



**School of Specialized Technology**

**Catalog 2014-2015**

**Volume 59, July 2014**

**LOCATION:**

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West Mifflin, PA 15122-2656**

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**Pittsburgh Institute of Aeronautics**

**Established 1929**



MAIN CAMPUS (PITTSBURGH PA)  
 Catalog Insert  
 Volume 59, July 2014

**School Calendar Degree Programs**

<b>Class Beginning Date</b> <b>AMT/AET</b>	<b>Graduation Date</b> <b>AMT/AET</b>
July 14, 2014	March 30, 2016
October 7, 2014	June 23, 2016
January 8, 2015	October 3, 2016
April 3, 2015	January 3, 2017

**Holidays**

September 1, 2014	January 1, 2015	January 1, 2016
November 27, 28, 2014	January 19, 2015	January 18, 2016
December 24, 25, 26, 2014	May 25, 2015	May 30, 2016
	July 4, 2015	July 4, 2016
	September 7, 2015	September 5, 2016
	November 26, 27, 2015	November 24, 25, 2016
	December 23, 24, 25, 2015	December 23, 26, 27, 2016

**Vacations**

June 26 through July 13, 2015                      June 24 through July 11, 2016

**Tuition**

The total tuition and payment schedule is as follows:

Total Program AET/AMT	\$35,700.00
Tuition Per Quarter	\$5,100.00

Payments for all terms must be made 2 weeks prior to the beginning of the term.

Any student who fails to attain the necessary minimum grades after completing the first quarter will not be permitted to continue, and, therefore, will not be required to make any further payments.

An applicant who has had previous college training may receive credit for the applicable courses by producing official college transcripts indicating a grade of "C" or better for these courses provided that the catalog descriptions for the courses are comparable to their PIA counterparts. If the descriptions of courses taken at another school only partially parallel PIA's classes, the applicant may be able to receive credit for these subjects by attaining acceptable minimum grades on the applicable by-pass examination(s). Permission to take the by-pass exams can only be granted by the Director.

**Registration Fee**

A registration fee of \$150.00 must be paid at the time of enrollment (see addendum to catalog).

### **Books, Tools & Supplies**

The charges for books, tools and supplies are approximate charges and are subject to Pennsylvania sales tax where applicable. Prices may change without notice.

Aviation Maintenance Technology Program	\$2,355.00
Aviation Electronics Technology Program	\$2,144.00

### **FAA Certification**

Graduates of the Aviation Maintenance Technician Programs are eligible to test for the FAA's Airframe & Powerplant certification. There are nine (9) examinations (3 oral, 3 practical, and 3 written) which the applicant must pass in order to achieve FAA certification. For those who wish, PIA is authorized by the FAA to administer exams. The current charge for all nine tests is \$945.00. This fee is subject to change with 30 days advance notice.

### **FCC Licensing Examination**

The FCC General Radiotelephone Operator's licensing examination is given by PIA staff. The charge for the basic examination is \$60.00. The school reserves the right to change the fee for the FCC examination by notifying the student 30 days in advance.



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## **PIA School Philosophy**

PIA is committed to the pursuit of higher education that is both meaningful to the individual and valuable to society. The Institute believes that it serves the dual functions of providing its learners with opportunities, while furnishing the community with its most valuable resources, skilled men and women who possess the willingness to learn and the propensity to mature as contributing members of society.

To accomplish its objectives, PIA believes that school programs must: (a) develop specific career-related skills, (b) broaden abilities in essential academic areas, and (c) form attitudinal traits compatible with career goals. In order to be effective, these studies must be dispensed through an appropriate collection of instructional techniques, each designed to best achieve its specific objective(s).

In reaching these goals, PIA accomplishes its purpose as a provider of career opportunities and fulfills its role as an institution of higher learning.

## **History of PIA**

The school was founded as the Curtiss-Wright Flying Service in 1927, and became PIA in 1929. From 1929 until 1944 PIA trained airframe and engine mechanics for the aviation industry. In 1944 William J. Graham purchased the school and incorporated Graham Aviation as a division of PIA. An aviation electronics (avionics) course was added to the curriculum in 1979, giving students a choice of training for certification as Aviation Maintenance Technicians or Aviation Electronics Technicians. Since 1929, PIA and the Graham Aviation Division have graduated more than 37,000 and 33,000 students, respectively. PIA graduates have been placed in careers throughout every segment of the aviation industry, including commercial air carriers, aircraft manufacturers and general aviation companies. The PIA campus, located on the Allegheny County Airport since 1946, is situated 8 miles southeast of downtown Pittsburgh.

### **Reorganization of PIA**

On December 1, 1944, Mr. William J. Graham, President of the Graham Aviation Company and pioneer in aviation training, purchased PIA. Mr. Graham became president of the school and under his direction, the existing for-profit corporation was dissolved and the school was reorganized as a non-profit corporation chartered in the Commonwealth of Pennsylvania on February 8, 1946. Mr. Graham's early administrative reorganization plans included the 1944 appointment of Dr. T.B. Lyons to the position of Director.

In May 1946, the school established its advanced phase of training for aircraft mechanics in new shops opened at Allegheny County Airport. The facilities replaced those discontinued when the Bettis Airport location was no longer available. It was decided that the school should move its base of operation from its downtown location to Allegheny County Airport.

A long range plan was developed by the officers of the school which led to the establishment of a fully accredited institute. Even more important, however, were the efforts to have the school develop a curriculum tailored to the industry it served. During the years between 1956 and 1971, the Institute played a major role in efforts to upgrade aviation technical education in the United States. A mechanic training program was conducted at PIA by the Federal Aviation Administration where representatives of the FAA monitored a class of students through the entire program, on a monthly basis. Their findings were used for the updating of the FAA curriculum requirements for all approved schools. In 1967 PIA was acquired by Mr. Jack Graham who became active in the management of PIA as President, CEO, and Chairman of the Board.

In 2005, John Graham III began his tenure as PIA's President. In 2008 John Graham II retired and John Graham III assumed the position of CEO, and Chairman of the Board as well.

Graduates of PIA School of Specialized Technology have been placed with airlines, electronics manufacturers, mechanical repair facilities, the space program, and a host of other industries. Many have become managers and administrative officers for those same corporations. In addition, many of the school's alumni are among the higher echelons of the electronics industry, the transportation industry, and their related technologies. PIA is recognized by the industries that it serves as a preeminent institution of education.

### **Separate Facilities**

In addition to the facility near Pittsburgh, PA, PIA currently operates the following campuses:

#### ***Hagerstown Branch Campus***

14516 Pennsylvania Avenue  
Hagerstown, MD 21742

#### ***Myrtle Beach Branch Campus***

1038 Shine Ave.  
Myrtle Beach, SC 29577

#### ***Youngstown-Warren Branch Campus***

1453 Youngstown-Kingsville Rd NE  
Vienna, OH 44473

# Admission Procedures and Requirements

## Minimum Requirements

Applicants must fulfill these minimum requirements to commence training at PIA's School of Specialized Technology:

- Possess a High School Diploma or GED Equivalency
- Be at least 16 ½ years of age

Due to Federal Aviation Administration (FAA) regulations and graduate employment requirements, applicants must be at least 16 ½ years old before they can commence training.

## Suggested Courses

Applicants interested in pursuing the **Aviation Maintenance Technology** program are recommended to have successfully completed the following high school courses:

- Algebra I
- Basic Physics

Applicants interested in pursuing the **Aviation Electronics Technology** program are recommended to have successfully completed the following high school courses:

- Algebra I
- Algebra II
- Trigonometry
- Basic Physics

The aforementioned courses are not required for admission. However, they provide a solid foundation for the programs at PIA's School of Specialized Technology.

## Application and Admission Procedures

Applicants for admission to PIA's School of Specialized Technology are required to visit the school for a personal interview and a tour of the school's facilities prior to beginning classes. The tour and personal interview are conducted by a qualified Admissions Representative and are intended to give the prospective student an understanding of the following:

- AMT and AET Programs
- Instruction Methods
- PIA's Learning Environment
- Program Goals and Outcomes
- Admission Policies
- Program Availability
- Academic Assistance
- Graduate Placement Statistics

Tours are generally conducted Monday through Friday by appointment. Tours can be arranged for either individuals or small groups by calling the Admissions Department at 1-800-444-1440. Visitors are encouraged to ask questions, so that they can make informed decisions concerning the career fields presented, costs, and methods of payment (for info on Financial Assistance, see page 12).

In order to apply for entrance to PIA's School of Specialized Technology, the prospective student must receive a current school catalog and submit a complete admission application form and \$150 registration fee. Applicants who are still attending high school may be conditionally accepted, pending graduation from high school. Applicants who possess a high school diploma or GED certificate may be conditionally accepted, pending proof of high school graduation or equivalency. Acceptable proof of high school graduation is an official final transcript. If it is not possible to secure the transcript, PIA may, at its discretion, accept a letter from the appropriate high school principal, or a PIA official may copy the applicant's original high school diploma. Applicants with a GED certificate may have a PIA official copy their original GED certificate. All applicants must also complete a Math Skills Assessment (unless waived by the Director) as part of the enrollment process. Accepted students will receive an enrollment packet which includes an enrollment agreement, disclosure statement, letter of acceptance or conditional acceptance and contact info form.

