Aeronautical Science - Professional Pilot

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School of Engineering Technology

Bachelor of Science Degree

Farmingdale State College’s Department of Aviation offers the premier collegiate aviation program on Long Island, and in the region. The professional pilot program is currently accredited by the Aviation Accreditation Board International through February, 2023. The degree program provides training for entry-level pilot positions within the air transportation industry. Opportunities also exist in Federal/State Government, Corporate/ Business Aviation sectors and the United States Military.

A grade of “C” or better is required in all AVN courses (including electives) for graduation from the Professional Pilot Program. Students who are unable to obtain a minimum grade of “C” after the second attempt in any AVN classes must obtain permission from the Chairperson of the department to remain in the program. This will apply for each course that needs to be retaken for the third time.

Flight training students must maintain a cumulative GPA of 2.0 and must be in Good Academic standing at the completion of each semester or they may be removed from their flight training schedule.

Please refer to the Safety and Technical Standards in the front section of the College catalog.

Aeronautical Science-Professional Pilot (BS) Program Outcomes:

Graduates will possess the necessary knowledge, skills and attitudes to competently and ethically function as professional pilots in the aviation industry.

Specifically, the graduate of the Aeronautical Science-Professional Pilot degree program will use the knowledge and skills obtained in the program to:

- demonstrate an ability to apply knowledge of mathematics, science, and applied sciences as a professional pilot
- analyze and interpret data relating to aviation
- function on multi-disciplinary teams as a professional pilot
- exhibit an understanding of ethical and professional responsibility of aviation professionals
- communicate effectively, including both written and verbal forms
- recognize the need for, and an ability to engage in, life-long learning
- exhibit knowledge of contemporary issues relating to professionals in the aviation field
- demonstrate an ability to use the techniques, skills, and modern technology necessary for professional aviators
- analyze the national and international aviation environment
- apply pertinent knowledge in identifying and solving problems confronting professional pilots

The Pro-Pilot Program prepares the student with the following Certificates and Ratings:
• Private Pilot Certificate
• Instrument Rating
• Commercial Pilot Certificate
• Certified Flight Instructor (CFI) Certificate

In addition, the student will have the option to complete the following Certificates and Ratings:

• Multi Engine Land
• Multi Engine Instrument Land
• Multi Engine Instructor
• Airline Transport Pilot Certificate
• Certified Flight Instructor Instrument (CFII) Certificate

Students pursuing flight training in their program must hold a 1st, 2nd, or 3rd class FAA medical Certificate prior to starting flight training. The Department of Aviation strongly recommends students obtain a First Class Medical prior to enrolling in the Professional-Pilot Program. A listing of FAA medical examiners can be obtained by contacting the FAA's Flight Standards District Office (FSDO) at Republic Airport (631-755-1300).

Students may elect to fly during the summer.

Flight Training Costs: Flight training fees and related equipment and publications are in addition to college tuition and fees. Flight fees must be paid each semester regardless of scheduled flight time.

