# ADMISSIONS INFORMATION

## SCHOOL OF ENGINEERING TECHNOLOGY – AVIATION PROFESSIONAL PILOT PROGRAM TECHNICAL STANDARDS FOR ADMISSION AND RETENTION

**Aviation Professional Pilot Program Technical Standards for Admission and Retention**

Flight training requires that the accumulation of aeronautical knowledge be accompanied by the simultaneous acquisition of skills essential to the profession. The curriculum is stressful requiring both emotional stability and physical stamina. All students flight training at Farmingdale State College must meet the safety and technical standards in the following areas: Communication Skills, Sensory Observation Skills, Motor Skills, Intellectual-Conceptual (Thinking) Skills, Behavioral-Social Skills, and Environmental Tolerance Skills. In addition students must be able to obtain and maintain a FAA Medical Certificate as specified in the Medical Standards in the Code of Federal Regulations Title 14 Part 67, and provide acceptable United States Citizenship Documentation or acceptance by the Transportation Security Administration Flight School Security Program for Legal Aliens in the Code of Federal Regulations Title 14 Part 1552.

**Communication Skills:** The student must possess the ability to communicate effectively in English using reasonable grammar and syntax in both oral and written formats. In addition, the student must notice and appreciate both verbal and nonverbal communication when performing the duties of Pilot in Command (PIC). Communication skills will be evaluated upon the student's pronunciation, structure, vocabulary, fluency, comprehension, and interactions of the English language as per the English language eligibility requirements of 14 CFR parts 61 and 63. Read, write, and understand English as required by FAA standards. Use English to obtain necessary information from acural and written sources. Express information clearly in English both verbally and in writing. Understand and correctly respond to radio and air traffic communication. Communicate clearly by radio with air traffic control Communicate clearly by radio with other pilots in the air.

**Sensory Observation Skills:** Students must be able to make independent observations and assessments to maintain positive aircraft control and safely pilot an airplane: observe air traffic accurately, both at a distance and near. In addition, the student must have the functional use of the senses of vision, touch, hearing, and smell which are necessary in assessing aircraft preflight actions and maintaining aircraft safety. Examples of Sensory Observation Skills include but are not limited to:

- Complete a pre-flight inspection of the engine, propeller, and electrical, environmental, hydraulic, pneumatic, fuel, ignition, lubrication, and flight control systems
- Process visual, auditory, and tactile input simultaneously
- Monitor for other air traffic through continuous visual scanning and radio calls
- Monitor instrument panel
- Detect and respond to auditory signals from air traffic control
- Chart flight plan with maps
- Possess quick sensory response time

**Motor Skills:** The student is required to possess sufficient physical strength, flexibility, and dexterity to operate an airplane, perform gross and fine motor movements, and maintain consciousness and equilibrium to provide safe aircraft operation. The candidate should have full manual dexterity including the functioning of both arms, both wrists, both hands and all fingers. Examples of motor skills include but are not limited to:

- Independently execute all required flight maneuvers including climbs, descents, stalls, turns, take-offs and landings
- Perform manual inspections of the airframe, engine, fuel tanks and oil reservoir requiring the ability to climb while maintaining balance and dexterity
- Respond to engine indications and instruments by making manual adjustments
- Sit for prolonged periods
- Possess quick physical response time
- Activate brake pedals for aircraft steering and braking
- Maintain balance and stability

**Intellectual-Conceptual (Thinking) Skills:** The student must possess the ability to problem solve, establish a plan of action, set priorities, calculate, measure, analyze and synthesize objective as well as subjective data. These critical skills are essential for applying aviation concepts and technology to safely pilot an aircraft. In addition the candidate must possess the ability to understand and comprehend three dimensional and spatial relationships. Examples of intellectual-conceptual skills include but are not limited to:

- Read, understand, and follow Farmingdale State College State, and FAA Regulations
- Recognize the design and operation of aircraft components, instruments, and systems
- Evaluate information and conditions to do flight planning, maneuvering, and safety risk management
- Apply principles of flight, weather, aerodynamics, and navigation to complete flight lessons
- Evaluate flight situations and make decisions quickly with sound judgment
- Process multi-sensory input and multi-task simultaneously to maintain positive aircraft control
- Keep up with sequence and pace of instructions