If an applicant pays the registration fee, but is not accepted into the program selected, the registration fee will be refunded in its entirety. Refer to page 11 of this catalog for applicable registration refund possibilities.

### **Math Skills Assessment**

Unless waived by the Director, the Mathematics Skills Assessment (MSA) must be taken by all applicants for admission into PIA's School of Specialized Technology. Its purpose is to determine the math abilities of the prospective student, allowing the Director to determine if the applicant possesses the skills required for success in his/her chosen program of study, or if some form of preparatory/transitional training is needed. The results of this examination cannot predict student success with 100% accuracy; however, it does give the faculty guidance in addressing student needs.

### **Registration Expiration**

In the event a student cannot begin his/her studies on the starting date of the class for which the applicant registered, credit will be granted for the registration fee toward the next three class start dates. After that period, the registration will be considered "expired" and the applicant must pay a new registration fee for any future classes.

## **General Information**

### **Students with Disabilities**

Pittsburgh Institute of Aeronautics is committed to compliance with Section 504 of the Rehabilitation Act of 1973 and its regulations. Persons with disabilities are encouraged, but not required, to identify themselves to the school in order to collaborate on development of a Personal Emergency Plan and/or to arrange necessary accommodations. The school does not discriminate on the basis of disability in admission or access to, or treatment or employment in, its programs and activities. Applicants or students with a disability may request an accommodation or Personal Emergency Plan by contacting the Director of Education.

### **Nondiscriminatory Policy**

PIA admits students of any race, religion, age, creed, marital status, veterans status, political belief (or affiliation), color, national origin, sex, or disability to all rights, privileges, programs and activities generally accorded or made available to students at the school. The institute does not discriminate on the basis of race, religion, age, creed, marital status, veterans status, political belief (or affiliation), color, national origin, sex or disability in the administration of its educational policies, scholarships and loan programs and/or other school-administered programs. The Director (refer to STAFF) serves as the Title IX coordinator, and can be contacted at 5 Allegheny County Airport, West Mifflin, PA 15122 (412-346-2100).

### **Credit for Military Experience**

In consideration for previous military maintenance or electronics experience, PIA may grant credit based on the results of evaluation tests. These examinations may be written, practical, or a combination of both depending on the area of experience or training being evaluated.

### **Credit for Comparable Education, Training and Experience**

At the discretion of PIA, credit may be granted for comparable education and training. This credit may be based on approved course work from other recognized schools or training facilities (when course descriptions match closely), or from the results of evaluation tests (when course descriptions do not match closely enough). These examinations may be written, practical, or a combination of both depending on the area of education or training being evaluated. PIA also accepts certain College Level Examination Program (CLEP) results that meet the school's minimum score requirements. A maximum of 16 credit hours may be granted through CLEP. A minimum of 40 credit hours must be completed in-residence in order to receive an associate degree from PIA.

Pittsburgh Institute of Aeronautics is a member of the Pennsylvania Commonwealth Prior Learning Assessment (PLA) Consortium. As such, PIA evaluates experiential learning and prior education based upon Advanced Placement (AP) courses, military training/experience, industry training programs, and professional licenses/certifications. Assessment of credit toward PIA degree and non-degree programs can be through a recognized national evaluation (CLEP, DANTES, ACE), a school challenge examination, or through a skill demonstration.

To be eligible for PLA, a candidate must be currently enrolled in a PIA degree or non-degree program, and be able to provide acceptable verification of the prior learning. Assessment will not take place once the term in which a challenged course is offered has begun. For a student enrolled in an aviation maintenance technology program, credit may not be granted for certain courses when prohibited by 14 CFR, Part 147.

As the receiving school, PIA will be the sole determinant of what learning and/or experience is acceptable for PLA.

## **Class Size**

Enrollments and class sizes are regulated by the appropriate governing agencies. Accordingly, student/instructor ratios cannot exceed 25:1 in the shop/lab environment, and cannot exceed 50:1 in the theory classroom.

## **Periods of Study**

The curriculum for all full-time programs is comprised of periods of study referred to as quarters. Each quarter consists of 59 days of study and 354 clock or contact hours.

## **Hours of Attendance**

Classes are in session five days a week, Monday through Friday, from 8:00 am to 2:30 pm. Exceptions are scheduled holidays, vacation days, and faculty in-service days as listed on the school calendar insert provided with this catalog. The daily class schedule consists of six 50-minute periods. There are 15-minute breaks after each of the first two periods in the morning and after each of the first two periods in the afternoon as well as a 30-minute lunch break between periods 3 and 4.

## **Tardiness**

Any student not present at the beginning of the first scheduled period of the day is considered as tardy and must report to his/her instructor. The exact number of minutes of tardiness will be recorded and transcribed into the student's permanent records. Tardiness is treated as a period of absenteeism.

## **Absence**

PIA is regulated by a number of governing agencies. Because they do not all agree on the parameters dealing with absence and grading criteria, PIA policies address these issues by complying with the most stringent regulations governing the school. Accordingly, all students are required to attend 98% of the scheduled contact hours. Any absence in excess of 2% must be made up by the learner before he/she can graduate. Make-up work can be accomplished at the times designated by the Director. These times usually include early mornings (7:15am - 8:00am) and afternoons (2:30pm - 3:30pm), as well as evenings selected by Director.

The net absence allowed for an individual during any quarter of study is predetermined. Any absence exceeding the school's predetermined amount in any given quarter of study must be made up prior to advancing to the succeeding term.

Make-up time for absence in excess of the allowable amount will be billed. The rate per hour will be the current quarterly tuition divided by 354.

Make-up work is not permitted for the purpose of receiving Veterans Administration training allowances.

Class cuts are not tolerated. Any student involved in cutting classes may be suspended from the Institute.

Any student who is absent from school for a period of five (5) days without notifying PIA of the reason for his/her absence will be removed from the school's roll sheets and considered as "withdrawn." In order to reenter, the student must apply for readmission, and he/she must submit an acceptable reason for the absence. It must be shown that corrective action has been taken to prevent recurrence of the absence. When a student applies for re-admittance, he/she will not be required to retake the MSA.

## **Early Dismissal**

Early dismissal, when permitted, is counted as a period of absence. Students are required to get permission from their instructor when leaving before the end of the scheduled day.

## **Student Housing**

PIA assists students in locating suitable housing accommodations. Students who desire housing assistance are referred to appropriate apartments, apartment complexes, and private homes within commuting distance of the campus. Housing assistance is offered through the Admissions Department. Roommate referral assistance and furniture rental referral assistance are also available upon request. Students who want housing or roommate assistance should contact the Admissions Office 4 to 6 weeks before classes start.

## **Conduct Requirements**

At the time of enrollment, each student is required to sign an enrollment agreement which states that the student will abide by the regulations and policies as outlined in the enrollment agreement, this catalog, the student handbook, and as presented by the staff of the Institute. Any violations of the regulations or policies may result in disciplinary action including suspension or dismissal from the Institute.

## **Student Complaint/Grievance Procedure**

Schools accredited by the Accrediting Commission of Career Schools and Colleges (ACCSC) must have a procedure and operational plan for handling student complaints. If a student does not feel that the school has adequately addressed a complaint or concern, the student may consider contacting the Accrediting Commission. All complaints considered by the Commission must be in written form, with permission from the complainant(s) for the Commission to forward a copy of the complaint to the school for a response. The complainant(s) will be kept informed as to the status of the complaint as well as the final resolution by the Commission. Please direct all inquires to: Accrediting Commission of Career Schools and Colleges (ACCSC), 2101 Wilson Blvd., Suite 302, Arlington, VA 22201 Phone 703-247-4212 Fax 703-247-4533: or the website at: [www.accsc.org/Student-Corner/](http://www.accsc.org/Student-Corner/).

A copy of the Commission's Complaint Form is available at the school and may be obtained by contacting the Director (see "Staff").

PIA is licensed by the Pennsylvania State Board of Private Licensed Schools. Any unresolved concerns may be directed to this agency at State Board of Private Licensed Schools, Pennsylvania Department of Education, 333 Market Street, Harrisburg, PA 17126-0333.

## Student Grading and Progress Reports

A student progress report is issued at the end of each term of study. The following grading system is used for all degree programs:

### Grading System

All written examinations and quizzes, as well as shop/lab projects, are scored by percentage. These percentages are then converted into letter grades.

Individual course achievement is recorded by letter grade, each equivalent to a prescribed grade-point value. This grade-point value is then multiplied by the number of credit hours (degree programs) or contact hours (non-degree programs) assigned to the course, giving a quantity of grade points used to calculate student averages.