Compliance with AABI Policy 3.4.2 Assessment Plan

Fall 2019 - Subject to Revision

<table>
<thead>
<tr>
<th>Liberal Arts and Sciences</th>
<th>(61 credits)</th>
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<tr>
<td>EGL 101 Composition I: College Writing (GE)</td>
<td>3</td>
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<td>EGL 102 Composition II: Writing About Literature</td>
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<td>ECO 156 Principles of Economics (Macro) (GE)</td>
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<td>ECO 157 Principles of Economics (Micro) (GE)</td>
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<td>Basic Communication - 200 level or higher (GE)</td>
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<td>American/Western/Other World Civilizations (GE)</td>
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<td>MTH 129 Precalculus (GE)</td>
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<td>Foreign Language (GE)</td>
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<td>The Arts (GE)</td>
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<td>PHY 136 College Physics II</td>
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<td>PSY 101 Intro to Psychology</td>
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<td>PSY 331 Industrial/Organizational Psychology</td>
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<td>Liberal Arts &amp; Sciences Electives</td>
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<td>AVN 101 Aviation Industry: A History Perspective</td>
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<td>AVN 104 Private Pilot Ground</td>
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<td>AVN 201 Safety Ethics</td>
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<td>AVN 202 Aviation Meteorology</td>
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<td>AVN 208 Instrument Pilot Ground</td>
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<td>AVN 309 Certified Flight Instructor-Ground</td>
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<td>AVN 320 Air Carrier Flight Operations</td>
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<td>AVN 321 Physiology of Flight</td>
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<td>AVN 322 Advanced Aircraft Systems</td>
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<td>AVN 400 Aviation Law</td>
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<td>AVN 421 Gas Turbine Engines</td>
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<td>AVN 422 Aerodynamics and Aircraft Performance</td>
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<td>AVN 423 Crew Resource Management</td>
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<td>AVN 424 Advanced Avionics and Cockpit Automation</td>
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<td>AVN 425 Safety of Flight</td>
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<td>AVN 447 Capstone Professional Pilot Seminar</td>
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<td>AVN Aviation Electives* (RATP students see advisor for approved course listing)</td>
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<td>AVN 105 Private Pilot – Flight to Solo</td>
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<td>AVN 106 Private Pilot – Flight to Certificate</td>
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<td>AVN 209 Instrument Pilot – Flight</td>
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<td>AVN 410 Commercial Multi Engine Pilot Rating</td>
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Degree Type: BS
Total Required Credits: 121-123

Please refer to the General Education, Applied Learning, and Writing Intensive requirement sections of the College Catalog and consult with your advisor to ensure that graduation requirements are satisfied.

Notes:
1. Students entering the program with a Private Pilot’s certificate must enroll in AVN 112 Private Pilot Proficiency. Students with any flight experience may also be required to enroll in AVN 112 at the discretion of the Chief Flight Instructor. Students must complete all required flight certificates and ratings above the Private Pilot Certificate at the Farmingdale State College (FSC) Flight Center in order to graduate with a FSC Professional Pilot Degree.

2. Flight Courses must be completed within a year from the date a student registers. Within this time frame a student must either 1) Successfully complete the course and be issued a grade, OR 2) Withdraw from the course, due to the following extenuating circumstances: Active Military Obligations, Medical conditions requiring removal from active flight status for a duration of 60 consecutive days or more. If neither of the above occurs, a failing grade will be assigned.

3. Students holding flight certificates and ratings above the Private Pilot Certificate are permitted to flight train but cannot graduate with a Professional Pilot degree.

4. All ground courses (AVN 104, 208, 211, 309) require successful completion of an FAA administered exam at the end of the course. The FAA exam can only been taken after receipt of a written endorsement from the course instructor. This instructor endorsement is given to those students who demonstrate sufficient understanding of the subject matter by achieving an average of 80 or better for all of the course exams during the semester. Students who don’t receive the endorsement to take the FAA exam or those who do not achieve a score of 70 or better on the FAA exam will be given an F for the course. Students that fail a ground course will not be permitted to continue the flight training associated with that ground course until they successfully pass the course. Students that fail a ground course twice will be removed from the Professional Pilot program and from flight training under Part 141 and cannot be endorsed by the College for reduced aeronautical experience under the FAA Letter of Authority (LOA) to Farmingdale State College.

5. Students seeking the RATP MUST take an elective credit course approved on our current LOA. Please see an academic advisor for the most recent approved course listing.

