charts and maps to share with the class.

**4. Intermediate Military Objectives:** This course supports the following  
 USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
 USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
(MASL 121065) L3OZR1210650SRB	Instructor Pilot Instrument Procedures	11 Weeks
<b>STUDENT LOAD:</b> MIN: 6                      MAX: 10		

**1. Course Description:** This course is designed to help prepare pilots with experience in instrument flying procedures to become instrument flight instructors. This course will reinforce the concepts, which are introduced in the Pilot Instrument Procedures Course (MASL D121064) and also familiarize students with instrument flight procedures and rules on instructional procedures and techniques necessary to perform instructional duties. Instruction covers both Federal Aviation Administration (FAA) and International Civil Aviation Organization (ICAO) rules and procedures. As there is no actual flight training involved and application is taught via flight simulators, graduates of this course will still be required to apply these procedures in their respective weapon systems with an experienced instructor or evaluator in order to be fully qualified for instrument flight operations.

## **2. Course Requirements:**

2.1. Eligibility: This course is designed for ranks of O-1 through O-5, police or civilian equivalent. Students must be a current and qualified pilot in their primary aircraft, must have flown within the 6 months preceding attendance and must have a minimum of 300 hours as an aircraft commander/pilot in command. The candidate must have a minimum of 20 hours (50 hours desired) of instrument flight time. It is also desirable for the candidate to have completed instructor qualification prior to attendance.

2.2. Training: Students should have completed the Pilot Instrument Flight Procedures course or equivalent training. Where equivalent training is claimed and the course is not part of an IAAFA approved equivalency list, the academy will make the equivalency determination.

2.3. Physical/Medical:

2.3.1. Vision: Normal (20/20 with or without glasses).

2.3.2. Speech: No hearing or speech impediments.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements, students are encouraged to bring flight suits and flight boots.

**3. Other Information:** Students are encouraged to bring examples of home field instrument approach charts and maps to share with the class.

**4. Intermediate Military Objectives:** This course supports the following  
 USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
 USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
(MASL 121066) L30ZR1210660SRB	Search and Rescue Planning	4 Weeks
<b>STUDENT LOAD:</b> MIN: 6                      MAX: 12		

**1. Course Description:** This course is an introduction to Search and Rescue (SAR) planning procedures and Rescue Coordination Center (RCC) operations and is designed for enlisted or officers who perform in the capacity of non-combat related SAR planning and coordination. The course will give the student a working knowledge in concepts on how to organize and plan SAR center operations and mission planning. Class sessions include scenario executions which give the student practical experience in a simulated SAR environment.

### **BLOCK I – The SAR System and Organization**

This block includes course orientation, the SAR system, SAR organizations, agencies and resources, communications, awareness and initial actions, documentation, and SAR satellite systems.

### **BLOCK II – Search Planning**

This block prepares the student for the factors involved in a SAR incident includes the facilities that are available to the search planner and the mathematical process involved in calculating a marine SAR operation. It also lays the foundation in planning and preparing for the next block of SAR applications.

### **BLOCK III – Solution to SAR Problems**

This block is an application of the SAR studies and theory learned in the first two blocks. It also prepares the students for SAR planning and operations using the new technology “SAROPS”. Multiple exercises are run to give the students many scenarios and practice in running and controlling a SAR operation.

## **2. Course Requirements:**

2.1. Eligibility: Open to all officers, enlisted, and/or civilians that perform or plan to perform SAR planning related duties.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Speech: No hearing or speech impediments or aides.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements, students are encouraged to bring flight suits and flight boots.

**3. Intermediate Military Objectives:** This course supports the following USSOUTHCOM/TCP objectives: 2, 4, 6, 7, 8, 9, 10, 11, 13 and USNORTHCOM/TCP objectives: 2.5, 2.7, 4.2, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
(MASL 122105) L3AZR1221050SRA	Weapons Safety	6 weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 12		

**1. Course Description:** Provides training for international personnel who are assigned to weapons safety management. Includes the organization of the US Air Force safety program; governing non-nuclear standards; support agreements; safety council/meetings; weapon safety training and education; weapon safety representatives; inspections and evaluation; flight line munitions operations; Operational Risk Management (ORM); weapons safety program management; mishap classifications and categories mishap investigation techniques; mishap reports; weapon safety inspection requirements; munitions storage methods; transportation of munitions; quantity-distance separations; weapons ranges, siting, waivers, exemptions, and deviations; site plan packages; Air Force explosive exemption data base, and contingency operations.

#### **BLOCK I – Weapons Safety Program Management**

Instruction begins with a course orientation in which students are made aware of the academy's policies and procedures, safety hazards, first aid, and human rights training. Topics discussed include non-nuclear standards, role of the Weapons Safety Manager (WSM), training and education requirements, risk management, and tools/techniques.

#### **BLOCK II – Mishap Classifications**

Subjects covered include mishap classification and categories, investigation techniques, mishap prevention. Students will conduct a mishap investigation and prepare a report.

#### **BLOCK III – Explosive Safety Principles**

This block of instruction identifies safety inspection requirement for storage, serviceability, and operations of munitions to include license locations, and transporting on and off base requirements. Students will process, prepare, and inspect a facility to determine explosive license requirements and will prepare an inspection report.

#### **BLOCK IV – Quantity Distance Concepts**

In this block of instruction students are required to determine procedures for quantity distance separation types, tables, explosives barricades, and specific facility situations. Students will determine risk assessments, protective measures with explosives. They will determine quantity distance separation and site plan requirements.

#### **BLOCK V – Site Planning**

In this block of instruction students will apply all knowledge acquired in previous blocks. They will prepare and review explosive site plans for a single combat aircraft parking area, munitions storage area, and assembly conveyer. Also they will prepare waiver/exemption request and review explosives site plan packages.

**2. Course Requirements:**

2.1 Eligibility: Open to military members between the ranks of E-5 through O-5, police or civilians equivalent that performs or plans to perform weapons safety managers' duties. Munitions experience is required.

**2.2. Physical/Medical:**

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: See general clothing requirements.

**4. Intermediate Military Objectives:** This course supports the following USSOUTHCOM/TCP objectives: 2, 5, 6, 7, 8, 11 and the USNORTHCOM/TCP objectives: 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.3

COURSE NUMBER	COURSE NAME	LENGTH
(MASL 126013) L3AQR1260130SRA	Anti-terrorism Level I Course	1 Week
<b>STUDENT LOAD:</b> MIN: 5                      MAX: 15		

**1. Course Description:** This course is designed to instruct all members of the armed forces and their civilian counterparts, regardless of specialty and or rank, the basic concepts of antiterrorism. The course provides training in the characteristics of terrorist operations by describing the phases of a terrorist incident and discussing the most common terrorist acts. This course includes the following unit of instruction: Fundamentals of Terrorism.

**BLOCK I – Fundamentals of Terrorism**

Training includes, introduction to terrorism, terrorist operation, protecting terrorist surveillance, individual protective measures and hostage survival

**2. Course Requirements:**

2.1 Eligibility: Personnel may be from any specialty, military, police, or civilian no higher than the rank of O-6 or equivalent.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: No speech or hearing impediments.

2.2.3. Physical: Normal dexterity.

2.3. Uniform/Equipment: Uniform: See general clothing requirements. All required specialized gear will be provided.

**3. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 5, 6, 7, 8, 12 and USNORTHCOM/TCP objectives:  
1.4, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5

COURSE NUMBER	COURSE NAME	LENGTH
(MASL 126014) L3AAR1260140SRA	Anti-terrorism Level II Course	1 Week
<b>STUDENT LOAD:</b> MIN: 5                      MAX:15		

**1. Course Description:** The course is designed to prepare mid-level to high-ranking members of any branch of the military or civilian counterparts to advise installation commanders on antiterrorism matters. The course provides training built around the threat working group (TWG) highlighting group members like Intelligence (INTEL), Counterintelligence (CI) agencies, structural engineers and Antiterrorism Officers (ATOs). The student will be able to identify basic physical security considerations as they apply to installations and facilities. The objective of this lesson is to familiarize the student with the purpose of the vulnerability assessment, the functions of the assessment, and the process one must go through in order to conduct an assessment. The vulnerability elements associated with an assessment, the application of physical security and assessments, and the procedures for actually conducting an assessment will be discussed and practiced. This course includes the following unit of instruction: Dynamics of Terrorism.

#### **BLOCK I – Dynamics of Terrorism**

Training includes assessing the threat, understanding anti-terrorist roles and responsibilities, conducting Vulnerability Assessments (VA) and VA presentation to installation commanders.

#### **2. Course Requirements:**

2.1. Eligibility: Personnel must have completed the Antiterrorism Level I course and no higher than the rank of O-6 or equivalent.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: Uniform: See general clothing requirements. All required specialized gear will be provided.

**3. Intermediate Military Objectives:** This course supports the following USSOUTHCOM/TCP objectives: 1, 2, 3, 5, 6, 7, 8, 12 and USNORTHCOM/TCP objectives: 1.4, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5

COURSE NUMBER	COURSE NAME	LENGTH
(MASL 152054) L3AAR1520540SRB	International Logistics	6 Weeks
<b>STUDENT LOAD:</b> MIN: 6                      MAX: 16		

**1. Course Description:** This course is designed for officers, NCOs and/or civilian personnel assigned to or projected for assignment to materiel management/logistics leadership positions. This course prepares students for leadership positions in the materiel management/logistics field by introducing them to the latest principles of management, funds management, management of repairable assets, fuels management and the Foreign Military Sales (FMS) program. This course includes the following units of instruction: introduction to management, logistics organizations, supply publications, material management, fuels management, foreign military sales and STARR/PC2.

#### **BLOCK I - LOGISTICS ORGANIZATIONS**

This block provides the principles and concepts for successful logistics management and general information on several support organizations that contribute to the overall logistics support of an operating base. Emphasis is placed on the main logistics support organizations; Supply, Maintenance, Transportation, and Contracting.

#### **BLOCK II - SUPPLY PUBLICATIONS**

This block of instruction provides an introduction to supply publications used to research data before requisitioning assets. This area presents five main sets of publications: MCRD, H Series, MD/I&S, Characteristics, and Technical Orders. Students learn to cross-reference part numbers to national stock numbers and search information pertaining to commercial/vendor addresses and codes related to commercial entities.