The term progress report and the final transcript indicate student achievement by grade point average (GPA), which is derived by dividing the total number of grade points earned by the total number of credit hours earned (degree) or contact hours (non-degree). Transferred credits or other advanced standings are not used in this computation.

Following is a table used to convert percentages, letter grades, and grade-point values.

PERCENT	LETTER	G-P VALUE
90 - 100	A	4.00
80 - 89	B	3.00
70 - 79	C	2.00
60 - 69	D	1.00
0 - 59	F	0.00

### Additional Grade Codes

In addition to the letter grades described above, other codes may appear on the student's term report or final transcript. Following are the meanings of the various codes:

BP - Term by-passed	SA - Suspension due to absence
CR - Credit granted	TC - Terminated (complete)
FA - Failure due to absence	TI - Terminated (incomplete)
FI - Financially incomplete	WC - Withdrawal (complete)
FG - Failure due to grades	WI - Withdrawal (incomplete)
OT - Other transcript	WU - Withdrawal (unsatisfactory)
RT - Repeat term	* - Retaken and passed

*NOTE: If a student receives a code of WI (withdrawal/incomplete), it will remain in effect indefinitely, or until the term is satisfactorily completed.*

## **Term Progress**

In order to advance to the next quarter or unit, the student must achieve a final term GPA of 2.00, or higher. In addition, the learner must attain a grade of “C” or higher for all technical-subject courses, and a grade of “D” or higher for all academic-subject courses. If the student receives a grade of less than 70% (“C”) on any shop/lab project, he/she must repeat the entire term. A grade of “D” or lower for any technical-subject course constitutes failure of the course. A grade of “F” for any academic-subject course constitutes failure of the course. Courses failed must be retaken.

The learner must have satisfied all attendance requirements, making up excess absence prior to the start of the next term. In addition, all exams and projects must be completed prior to the start of the next term.

All financial obligations to the school must be met prior to advancing to the next term.

Although it is PIA’s policy to supply transcripts to students when properly requested, transcripts issued to students who have not satisfied all grade, attendance, and/or financial obligations will be marked with a stamp identifying the deficiency.

## **Individual Examinations**

When a student receives a written test score of less than 60%, the examination may be retaken under the following conditions: 1) BOTH the instructor and the student determine that a retake is warranted; 2) The test is retaken within five (5) school days of the failed attempt; 3) The student understands that the highest possible grade he/she can receive for the retaken exam is 60% (“D”). This policy does not apply to quizzes, or shop/lab projects; 4) Only two retakes are permitted for any exam.

## **Satisfactory Progress**

The PIA grading policy requires that a learner must have achieved at least a 2.00 GPA at the end of each term. Any student who receives a final term GPA of less than 2.00 is placed on academic probation and must repeat the entire term before he/she can advance to the next quarter or unit. The probation period will continue throughout the repeated term, where work must show improvement to a GPA of 2.00, or higher. A student who is unsuccessful in completing a quarter after two attempts may be terminated from the program. Any term or time repeated will be billed at the rate currently in effect.

The PIA attendance policy requires that a learner must have a net absence (time missed minus time made up) of no more than the prescribed amount in order to advance to the succeeding quarter. Also, PIA attendance policy does not allow a learner to have a gross absence of more than 42 hours per quarter. Exceeding the gross-hour limit may constitute failure of the term.

Regardless of the reason for unsatisfactory progress, students MUST complete their selected program of study within 1.5 times the normal duration of completion. For example, a 21-month program must be completed in 31.5 months of attendance, or less.

## **Termination of Students**

The Institute reserves the right to reject any applicant who does not meet the required standards, or to expel any student who does not abide by the rules and/or regulations, behaviorally and/or scholastically, as outlined in this catalog, student handbook, and the enrollment agreement.

A student may be terminated from the school for unsatisfactory academic progress, nonpayment of tuition, excessive absence or tardiness, or failure to abide by rules and policies as outlined under “Conduct Requirements.” The termination date will be the student’s last date of attendance.

## **Reinstatement**

A student seeking to return to school may be granted reinstatement under the following conditions: 1) he/she must meet minimum school academic criteria (refer to “Term Progress”), 2) he/she must be in compliance with the school’s attendance policy (refer to “Absence”) at the time of reinstatement, 3) he/she must be recommended for reinstatement by the Director and accepted by the Director, 4) he/she must have met all financial obligations to the school up to the date of reinstatement, and 5) he/she must be free of any sanctions imposed by the school, including suspensions or other forms of disciplinary action.

A student seeking to return to school and granted reinstatement under the aforementioned criteria will enter the applicable program of study at the point where all of these standards have been met, even if that means that certain classes previously attended must be retaken, and all applicable conditions, including the payment of course/term tuition and achieving a passing grade(s), have been satisfied.

## **Retaking Courses**

A course which is taken and receives a grade of “incomplete” must be completed with a passing grade no later than nine (9) months after the first attempt. A student can not progress to the subsequent quarter of study until all courses designated for a given quarter of study have been passed.

A technical course which is taken and for which the student receives a grade of less than “C” must be retaken. A general education course which is taken and for which the student receives a grade of “F” must be retaken. When the course is retaken, the student must receive a grade of at least “C” for a technical course or a grade of “D” for a general education course. A grade of “C” is the highest grade that will be listed on the student’s transcript for any retaken course. The repeat grade will be used to recalculate the overall GPA for the student.

## **Refund Policies**

### **Applicant Rejection**

All monies paid by the applicant will be refunded if his/her application for admission is rejected by the school.

### **Registration Cancellation**

Any applicant may cancel his/her registration prior to the beginning of the class by requesting a cancellation in writing and mailing it to the school. If the request for cancellation is postmarked within five (5) calendar days following the date of the enrollment agreement and prior to the start of the training program, all monies including the registration fee will be refunded. Upon cancellation after the fifth calendar day following the date of the enrollment agreement but prior to the beginning of the training program, monies paid to the school will be refunded except the registration fee. However, if the cancellation occurs prior to ninety (90) days before the beginning of the applicant's original training program, 50% (\$75) of the full registration fee paid may be refunded in addition to the other monies paid. Notice of cancellation must be in writing and delivered to the school.

### **Student Withdrawals**

When a student begins training and withdraws prior to completion of any quarter, a refund of any tuition overpayment is made as outlined in this paragraph. Earned tuition is computed through the last day of attendance, and refund of overpaid tuition, if any, is made on a pro-rata basis of 100% according to the number of days remaining beyond the last day of attendance. The refund is made within 30 calendar days of the official date of withdrawal. All students, regardless of their method of payment, are subject to the same refund policy. Information concerning refunds for third-party funding agencies (Title IV, Veteran's Administration, WIA, etc.) can be obtained from the Financial Aid Office.

### **Request for Leave of Absence or Withdrawal Policy**

Students are encouraged to make an appointment with the Campus Director prior to initiating any request for temporary or permanent leave.

A student may request a temporary period of absence from Pittsburgh Institute of Aeronautics (PIA) due to extenuating academic, medical or personal circumstances that prevent a student from participating fully in his/her program of study. A student must apply in advance and all requests for leave must be submitted in writing, must be signed and dated. The student must provide a reason for requesting the leave and a reasonable expectation when they will return.

The Director and Director of Financial Aid will review all leave requests and determine whether the student is approved for a Leave of Absence (LOA). A student who meets the criteria and is granted an approved LOA is not considered to have withdrawn, and no Return of Title IV calculation is required.

If the student's request for leave is determined to be a Withdrawal (W/D) and the student received financial aid and is a Title IV loan recipient, he/she will be subject to the Federal regulations governing the return of Title IV funds. A refund of any tuition overpayment is made as outlined in this paragraph. PIA will calculate the amount of grant, loan assistance and earned tuition through the last date of recorded attendance. The refund of overpaid tuition is made on a pro-rata basis of 100% according to the number of days remaining beyond the last date of recorded attendance. This refund is made within 30 calendar days of the official date of the withdrawal. All students, regardless of their method of payment, are subject to the same refund policy.

The maximum time allowed for an approved leave of absence is 180 days in any 12 month period. Students who do not return at the expiration of an approved leave of

absence will have their enrollment status changed to a withdrawal and must apply for re-admission. Due to the change in enrollment status PIA will begin the return of Title IV funds outlined in the previous paragraph. Information concerning refunds for third party funding agencies (Title IV, Veteran's Administration, WIA, etc.) can be obtained from the Financial Aid Office.

If the student re-enters after 180 days, his/her remaining financial aid (as applicable) will be calculated on the remaining time to complete the program. This may lower the amount of eligible financial aid when the student re-enters.

If the student re-enters after 180 days, he/she will lose his/her six (6) month grace period (as applicable). An active student loan(s) will enter repayment and the student will be responsible for monthly installments. Please note, once a student uses the 6 month grace period, it may not be reinstated for any reason. Based on the student enrollment status they may utilize an in-school deferment to postpone repayment of his/her loans until graduation.

## **Financial Assistance for Students**

Financial assistance is available to qualified students attending PIA through various loans, grants, and scholarship programs.