Course Descriptions

**EGL 101 Composition I: College Writing (GE)**
This is the first part of a required sequence in college essay writing. Students learn to view writing as a process that involves generating ideas, formulating and developing a thesis, structuring paragraphs and essays, as well as revising and editing drafts. The focus is on the development of critical and analytical thinking. Students also learn the correct and ethical use of print and electronic sources. At least one research paper is required. A grade of C or higher is a graduation requirement. Note: Students passing a departmental diagnostic exam given on the first day of class will remain in EGL 101; all others will be placed in EGL 097. Prerequisite is any of the following: successful completion of EGL 097; an SAT essay score (taken prior to March 1, 2016) of 7 or higher; an SAT essay score (taken after March 1, 2016) of 5 or higher; on-campus placement testing. Credits: 3

**EGL 102 Composition II: Writing About Literature**
This is the second part of the required introductory English composition sequence. This course builds on writing skills developed in EGL 101, specifically the ability to write analytical and persuasive essays and to use research materials correctly and effectively. Students read selections from different literary genres (poetry, drama, and narrative fiction). Selections from the literature provide the basis for analytical and critical essays that explore the ways writers use works of
the imagination to explore human experience. Grade of C or higher is a graduation requirement. Prerequisite(s): EGL 101 Cr

Credits: 3

ECO 156 Principles of Economics (Macro) (GE)
This course is designed to introduce classic macroeconomic issues such as unemployment, inflation, national income and economic growth. The course will provide a unified framework to address these issues and to study the impact of different policies, such as monetary and fiscal policies, on the aggregate behavior of the economy. Analytical tools will be used to understand the experiences of the United States and other countries, and to address how current policy initiatives affect their macroeconomic performance. Credits: 3

ECO 157 Principles of Economics (Micro) (GE)
This course introduces students to fundamental economic concepts and theory, including demand, supply, and the formation of equilibrium prices in product and resource markets. Students will learn a specific set of analytical tools as well as how to apply them to current policy issues. In addition, the course offers an introduction to applied fields such as industrial organization (market structures), labor economics, international trade, and market failure. Credits: 3

MTH 129 Precalculus (GE)
In this course, the topics introduced in College Algebra course will be extended. The course will provide a comprehensive study of functions, which are the basis of calculus and other higher-level mathematics courses. The students will study the properties, graphs, and some applications of polynomial, rational, inverse, exponential, logarithmic, and trigonometric functions. Note: Students completing this course may not receive credit for MTH 117. Prerequisite(s): MP3 or MTH 116 Credits: 4

MTH 130 Calculus I with Applications
This is a calculus course for those not majoring in Mathematics, Engineering Science or Computer Science. Topics include the derivative, differentiation of algebraic, trigonometric, exponential and logarithmic functions, applications of the derivative and the definite integral. Applications are taken from technology, science, and business. Problem solving is stressed. A graphing calculator is required. Note: Students completing this course will not receive credit for MTH 150. Prerequisite(s): MP4 or MTH 117 or 129 Credits: 4

PHY 135 College Physics I (GE)
An integrated theory/laboratory general college physics course without calculus. Topics will include fundamental concepts of units, vectors, equilibrium, velocity and acceleration in linear and rotational motion, force, energy, momentum, fluids at rest and in motion, and oscillatory motion. Laboratory problems, experiments and report writing associated with the topics studied in the theory are performed. Prerequisite(s): MTH 129 Corequisite(s): PHY 135L Credits: 4

PHY 136 College Physics II
A continuation of PHY 135. Topics will include heat, electricity, magnetism, light and optics. Prerequisite(s): PHY 135 Corequisite(s): PHY 136L Credits: 4

PSY 101 Intro to Psychology
This course is designed to present basic psychological concepts and to introduce students to the scientific study of behavior. Core topics include methods of psychological research, the biological bases of behavior, principles of learning, memory and cognition, personality, and psychopathology. Other selected topics to be covered would include the following: motivation and emotion, life-span development, social psychology, health psychology, sensation and perception, intelligence, human sexuality, statistics, and altered states of consciousness. Credits: 3