#### **BLOCK III - MATERIAL MANAGEMENT**

This block covers the organization and management of a supply account. It provides an extensive look at material management and property accounting. It also includes important aspects about the processes for determining requirements, establishing appropriate stock levels to support the base level customer, and focuses on aspects of inventory management and the repair cycle concept in extensive detail.

#### **BLOCK IV - FOREIGN MILITARY SALES**

This block begins with a view of the US Security Assistance program. It outlines the six Security Assistance program components to include Foreign Military Sales (FMS), the Defense Reutilization and Marketing System (DRMS), and the Worldwide Warehouse Redistribution System (WWRS). It also includes types of materiel available for sale, letters of offer and acceptance (LOA), Report of Discrepancy, and Military Standard Requisitioning and Issue Procedures (MILSTRIP).

#### **BLOCK V - STARR/PC2**

This block outlines the purpose and management of the STARR/PC2 system. It covers in detail its use in managing the purchase of Foreign Military Sale (FMS) materiel as well as the management

of repairable assets. Students learn how to navigate the STARR/PC2 program, input data, inquire, and interpret codes when processing supply transactions and the flow of information from the user's computer terminal to the US Source of Supply.

## **2. Course Requirements:**

2.1. Eligibility: Officers in the grades of O-1 through O-6, enlisted personnel in the grades of E-6 through E-9, police, or civilian equivalent.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal manual dexterity.

2.3. Uniform/Equipment: See general clothing requirements.

**3. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12 and USNORTHCOM/TCP  
objectives: 1.4, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5

COURSE NUMBER	COURSE NAME	LENGTH
(MASL 152055) L3AZR1520550SRB	Supply Management	6 Weeks
<b>STUDENT LOAD:</b> MIN: 6                      MAX: 16		

**1. Course Description:** This course is designed for officers, NCOs, Airmen and/or civilian personnel working in base supply or supply-related functions. The course prepares supply specialists and first line supervisors to assume entry-level supply responsibilities. The students receive training on how to identify, inventory, account, and manage property. They also learn how to set up a warehouse and how to operate material handling equipment to include training on forklift safety and how to operate it. This course includes the following units of instruction: supply organization, supply publications, inventory management, warehousing and storage principles, materiel storage and distribution processes, and supply automated management and warehousing applications.

#### **BLOCK I – ORGANIZATION**

Students begin this course with an in-depth view of various logistics systems. The focus is on the supply organization and functions of a base level supply unit and its interface with depot level supply. Students learn about the supply/logistics career field, duties, and responsibilities, and how our day-to-day function directly affects the mission of the operational units, which are supported

#### **BLOCK II – SUPPLY PUBLICATIONS**

This block of instruction provides an introduction to supply publications used to research data before requisitioning assets. This area presents five main sets of publications: MCRD, H Series, MD/I&S, Characteristics, and Technical Orders. Students learn to cross-reference part numbers to national stock numbers and search information pertaining to commercial/vendor addresses and codes related to commercial entities.

#### **BLOCK III - MATERIEL MANAGEMENT**

This block of instruction provides an introduction to stock level and economic order quantity principles. It analyzes the USAF model to illustrate the accountability of in-stock assets and provide all aspects regarding the inventorying of material. The entire process covers how to research and resolve out-of-balance conditions, inventory adjustments, and determining the accuracy of the inventory maintained in the warehouse.

#### **BLOCK IV – WAREHOUSING**

This block of instruction focuses on the processes and elements of a supply organization that physically deals with property from the time it enters the supply system until it issues to another organization. This block covers processes, which ensure that the property maintains a serviceable condition while in stock and readily available for issue to the correct user, and the time and place for the need of an asset.

**BLOCK V – AUTOMATED INVENTORY MANAGEMENT**

This block provides students the opportunity to implement all subjects learned throughout the previous blocks of instruction. Students apply all warehousing principles learned to determine the appropriate warehouse location, assign a warehouse location, and establish a locator system. Students also establish an automated inventory management database, and actual layout of a storage facility and organization of a supply squadron.

**2. Course Requirements:**

2.1. Eligibility: Newly commissioned officers in the grade of O-1 through O-4, enlisted personnel in the grade of E-1 through E-6, police, or civilian equivalent who perform or will perform inventory management and warehouse functions.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Speech: No hearing or speech impediments.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: See general clothing requirements.

**3. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12 and USNORTHCOM/TCP  
objectives: 1.4, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5.

COURSE NUMBER	COURSE NAME	LENGTH
(MASL 155065) L3AZR1550650SRB	Information Technology	8 Weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 12		

**1. Course Description:** The course is designed for students who work or will work with computers and other information systems. Students with no experience or those with limited formal computer training will significantly benefit from the course. Classes are structured to enhance the student's technical proficiency when using computers, other automated equipment, and office applications. The classes also provide valuable hands-on experience necessary for the installation and configuration of hardware, software, operating systems, and application programs similar to the professional A+ Commercial Certification. Information, computer, and network security are at the forefront of every lecture and the underlying theme of the entire course. Upon completion, students are considered Level 1 System Administrators capable of tackling most common and some complex information systems problems. Additionally, students are equipped with the knowledge and tools to dramatically improve the security of their respective military network. This course includes the following units of instruction: information technology security concepts, operating systems, application software, and utility software.

#### **BLOCK I – Information Technology Security Concepts**

Students are introduced to computer security concepts, components, and programs to include: ethics, malicious codes, social engineering, customer contact fundamentals, computer evolution, hardware (motherboard, hard drives, CPUs, memory modules, etc.), and basic troubleshooting.

#### **BLOCK II – Operating Systems**

Students are introduced to the installation and configuration of operating systems like Windows and Unix. Students learn how to administer, manage, secure, and optimize computers utilizing system tools.

#### **BLOCK III - Application Software**

Students are introduced to the Microsoft Office Suite. In this block students learn the functionality of each application within Microsoft Office Professional with special interest given to databases. The following applications are discussed: Word, PowerPoint, Excel, and Access.

#### **BLOCK IV – Utility Software**

Students are introduced to utility software such as Optical Character Recognition (OCR), Antivirus, and Anti-Spyware. The following tools are also discussed: Personal Digital Assistants (PDA), scanners, and the Smart Board Professional Presentation System.

## **2. Course Requirements:**

2.1 Eligibility: Open to military members no higher than the rank of O-5, police, or civilians equivalent who work with information technology systems. Basic personal computer knowledge is highly desirable, but not necessary.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: See general clothing requirements.

**3. Other Information:** Members are encouraged to bring situations from their countries to discuss in class.

**4. Intermediate Military Objectives:** This course supports the following USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12 and USNORTHCOM/TCP objectives: 1.4, 1.6, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5.

COURSE NUMBER	COURSE NAME	LENGTH
(MASL 162030) L3AJR1620300SRA	On-the-Job Training Administration	4 Weeks
<b>STUDENT LOAD:</b> MIN: 6                      MAX: 14		<b>(MTT Capable)</b>

**1. Course Description:** This course provides training for officers, NCOs and civilians to enable them to effectively develop, administer and evaluate On-the-Job Training (OJT) Programs. The course is oriented for middle to upper-level training supervisors and managers who are directly involved with job specific training activities. The training concepts taught in this course are easily adaptable to any professional specialty and include how to plan an OJT program, administer training, evaluate training programs, prepare training directives, and document an OJT program. This course includes the following units of instruction: OJT organization, and how to conduct, evaluate, and document training.

#### **BLOCK I - OJT ORGANIZATION**

This block covers basic organization of OJT programs. Topics include structure of the OJT program, OJT responsibilities for the supervisor/trainee, presentation of an impromptu speech, developing a specialty job description, and documenting and maintaining training forms and records. The student learns to develop training charts, OJT records, and master task listings as well as determine training needs, capabilities, and resources. Training scheduling processes will also be covered.

#### **BLOCK II - HOW TO CONDUCT, EVALUATE, AND DOCUMENT TRAINING**

This block focuses on the actual execution of training programs. Topics include initiating the training process, identification and application of the laws of learning (training related), selecting training strategies and principles, and selecting/applying training methods and techniques. The student learns to develop and apply the demonstration-performance method, as well as select and apply training evaluation methods. Instruction also includes concepts of conducting field-training evaluations, managing the training evaluation process, as well as developing effective written and performance tests.

#### **2. Course Requirements:**

2.1 Eligibility: Open to military members with a rank of E-4 and above, but no higher than the rank of O-4, police, or civilians equivalent who administers or manages OJT training activities and functions.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: No special uniforms or equipment are required other than those mentioned in the General Clothing Requirements.

**3. Other Information:** Students are encouraged to bring examples of unit training programs to share with the class.

**4. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12 and USNORTHCOM/TCP  
objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

- **Note:** To get the most out of the On-the-Job Training (OJT) course (MASL 162030) and have a student that can better meet future leadership challenges, we ***highly encourage*** attending the Inter-American Noncommissioned Officer Academy (INCOA) course (MASL 171033) offered just after the OJT course. Elements of the OJT course are used and applied during the INCOA course. The countries not only save funds but also get two courses during one visit to IAAFA.

COURSE NUMBER	COURSE NAME	LENGTH
(MASL 166041) L3AZR1660410SRB	Basic Instructor Course	8 Weeks
<b>STUDENT LOAD:</b> MIN: 6                      MAX: 14		

**1. Course Description:** This course prepares officers, NCOs and civilians to perform instructor duties in their respective specialty. Top Air Force technical training concepts and techniques taught in this course ensure instructors deliver quality instruction. The course is designed to give the student a fundamental knowledge base, not only of how to conduct classroom instruction, but how to develop a curriculum as well. The course uses extensive practical exercises to build the student's presentation skills. The end result is a fully certified instructor ready to meet the most demanding instructional assignments. This course includes the following units of instruction: fundamentals of teaching, instructional development and counseling.

#### **BLOCK I - FUNDAMENTALS OF TEACHING**

Instructional techniques and communicative skills lay the foundation for technical instruction. The developmental approach to academic instruction covers instructor roles, responsibilities, and motivational theories. The purpose and use of effective instructional aids is covered in detail. Effective questioning techniques are reviewed and practiced. The students will prepare one informal lecture presentation to practice those technical concepts covered in this block of instruction.