### **The Institute is approved by:**

- Pennsylvania Higher Education Assistance Agency (PHEAA)
- U.S. Department of Education

### **The Institute offers the following Financial Aid Programs:**

- Federal Direct Student Loan Program (FDLP)
- Alternative Loan Programs
- Pell Grant
- PHEAA Grant Program
- Various Individual Scholarship Programs

PIA does not participate in campus based financial aid programs. Certain federal and state financial assistance programs require that the applicant is registered with the Selective Service System. Details on the financial aid programs are available from the Financial Aid Office.

## Scholarships

**PIA Memorial Scholarship Fund** - Maximum of five awards annually. To be eligible to apply for these scholarships, students must :

1. Be enrolled full-time in an Associate in Specialized Technology degree program or Aviation Maintenance program at PIA or one of its branch campuses, and
2. Have completed at least one academic quarter/semester at PIA as of the scholarship deadline.

Funded by PIA Memorial Scholarship Fund.

**Association for Woman in Aviation Maintenance (AWAM)** – PIA funds up to four annual awards in the amount of 25% of current tuition rate per quarter, available to women enrolling for the first time in a degree program at PIA’s main campus, and whose start date for training is after the scholarship deadline. Minimum requirements: Submission of application to AWAM, including 200+ word essay, letter of recommendation. Recipients selected by representatives of AWAM. Scholarship award distributed on a per quarter basis. Recipients must maintain 3.0 GPA throughout program of study to continue eligibility. Additional information available through Financial Aid Office.

**Aviation Council of Pennsylvania (ACP)** - One annual award: \$2,000 for student currently enrolled in aviation related program. Minimum requirements: 2.75 GPA, need for funding. Funded by ACP.

**Professional Aviation Maintenance Foundation (PAMF)** - Several annual awards (varies in quantity): ranging from \$1,000 to \$2,000 for students enrolled in aviation-related programs. Competition is at the national level. Funded by PAMA, National and PAMA, Western PA.

## Graduation Requirements

Following are the minimum graduation requirements for students attending one of PIA's programs:

- The student must have achieved a cumulative GPA of 2.00, or higher. In addition, the student must have passed every shop/lab project with a score of 70% or better. He/she must have achieved a letter grade of "C" or better for every technical-subject course, and a letter grade of "D" or better for every academic-subject course.
- All absence in excess of the allowable 2% has been satisfactorily made up.
- All financial obligations have been met to cover tuition, make-up time, books, supplies, tools, fees, etc., according to school policies.

In addition, Aviation Electronics students must have passed either the FCC General Radiotelephone Operator's licensing examination (U.S. citizens), or the equivalency test (non-U.S. citizens).

## Graduate Placement

The final objective of most learners at PIA is to obtain employment upon graduation. Over the years, the school has established excellent relationships with employers in many industries. The school provides post graduate employment assistance, at no extra charge, for all alumni who want to avail themselves of this service. PIA will assist any graduate in securing employment at any time he/she requests, regardless of the number of occurrences or the amount of time that has elapsed since graduation. However, each applicant, student, and graduate must keep in mind that **PIA does not guarantee jobs.**

## Required Core Curriculum

All full-time programs share 39 credit hours of common core required courses, affording the student the opportunity to revise his/her major of study any time during the first academic year. The first academic year consists of three quarters of study which are:

<b>First Quarter</b>	<b>General Studies</b>	<b>(17 Credit Hours)</b>
EN101	English Composition	3.0
GS111	Blueprint Reading	1.0
GS113	Safety & the Environment	1.0
HI104	World History - Aviation	3.0
MA102	Foundations of Mathematics	4.0
PH117	Basic Physics	4.0
PH119	Introduction to Electricity	1.0
<b>Second Quarter</b>	<b>Electricity / Publications</b>	<b>(11 Credit Hours)</b>
EL125	Practical Electricity	3.0
EL126	Electrical Systems	3.0
GS127	Using Reference Materials	2.0
MA106	Mathematics for Technology	3.0
<b>Third Quarter</b>	<b>Electronics / Instruments</b>	<b>(11 Credit Hours)</b>
EL135	Introduction to Electronics	3.0
EN105	Technical Writing	3.0
GS136	Introduction to Instruments & Controls	2.0
GS137	Advanced Instruments & Controls	3.0

### Credit Equivalency

Clock hour/credit hour equivalency is based on the ratios of 34 clock hours being equal to one (1) credit hour for technical subject courses, and 16 clock hours being equal to one (1) credit hour for academic subject courses. A clock hour is defined as: "a one-hour period including at least 50 minutes of student/instructor contact," also sometimes referred to as a "contact hour."

Credit hour is a measurement, not necessarily an indicator of transferability. Transfer of credits from one educational institution to another is always subject to acceptance by the receiving school. Even though PIA employs a quarterly academic schedule, its credit hours are calculated according to semester hours. This is done to help accommodate the transfer of credits to various institutions with which PIA holds articulation agreements. Most of these schools employ semester-hour systems.

### Transfer Credit

PIA holds articulation agreements with a number of colleges and universities. Articulation agreements vary in the amount and conditions for which transfer credit is awarded. A student may get the details of transfer credit and articulation agreements from the Admissions Office.

Students continuing their education at, or transferring to, other institutions must not assume that credits earned at this school will be accepted by the receiving institution. An institution's accreditation does not guarantee that credits earned at that institution will be accepted for transfer by any other institution. Students must contact the receiving institution to determine what credits, if any, that institution will accept.

## **Certifications**

Individuals who graduate from PIA's AMT program are qualified to test for the FAA Airframe and/or Powerplant certificate(s), as appropriate. In order to secure these certifications, the graduate must pass a battery of written (computerized), practical, and oral examinations prescribed by the FAA. These certifications are not requirements for graduation, since they cannot be accomplished until after the student has completed the approved subject areas, however it is school policy that all AMT students pass the FAA general and powerplant (or airframe, as applicable) oral, practical, and written examinations prior to advancing to their final quarter of study. The Director of Campus Operations may grant an extension to the deadline for completion of these exams, but the extension may not exceed two (2) calendar weeks.

An individual whose major is in an area of electronics, must take and pass the Federal Communications Commission's (FCC) General Radiotelephone Operator's (GRO) licensing examination as a prerequisite for graduation.

**NOTE: Since those who are not U.S. citizens are ineligible to hold an FCC GRO license, these students must pass an equivalency exam in order to qualify for graduation.**

## **Aviation Maintenance Technology Program Associate in Specialized Technology Degree**

Seven Quarters of Study - 21 Months: 79 Credits - 2,478 Clock Hours

Graduates of the Aviation Maintenance Technology (AMT) Program (full-time) are awarded the Associate in Specialized Technology (AST) degree. The curriculum for this program not only meets Pennsylvania Department of Education (PDE) criteria for conferral of the degree, but it also satisfies the requirements of 14 CFR (Code of Federal Regulations), Part 147, making the graduate eligible for FAA Airframe and Powerplant (A&P) certification examinations. This program is designed not only to meet the aforementioned requirements, but also to provide the skills needed for entry-level employment in the aviation maintenance industry.

### **AMT Associate Degree Curriculum**

Core Courses 39 Credits (Quarters 1, 2, and 3) See page 15 for outline of Core Courses.

Major Courses 40 Credits (Quarters 4, 5, 6, and 7)

<b>Fourth Quarter</b>	<b>Propulsion Systems</b>	<b>10 Credit Hours</b>
PP241	Introduction to Turbine Engines	2.0
PP242	Turbine Engine Technology	3.0
PP245	Introduction to Reciprocating Engines	3.0
PP246	Reciprocating Engine Technology	2.0

<b>Fifth Quarter</b>	<b>Aircraft Structures</b>	<b>10 Credit Hours</b>
AF253	Non-Metallic Structures	1.0
AF255	Introduction to Metallic Structures	2.0
AF256	Working with Metallic Structures	3.0
AG251	Basic Systems Maintenance	4.0

<b>Sixth Quarter</b>	<b>Advanced Powerplant</b>	<b>10 Credit Hours</b>
AG266	Fuels & Fuel Systems	2.0
EN208	Professional Communication	1.0
PP265	Advanced Engine Overhaul	2.0
PP267	Ignition Systems	2.0
PP268	Propeller Systems	2.0
PP269	Advanced Engine Maintenance	1.0

<b>Seventh Quarter</b>	<b>Advanced Airframe</b>	<b>10 Credit Hours</b>
AF371	Working With Composite Materials	2.0
AF373	Fluid-Powered Systems	4.0
AF375	Welding Technology	1.0
AG377	Advanced Aircraft Maintenance	3.0

### **Aviation Maintenance Technician Job Description**

Duties of the aviation maintenance technician include inspections, component replacements, overhauls, extensive repairs, troubleshooting, and servicing of aircraft and aircraft systems. Certificated aviation maintenance technicians enter the industry as journeymen, and are not required to serve in apprenticeship capacities.