PSY 331 Industrial/Organizational Psychology
Students will explore how the science and practice of psychology is applied in the world of work and organizations. Among the topics that will be examined are the history and research methodology of industrial/organizational psychology, job analysis, employee selection, performance evaluation, training, work motivation, job satisfaction, leadership, group dynamics, and organizational development. The course will highlight emerging trends in the modern workforce and examine how these changes will impact research and practice in today's organizations. Students will examine the factors influencing cross-cultural diversity and globalization, the theoretical and practical implications of these workforce trends, and how current organizational theories and practices apply to cultures outside of the United States. Implications for the full range of topics discussed in the course will be examined including how cultural diversity and globalization affect employee selection procedures, group dynamics, preferences for leadership, training needs, work motivation, and organizational development. Prerequisite(s): PSY 101. Credits: 3

**AVN 101 Aviation Industry: A History Perspective**

This course is a basic survey of the aviation industry viewed from a historical perspective. Topics covered will range from the early days of aviation to the present. The course will also examine the chronology of aviation laws and regulations and how they have changed from aviation beginnings in the United States to present day. At the conclusion of this course, the student will have a comprehensive knowledge of the U.S. air transportation industry and will understand its significant social/economic impact upon the nation and the world. Credits: 3

**AVN 104 Private Pilot Ground**

Private Pilot-Ground Training will enable the student to meet the prerequisite(s) specified in 14 CFR Part 61.105 as well as 14 CFR Part 141 Appendix B, as appropriate. Selected subject areas will include airplane systems, aerodynamic principles, flight environment, communication and flight information, meteorology for pilots, FAA Regulations, National Airspace System, NTSB, AC’s, interpretation of weather data, aircraft performance, radio and visual navigation, human factors, flight safety, and cross country flight planning. A grade will be issued upon taking the FAA ?Knowledge Examination? necessary for the Private Pilot certificate. Prerequisite(s): FAA Student Pilot Certificate Credits: 3

**AVN 201 Safety Ethics**

This course emphasizes ethical decision making as it applies to Complex Systems, aviation and aerospace, nuclear power plant, civil and IT engineering and the medical field. These systems have an extremely narrow tolerance for error, often resulting in monumental impact on the public, the economy of the nation and human life. This course seeks to increase the awareness levels of ethical issue for industry professionals and to provide the necessary skills to effectively deal with such critical problem solving issues. Topics include complex systems ethical decision making, safety with human factors emphasis, applied ethics for members of complex systems, corporate culture and risk management theory, moral and values. Students cannot get credit for AVN 201 and 201W; AVN 201W can be used to fulfill the writing intensive requirement. Prerequisite(s): EGL 102 with a grade of C or higher Credits: 3

**AVN 202 Aviation Meteorology**

A basic course in Aviation Weather. Weather theory including differential heating, air mass development, wind frontal activity and systems, weather hazards, weather reporting and weather forecasting is covered. Charts which are studied include Surface Analysis and Weather Depiction Charts, Constant Pressure Charts, Composite Moisture Stability Charts. Prerequisite(s): AVN 104 with a grade of C or higher Credits: 3

**AVN 208 Instrument Pilot Ground**

Instrument Pilot Ground training will enable the student to meet the prerequisite(s) specified in 14 CFR Part 61.65(b), or 14 CFR Part 141 Appendix C, as appropriate. Selected subject areas will include Federal Aviation Regulations that apply to flight operations under IFR, appropriate information that applies to flight operations under IFR in the “Aeronautical Information Manual,” Air Traffic Control system and procedures for instrument flight operations, IFR navigation and approaches by use of navigation systems, use of IFR enroute and instrument approach procedure charts, procurement and use of aviation weather...
reports and the elements of forecasting weather trends based on that information and personal observation of weather conditions, safe and efficient operation of aircraft under instrument flight rules and conditions, recognition of critical weather situations and wind shear avoidance, aeronautical decision making and judgment, and crew resource management, including crew communication and coordination. A grade will be issued upon taking the FAA "Knowledge Examination" necessary for the Instrument Pilot Rating. Prerequisite(s): AVN 104 and AVN 105 with a grade of C or higher FAA Private Pilot Knowledge Test (with a grade of 70 or better). Credits: 3