#### **BLOCK II – INSTRUCTIONAL DEVELOPMENT**

Techniques learned in this block are applied to the instructional system development process. This process teaches the instructor how to develop and maintain a quality course. Development of criterion instructional objectives set the stage for standardized instruction. Development of effective measurement devices is covered and practiced. Test administration, control and security procedures are also covered in detail. The student will prepare one informal lecture presentation.

#### **BLOCK III – COUNSELLING**

This block is designed for maximum student participation. Instructor counseling techniques are reviewed, practiced and enhanced through classroom scenarios. Student administration procedures are reviewed and discussed. The student will apply all instructional techniques covered in the two previous blocks to practice and deliver effective presentations. Students will be required to prepare and present three different presentations: two informal lectures and one demonstration/performance lecture. This block completes the instructor certification requirement.

## **2. Course Requirements:**

2.1 Eligibility: Open to military members no higher than the rank of O-5, police, or civilians equivalent with at least two years advanced technical area knowledge or experience within their respective specialty or field.

NOTE: Pilots requiring preparation for instrument pilot instructor duties should be enrolled in the Instructor Pilot Instrument Procedures course, MASL D121065.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: No special uniforms or equipment are required other than those mentioned in the General Clothing Requirements.

**3. Intermediate Military Objectives:** This course supports the following USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12 and USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

- *Note: This course was previously called Technical Training Instructor.*

COURSE NUMBER	COURSE NAME	LENGTH
L3AQR1720230SRA (MASL 172023)	Introductory Air Intelligence	7 Weeks
<b>STUDENT LOAD:</b> MIN: 6            MAX: 12		

**1. Course Description:** The course is designed for officers, enlisted, National Police and civilian equivalent requiring an understanding of the fundamentals of Intelligence, Surveillance, and Reconnaissance (ISR). The course enables students to perform the core duties and responsibilities of intelligence professional. Students receive training on: basic principles of intelligence, analysis, critical thinking, intelligence preparation of the operational environment, mission planning, ISR support to ROMO, F2T2EA fundamentals, collection management and ISR applications.

### **Orientation**

Instructors indoctrinate students to course outline, local policies, and military chain of command, academic and work environment expectations. Medical procedures, extracurricular and cultural programs available are also explained to students.

### **BLOCK I – INTRODUCTION TO INTELLIGENCE**

Students get acquainted with the world of military intelligence seen through a historical lens. Using this as a backdrop, the course outlines the intelligence cycle process, Security, Information Protection to include Operations Security (OPSEC) and Classification of Information round out the introductory discussions.

### **BLOCK II – INTELLIGENCE FUNDAMENTALS**

Students learn about different types of intelligence (the –INTs), the roles of Air Force personnel in the –INT world, the roles of National Agencies and Department of Defense related to the –INTs and Intelligence as a whole. The block concludes with a focus on different types of Intelligence Community (IC) reporting as well as the products ISR analysts produce for a wide variety of customers.

### **BLOCK III – ANALYSIS FUNDAMENTALS**

This block challenges students to evaluate how they think, process, consider and assess. Following this self introspection, we review general analytical processes and standards. Students will gain insight into common Intelligence tradecraft methodologies focusing on Intelligence preparation of the operational environment (IPOE). Students will build and present current intelligence briefings to help them gain analytical perspective of common world issues and to employ techniques specified in classroom instruction.

### **BLOCK IV – PLANNING FUNDAMENTALS**

In this block, students are introduced to general planning considerations – time, desired effects, locations, and operational context. Mission planning addresses tactical, operational and strategic levels for Air Force, joint, multinational events spanning the range of military operations (ROMO).

Students will learn to use Geospatial mapping tools to construct digital situation maps and order-of-battle displays and to reinforce planning principles via course exercises. The block closes with a consideration of legal implications in war through discussion of the Law of Armed Conflict (LOAC) and Rules Of Engagement (ROE).

### **BLOCK V – ISR application fundamentals**

This unit addresses the core concepts of collection and request for information (RFI) management. Students will build mock collection plans designed for tactical, operational, or strategic levels depending on classroom scenarios. Also key in this unit is the increasing role of dynamic targeting termed “F2T2EA” find, fix, track, target, engage, assess. This targeting is emphasized calling on full, motion video (FMV) data simulation. Students will learn to operate simulated ISR data feeds (still in development stages). This block concludes by defining ISR’s role in helping protection the troops.

### **BLOCK VI – Operational Exercise**

The course culminates with students participating in an operational exercise in which, a simulated humanitarian crisis, has gone awry. Students apply knowledge learned throughout the course. The exercises encompass mission planning, IPOE, collection plan building, RFI maintenance, Force protection concerns, production of daily intelligence reports and dynamic targeting opportunities.

## **2. Course Requirements:**

2.1. Eligibility: Open to military members no higher than the rank of O-5, police, or civilian equivalent. Attendees should be assigned to an intelligence unit position or have an additional duty of Intelligence Officer, NCO or equivalent. Some basic computer skills, particularly PowerPoint, are highly desirable.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: See general clothing requirements.

**3. Other Information:** Members are encouraged to bring situations from their countries to discuss in class.

**4. Intermediate Military Objectives:** This course supports the following USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12 and USNORTHCOM/TCP objectives: 1.4, 1.7, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5.

- *Note: This course was previously called Introductory Air Intelligence.*

COURSE NUMBER	COURSE NAME	LENGTH
(MASL 173056) L3AZR1730560SRB	Ground Defense Leadership Course	8 Weeks
<b>STUDENT LOAD:</b> MIN: 31		MAX: 44

**1. Course Description:** This course is designed for security forces personnel (defenders) of any branch charged to protect key resources in the field needed to sustain air operations during peacetime or contingencies. Training concludes with a five day field training exercise.

### **BLOCK I – Basic Principals of Defense**

Training includes Law of Armed Conflict, Basic Principles of Threat Spectrum, Transition to War, Principles of War, Rear Battle, Military Operations Other than War, Enemy Prisoners of War, Air Base Defense Command and Control, Base Defense Operations Center, Sector Flight Command Post, Delay Withdrawal Operations, Alternate Means of Communication, Field Craft Skills, Team Movement Techniques, Range Cards, Sector Sketches, Range Determination, and Troop Leading Procedures.

### **BLOCK II – Fundamentals of Defense**

Training includes M-16A-2/M-4 Carbine, M-203 Grenade Launcher, M-240 Machine Gun, M-249 Squad Automatic Weapon, Land Navigation, Patrolling, Establishing a Defensive Fighting Position, M-18A-1 Claymore Mine, Radio and Wire Communications, Night Vision Devices, Built-Up Area Search and Clear Operations, and Convoy Operations.

## **2. Course Requirements:**

2.1 Eligibility: Open to military members no higher than the rank of O-3, police, or civilian equivalent. Personnel not in a security forces or police specialty code may attend with prior coordination.

2.2. Physical/Medical: Top physical condition, NO injuries that could prevent member from training.

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.2.4. The following is a table of minimum physical requirement on the first day of training:

MALE

Age	2-Minute Push-Ups	2-Minute Sit-Ups	2-Mile Run Time
17-21	49	59	15:12

22-26	49	58	15:42
27-31	49	54	16:06
32-36	46	51	16:36
37-41	44	48	17:06
42-46	39	42	17:36

## FEMALE

Age	2-Minute Push-Ups	2-Minute Sit-Ups	2-Mile Run Time
17-21	25	59	18:06
22-26	25	58	18:36
27-31	25	54	19:18
32-36	23	51	20:12
37-41	20	48	21:30
42-46	18	42	23:00

**\*Note:** It is imperative to note that students not meeting the minimum physical fitness requirements will be removed from the course. Country managers should ensure that personnel selected to attend this course assess their students' physical condition prior to course attendance using the standards listed above.

2.3. Uniform/Equipment: Uniform: See general clothing requirements. All required specialized gear will be provided.

**3. Intermediate Military Objectives:** This course supports the following USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12 and USNORTHCOM/TCP objectives: 1.4, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5.

COURSE NUMBER	COURSE NAME	LENGTH
(MASL 173067) L3AZR1730670SRB	Special Reaction Team	7 Weeks
<b>STUDENT LOAD:</b> MIN: 12		MAX: 25

**1. Course Description:** This course is designed for mid-level security forces members of any branch charged to manage high-risk situations. After completing this course, graduates will have learned SRT tactics to include how to respond to high risk incidents, familiarization with four different weapons systems focusing on safety and proper weapon handling techniques. Also, they will have learned basic rappel tactics/tactical rappelling, window entry techniques, bus and vehicle assaults to include aircraft interdiction. . All this training will enable members to support the war against terror as well as counter-narcotics operation, peacekeeping efforts and natural disaster response. This course includes the following units of instruction: SRT fundamentals, and SRT tactics.

#### **BLOCK I – SRT Fundamentals**

Training includes use of force, SRT concepts of operations, Crisis Negotiation Team Concepts of Operations, Introduction to Terrorism, Tactical Considerations, Intelligence Gathering Techniques, and Contingency Planning.

#### **BLOCK II – SRT Tactics**

Training includes Rappel Operations, Physical Apprehension and Restraining Techniques, Concepts and Principles of Close Quarters Combat, Vehicle Search and Clear Operations, Mobile Vehicle Apprehension, Aircraft Interdiction, M-9 handgun, M-500 shotgun, M203 grenade launcher, and M-16 A2/M-4 carbine.

#### **2. Course Requirements:**

2.1 Eligibility: Open to military members no higher than the rank of O-3, police, or civilian equivalent. Personnel not in a security forces or police specialty code may attend with prior coordination.

2.2. Physical/Medical: Top physical condition, NO injuries that could prevent member from training.

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.2.4. The following is a table of minimum physical requirement on the first day of training:

## MALE

Age	2-Minute Push-Ups	2-Minute Sit-Ups	2-Mile Run Time
17-21	49	59	15:12
22-26	49	58	15:42
27-31	49	54	16:06
32-36	46	51	16:36
37-41	44	48	17:06
42-46	39	42	17:36

## FEMALE

Age	2-Minute Push-Ups	2-Minute Sit-Ups	2-Mile Run Time
17-21	25	59	18:06
22-26	25	58	18:36
27-31	25	54	9:18
32-36	23	51	20:12
37-41	20	48	21:30
42-46	18	42	23:00

**\*Note: It is imperative to note that students not meeting the minimum physical fitness requirements will be removed from the course. Country managers should ensure that personnel selected to attend this course assess their students' physical condition prior to course attendance using the standards listed above.**

2.3. Uniform/Equipment: Uniform: See general clothing requirements. All required specialized gear will be provided.

**3. Intermediate Military Objectives:** This course supports the following  
 USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12 and USNORTHCOM/TCP  
 objectives: 1.4, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5.