## **Aviation Electronics Technology Program**

### **Associate in Specialized Technology Degree**

Seven Quarters of Study - 21 Months: 79 Credits - 2,478 Clock Hours

Graduates of the Aviation Electronics Technology (AET) Program are awarded the Associate in Specialized Technology (AST) degree. The curriculum for this program not only meets Pennsylvania Department of Education (PDE) criteria for conferral of the degree, but it also prepares the learner for the Federal Communications Commission (FCC) General Radiotelephone Operator's License (GROL) examination. This program is designed not only to meet the aforementioned requirements, but also to provide the skills needed for entry-level employment in the aviation electronics industry.

#### **AET Associate Degree Curriculum**

Core Courses 39 Credits (Quarters 1, 2, and 3) See page 15 for outline of Core Courses.

Major Courses 40 Credits (Quarters 4, 5, 6, and 7)

#### **Fourth Quarter Intermediate Electronics 10 Credit Hours**

EL243	Diodes, Transistors, and Semiconductors	3.0
EL244	Applications of Amplifiers and Power Supplies	4.0
EL247	Electronic Techniques and Practices	3.0

#### **Fifth Quarter Digital / Microprocessors 10 Credit Hours**

EL252	Basic Digital Techniques	2.0
EL254	Advanced Digital Techniques	4.0
EL257	Introduction to Microprocessors	2.0
EL258	Digital Applications for Electronics	2.0

#### **Sixth Quarter Navigation / Communication 10 Credit Hours**

EL261	Advanced Radio Theory	2.0
EL262	Communications Transceivers	3.0
EL263	Navigation Systems	3.0
EL264	Individualized Audio & Entertainment Systems	1.0
EN208	Professional Communication	1.0

#### **Seventh Quarter Advanced Avionics 10 Credit Hours**

EL372	Avionics Shop Practices	1.0
EL374	Microwave Systems	4.0
EL376	Radar Surveillance and Weather Avoidance	2.0
EL378	Automatic Flight Control Systems	3.0

#### **Aviation Electronics Technician Job Description**

Duties of the aviation electronics technician include inspections, and troubleshooting of aircraft electronics systems. The "avionics" technician must be able to isolate malfunctions, and make necessary equipment changes or repairs. Tasks may be performed either on the aircraft (line maintenance) or in the shop (bench maintenance). Aviation electronics technicians who have prior military or civilian electronics experience may enter the industry as journeymen, and may not be required to serve in apprenticeship capacities. Inexperienced electronics technicians may serve an apprenticeship.

## Approvals and Accreditation

- Federal Aviation Administration Avionics Repair Station Certificate HE1R189K
- Federal Aviation Administration approval HE1T189K (formerly #76)
- Approved by the Pennsylvania Department of Education to award an Associate in Specialized Technology Degree
- Licensed by the Pennsylvania State Board of Private Licensed Schools
- Accredited by the Accrediting Commission of Career Schools and Colleges (ACCSC). Visit [www.accsc.org](http://www.accsc.org) for more information on accreditation.
- Approved by the Pennsylvania Higher Education Assistance Agency (PHEAA) to participate in the FDLP and the Federal Direct Student Loan Program
- Approved as a member of the Pennsylvania Higher Education Assistance Agency Scholarship Plan
- Approved for the training of veterans:

Montgomery GI Bill	Chapter 30
Veterans Educational Assistance Program (VEAP)	Chapter 32
Dependents Educational Assistance (DEA)	Chapter 35
Montgomery GI Bill Selected Reserve	Chapter 1606
Reserve Education Assistance Program (REAP)	Chapter 1607
Vocational Rehabilitation	Chapter 31
Post 9-11 GI Bill	Chapter 33
- Approved as an Institution of Higher Learning (IHL) for veteran training
- Approved by the Bureau of Vocational Rehabilitation, Commonwealth of Pennsylvania
- Approved by the Ohio State Board of Proprietary School Registration
- Approved by the State College System of West Virginia
- This school is authorized under Federal law to enroll non-immigrant alien students
- Accredited by the National Center for Aerospace & Transportation Technology

## **PIA Staff**

### **Administrative Staff**

John Graham	President/CEO
Suzanne L. Markle	Executive Vice President/Director
Gary E. Hoyle	Director of Campus Operations/Acting Director
Gregory Null	Director of Education/Acting Director
Jonathan S.Vukmanic	Director of Financial Aid/Acting Director
Steven D. Sabold	Director of Admissions/Acting Director
Brianne Goodwin	Assistant Director of Campus Operations
Bonnie Wissner	Corporate Office Manager

### **Faculty**

Charles Boles  
Warren Guthrie  
Andrea Ireland  
Andrew Janov  
David Koehler  
Todd Kruszka  
Mark Milhalko  
Leroy Nicholson  
Thomas O'Keefe  
Jason Pfarr  
Kevin Reid  
Frank W. Saye  
Albert Simon  
Susan Veverka  
James Wadsworth  
James Zack

### **Student Advisors**

Robert Allison - Admissions  
Dolores Bowen - Admissions  
Dino Cicconi - Admissions  
Donata Clark - Financial Aid  
Jacob L. Holt - Admissions  
Mark Honse - Marketing  
Brooke Hrinda - Financial Aid  
Benjamin O'Keefe - Enrollment Manager  
Jason Mongan - Placement Supervisor  
Margaret Neely - Student Services  
Patrick Sylves - Admissions  
Tara Timpano - Financial Aid  
Karen Very - Student Records Coordinator

### **Facilities**

Charles Miller  
Patrick Eckles

## **Location and Facilities**

PIA is located eight miles southeast of the city of Pittsburgh with its campus buildings on Allegheny County Airport, West Mifflin, PA. PIA's airport location provides an ideal atmosphere for aviation training and provides access to the airport runways so that the airplanes that are worked on in PIA's shops can fly to the school's facilities.

The total area of school facilities is more than 100,000 square feet. In addition to classrooms and laboratory areas, the campus houses a bookstore, and learning resource center.

### **Travel Directions**

From the northwest, follow the Pennsylvania Turnpike to Cranberry Twp Exit #28. Exit turnpike onto I-79 South to Pittsburgh. Then follow I-279 South to Pittsburgh. Split off of I-279 South to the right onto I-579 South (Veterans Bridge). Follow I-579 South to exit for the Liberty Bridge. Cross bridge and proceed through the Liberty Tunnels. Stay in the right lane through the tunnels and turn onto PA Route 51 South to Uniontown. Follow Route 51 South approximately 6 miles to traffic light at the intersection of Route 51 and Old Lebanon Church Road (U-Haul Rental Agency on the left and Bill Green Shopping Center on the right). Turn Left at the traffic light. Proceed 1 mile to next traffic light and turn right onto Lebanon Church Road. Travel to 4th traffic light and turn left into the entrance of the Allegheny County Airport.

From the southwest follow I-70 east to Pennsylvania Route 51 North to Pittsburgh. Continue north for approximately 17 miles to traffic light at the intersection of Route 51 and Old Lebanon Church Road (U-Haul Rental Agency on the right and Bill Green Shopping Center on the left). Proceed through traffic light and exit Route 51 immediately after U-Haul Rental Agency onto Lebanon Church Road. Proceed 2 miles and turn left into the entrance of the Allegheny County Airport.

From the east use Pennsylvania Turnpike to Exit #75, New Stanton then follow I-70 west to Route 51 North to Pittsburgh. Continue with directions in previous paragraph.

### **Equipment**

The equipment used for the students' practical training exceeds a value of \$20,000,000.00. This equipment consists of numerous reciprocating and jet engines, airplanes, and electrical and electronic equipment. The school's tool rooms maintain the precision and special tools needed by the student to perform work on airworthy airplanes, powerplants and electrical equipment. In addition to the basic equipment used by the student, PIA also has a fleet of aircraft used for maintenance training, which includes one North American Sabreliner, a Rockwell Jet Commander, two Beechcraft U8-D's, a Beechcraft D50C, two Cessna 310s, a King-Air 90, a Bell H-58 helicopters, and one Hughes Model 269 helicopter.

## **Student Advisement and Academic Assistance**

Advisement begins in an informal manner at the time of the prospective student's initial interview with the Admissions Department representative. During this interview, the applicant is advised relative to the school's academic provisions for progress, and told whether or not his/her educational background has provided her/him with the basic skills needed to be successful in the selected major of study. In addition, school life, acceptable conduct, and expected interactions with fellow students, faculty, and other PIA personnel are discussed.

Each prospective student must take the Mathematics Skills Assessment (MSA) either prior to or immediately upon enrollment. Within a short time, the results of this appraisal will be discussed with the applicant, and he/she will be advised if remediation is warranted. This is never done to discourage the student; rather, it is a means of providing additional assistance early in the learning process to enhance the probability of academic success. There is no tuition charge to enrolled students for remedial classes conducted at PIA.

In addition, student tutors are provided after 2:30pm on selected days to assist learners who are having difficulty in specific subject areas.