**AVN 211 Commercial Pilot Ground**
Commercial Pilot Ground Training will enable the student to meet the prerequisite(s) specified in 14 CFR Part 61.125(b), or 14 CFR Part 141 Appendix D, as appropriate. Selected subject areas will include: accident reporting requirements of the National Transportation Safety Board, basic aerodynamics and the principles of flight, meteorology to include recognition of critical weather situations, wind shear recognition and avoidance, and the use of aeronautical weather reports and forecasts, safe and efficient operation of aircraft weight and balance computations, use of performance charts, significance and effects of exceeding aircraft performance limitations, use of aeronautical charts and a magnetic compass for pilotage and dead reckoning, use of air navigation facilities, aeronautical decision making and judgment, principles and functions of aircraft systems, maneuvers, procedures, and emergency operations appropriate to the aircraft, night high altitude operations, procedures for operating within the National Airspace System, and procedures for flight and ground training for lighter than air ratings. A grade will be issued upon taking the FAA Knowledge Examination necessary for the Commercial Pilot certificate. Prerequisite(s): AVN 106 and AVN 208 with a grade of C or higher; FAA Instrument Rating Knowledge Test (with a grade of 70 or better). Credits: 3

**AVN 300 Government in Aviation**
This course expands and focuses on many of the regulatory subjects in AVN 101 (Aviation History). It is a study of the constitutional, legislative, executive and judicial control of aviation from the local, state, federal and international perspective. This course forms the foundation for AVN 400 Aviation Law. Students who take AVN 300 cannot receive credit for AVN 300W. AVN 300W can be used to fulfill the writing intensive requirement. Prerequisite(s): AVN 101 with a grade of C or better or CRJ 100, Junior or Senior status required. Credits: 3

**AVN 309 Certified Flight Instructor-Ground**
This course will allow students to meet the requirements as specified by 14 CFR Part 61.185 or 14 CFR Part 141 Appendix F, as appropriate, and will allow students to meet the requirements necessary to complete the Certified Flight Instructor Written Exams: Fundamentals of Instruction (FOI), Certified Flight Instructor Airplane (FIA), and the Certified Flight Instructor Instrument Written Exam (CFII). Selected subject areas will include applicable Federal Aviation Regulations of this chapter that relate to Certified Flight Instructor pilot privileges, limitations, and flight operations, the fundamentals of instructing, including: the learning process; elements of effective teaching; student evaluation and testing; course development; lesson planning; and classroom training techniques. Also included are the aeronautical knowledge areas for a recreational, private, and commercial pilot certificate applicable to the aircraft category for which flight instructor privileges are sought. A grade will be issued based on the completion of the following written exams: the student will either take the FAA Knowledge Examinations (Written Exams) necessary for the Certified Flight Instructor Certificate; Fundamentals of Instructing (FOI), Flight Instructor Airplane (FIA), and the Flight Instructor Instrument Written Exam (FII) or the FAA Knowledge Examinations (Written Exams) necessary for the Advanced Ground Instructor Certificate; Fundamentals of Instructing (FOI), Advanced Ground Instructor (AGI), and the Instrument Ground Instructor (IGI). Prerequisite(s): AVN 211 and AVN 209 with a grade of C or higher. Credits: 3

**AVN 320 Air Carrier Flight Operations**
A study of the operational considerations and procedures of air carrier flight operations. Flight Operations conducted under 14CFR121 (Part121 air carriers) are highlighted. Also included are 14CFR135 (Part135) Air Carriers, supplemental air carriers and Operators of Large Aircraft flight operations. Prerequisite(s): AVN 208 with a grade of C or higher Credits: 3
AVN 321 Physiology of Flight
Operational and lifestyle considerations and consequences arising from physiological factors will be introduced, with an emphasis on the atmosphere and high-altitude flight (Hyperbarism). General fundamentals of anatomy and psychology will be reviewed to impart career-prolonging health maintenance and stress reduction techniques. Subtle yet critical aviation issues such as situational awareness and crew resource management will be explored. Prerequisite(s): AVN 202 with a grade of C or higher Credits: 3