**Behavioral-Social Skills:** The student must possess emotional stability and flexibility, which will enable their to develop the ability to function effectively in stressful situations. This includes the ability to adapt to changing environments, exercise sound judgment, comprehend constructive criticism, and behave appropriately and safely in a high-risk learning environment. Examples of these Behavioral-Social skills include but are not limited to:

- Work independently with minimal or no supervision
- Follow through with individual responsibilities
- Evaluate information and conditions to do flight planning, maneuvering, and safety risk management
- Exercise good judgment
- Ability to think and act rationally during stressful situations
- Comply with drug-free requirements and testing
- Demonstrate appropriate behavior towards staff, and peers according to societal norms
- Accepting constructive criticism

**Environmental Tolerance Skills:** The student must be able and willing to work in a flight training environment for prolonged periods of time. Examples of these Environmental Tolerance Skills include but are not limited to:

- Changes in altitudes
- Changes in temperature n Changes in air pressure n Extreme noise
- Gas and Fumes
- Moving objects and vehicles
- Slippery or uneven surfaces
- Variations of lighting

FAA Medical Certificate Standards: Please keep in mind that you will have to fulfill additional requirements to be eligible for certification exams or licensure in the field. A medical exam administered by an FAA Aviation Medical Examiner is required prior to flight training. Students must be able to obtain a 1st, 2nd or 3rd class FAA medical certificate. For students pursuing flight as a career choice the department strongly recommends students obtain a 1st class medical certificate. The requirements for medical standards are listed in the Code of Federal Regulations Title 14 Part 67. For specific information on medical standards required for obtaining licenses and ratings through an Aviation Medical Examiner, or to locate an Aviation Medical Examiner in your area, go to www.faa.gov/pilots/amelocator/.

Alien Flight Student Program (AFSP): The mission of the Alien Flight Student Program (AFSP) is to ensure that foreign students seeking training at flight schools regulated by the Federal Aviation Administration (FAA) do not pose a threat to aviation or national security. Section 612 of the Vision 100 - Century of Aviation Reauthorization Act (Public Law 108-176, December 12, 2003) prohibits flight schools regulated by the Federal Aviation Administration (FAA) from providing flight training to a foreign student unless the Secretary of Homeland Security first determines that the student does not pose a threat to aviation or national security. Vision 100 transferred responsibility for conducting security threat assessments for foreign students seeking flight training from the Department of Justice to the Department of Homeland Security. On September 20, 2004, the Transportation Security Administration (TSA) issued an interim final rule establishing the Alien Flight Student Program (AFSP).

Legal notices are available on the Candidate and Provider menus. These include the notices about the Vision 100 - Century of Aviation Reauthorization Act, Paperwork Reduction Act, Information Verification, and Privacy and Security within the AFSP website. For more information,

first review the Flight Training for Aliens and Other Designated Individuals; Security Awareness Training for Flight School Employees Interim Final Rule (IFR) 49 CFR 1552. The rulemaking docket is available at www.regulations.gov. For the AFSP rulemaking docket, click on "Simple Search" and then enter the docket number for the AFSP rulemaking docket (19147) and click on "Search".

If you have further questions regarding legal notices on AFSP policy, please send questions with all relevant details by email to AFSP.Help@dhs.gov.

**Disability Accommodations:** We have developed our technical standards in compliance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. We will provide reasonable accommodations to qualified students with disabilities. The College may not make inquiry regarding a prospective student's disability status prior to admission to the institution. However, students may choose, at any time during their association with the College, to disclose a documented disability. Students should be aware that certain disabilities and/ or their mitigating therapies might delay or preclude their participation in some of the College's programs of study due to regulatory limitations of the Federal Aviation Administration. Students are encouraged to discuss these concerns with an Aviation Medical Examiner or directly with the FAA in Oklahoma City, OK by phoning (405) 954-4821.