At the end of the first term of study, the student's grade report is reviewed. Those who are found to be academically deficient (see TERM PROGRESS) are advised by a General Studies Department faculty member, based on past experience, as to whether remediation can be helpful or not.

Students are encouraged to discuss their academic or school life problems with their immediate instructor. In matters that are of a different nature and require advisement beyond that which the instructor can provide, the student may seek the assistance of the Director.

Those who are faced with problems of a financial matter may seek advice from the Financial Aid or Accounting Offices.

Students who need academic assistance in order to maintain satisfactory progress have the privilege of remaining in school, each day, at the end of scheduled classes to receive personal instruction. Students may avail themselves of this opportunity by requesting it from the Director. There is no charge for this assistance, provided the student is not using it to make up absence in excess of the school's allowable maximum. If so, then the policy outlined in this catalog (see ABSENCE) will be in effect.

PIA retains the services of Washington EAP for personal assistance to students who are experiencing physical, mental, or emotional difficulties which affect their academic performance. This assistance includes referrals to a number of programs, including drug and alcohol abuse.

Students should refer to the PIA STAFF section of this catalog for a list of student advisors.

## Foreign Student Information

PIA is authorized under federal law to enroll non-immigrant alien students. Foreign students who wish to attend PIA must comply with the following requirements:

- 1) Certification of an acceptable grade on the TOEFL (Test Of English as a Foreign Language) written or computer-based exams (\*), or verification of English language proficiency by educational transcripts.
- 2) Verification of financial capability to meet school and living expenses.
- 3) Name of the student's sponsor while attending PIA.

When these requirements have all been satisfied, the prospective student must submit a completed admissions application along with the \$150.00 registration fee in order for PIA to issue a SEVIS form I-20. Students at PIA may be approved for F-1 or M-1 status.

(\*) Acceptable TOEFL Scores:

	WRITTEN	COMPUTER-BASED	INTERNET BASED
Applicants who have no prior experience in their major of study	500	173	61
Applicants who have at least one year of formal training in their major	480	157	54

# PIA

## Credit Course Descriptions

### 2014 -2015

Course codes are used to indicate four significant bits of information:

- 1) The two-letter alpha prefix indicates the major topic of study (Examples: EN - English, EL - Electrical, HI - History);
- 2) The first digit indicates the academic year (Examples: 113 - first academic year, 372 - third academic year);
- 3) The second digit indicates the usual quarter of study, except for purely academic subjects like English and mathematics, which utilize a "0" (Examples: 125 - second quarter, 245 - fourth quarter); and
- 4) The third digit in the alpha numeric code is used to distinguish one similar course from another (Examples: PP241 from PP242, AF373 from AF375).

*NOTE: Course titles are followed by the number of credit hours granted. Courses which are followed by a letter "P" include a practical component (shop/lab).*

#### Explanation of Alpha Prefixes

AF	Subject matter deals primarily with the study of the <b>Art of Fabrication</b> .
AG	Subject matter deals with the study of <b>Aviation General</b> topics.
EL	Subject matter deals primarily with the study of <b>ELectricity/electronics</b> .
EN	Subject matter deals with the academic study of the <b>ENglish</b> language.
GS	Subject matter deals with the study of <b>General Subjects</b> related to the major.
HI	Subject matter deals primarily with the academic study of <b>HIstory</b> .
MA	Subject matter deals with the study of <b>MAthematics</b> and related topics.
PH	Subject matter deals primarily with the study of <b>PHysics</b> and related topics.
PP	Subject matter deals primarily with the study of <b>ProPulsion</b> systems.

#### **Art of Fabrication**

##### **AF253 Non-Metallic Structures (1 credit hr - P) (36 clock hrs)**

This course examines the construction, repair, and inspection of aircraft wooden structures and fabric coverings, as well as the application of finishing materials. Windshields, windows, doors, and interior furnishings are also studied in this unit.

##### **AF255 Introduction to Metallic Structures (2 credit hrs - P) (72 clock hrs)**

This course introduces the learner to metal working tools and equipment, the art of forming metal, riveting practices, and the use of special fasteners. A discussion of bonded structures, and the various physical properties of common metals are also addressed. GS113 is a prerequisite for this course.

##### **AF256 Working With Metallic Structures (3 credit hrs - P) (102 clock hrs)**

AF256 expands upon the practical aspects of sheet metal construction and repairs. Components are laid out and built by the learner, structural repairs are performed, and the effects of metal fatigue and corrosion are studied. In addition, the use of drawings and blueprints is incorporated to create a real-life maintenance condition. AF255 and GS111 are prerequisites for this course.

##### **AF263 Practical Welding (2 credit hrs - P) (68 clock hrs)**

This course exposes the learner to a variety of welding techniques that are useful in many maintenance environments. The course is not designed, in itself, to create certified welders. It does, however, teach the student to perform basic welding constructions and repairs, and prepares him/her for more advanced welding courses. GS111 and GS113 are prerequisites to this course.

##### **AF264 Intermediate Level Welding (4 credit hrs - P) (144 clock hrs)**

This unit utilizes the knowledge and proficiencies developed in course AF263 and enhances the learner's welding abilities in a number of welding skill areas. Course AF263 is a prerequisite.

##### **AF371 Working With Composite Materials (2 credit hrs - P) (72 clock hrs)**

This course provides an in-depth study of the various composite materials employed in aviation, medical, and other advanced technical constructions. Safety concerns, manufacturing practices, and damage assessment of these modern man-made materials are all explored. Practical experience is

provided in both construction and repair techniques used in industry today. AG251 and AF255 are prerequisites for this unit of study.

**AF373 Fluid-Powered Systems (4 credit hrs - P) (144 clock hrs)**

AF373 examines the hydraulic, pneumatic, and landing gear systems of modern aircraft. Also included in this block of instruction are environmental systems, ice and rain protection, and emergency oxygen systems. The physical laws involved with each are explored, while practical experience is gained. Operating principles, construction, and applicable maintenance practices for each of these systems are studied. PH117 and AG251 are prerequisites for this course.

**AF375 Welding Technology (1 credit hr - P) (36 clock hrs)**

Welding Technology emphasizes the close inspection of welds employed in structural components. Practical application is utilized to enhance conceptual aspects of the topic. Included in this course is an investigation of the FAA approved repair methods. AG251 is a prerequisite to this course.

***Aviation General***

**AG251 Basic Systems Maintenance (4 credit hrs - P) (144 clock hrs)**

This introduction to aircraft maintenance includes general knowledge area subjects employed in almost all aspects of maintenance. Performing weight and balance, constructing hydraulic fluid lines and fittings, conducting nondestructive inspections, and using hardware correctly are all covered. Both theory and practical aspects of this complex field of study are explored, providing the learner with a good technical foundation for future, related topics. MA102 and GS113 are prerequisites to this course.

**AG266 Fuels and Fuel Systems (2 credit hrs - P) (72 clock hrs)**

This comprehensive course covers fuels and fuel systems from the onboard storage tanks up to the engine combustion chambers. Reservoirs, fuel lines, related valves, distribution systems, and fuel metering devices are all studied. Particular attention is given to fuel system troubleshooting and common maintenance practices. PH117 is a prerequisite to this course.

**AG377 Advanced Aircraft Maintenance (3 credit hrs - P) (102 clock hrs)**

This course of study includes such diverse topics as: aircraft assembly, rigging, periodic inspection, flight line repair work, and rotary aircraft (helicopter) theory. Live job conditions are mirrored to provide practical experience performing aircraft inspections, as well as both scheduled and unscheduled maintenance. AG377 is the culmination of the entire AMT program. All AMT courses required during the first five quarters of study are prerequisite to AG377.

**AG383 Rotorcraft Systems and Maintenance (2 credit hrs - P) (60 clock hrs)**

This elective course of study was originally designed to familiarize FAA field inspectors with the intricacies of rotary wing aircraft (helicopters). It evolved into a popular offering for AMT students. AG383 begins with the history of helicopters, and then discusses the aerodynamics peculiar to rotorcraft. Flight controls and basic engine installations are also discussed. Participants gain hands-on experience in many areas of helicopter maintenance. Students must have completed quarters one, two, and three to participate.

***Electric/Electronics Studies***

**EL125 Practical Electricity (3 credit hrs - P) (108 clock hrs)**

This course enhances the ability of the student to grasp more complex electrical concepts. It also provides a means for the learner to attain the specific skills needed to maintain electrical and electronic components and systems. Basic wiring, soldering techniques, connector maintenance, and analysis of both DC and AC circuits are accomplished. PH119 is a prerequisite for this course.

**EL126 Electrical Systems (3 credit hrs - P) (108 clock hrs)**

EL126 gives the learner practical knowledge concerning the operation and maintenance of a wide variety of electrically operated and controlled systems. Systems studied in this course include, but are not limited to, battery, generator & alternator, inverter, DC and AC motor, position indicating and warning, fire detection and extinguishing, and anti-skid (antilock) brakes. Shop/lab projects are designed to enhance the learner's ability to maintain, overhaul, and repair these systems and their components. EL125 is a prerequisite (or co-requisite) for this course.