AVN 322 Advanced Aircraft Systems
This course exposes the student to the advanced aircraft systems commonly found in air carrier aircraft. Included are Electrical Systems, Hydraulics, Pneumatics, Flight Controls, Landing Gear Systems, Auto-Pilots and Cockpit Automation, Master Warning and Caution Annunciation Systems. At the conclusion of this course, the student should have a good level of operational understanding of these systems. Prerequisite(s): AVN 211 Credits: 3

AVN 400 Aviation Law
Aviation Law develops the student's knowledge to the application level of learning by emphasis on real cases to demonstrate the legal, regulatory and government theory previously discussed in AVN 101 and AVN 300. Emphasis will be on the FAA's roles in regulating aviation including the rule making process, certification of airmen, medical certification and enforcement. Prerequisite(s): AVN 300 or AVN 300W with a grade of C or higher. Credits: 3

AVN 421 Gas Turbine Engines
An in-depth study of gas turbine engines as found in air carrier and high performance aircraft. Topics include the history of turbine development, jet propulsion, theory engine design and construction and control systems. FAA Commercial Pilot Certificate with Instrument Rating required. Prerequisite(s): AVN 321 Credits: 3

AVN 422 Aerodynamics and Aircraft Performance
Advanced aerodynamic principles will be introduced following extensive review of fundamentals. Emphasis will be on practical design and performance considerations including mission, cost, and feasibility. This course will familiarize the student with the application of aeronautical principles and design practices. The course will focus steps in preliminary design of general aviation aircraft with emphasis on the iterative aspects of design. Prerequisite(s): AVN 211 with a grade of C or higher and PHY 136 Credits: 3

AVN 423 Crew Resource Management
This course deals with flight-crew decision making. It includes, but is not limited to: optimum decision-making techniques; personality profiling; crew communication; high risk areas of a flight; maintaining situational and spatial awareness; crew discipline; and airline-level standard operating procedures. Prerequisite(s): Junior Advances Standing and Completion of AVN 300W level course. Credits: 3

AVN 424 Advanced Avionics and Cockpit Automation
Introduction to modern cockpit avionics suites as found in corporate Jets and Transport Category aircrafts. Principles, operations and limitations of advanced avionics suites typically found in this category aircraft. Automation topics covered include automatic flight control and flight director systems, stability augmentation systems, power management systems, flight management systems and autoland/go around systems. Latest technology navigation systems topics including inertial navigation systems (INS), inertial reference systems (IRS), Global Positioning Systems (GPS) including Local Area Augmentation Systems (LAAS) and Wide Area Augmentation System (WAAS). Prerequisite (s): AVN-209 with C or higher and AVN-211 with a grade of C or higher. Credits: 3

AVN 425 Safety of Flight
Safety of Flight is an essential course for students to understand the principles and regulatory practices of commercial aviation safety in the United States and worldwide community in the 21st century. It includes an examination of aircraft accidents, the respective roles of the FAA and NTSB, human factors in aviation safety, air traffic safety systems, and introduction to Safety Management Systems (SMS). The student will obtain the necessary safety of flight knowledge to be able to effectively work in the aviation industry. At the completion of the course, students will be able to assess contemporary issues in safety of flight and demonstrate understanding of aviation safety and human factors. Prerequisite(s): AVN 209 with a grade of C or higher and AVN 211 with grade of a C or higher. Credits: 3

AVN 447 Capstone Professional Pilot Seminar
The Capstone Pro Pilot Seminar will be the culminating Upper Division experience in flight education for the Professional Pilot program. The seminar will require students to examine key aviation concepts presented in the Pro Pilot track and connect key learning objectives associated with these concepts to the skills necessary for success in the aviation industry as a pilot. Selected subject areas will include but not be limited to aviation safety, aviation law, crew resource management, safety ethics, physiology of flight, and aviation meteorology and how these relate to the requirements to be a certificated instrument-rated commercial pilot and fly as a certified flight instructor or a multiengine airplane pilot. Students will be required to complete comprehensive case studies of aviation accidents, present results to the seminar participants and lead the case discussion. A Capstone mentorship flight or simulator event summarizing the key course concepts will be included as part of the course (flight fees as applicable). Prerequisite(s): AVN 209 with C or higher. Credits: 3