- **Note:** To get the most out of the Special Reaction Team (SRT) course (MASL 173067) and have a student that can better meet the challenging demands of the career field, we ***highly encourage*** attending the Anti-terrorism (AT) level I and II (MASLs 126013 and 126014) offered just before the SRT course. Elements of AT level I and II are used and applied during the SRT course. The countries not only save funds but also get three courses during one visit to IAAFA.

COURSE NUMBER	COURSE NAME	LENGTH
L3AZR1760060SRA (MASL 176006) (E-IMET)	Rule of Law and Disciplined Military Operations	1 Week
<b>STUDENT LOAD:</b> MIN: 8                      MAX: 20		

**1. Course Description:** The objective of this course is to teach international officers and NCOs of any military force the basics of the international rules of law and their impact on human rights, including how these international standards fit into the planning of military operations. This information is vital to any country that may participate in international peacekeeping missions sponsored by the United Nations. The Defense Institute of International Legal Studies, a field activity of Defense Security Cooperation Agency, teaches this course at IAAFA.

**2. Course Requirements:**

2.1. Eligibility: Open to military members no higher than the rank of O-6, police, or civilian equivalent.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal manual dexterity.

2.3. Uniform/Equipment: See General Clothing Requirements in the General Information section. Normally, this class does not require mess dress since it is held after end-of-training cycle (no graduation banquet).

**3. Intermediate Military Objectives:** This course supports the following USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8 and USNORTHCOM/TCP objectives: 2.2, 2.3, 2.7, 3.1, 3.3, 3.5, 4.2, 4.3.

**AIRCRAFT AND SYSTEMS TRAINING COURSES**

COURSE NUMBER	COURSE NAME	LENGTH
L3AQR1330600SRA (MASL 133060)	Avionics Communication/Navigation Equipment Technician	12 Weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 12		

**1. Course Description:** This specialized course provides students with training on inspection, maintenance, alignment, repair, and installation of avionics communications/navigation equipment. Upon completion, students will identify theory of operation, analyze schematics and have acquired hands-on training on minimum performance tests and alignments. This course includes the following units of instruction: ADF-60, VIR-30 VOR/ILS navigation system, AN/ARC 186-2 VHF radio, AIC-18 intercommunications system, and DME-40. Students are required to pass a written and/or performance test at the end of certain blocks prior to advancement to the next block of instruction.

#### **BLOCK I – ADF-60**

The students learn theory of operation, component characteristics, system block diagrams, and schematics for the antenna, receiver and instrumentation. During the laboratory portion of instruction, students learn the requirements for minimum performance checks and alignment. The following test equipment is used: ADF test set, ADF receiver, 479S-6 VOR/ILS signal generator, audio output meter TS-585, digital multimeter, and oscilloscope.

#### **BLOCK II – VIR-30 VOR/ILS NAVIGATION SYSTEM**

The students learn system theory of operation and characteristics, component and system block diagrams, as well as schematics, which includes: ground transmitter, receiver and detailed receiver. During in-shop minimum performance checks and alignment, students are familiarized with the operation of test equipment, appropriate safety measures and proper maintenance procedures. Test equipment used during this course includes VOR/ILS test set, VIR-30 receiver, 479S-6 VOR/ILS signal generator, audio output meter TS-585, digital multi-meter, and oscilloscope.

#### **BLOCK III - DME-40**

Students learn system theory of operation and characteristics, component and system block diagrams that include: receiver-transmitter, 339F-12 indicator, analog distance circuit and receiver-transmitter special circuits. During in-shop performance checks and alignment, students are familiarized with the operation of test equipment, appropriate safety measures and proper maintenance procedures. Test equipment used during the course includes DME test bench, DME-40 receiver-transmitter, signal generator, audio output meter TS-585, digital multi-meter, and oscilloscope.

#### **BLOCK IV - AIC-18 INTERCOMMUNICATIONS SYSTEM**

Students learn the operation, characteristics and the functions of all major components and related circuits. During in-shop performance checks and alignment, students are familiarized with the operation of test equipment, appropriate safety measures and proper maintenance

procedures. Test equipment used during this course includes, AIC-18 intercommunications test panel, AN/PSM-37 multi-meter, fluke digital voltmeter, and power supply.

### **BLOCK V - AN/ARC 186-2 VHF RADIO**

Block V provides the basis for understanding block diagrams, identification of major components, and functional operation of the AN/ARC-186. Students are provided practical training on minimum performance and alignment of the ARC-186 VHF transceiver using various test equipment. At the completion of this course, the student will know the modes of operation and be able to conduct performance tests, alignments, and analyze equipment failure using diagrams.

## **2. Course Requirements:**

2.1 Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent and have successfully completed the Electronic Fundamentals, MASL D131119, or equivalent electronic fundamentals course.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: Battle Dress Uniform or utility uniforms. Safety toe boots and non-conductive plastic frames for eyeglasses are mandatory for students who wear glasses.

**3. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3OZR1412430SRB (MASL 141243)	Aircraft Maintenance Officer	10 Weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 12		

**1. Course Description:** This course is designed for officers in aircraft maintenance leadership and management positions by giving them the tools and training in the essential areas of the maintenance career field. The curriculum provides maintenance management skills that help develop, prepare, execute, and sustain maintenance activities, it also helps the understanding of the organizational structures and management techniques used in the planning and developing of functional areas within a maintenance organization. This course includes the following units of instruction: Operational Risk Management (ORM), Quality Assurance/Control (QA), Aircraft Generation process, Continuous Process Improvement (CPI), Technical Order System, Supervisory Management, Logistic and Supply Programs, and-Safety Programs.

#### **BLOCK I – Intro/Safety Programs**

The students will be introduced to the principles of the Air Force Safety Programs, develop a safety program. Students will also understand the fundamentals of the following programs Air Force Occupational Safety and Health (AFOSH), Mishap Prevention Program, Hazardous Communications (HAZCOM), Environment Protection Agencies.

#### **BLOCK II – Operational Risk Management (ORM), Quality Assurance/Control (QA)**

The student will learn the Operational Risk Management (ORM) program, Safety Analysis in the work place and Inspections, Quality Assurance Program and responsibilities, Development of an QA Inspection Plan, Development of Minimum Essential Sub-system Listing (MESL),

#### **BLOCK III – Process Improvement**

Students will be introduced to the Continuous Process Improvement concept LEAN, Team Dynamics; Team Development. Students will learn to properly use the Process Improvement tools, Process Improvement techniques, LEAN program and Problem solving techniques. Students will also develop internal procedures on a selected subject and implement a self inspection program.

#### **BLOCK IV – Technical Order System**

The students will be introduced to the Technical Order System; students will also learn the use, changes and updating technical data, developing a technical order library and responsibilities in maintaining all applicable technical data. Aircraft Documentation process and procedures will also be introduced.

**BLOCK V – Supervisory Management**

The students will be introduced to Supervisory Management, Flightline Organization and Leadership, Common Maintenance Practices and Terms, Flightline maintenance Processes.

**BLOCK VI – Logistic and Supply Programs**

Students will learn the interface of logistic and maintenance processes. Student will learn principles of the Logistics and Supply System; Security Assistance Program and Foreign Military Sales Program.

**BLOCK VII – Aircraft Generation**

Students will learn the development of Aircraft Generation Sorties, use and interpretation of Maintenance Management Metrics (Indicators), develop and execute an Aircraft Scheduling Process, identify and manage Aircraft Maintenance Status, finally students are exposed to a variety of simulated maintenance and scheduling problem situations and virtual simulation of an operational maintenance unit to further prepare you for them to working in the maintenance environment. Students are evaluated individually and as a team on the decision making techniques, communication and coordination to sustain the aircraft support capability during aircraft generation sorties (missions).

**2. Course Requirements:**

2.1 Eligibility: Officers in the grades of O-1 through O-6, police, or civilian equivalent. Basic maintenance knowledge is highly desirable.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following the utility or work uniform: BDUs, fatigues, coveralls.

**3. Other Information:** Students are encouraged to bring material in reference to a problem in a process within the organization to do a country presentation.

**4. Intermediate Military Objectives:** This course supports the following

USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and

USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AZR1412470SRB (MASL D141247)	Aircraft Pneudraulics Systems Technician	12 Weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 12		

**1. Course Description:** This course provides training in the fundamentals of aircraft pneudraulics systems at the apprentice level enabling students to become proficient on hydraulic and pneumatic principles, system theory, hydraulic system and subsystem operation, on-aircraft troubleshooting techniques and related system support equipment. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction. This course includes the following units of instruction: tools and aircraft hardware, fundamentals and publications, maintenance equipment, basic components of a hydraulic system, subsystem components, operation of pneudraulic system and subsystems, wheel brake assemblies, and shock absorbing devices and brake systems.

#### **BLOCK I – FUNDAMENTALS AND PUBLICATIONS**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. Instruction is provided on ground, back-shop, and flight line safety. Students learn the principles of flight, hydraulics, and pneumatics. They will also receive instruction on solving equations pertaining to basic pneudraulics principles, detailed instructions on the use of technical orders, as well as maintenance manuals and illustrated parts breakdown, also the use of Fault Isolation T.O.

#### **BLOCK II – TOOLS AND AIRCRAFT HARDWARE**

This block provides necessary information on the proper selection and care of hand tools and detailed instruction on the use of torque wrenches, calipers, and micrometers, allowing students to determine allowable tolerances of components. Students will receive instruction on safety devices and demonstrate proper safety procedures, learn to identify hydraulic fittings, seals, hydraulic fluids and lubricants used on aircraft pneudraulics systems. Additionally, students will manually fabricate a medium pressure hose assembly.