**EL135 Introduction to Electronics (3 credit hrs - P) (130 clock hrs)**

EL135 includes a practical presentation format which covers several topics related directly to maintaining electrical and electronic systems and components. This course also introduces the learner to the most essential aspects of basic electronic devices and circuits, and allows the student to apply this knowledge to the study of common electronic equipment. MA102 and EL126 are prerequisites for this course.

**EL243 Diodes, Transistors, and Semiconductors (3 credit hrs - P) (114 clock hrs)**

This unit of study picks up where the previous three courses left off. It provides the electronics student with a more detailed background in the operation and application of practical semiconductor (solid state) devices and circuits. Since many of these devices and circuits are designed to perform specific electronic functions, a thorough knowledge of each is vital to the success of the future technician. The course includes intensive studies of circuits containing solid state diodes of all types, bipolar and field-effect transistors, linear (analog) and digital integrated circuits, and special purpose optoelectronic devices. EL135 is a prerequisite for this course.

**EL244 Applications of Amplifiers and Power Supplies (4 credit hrs - P) (138 clock hrs)**

Many complex electronic circuits are collections of advanced, specially-designed amplifiers. Thus, a study of basic electronic amplifiers is an important step toward the understanding of more elaborate circuitry. Topics in this course include: amplifier fundamentals, typical amplifier circuits, and operational amplifiers. EL244 also includes a thorough and practical study of circuits designed to perform unique but essential functions for given applications. The final section addresses basic radio theory, with presentations on the fundamentals of radio wave propagation and amplitude and frequency modulation. EL135 is a prerequisite for this course.

**EL247 Common Electronic Techniques and Practices (3 credit hrs - P) (102 clock hrs)**

The techniques and practices introduced in this course are essential to the performance of proper maintenance of all electrical and electronic components and systems. Topics include the correct methods of working with fiber optic media, accepted industry standards for soldering, component and wire preparation, component placement and mounting, special considerations for electro-statically sensitive components, and approved testing and inspection practices. The course culminates in the supervised construction of an AM/FM radio receiver, and a thorough familiarization with the testing procedures necessary. EL243 and EL244 are prerequisites (or co-requisites) to this course.

**EL252 Basic Digital Techniques (3 credit hrs - P) (102 clock hrs)**

Basic Digital Techniques serves as an introduction to the methods and practices associated with digital circuit design and operation. Subjects covered in this course include digital numbering systems and codes, digital logic circuits, Boolean Algebra and digital arithmetic. MA102 and EL247 are prerequisites for this course.

**EL254 Advanced Digital Techniques (4 credit hrs - P) (138 clock hrs)**

This course builds on the knowledge gained in EL252 Basic Digital Techniques. It features in-depth studies of digital counters and registers, logic families, digital-to-analog and analog-to-digital conversion circuits, and memory circuits. EL252 is prerequisite to this course.

**EL257 Introduction to Microprocessors (2 credit hrs - P) (80 clock hrs)**

A solid background in the fundamentals of computer theory is provided by this unit. Included are: microprocessor number and code systems, microprocessor addressing modes, introductory programming techniques, execution of programs, computer arithmetic, and algorithms. This course also provides a more detailed knowledge of the operation of a typical microprocessor-based circuit. Subjects include: typical microprocessor architecture, instruction sets, advanced addressing modes, stack operations, input/output (I/O) operations, interfacing, displays, and switching. EL254 is prerequisite (or co-requisite) to this course.

**EL258 Digital Applications for Electronics (1 credit hr - P) (34 clock hrs)**

Microprocessor uses and interfacing are the highlights of this unit. Operations and uses of peripheral and asynchronous communications interface adapters are included. This course also demonstrates how Programmable Logic Controllers (PLC) can be wired and programmed to provide process control of industrial electric equipment through the use of peripheral devices such as input sensors, limit switches, and industrial controls. The student will gain experience in the creation, modification, and use of "ladder" diagrams, schematics, wiring diagrams, flow charts, and PLC program listings.

**EL261 Advanced Radio Theory (2 credit hrs) (78 clock hrs)**

This course assists the learner in obtaining a solid knowledge of radio theory. No shop/lab is included. Beginning with a review of basic radio theory, subjects studied include: advanced frequency modulation theory, frequency modulation circuits, radio wave propagation, transmission lines, and antennas for special applications. Subject areas are addressed in preparation for the FCC general radiotelephone Operator's (GRO) licensing examination. EL247 is prerequisite to this course.

**EL262 Communications Transceivers (3 credit hrs - P) (108 clock hrs)**

Subjects covered in EL262 include: citizen band (CB) radio transceiver block diagrams, detailed circuit analysis, testing, alignment, and troubleshooting; high frequency (HF) transceiver circuit analysis; very high frequency (VHF) transceiver detailed circuit analysis, factory-approved testing, and maintenance practices. EL261 is a prerequisite (or co-requisite) for this course.

**EL263 Navigation Systems (3 credit hrs - P) (108 clock hrs)**

This course addresses operational theory and maintenance practices for Automatic Direction Finder (ADF) receivers, marker beacon receivers, and Emergency Locator Transmitters (ELT). Navigation Systems thoroughly examines the circuitry, operational theory, and manufacturer approved testing and maintenance practices for a typical VHF navigation system. The presentations in this course place the accent on the VHF navigation (VOR), localizer (LOC), and glide scope (GS) functions of these radio systems, including alignment, testing, and troubleshooting. EL262 is a prerequisite (or co-requisite) to this course.

**EL264 Individualized Audio & Entertainment Systems (1 credit hr - P) (44 clock hrs)**

EL264 provides a well-rounded examination of various audio and video signals in typical individualized entertainment systems. Block diagram studies and detailed circuit analyses of audio control panels focus on the ways in which audio inputs and outputs are switched and controlled. Included in this study are overviews of commercial aircraft audio systems such as intercom (interphone) systems, passenger address and entertainment systems, and passenger video systems. EL247 is prerequisite.

**EL372 Avionics Shop Practices (1 credit hr - P) (36 clock hrs)**

Presentation topics include: shop management practices, test equipment calibration procedures, a review of aircraft structures, proper use of hardware, FAA regulations pertinent to the operation of a live radio shop, and common avionics (aviation electronics) equipment installation practices. Quarters one through six of the AET program are prerequisites for this course.

**EL374 Microwave Systems (4 credit hrs - P) (144 clock hrs)**

Topics in EL374 include microwave propagation characteristics, microwave generating devices and circuits, transmission lines and antennas for aircraft microwave applications, radar principles and terminology, radar transmitters, receivers, and antennas, and specific radar applications in aviation electronics. Once mastered, these principles are then applied to the study of Distance Measuring Equipment and Area Navigation (DME/RNAV) systems. In addition, course presentations cover Global Positioning Systems (GPS) principles of operation and typical GPS installation considerations. EL263 is a prerequisite for this course.

**EL376 Radar Surveillance & Weather Avoidance (2 credit hrs - P) (72 clock hrs)**

Course EL376 addresses two of the increasingly important aspects of commercial aviation. It does so by focusing on the primary related systems used in aviation today. Subjects of this unit include: airborne weather avoidance radar (WXR), air traffic control radar beacon system (ATCRBS), and traffic alert and collision avoidance system (TCAS). Learners take an in-depth look at the construction, operation, testing, maintenance, and troubleshooting aspects of these complex systems. EL372 and EL374 are prerequisites (or co-requisites) to this course.

**EL378 Automatic Flight Control Systems (3 credit hrs - P) (102 clock hrs)**

EL378 begins with lessons addressing the fundamentals of electromechanical control theory, and includes basic system elements, system functions and responses, control system dynamics, and the various types of control systems. The focus then shifts to flight control systems, including: autopilot system terminology, basic design theory, and a thorough coverage of general aviation autopilots. The course concludes with the study of commercial aircraft automatic flight control systems and flight management systems. As the final offering of the AET program, all other required courses must be completed prior to the start of EL378.

## ***English Language Studies***

### **EN090 Developmental English (1 credit hr) (18 clock hrs)**

This course is offered primarily to foreign students who have not yet mastered the technically-oriented terms and uses of the English language. EN090 addresses language deficiencies by developing vocabulary, syntax, and sentence structure. Special emphasis is given to the technical vocabulary and word usage needed by those entering the aviation and electronics career fields. This course is designed for students who have already attained a moderate level of English language fluency, but have not achieved the required TOEFL 500 score required for entry into PIA's associate degree programs.

### **EN101 English Composition (3 credit hrs) (48 clock hrs)**

This course is designed to improve comprehension and to develop the overall analytical skills that one can apply to any subject requiring the interpretation of written materials. With the student's career choice in mind, EN101 incorporates relevant technical vocabulary in its assignments. The structure of the English language, in both speaking and writing, is used to promote inductive thinking techniques. The materials of this course, including its writing requirements, are designed for first-term postsecondary students.