Farmingdale State College will provide reasonable accommodations but is not required to substantially alter the requirements or nature of the program or provide accommodations that inflict an undue burden on the College. In order to be admitted one must be able to perform all of the essential functions with or without reasonable accommodations. However, due to the rigors of the curriculum and the immense responsibility for safe aircraft operation a student can be denied admission to the Pro-Pilot program or disenrolled from the program if accommodating the student's disability would pose a direct threat to aircraft safety or would compromise the academic integrity of the program. If an individual's health changes during the program of learning, so that the essential functions cannot be met with or without reasonable accommodations, the student may be withdrawn from the Pro- Pilot program.

**Graduation Requirements:** All Pro-Pilot Majors must have all FAA certificates/ratings required prior to graduation. Grades earned are issued upon obtaining the FAA certificate/rating specified in the course. FSC Professional Pilot and Aviation Flight Minor students must demonstrate safe practices, good judgment, and sound aeronautical decision-making (ADM) as specified in the FSC Flight Operations Manual and the FAA Pilot's Handbook of Aeronautical Knowledge for ALL flights flown as a pilot during the period of their enrollment. This includes piloting aircraft that are not owned or operated by FSC. All flights by FSC enrolled flight students are subject to examination by the Chief Flight Instructor.

If at any point during your tenure with Farmingdale State College you fail to meet our safety and technical standards, the Aviation Center Management reserves the right to no longer provide you flight training. Only students who adhere to these behavioral-social skills standards and the rules/ policies of our Flight Operations Manual are eligible for the Professional Pilot Degree or Aviation Flight Minor. Any student who fails to meet these standards while piloting any aircraft (whether FSC owned/operated or other) during their enrollment at Farmingdale State College may be removed from the Professional Pilot or Flight Minor program.

An admissions interview may be conducted at the discretion of Aviation Center management prior to allowing a student to flight train at Farmingdale State College.

**Mechanicl Engineering Technical Standards for Admission and Retention**

All students in the Mechanical Engineering Technology program at Farmingdale State College must meet the safety and technical standards in the following areas: communication, observation, motor, and intellectual-conceptual attributes.

**Communication Skills:** The student must possess the ability to communicate effectively in English using reasonable grammar and syntax in both oral and written formats. In addition, the student must notice and appreciate both verbal and nonverbal communication when performing design or manufacturing processes. Examples of communication skills include but are not limited to:

- Effectively report to the supervisor for any manufacturing related issues.
- Accurately explain manufacturing processes of mechanical components.
- Present experimental results to supervisor and/or peers

**Sensory Observation Skills:** Students must be able to make independent observations and assessments when operating testing equipment or machines. Student must have the functional use of the senses of vision, touch, hearing, and smell which are necessary in assessing and maintaining work environment safely. Examples of sensory observation skills include but are not limited to:

- Perform visual inspection on lathe and milling machines
- Possess quick sensory response time
- Detect and respond to auditory signals from testing equipment or machines

**Motor Skills:** The student is required to perform gross and fine motor movements, maintain consciousness and equilibrium, and possess the physical strength and stamina which are necessary to operate testing equipment or machines safely. Examples of motor skills include but are not limited to:

- Properly install cutting tools in lathe and milling machines
- Properly inspect mechanical components using measurement tools
- Properly connect hoses in pneumatic and hydraulic control circuits
- Properly connect wires between programmable logic controller PLC and solenoid valves

**Intellectual-conceptual skills:** The student must possess the ability to problem solve, establish a plan of action, set priorities, calculate, measure, analyze and synthesize objective as well as subjective data. These critical skills are essential for applying mechanical and manufacturing concepts and technology to safely operate testing equipment or machines. In addition the student must possess the ability to understand and comprehend three dimensional and spatial relationships.

It is the policy of Farmingdale State College to comply with the Americans with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, and other applicable federal and state regulations that prohibit discrimination on the basis of disability. Otherwise qualified individuals shall not be excluded from participation solely by reason of their disability or medical condition.

Students enrolled at FSC are responsible for requesting accommodations, and for providing the appropriate and required documentation of the disability in a timely manner to Disability Services Center.

The Technical Standards are intended to inform students of the skills, abilities, and behavioral expectations required in this program with or without reasonable accommodation. The Technical Standards reflect performance abilities and characteristics that are necessary to successfully complete the requirements of this program. If you feel you are unable to meet the Technical Standards because of a disability, you are encouraged to discuss your concerns with Disability Services Center.