#### **BLOCK III – MAINTENANCE EQUIPMENT**

This block provides students with the fundamentals and operation of shop equipment, aircraft jacks and maintenance stands. They learn to interpret support equipment schematics on the MJ-1-1 hydraulic test stand and MC-1A air compressor. They also learn to operate and adjust an MJ-1-1 hydraulic test stand to support aircraft hydraulic systems and sub-systems operational checkouts. Instruction is also provided on the operation of the MC-1A air compressor. Finally, students will operate and adjust pressure output to service aircraft pneumatic systems.

#### **BLOCK IV – BASIC COMPONENTS OF A HYDRAULIC SYSTEM**

This block concentrates on the description and theory of operation of basic hydraulic system components. Items covered in the block include: hydraulic reservoirs, hydraulic pumps, pressure regulators, filters, accumulators, and selector valves. They will be instructed in the operation of an

open and close center hydraulic system. Students will accomplish overhaul procedures on Accumulator.

### **BLOCK V – SUBSYSTEM COMPONENTS**

During this block students will learn to use schematics and state the purpose of control valves; explain the operation of a hydraulic fuse, flow regulator, and a hydraulic flow equalizer. They will explain the purpose and operation of a pressure-reducing valve, methods for controlling sequencing valves and hydraulic system sequencing, as well as calculate three pressure settings for relief valves, and explain the operation of a hydraulic motor and how mechanical forces are developed. They will learn general procedures to overhaul and inspect an ~~double-acting-unbalance~~ of actuating cylinders.

### **BLOCK VI – OPERATION OF PNEUDRAULIC SYSTEM AND SUBSYSTEMS**

Using schematics, students will learn the theory of operation of the A-37 hydraulic system and subsystems. They will perform an operational check of the hydraulic system and subsystems. Students will perform an operational check of the hydraulic system and the landing gear sub-system of the A-37B aircraft. This block also covers the theory of operation of the C-130 landing gear hydraulic sub-system; the C-130 landing gear mock-up is used to demonstrate retraction and extension of the gear. They will also receive instruction on the system and subsystem arrangement and operations. Students will describe and perform functional checks of the primary flight control system using the C-130 mock-up and perform a functional check of the secondary flight control system of an A-37B aircraft. Also they will perform Fault Isolation procedures, with the C-130 T.O..

### **BLOCK VII – SHOCK ABSORBING DEVICES AND BRAKE SYSTEMS**

This block covers construction of the landing gear shock struts and servicing procedures, the student will perform the measurement on the Strut using the “Dimension X”. Students learn general procedures for disassembly, inspection and reassembly a shimmy damper, perform an operational check of a nose wheel steering sub-system, and explain the operation of each sub-system. Instruction is also provided on the independent power boost brakes and slave brake sub-systems. They will learn general bleeding procedures for Independent Brake System and Brake Boost and Power Brake Sub-systems.

### **BLOCK VIII – WHEEL BRAKE ASSEMBLIES**

Here students will learn component breakdown and operation of the shoe, multiple discs, segmented rotors and spot disc brake assemblies. Students will identify segmented rotor brake components and its common malfunctions. Perform overhaul of a Brake assembly

## **2. Course Requirements:**

2.1. Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing.

2.2.3. Other: Normal manual dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements section, utility uniform, battle-dress uniform or equivalent, and steel toe boots are required.

**3. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2,  
4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AAR1412490SRA (MASL 141249)	Aircraft Maintenance Superintendent	10 weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 12		

**1. Course Description:** This course is designed for experienced senior Non-commissioned officers and civilian equivalent who perform supervisory and/or superintendent duties and assume a greater leadership role within a maintenance complex. Training includes safety, quality assurance, Total Quality Management, Technical Order system, supervisory on-the-job training, weight and balance, supervisory management, and organization structure and logistics. The training received will increase the individual's knowledge and understanding of maintenance operations while honing his/her military professionalism and increase their ability to function as a senior maintenance supervisor and/or Maintenance Superintendent.

#### **BLOCK I – ORIENTATION AND AIR FORCE SAFETY PROGRAM**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. It also provides the student with an introduction to Human Rights. This block provides detailed lectures and discussions on the maintenance safety doctrine, Supervisory Safety responsibilities Safety practices and the Air Force Occupational Safety and Mishap Prevention Program.

#### **BLOCK II – QUALITY ASSURANCE AND ORGANIZATIONAL RISK MANAGEMENT (ORM)**

This course provides the student with the fundamentals of the Organizational Risk Management (ORM) program, Job Safety Analysis, and the Quality Assurance (QA) functions. Subjects to be covered include: The role and responsibilities of QA in evaluating and assessing personnel proficiency (including the quality and effectiveness of training programs), equipment, and aircraft condition, as well as the management of specific programs that ultimately increase mission effectiveness.

#### **BLOCK III – TOTAL QUALITY MANAGEMENT**

The objective of this lesson is for each student to know the evolution of Quality and the principles behind the concept of Quality. The student also learns the concept of Quality Practices and Management in today's military environment. It also provides the student with decision tools that are essential in enhancing the continuous improvement efforts, an understanding of team dynamics and how to apply team leader skills to manage a successful team.

#### **BLOCK IV – TECHNICAL ORDER SYSTEM**

This block begins with a general introduction to the AF publication system and it is followed by a familiarization with the Technical Order (TO) system, the TO Index system and the TO numbering system. Students learn the purpose, authority, and use of the USAF TO system, and illustrated parts breakdowns. They also learn how to research and select the proper Technical Order and how to determine the status of Technical Orders

**BLOCK V – SUPERVISORY ON-THE-JOB TRAINING (OJT)**

The student is exposed to the On-the-Job-Training Program. The students learn the structure of the program and responsibilities of key personnel within training program. It also teaches supervisors how to plan, conduct, evaluate and document training.

**BLOCK VI – WEIGHT AND BALANCE**

Students are introduced to weight and balance principles in aircraft maintenance operations. Students learn and perform mathematical formulas used to calculate aircraft weight changes, aircraft Center of Gravity (CG) changes, ~~practical exercises~~, and proper forms documentation related to weight and balance.

**BLOCK VII – SUPERVISORY MANAGEMENT**

Students are provided with working knowledge of the principles and techniques of effective personnel management to include: supervisory job and responsibilities, the management process, effective leadership, human relations, effective communication, and counseling. This principles and techniques will further hone the military professionalism and leadership trait of students.

**BLOCK VIII – ORGANIZATIONAL STRUCTURE AND LOGISTICS**

This block begins with an introduction to the operational principles of the USAF structure, which is followed and reinforced with the concept of Maintenance Management structure. It also introduces students to the Logistics and Supply system. These will include: organizational structure and specific responsibilities, development of an aircraft maintenance flying schedule (daily, weekly, monthly), to include scheduled and unscheduled maintenance requirements, preventive maintenance and inspections, sortie generation, and contingency response. Culminating with the student participation in a maintenance generation exercise in a Flight-line Simulator, where the students put in practice all of the concepts learned in this course.

**2. Course Requirements:**

2.1. Eligibility: Open to military members between the ranks of E-7 through E-9, police or civilians equivalent and/or to military members in the ranks of E-5 and E-6, police or civilians equivalents who are performing aircraft maintenance superintendent duties or that will perform aircraft maintenance superintendent duties immediately after attending this course.

2.2. Medical requirements:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Speech: Normal hearing and speech.

2.2.3. Physical: Normal dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following utility or work uniform: BDUs, ABUs, or fatigues.

**3. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2,  
4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AQR1412510SRA (MASL 141251)	Aircraft Technician	12 Weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 12		

**1. Course Description:** This course is designed to train aircraft maintenance technician apprentices on operational principles and theory of ground safety, aircraft systems and sub-systems, component description and operation, aircraft ground handling, inspection, servicing procedures, and operation of aerospace ground equipment. The course provides aircraft familiarization to personnel that will be assigned to light aircraft (fighters, trainers, and attack). This course includes the following units of instruction: Familiarization, Aircraft General, Electrical System, Utility Systems, Pseudraulics System, Flight Control System, Fuel Systems and Engine Systems. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

#### **BLOCK I – FAMILIARIZATION**

This block consists of course orientation, academy’s policies, programs, and academic objective requirements. Students learn safety principles, accident prevention, aircraft ground safety and flight line procedures.

#### **BLOCK II – AIRCRAFT GENERAL**

Students learn the variety of airframe structures, reference datum numbering and aircraft markings. They are taught aircraft ground handling, marshalling procedures, parking, towing, mooring, and jacking. Students also learn the principles and use of non-powered ground support equipment, and operation of powered ground support equipment.

#### **BLOCK III - ELECTRICAL SYSTEM**

Students learn the operational concepts and theory of electricity, circuits, and components. They learn identification and inspection procedures of the direct and alternating current systems; aircraft lighting systems, and operation of aircraft fire and overheat warning systems.

#### **BLOCK IV - UTILITY SYSTEMS**

Students learn the fundamental principles, components, theory of operation, and inspection procedures of the bleed air system, air-conditioning and pressurization systems, fire extinguisher and anti-icing and de-icing systems. Additionally, the operation of the liquid and gaseous oxygen system, servicing procedures, and the inspection procedures of the utility systems are discussed.

#### **BLOCK V - PNEUDRAULICS SYSTEM**

Students learn the aircraft pseudraulics systems, components, and operation. Students learn the aircraft’s landing gear, inspection, components, and operational checks of the system. Removal and installation of wheel/tire and brake assembly is also taught during this block of instruction.

#### **BLOCK VI - FLIGHT CONTROL SYSTEM**

The students learn theory and principles of flight. They identify and state the purpose of the

primary and secondary flight control surfaces and components. Students also perform procedures of inspection, rigging, removal and installation of flight control surfaces.

### **BLOCK VII - FUEL SYSTEMS**

Students learn the fundamentals of the fuel system, inspection procedures and safety precautions, components and operation of the internal and external fuel system, and inspection and servicing procedures.

### **BLOCK VIII - ENGINE AND SYSTEMS**

Students learn the technical terminology, major sections, and component on several types of jet engines. They also learn principles of operation, inspection and component location, and subsystems

## **2. Course Requirements:**

2.1 Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent. Basic personal computer knowledge is highly desirable.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students attending this course are required to bring the following utility or work uniform: BDUs, fatigues, flight suit, maintenance coveralls or equivalent.