### **EN105 Technical Writing (3 credit hrs) (48 clock hrs)**

Writing clear and concise technical reports is the primary objective of this unit of study. The basic principles of inductive thinking practiced in EN101 are more fully developed. Creating practical written structures helps promote theme consistency through factual support and overall cohesion. EN101 is prerequisite to this course.

### **EN208 Professional Communication (1 credit hr) (16 clock hrs)**

Verbal communication and resume development are highlighted in this course. The student is helped to acquire up-to-date interview and resume building skills. A student portfolio is developed which includes materials necessary for the interview and hiring process. Methods of electronic resume development and delivery are explored. EN101 is prerequisite to this course.

## ***General Subjects***

### **GS111 Blueprint Reading (1 credit hr - P) (39 clock hrs)**

At first, GS111 familiarizes the learner with drafting equipment and drawing procedures. The course then provides practical experience in reading and interpreting blueprints, diagrams, and schematics, while affording the student the opportunity to construct basic isometric, orthographic, and free-hand illustrations utilizing both pencil & paper. This is an introductory-level course, requiring no prior knowledge of drafting or blueprint reading.

### **GS113 Safety & the Environment (1 credit hr - P) (48 clock hrs)**

This general information course addresses a number of topics which affect safe working environments, as well as ecological concerns for future technicians. Among the subjects discussed are: safe use of hand tools, airport operations, confined space entry, human factors, Occupational Safety & Health Administration (OSHA) regulations, and the Environmental Protection Agency (EPA). Nearly all technicians are now affected by these important issues while on the job. Students apply what they have learned by assisting upperclassmen in certain maintenance tasks. This is an introductory level course, requiring no prior knowledge of these topics.

### **GS127 Using Reference Materials (2 credit hrs - P) (90 clock hrs)**

GS127 teaches the student how to employ reference materials in order to effectively inspect, disassemble, test, reassemble, evaluate, research, acquire, maintain, or measure complex systems and their constituent components. Students also learn how to record and store information concerning these same practices. Using the aerospace industry as a model, GS127 offers a series of related lessons dealing with the utilization of technical reference materials in modern industry. EN101 is a prerequisite for this course.

### **GS136 Introduction to Instruments & Controls (2 credit hrs - P) (72 clock hrs)**

This course of study provides a means to apply several of the concepts involving both mechanical and electronic theory to various instrument systems. Beginning with a study of instrumentation techniques and practices, the course continues with presentations concerning basic electronics subjects, such as radio fundamentals and navigation and communication systems. GS136 concludes with introductory material dealing with radar, autopilots, and flight directors. EL135 is a prerequisite (or co-requisite) to this course.

**GS137 Advanced Instruments & Controls (3 credit hrs) (104 clock hrs)**

Advanced Instruments & Controls is a logical extension of GS136, and provides an overview of some of the more advanced electronically-based systems found on large commercial aircraft. Course highlights include a study of common electronics specifications and standards, and an introduction to advanced communication, navigation, alerting, and warning systems. The study concludes with a more in-depth examination of automatic flight control systems and current electronic instrumentation technologies. GS136 is a prerequisite for this course.

**History****HI104 World History - Aviation (3 credit hrs) (48 clock hrs)**

From the early unsuccessful attempts at flight to uses in warfare to modern commercial applications, HI104 focuses on the impact of aircraft and their technological advances on historical events, economic development, and political decisions. From the designs of Leonardo de Vinci to modern military and commercial aircraft, this course studies the events and discoveries that helped form history and impact global development. This course is designed for first-year postsecondary students.

**Mathematics****MA098 Basic Math Skills (1 credit hr) (24 clock hrs)**

This course is offered to students who need to enhance their basic mathematics skills prior to entry into one of the school's associate degree programs. MA098 primarily addresses arithmetical functions of whole numbers, fractions, and decimals, and touches upon simple one-variable algebraic equations. There is no prerequisite for this course.

**MA102 Foundations of Mathematics (4 credit hrs) (66 clock hrs)**

This comprehensive course is designed to develop the student's skill and confidence with a variety of practical mathematics disciplines. Topics include whole number operations, fractions, decimals, percent, ratios and proportions, powers and roots, signed numbers, algebraic operations, scientific notation, plane and solid figures, graphs, charts, Boolean algebra, and the use of calculators. An acceptable score on the MSA is prerequisite for this course.

**MA106 Mathematics for Technology (3 credit hrs) (48 clock hrs)**

This course in trigonometry is designed to further students' knowledge in mathematical logistics. Topics include: basic trigonometry, right angle theory, coordinate systems, radian measure, trigonometric functions, sine functions, logarithms, complex numbers, and the polar coordinate systems. MA102 is a prerequisite for this course.

**Physics****PH117 Basic Physics (4 credit hrs) (66 clock hrs)**

Upcoming technical courses require a basic understanding of a variety of the physical laws of science. PH117 addresses topics such as: atomic structure, heat & temperature, properties of matter, force and motion, light, sound, magnetism, and simple machines. Archimedes's Principle, Bernoulli's Principle, and Newton's Laws of Motion are given particular attention in this broad study. An acceptable score on the MSA is prerequisite for this course.

**PH119 Introduction to Electricity (1 credit hr - P) (39 clock hrs)**

PH119 introduces the learner to the basic theories and applications of electricity. Ohm's law is studied in the classroom and applied in the lab through construction of simple circuits and electrical diagrams. This course prepares the learner for more complex technical applications of electricity and electronics. An acceptable score on the MSA is prerequisite for this course.

**Propulsion Systems****PP241 Introduction to Turbine Engines (2 credit hrs - P) (72 clock hrs)**

Introduction to Turbine Engines is a comprehensive look at the theory and operation of modern gas turbines. Engines ranging in size from those that can be hand-carried to high by-pass turbofans as big as a house are studied. Operating principles and fundamental construction form a foundation for future courses. Various engine systems are explored, and learners enjoy the opportunity to disassemble, inspect, and reassemble gas turbine propulsion systems. PH117 is a prerequisite to this course.

**PP242 Turbine Engine Technology (3 credit hrs - P) (102 clock hrs)**

Information covered in this unit of study includes turbine engine systems and inspection criteria. Particular attention is given to acceptable maintenance practices, engine trim procedures, and remote visual inspections. Additional emphasis is placed on current auxiliary power unit (APU) technology and high efficiency turbofan powerplants. PP241 is a prerequisite (or co-requisite) for this course.

**PP245 Introduction to Reciprocating Engines (3 credit hrs - P) (108 clock hrs)**

This course includes the history and development of the internal combustion reciprocating engine. Basic piston engine components and their purposes are closely examined. Overhaul and inspection procedures are studied in the classroom then applied in shop. Students who complete this course have a fundamental knowledge about the construction and operation of reciprocating engines. There is no prerequisite for this course.

**PP246 Reciprocating Engine Technology (2 credit hrs - P) (72 clock hrs)**

PP246 covers engine operating principles, including: firing orders, valve timing, and engine efficiencies. It then goes on to address such engine-related systems as: lubrication, induction, supercharging, heat exchangers, and exhaust. Mathematical computations involving compression ratios, horsepower, gear reduction ratios, and specific fuel consumption are also studied. MA102 and PP245 are prerequisites for this course.

**PP265 Advanced Engine Overhaul (2 credit hrs - P) (78 clock hrs)**

This advanced course picks up where PP245 and PP246 left off. Learners disassemble, inspect, re-assemble, and run up a reciprocating engine. All the finer details of engine overhaul are addressed, including: valve grinding and lapping, cylinder fin repair, helicoil installation, stud removal and repair, hardware identification, pre-lubrication, and engine run-in. PP245 and PP246 are prerequisites for this course.

**PP267 Ignition Systems (2 credit hrs - P) (72 clock hrs)**

Information covered in PP267 includes the types of engine ignition systems (battery, magneto) and their operating characteristics. Ignition system components, such as coils, condensers, distributors, harnesses, and spark plugs are closely examined. Particular attention is given to magneto ignition systems and their starting aids. EL125 and PP246 are prerequisites for this course.

**PP268 Propeller Systems (2 credit hrs - P) (72 clock hrs)**

This course examines the fundamental design of propellers and their related systems. Special attention is given to the physical laws which govern propeller operation. The various types of propellers are studied, ranging from simple one-piece wooden props to variable pitch, composite material propellers. Ice control and speed governing systems are also examined. PH117 is a prerequisite for this course.

**PP269 Advanced Engine Maintenance (1 credit hr - P) (44 clock hrs)**

Advanced Engine Maintenance parallels industry hangar and flight line operations for the powerplant technician. The learner conducts inspection and repair work similar to that found at an aviation fixed-base operation (FBO). Topics covered include: engine replacement, 100-hour inspections, non-destructive testing procedures, and routine aircraft engine maintenance practices, including ground run and towing. Based on the theory learned in previous engine-related courses, PP269 takes the student to the next level of practical applications. PP245, PP246, PP265, and PP267 are prerequisites for this course.