**3. Intermediate Military Objectives:** This course supports the following

USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and

USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AQR1412530SRA (MASL D141253)	Avionics Instrument Technician	12 Weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 12		

**1. Course Description:** This course is designed to take students through all phases of various avionics instrument and flight control systems. Additionally, they learn identification and relationship of associated systems. Students are able to state principles and facts for all systems and associated systems, and will have in-depth understanding needed to work these systems throughout their careers. Students are required to pass a written and/or performance test at the end of certain blocks prior to advancement to the next block of instruction. This course includes the following units of instruction: electromechanical devices, direct pressure and liquid quantity indicating systems, barometric flight instruments, engine instrument systems, compass systems, stall warning and autopilot system, and integrated flight instruments systems.

#### **BLOCK I – Electromechanical Devices**

This block starts with a course orientation in which students are made aware of the academy's policies and procedures, hazards, and ground safety. Students are then familiarized with aircraft and the flight theory needed for subsequent blocks of instruction. Finally, the theory of basic electromechanical devices is covered to establish the background for more complex systems. Students learn the principles of operation, terminology, and characteristics of transformers, relays, motors and generators, as well as remote position indicating systems such as Synchros, Magnesyn and Selsyn

#### **BLOCK II – Direct Pressure and Liquid Quantity Indicating Systems**

Block II of instruction introduces students to aircraft fuel quantity indication systems and direct pressure indication systems. The principles of operation, terminology, and characteristics are explained, to include: resistive type fuel quantity indicating systems and capacitance type fuel quantity indicating systems, and direct pressure indicating systems. Students will learn to use test equipment such as the capacitive fuel quantity tester GTF-6.

#### **BLOCK III – Barometric Flight Instruments**

This block begins with the introduction of aircraft pitot-static systems. It covers the theory of barometric altimeters, vertical velocity indicators; and airspeed indicators. It concludes by learning about different types of encoding altimeter systems such as AIMS. Students will perform a complete checkout of a pitot-static system and all associated instruments using the TTU-205F test set. Additionally, they learn use of the TTU-229 test set for operational checkout of electric altimeter encoders.

#### **BLOCK IV – Engine Instrument Systems**

In Block IV students will learn the principles of operation and terminology of engine instrument indication systems. Students are familiarized with the characteristics of synchronous pressure indicating systems, fuel flow indicating systems, tachometer indicating systems, temperature indicating systems, and torque indicating systems. Students will learn to use test equipment such as

TTU-23 for synchronous systems, TTU-27 for testing instruments and transmitters in a tachometer system, and the Jet-Cal tester for thermocouple testing.

### **BLOCK V – Integrated Flight Instruments Systems**

This block of instruction covers the principles of operation, terminology, and characteristics of the G-meter, Gyroscopic Principles, Turn and Bank Indicator, Self Contained Attitude Indicators such as the J-8, Remote Attitude Indicating Systems, and Flight Director Systems. Students will get hands-on training and interaction with working mockups of these systems.

### **BLOCK VI – Compass Systems**

During block V students will learn the principles of operation, terminology, and characteristics of the standby compass, and electronic gyro compass systems such as C-12. A working mockup of the electronic compass is provided for interaction and hands on training.

### **BLOCK VII – Stall Warning and Autopilot System**

In this final block of instruction, students will learn the principles of operation, terminology, and characteristics of the Stall Warning System and Autopilot System, and accomplish a complete functional analysis of the autopilot system using technical order wiring diagrams. They will gain valuable knowledge applicable to all autopilot systems in general. A C-130 mockup is provided in order to perform hands on training, and troubleshooting.

## **2. Course Requirements:**

2.1 Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses with non-conductive material).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following utility or work uniform: BDUs, fatigues, coveralls.

**3. Intermediate Military Objectives:** This course supports the following

USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and

USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AQR1412540SRA (MASL 141254)	Aircraft Electrical Fundamentals Technician	12 Weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 10		

**1. Course Description:** This course provides aircraft electrical fundamentals for the apprentice level students. The course is the foundation for aircraft electrical system maintainers. They will have the knowledge to confidently repair aircraft electrical systems. Students are introduced to aircraft safety, electrical theory and principles, equipment and maintenance, and operational procedures. Instruments, communication, navigation, and armament systems are excluded. This course includes the following units of instruction: fundamentals principles of electricity, maintenance fundamentals, alternating current (a/c), alternating current systems, direct current (d/c), direct current systems, miscellaneous systems and troubleshooting techniques. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

#### **BLOCK I – FUNDAMENTALS**

Instruction begins with an introduction to the Aircraft Electrical Fundamental Course. Students will see the course outline and content. Topics discussed in this block are ground safety, basic math operations, electron, theory magnetism measuring devices (volt, ohm and ampere meters) and control devices such as manual/mechanical switches, circuit breakers and relays.

#### **BLOCK II – PRINCIPLES OF ELECTRICITY**

Some of the subject areas covered in this block include: Ohms Law, series/parallel circuits, inductors, capacitors, magnetic devices and transformers.

#### **BLOCK III -- MAINTENANCE FUNDAMENTALS**

Students will learn to safety wire parts and components, wire soldering, wire repair and wire making.

#### **BLOCK IV -- ALTERNATING CURRENT (AC) POWER SYSTEMS**

Areas discussed in this block include: aircraft AC power systems, AC generators, protection devices, power supply, power distribution, and transformer rectifiers.

#### **BLOCK V – DIRECT CURRENT (DC) POWER SYSTEMS**

Students now learn the operating principles of aircraft electrical power production systems to include: nickel-cadmium batteries, lead-acid batteries, DC generators, regulators, inverters, protection devices, and DC Motors

#### **BLOCK VI -- MISCELLANEOUS SYSTEMS TROUBLESHOOTING TECHNIQUES**

At this point students perform operational checks and employ learned troubleshooting techniques using electrical diagrams, multi-meters, on aircraft simulator trainers. Students learn troubleshooting techniques of the following: landing gear, nose steering, lighting, flight control, fire warning, fire extinguishing, engine start & ignition and master caution systems.

**2. Course Requirements:**

2.1 Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses), plastic or non-conductive frame glasses (if worn).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following utility or work uniform: BDUs, fatigues, coveralls.

**3. Other Information:** Members are encouraged to bring material to do a country presentation.

**4. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AZR1412570SRB (MASL 141257)	Basic Helicopter Crew Chief	12 weeks
<b>STUDENT LOAD:</b> MIN: 5                      MAX: 10		

**1. Course Description:** This course is designed for personnel entering the helicopter maintenance field. The training includes ground safety, tools control, technical manuals, airframe familiarization, landing gear maintenance, special and common tool knowledge, hydraulic, electrical, instruments and avionics system familiarization, rotary wing aerodynamics, major component removal and installation, flight control system rigging, T-53 engine familiarization with removal and installation, drive train systems maintenance, familiarization with vibrations applicable to helicopters. This course includes the following units of instruction: general subjects, general helicopter maintenance, helicopter systems, helicopter power plant, main and tail rotor systems, power train system, and flight control systems.

#### **BLOCK I – GENERAL SUBJECTS**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. Students are given an introduction to safety doctrine and practices. They are taught the importance of ground safety and its effects on the maintenance activity with emphasis on awareness and compliance. The student will also learn how to identify and properly use maintenance manuals and other reference materials. In addition, the student will learn about the responsibilities of the helicopter maintenance organization and the different levels of supervision. Students are also instructed on how to perform different types of preventive maintenance procedures, required inspections, and documentation.

#### **BLOCK II – GENERAL HELICOPTER MAINTENANCE**

During this block of instruction the student is taught how to properly identify and use common and special tools. Students will learn to identify different types of aircraft hardware and aircraft tubing and hoses according to their color-coded decals. This block will teach the student how to correctly select and install safety devices. The purpose, operation, and safety for different types of powered and non-powered ground support equipment are taught during this block. The student learns to recognize and treat different types of corrosion and the procedures for corrosion control. Helicopter ground handling is also included in this block. The students learn hand signals and proper towing procedures. The student will remove, inspect and install the helicopter main landing gear. Students are familiarized with the theory and construction of the UH-1 helicopter.

#### **BLOCK III – HELICOPTER SYSTEMS**

This block will familiarize students with the fundamental theory of operation, purpose, and component location of helicopter systems to include hydraulic, electrical, instruments, utility, and fuel systems. Through schematics students are able to visualize the entire flow of these systems and learn the functions of various valves and pumps located within them. They will also learn the identification of different instruments and the meaning of range markings.

**BLOCK IV – HELICOPTER POWERPLANT**

Students are taught the theory of operation for each T-53 engine system. This block also teaches the proper removal and installation procedure for the T-53 engine.

**BLOCK V – MAIN AND TAIL ROTOR SYSTEMS**

This block begins by familiarizing students with different types of main rotors and their major components. Students will remove the stabilizer bar, main rotor, and blades from a UH-1H helicopter. They will learn the procedures for the stabilizer bar damper check. Familiarization with the tail rotor system is also taught within this block. Students will remove and install the tail rotor, and the pitch change mechanism is discussed. Students are then taught about helicopter vibrations and its affects in flight.

**BLOCK VI – POWER TRAIN SYSTEM**

This block is designed to familiarize students with information about the helicopter power train system. Students will remove and install the main transmission. The removal and installation of the tail rotor drive shafts, hanger bearing assemblies, and 42 degree and 90 degree gearboxes are also accomplished during this block. In this block the students will install the stabilizer bar, main rotor, and blades as these components were removed prior to removing the main transmission.

**BLOCK VII – FLIGHT CONTROL SYSTEM**

During this last block students are familiarized with the purpose and functions of helicopter flight controls. Students will perform rigging procedures on flight controls to include the collective, cyclic, tail rotor, and synchronized elevator systems.

**2. Course Requirements:**

2.1. Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following utility or work uniform: BDUs, fatigues, coveralls.

**3. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AQR1412590SRA (MASL 141259)	C-130B/E/H Aircraft Technician	8 weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 10		

**1. Course Description:** This is an essential course designed to provide C-130 aircraft journeyman and craftsmen the guidance to develop advanced troubleshooting skills, schematic interpretation, and systems operation specific to the C-130 through the latest Simulated Based Training Aid (SBTA). SBTA's are real-time simulations that accurately reproduce the normal and abnormal behaviors of any system, sub-system or process of the C-130 aircraft. This method of training builds student confidence as it provides a safe training environment. This fast-paced training is composed of six blocks of instruction covering the C-130 systems in their entirety. This course includes the following units of instruction: Aircraft General, Electrical Systems, Fuel Systems, Utility Systems, Hydraulic Systems, and Propulsion System.

#### **BLOCK I- AIRCRAFT GENERAL**

On the first block students learn the principles of safety, accident prevention, and aircraft ground safety procedures. Students also learn how to select and interpret technical data, and the documentation, and filing of aircraft forms. Additionally, students learn airframe components, corrosion control, jacking and towing procedures.

#### **BLOCK II- ELECTRICAL SYSTEMS**

During block II, students learn to analyze the C-130's AC/DC power supply systems and the electrically operated and controlled systems which include: lighting, power plant, fuel, utility, landing gear, flight controls, fire and overheat detection, and hydraulics.

#### **BLOCK III- FUEL SYSTEMS**

In block III students are now ready to learn specifics of the C-130 fuel system. Using technical publications, and trouble analysis charts, they learn the operating theory of the fuel system safety configuration, aircraft feed, dump, quantity indication, refuel/de-fuel and vent system. The block also covers fuel tank construction to include the fire suppression foam system. Additionally, students will learn about air refueling receptacles and Benson tanks.

#### **BLOCK IV- UTILITY SYSTEMS**

This block introduces students to the C-130's utility systems. Students learn specifics of theory and operational procedures of the bleed air system, air turbine motor or auxiliary power unit, anti-ice system, under-floor heat, air conditioning system, pressurization system, liquid oxygen system and fire extinguisher system.

#### **BLOCK V- HYDRAULIC SYSTEMS**

In this block students learn the characteristics and are required to analyze malfunctions of aircraft pneudraulics systems. Additionally, students will learn about the theory and operation of hydraulically powered components, ramp, and aft cargo door, flight control and landing gear

hydraulic systems.

### **BLOCK VI- PROPULSION SYSTEM**

In this last block students learn principles of the T-56-A-7B/T-56-A-15 engine. Students will also cover: oil, pneumatic fuel, temperature datum, ignition, main components, and troubleshooting operations. Finally, they learn principles of operation, inspection, and component location, and subsystems of the Hamilton standard propeller. The concepts of this course are presented in a context that enhances the understanding of the fundamental theories and methods of aircraft maintenance.

#### **2. Course Requirements:**

2.1. Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent who have completed an apprentice level C-130 aircraft technician course or who have at a minimum six months of practical experience on any C-130 model aircraft.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following utility or work uniform: BDUs, fatigues, coveralls.

**3. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AZR1412600SRA (MASL 141260)	C-130 B/E/H/ T-56 Engine Technician	6 Weeks
<b>STUDENT LOAD:</b> MIN: 4            MAX: 10		

**1. Course Description:** The course is designed to provide advanced operating principles and theory of the T-56 engine and to establish a solid maintenance craftsman foundation. Students will be given thorough technical instruction to evaluate conditions and make proper repair decisions of engine operating systems and subsystems. This course includes the following units of instruction: T-56 engine familiarization, T-56 system operation, and in-shop maintenance. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

**BLOCK I – T-56 Engine Familiarization**

The students will learn an in depth description and familiarization about the T-56 engine to include, a detailed description of all engine components and subsystems. Block will end with a test.

**BLOCK II – T-56 System Operation**

Student will receive engine principles and operational theory on all gearbox accessories and engine components. Block will end with test.

**BLOCK III – In Shop Maintenance**

Students will perform a complete engine teardown, build-up and learn important trouble shooting procedures and in-shop maintenance practices. Block will end with a progress check.

**2. Course Requirements:**

2.1 Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent. Have completed an apprentice-level jet engine course or two years of practical experience in the jet engine field.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following utility or work uniform: BDUs, fatigues, coveralls.

**3. Other Information:** In Addition to the uniform requirements, students should bring item(s) to perform a country presentation at the academy.

**4. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AZR1412610SRA (MASL 141261)	C-130 B/E/H Propeller Technician	5 Weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 10		

**1. Course Description:** This course is designed to provide C-130 B/E/H propeller technicians with advanced operational theory and hands-on maintenance training in order to establish a solid craftsman foundation. With this extensive knowledge furnished by the curriculum, the students will be able to analyze facts and draw conclusions related to operation and troubleshooting of the propeller's systems and subsystems. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction. This course includes the following units of instruction: propeller familiarization, propeller electrical systems, and flight line and in-shop maintenance.

#### **BLOCK I – Propeller Familiarization**

The students will learn a comprehensive description and familiarization about the 54H60 propeller and its major components. Block will end with a test.

#### **BLOCK II – Propeller Electrical Systems**

Student will receive information about operational theory and trouble-shooting techniques on the propeller's systems and sub-systems. Block will end with test.

#### **BLOCK III – Flight line and In-Shop Maintenance**

The student will apply all items learned during the course and completely rebuild the engine's propeller and sub-assembly using special tools. Block will end with a progress check.

### **2. Course Requirements.**

2.1 Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent. Have completed an apprentice-level propeller technician course or have one or two years of propeller maintenance experience.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following utility or work uniform: BDUs, fatigues, coveralls.

**3. Other Information:** In Addition to the uniform requirements, students should bring item(s) to perform a country presentation at the academy.

**4. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AZR1412800SRB (MASL 141280)	PT-6A Engine Technician	4 Weeks
<b>STUDENT LOAD:</b> MIN: 3      MAX: 10		

**1. Course Description:** This course is designed to provide PT-6A engine technicians advanced operational theory, hands-on maintenance training, and establish a solid craftsman foundation with extensive operational knowledge and intermediate level maintenance skill. The student will be able to troubleshoot, analyze facts and draw conclusions related to the operation and workings of the PT-6A engine and engine subsystems. Students are required to pass a written and or performance test at the end of instruction. This course includes the following units of instruction: PT-6A engine familiarization, hot section inspection, and maintenance.

**BLOCK I – PT-6A Engine Familiarization**

The students will learn a general description and familiarization about the PT6A engine, its characteristics and theory of operation. All engine systems are discussed in depth and explain to its highest capacity. Block will end with a test.

**BLOCK II – Hot Section Inspection and Maintenance**

Student will receive instruction and complete engine inspection, teardown of major sections, and discusses maintenance procedures using applicable technical data. This includes hot section inspection. Block will end with a progress check.

**2. Course Requirements:**

2.1 Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent. Have completed an apprentice-level jet engine course or have two years of practical experience in the jet engine field.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following utility or work uniform: BDUs, fatigues, coveralls.

**3. Other Information:** In Addition to the uniform requirements, students should bring item(s) to perform a country presentation at the academy.

**4. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2,  
4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AZR1412820SRB (MASL D141282)	Corrosion Control Technician	6 Weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 8		

**1. Course Description:** This course is designed to train maintenance personnel in the fundamentals of corrosion. Students learn procedural requirements for the detection, prevention, and treatment of corrosion on aircraft and equipment. Focus is placed on safety, proper technical order usage, surface preparation and coating application techniques. Finally, students will learn the fundamentals of painting aircraft parts. This course includes the following units of instruction: fundamentals, corrosion removal and surface treatment, and application of coatings. Students are required to pass a written and/or performance test at the end of certain blocks prior to advancement to the next block of instruction.

### **BLOCK I – FUNDAMENTALS**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. They will learn the fundamentals of ground safety, personal protection, fire prevention, use and storage of chemicals. Students will be taught how to identify and use technical orders. Students will learn of the environmental impact of improper corrosion control practices. They will discuss the characteristics of metals. Additionally, students will learn the factors, types of corrosion, and the effects of corrosion on all aircraft structural surfaces.

### **BLOCK II – CORROSION REMOVAL AND SURFACE TREATMENT**

Cleaning methods are explained and taught according to technical orders. Students are taught corrosion removal, treatment, and inspection techniques, using the mechanical methods. They will discuss the procedures and methods of chemical treatment and surface preparation to prevent corrosion.

### **BLOCK III - APPLICATION OF COATINGS**

Finally students learn about the composition of coatings, the care and use of equipment, the application of aerospace markings, and polyurethane coatings.

## **2. Course Requirements:**

2.1 Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent. Basic personal computer knowledge is highly desirable.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal manual dexterity. Must not have any physical or medical condition that will prevent the wearing of a full-face respirator.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following utility or work uniform: BDUs, fatigues, coveralls.

**3. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AAR1413040SRA (MASL 141304)	UH-1H Helicopter Technician	7 weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 8		

**1. Course Description:** This course is designed for personnel working with the UH-1H airframe and its systems. Emphasis is placed on those tasks that relate to the journeymen level such as supervising tasks, operating adjustments, troubleshooting of most common helicopter anomalies. The training includes ground safety, tools control, landing gear maintenance, flight control system inspection and troubleshooting, T-53 engine and related systems inspections, T-53 adjustment procedures, familiarization of rotors and drive train systems, maintenance of rotor system components, use of Vibrex equipment and vibration analyzer, vibrations and their effects, use of technical orders and use of special tools. This course includes the following units of instruction: general subjects, landing gear and flight control systems, T-53-L-13B engine, rotors and drive train system, and Vibrex system.

#### **BLOCK I - GENERAL FAMILIARIZATION**

This block begins with flight line safety responsibilities at the supervisory level. Students will receive a thorough understanding of flight controls and rigging procedures. They are familiarized with tasks related to airframe and landing gear inspections, deflection checks and weigh the helicopter using load cells. Flight control inspections are performed and troubleshooting procedures discussed. Rigging procedures are performed on the collective, cyclic and tail rotor flight control systems.

#### **BLOCK II - T -53-L-13 TURBO SHAFT ENGINE MAINTENANCE**

Adjustment and troubleshooting of the T-53 turbo shaft engine and its components is the focus in this block. Students will perform engine throttle and power control rigging. They will also perform engine to transmission alignment and starting engine procedures using the UH-1 systems trainer.

#### **BLOCK III - ROTORS AND DRIVE TRAIN SYSTEM**

Main and tail rotor hub assembly inspection procedures are accomplished. The main rotor hub is disassembled and reassembled. Wear limitations are identified and discussed. The student will learn the operating characteristics of the drive train system. They will also become skilled on how to disassemble and reassemble the drive shaft hanger bearings and inspect the main drive shaft. Students will gain knowledge of operating principals of all gearboxes. They will learn to remove, inspect, and install the 42 degree and 90 degree gearboxes.

#### **BLOCK IV - HELICOPTER VIBRATIONS AND VIBRATION ANALYSIS EQUIPMENT**

In this block the student is taught vibration characteristics and their effects on the helicopter airframe and rotating components. They will learn to install and use vibration analysis equipment

and apply troubleshooting techniques to solve vibration problems. Students will install actual equipment on aircraft and apply troubleshooting procedure with a whirly-gig simulator to reduce vibrations. An introduction to use and function of the 8500 spectrum analyzer is given.

## **2. Course Requirements:**

2.1. Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent. Have completed the helicopter crew chief course (MASL 141257) or equivalent or have one year of practical experience on any rotary wing aircraft.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following utility or work uniform: BDUs, fatigues, coveralls.

**3. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AAR1413220SRA (MASL 141322)	UH-1N/Bell 212 Helicopter Technician	7 weeks
<b>STUDENT LOAD:</b> MIN: 4            MAX: 8		

**1. Course Description:** This course is designed for helicopter crew chief working with the UH-1N and/or the Bell 212 airframe and its systems. Emphasis is placed on those tasks that relate to the journeymen level such as operating adjustments, component overhaul and troubleshooting of most common helicopter anomalies. Differences and similarities are discussed between the UH-1N and Bell 212 helicopters. The training includes, ground safety, airframe maintenance, maintenance directives, landing gear maintenance, hydraulic, electrical, instruments and avionics system familiarization, rotary wing aerodynamics, inspections of drive train system components, disassemble, inspect and assemble main rotor hub and drive shaft components, PT-6B/T-400 engine and related systems inspections, engine rigging procedures, flight control system rigging, UH-1 vibration characteristics and causes, and use of vibration troubleshooting equipment as applicable to helicopters.

#### **BLOCK I – AIRFRAME MAINTENANCE**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. Students will receive a thorough understanding of safety and supervisor roles on the flight line. They are familiarized with tasks related to ground handling, airframe, and landing gear maintenance requirements to include weighing the helicopter using load cells. This block will also familiarize students with the fundamental theory of operation, purpose, and component location of helicopter systems to include utility, hydraulic, electrical, radio, and instruments.

#### **BLOCK II – TWIN PACK POWER PLANT**

Adjustment and troubleshooting of the T-400 engine and its components is the focus in this block. Students will perform engine throttle rigging, power turbine Nf rigging, power lever control Ng rigging, droop compensator rigging, and beep actuator control rigging. They are also familiarized with the fuel system operation and starting engine procedures using the UH-1 systems trainer.

#### **BLOCK III – ROTORS AND DRIVE TRAIN SYSTEM**

This block begins with rotary wing aerodynamic principals, and main rotor and tail rotor function. The main rotor hub disassembly, inspection, and reassembly procedures will be accomplished. The students will learn the operating characteristics of the drive train system and the main input quill seal replacement procedures. They will also become skilled on how to disassemble, inspect, and reassemble the drive shaft hanger bearings and inspect the main drive shaft. Students will gain knowledge of operating principals of all gearboxes to include main transmission, 42 degree, and 90 degree gearbox maintenance procedures.

**BLOCK IV – FLIGHT CONTROLS, VIBRATIONS, AND INSPECTION SYSTEMS**

In this block students are taught flight control systems, rigging procedures, and UH-1 vibration characteristics and causes. They will learn to use vibration analysis equipment, install vibration analysis equipment, application of the 8500-vibration analyzer, and they will use a Heli-sim workshop. Students are also instructed on how to perform different types of required inspections and proper documentation procedures.

**2. Course Requirements:**

2.1. Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent. Have completed the helicopter crew chief course (MASL 141257) or have one year of practical experience on any UH-1 rotary wing aircraft.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following utility or work uniform: BDUs, fatigues, coveralls.

**3. Intermediate Military Objectives:** This course supports the following

USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and

USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AZR1413870SRB (MASL 141387)	J-85 Engine Technician	10 Weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 10		

**1. Course Description:** This course is designed for engine specialists who want to receive advanced training on the J-85 engine. This course provides in-shop training, intermediate depot level maintenance, compressor balancing, inspection and repair procedures on the engine, its components, and its sub-systems. The training also includes familiarization with engine operation, engine inspection techniques, and rigging procedures; field level disassembly; compressor repair, total reassembly of the engine and accessories. This course includes the following units of instruction: main engine sections, engine systems, engine teardown, compressor repair, and build-up of the engine.

#### **BLOCK I – J-85 Main Engine Sections**

The students will learn an in depth description and familiarization about the J-85 main engine sections. Block will end with a test.

#### **BLOCK II – J-85 Engine Systems**

Student will receive a complete description of the engine's subsystems, and trouble shooting techniques. Block will end with test.

#### **BLOCK III – J-85 Engine Teardown**

Students will perform a complete engine teardown and learn important procedures on inspecting engine components. Block will end with a progress check.

#### **BLOCK IV – J- 85 Compressor Repair**

The students will disassemble and repair the engine compressor and complete a full inspection of all stages of compression with special shop equipment. Block will end with a progress check.

#### **BLOCK V – J-85 Build-up of the Engine**

The student will apply all items learned during the course and completely rebuild the engine with all sub-assembly and all perform rigging check procedure. Block will end with a progress check

## **2. Course Requirements:**

2.1 Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent. Have completed an apprentice-level jet engine course or have two years of practical experience in the jet engine field.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing and speech.

2.2.3. Physical/Other: Normal dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following utility or work uniform: BDUs, fatigues, coveralls.

**3. Other Information:** In Addition to the uniform requirements, students should bring item(s) to perform a country presentation at the academy.

**4. Intermediate Military Objectives:** This course supports the following  
USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and  
USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.

COURSE NUMBER	COURSE NAME	LENGTH
L3AZR1413960SRB (MASL141396)	Aircraft Structural Maintenance Technician	12 Weeks
<b>STUDENT LOAD:</b> MIN: 4                      MAX: 12		

**1. Course Description:** This course is designed to prepare the aircraft technician for the responsibilities and duties at an apprentice level in the Aircraft Structural Maintenance career field. Students will learn to use tools ranging from basic hand tools to specialized tools. This course teaches them to repair, modify, and fabricate aircraft metal components and assemblies. They will also learn the theory of corrosion to form a better understanding about common aircraft metals. Finally, students will learn the basic theory of advanced composite structures and their repairs. This course includes the following units of instruction: metals identification and characteristics, flat pattern layout, metal layout, powered and non-powered cutting tools, setback and bend allowances, radius bend, hand and mechanical metal forming, rivet identification and pattern layout, corrosion principles, HAZMAT management, pneumatic riveting, damage classification, flush non-flush and combination repair, special fasteners, tubing assemblies, introduction to advanced composites, vacuum-bag and hot bonder setup. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

#### **BLOCK I – FUNDAMENTALS**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. Students are given an introduction to safety doctrine and practices. They will learn the characteristics and identification of common aircraft metals. Students learn shop mathematics, how to interpret technical drawings, and tool control. Students initially learn how to utilize simple tools such as: rulers, scribes, and dividers to develop metal layouts and cut them with non-powered equipment. Lastly, the student will use the same metal layouts to learn how to make different types of sharp bends.

#### **BLOCK II – FABRICATION OF AIRCRAFT PARTS**

In block II, students will learn about setback and bend allowance-using tables and charts to calculate the minimum and maximum radius bends that can be accomplished. They will also fabricate a Simulated Aircraft Structure (SAS) utilizing their knowledge. Afterwards, they will learn to form a metal part by hand then by machine forming.

#### **BLOCK III – PREPARATION FOR STRUCTURAL ASSEMBLY**

During block III structural assembly preparation, students advance and begin to utilize powered equipment and tools. They learn about the power shear and band saw and how they are used to cut out sheet metal. Rivet identification, rivet pattern and rivet layout is taught followed by pneumatic drilling, countersinking, and dimpling holes using the SAS.

#### **BLOCK IV – CORROSION PREVENTION AND STRUCTURAL ASSEMBLY**

The students learn about technical orders and the principle of corrosion affecting common aircraft metals. They learn about hazardous materials and the importance of shelf life program for chemicals. The students learn about spray guns, spray pattern defects, chemical preservation,

and application of primer on the SAS. The student is taught pneumatic riveting on the SAS. The SAS will be used to apply a protective coating.

### **BLOCK V – AIRCRAFT STRUCTURAL REPAIR**

The students learn about classifying damage and stop-drilling cracks. They also learn about coating and corrosion removal. Lastly, they learn non-flush repair and a combination repair on the completed SAS.

### **BLOCK VI – SPECIAL ASSEMBLIES**

In this block of instruction students learn about the most common hardware and fasteners used on aircraft. They will also learn how to manufacture aircraft tubing assemblies. The block concludes with learning about aircraft cables.

### **BLOCK VII – ADVANCED COMPOSITES**

In the final block of instruction students learn about advanced composites. Unlike earlier composite structures defined in the course, students start with basic fiberglass composites and from there transition to the more advanced Kevlar and Graphite composite structures. Topics discussed are advantages and disadvantages of advanced composites use, handling, storage, construction and repair of such structures.

## **2. Course Requirements:**

2.1 Eligibility: Open to military members no higher than the rank of O-4, police, or civilian equivalent.

2.2. Physical/Medical:

2.2.1. Vision: Normal (20/20 with or without glasses).

2.2.2. Hearing/Speech: Normal hearing with no speech impediments.

2.2.3. Physical/Other: Normal manual dexterity.

2.3. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements in General Information section, students in this course are required to bring the following utility or work uniform: BDUs, fatigues, coveralls. Steel toe boots and goggles.

**3. Intermediate Military Objectives:** This course supports the following

USSOUTHCOM/TCP objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and

USNORTHCOM/TCP objectives: 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 4.2, 4.3, 4.4, 4.5, 4.6.



## **The IAAFA Mission**

**Foster enduring engagement  
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