AVN 105 Private Pilot – Flight to Solo
Private Pilot Flight to Solo will enable the student to meet some of the prerequisite(s) specified in 14 CFR Part 61.109 or 14 CFR Part 141 Appendix B, as appropriate. During this course, the student obtains the foundations for all future aviation training. The student becomes familiar with the training airplane and learns how the airplane controls are used to establish and maintain specific flight attitudes and ground tracks. At the conclusion of the course, the student demonstrates proficiency in basic flight maneuvers and the student pilot will have successfully completed no less than three (3) takeoffs and full stop landings in the traffic pattern as Pilot-in-Command. Students must have a FAA Student Pilot Certificate/FAA 3rd Class or higher Medical Certificate. Aero fees will be charged. Note: FAA minimum hours approved are 35 total hours for AVN 105 & 106. Prerequisite(s): FAA Student Pilot Certificate and AVN 104 Credits: 1

AVN 106 Private Pilot – Flight to Certificate
Private Pilot Flight training will enable the student to meet the prerequisite(s) specified in 14 CFR Part 61.109 or 14 CFR Part 141 Appendix B, as appropriate. Private Pilot Flight to Certificate will enable the student to meet the requirements necessary to obtain a Private Pilot certificate. An enrolled student must demonstrate through oral examinations, practical tests, and appropriate records that he/she meets the knowledge, skill and experience requirements necessary to obtain a Private Pilot certificate with an airplane single-engine land rating. Selected subject areas will include engine starting, normal and crosswind taxiing, radio communications, normal takeoffs, power on and power off stalls, maneuvering during slow flight, traffic patterns, go around from a rejected landing, crosswind and normal landings, cross country flying, radio navigation, cockpit management, low level wind shear precautions, airport and runway marking and lighting, constant airspeed climbs and descents, stall spin awareness, and steep turns. Students must have a FAA Student Pilot Certificate/FAA 3rd Class or higher Medical Certificate. A grade will be issued upon taking the FAA Private Pilot practical exam. Aero fees will be charged. Note: FAA minimum hours approved are 35 total hours for AVN 105 & 106. Prerequisite(s): AVN 104 and AVN 105 with a grade of C or higher; FAA Student Pilot Certificate Credits: 1

AVN 209 Instrument Pilot – Flight
Instrument Pilot Flight training will enable the student to meet the prerequisite(s) specified in 14 CFR Part 61.65, or 14 CFR Part 141 Appendix C, as appropriate. Instrument Pilot Flight will enable the student to meet the requirements necessary to obtain an Instrument Rating. Selected subject areas will include airplane attitude control by reference to instruments, use of full and partial panel reference, accurate use of navigation systems by maintaining positional awareness, holding patterns,
instrument approaches, and IFR cross country procedures. A grade will be issued upon taking the FAA Instrument Rating practical exam. Students must possess an FAA Private Pilot Certificate/FAA 3rd Class or higher Medical Certificate. Aero fees will be charged. Note: FAA minimum hours approved are 35 total hours for AVN 209. Prerequisite(s): AVN 106 with a grade of C or higher Corequisite(s): AVN 208 Credits: 1

AVN 212 Commercial Pilot – Flight
Commercial Pilot Flight training will enable the student to meet the prerequisite(s) specified in 14 CFR Part 61.129 or 14 CFR Part 141 Appendix D, as appropriate. Commercial Pilot Flight will enable the student to meet the requirements necessary to obtain a Commercial Pilot Certificate. Selected subject areas include accurate planning of VFR cross country flights, pilotage, dead reckoning, navigation systems, and commercial maneuvers as well as provide the skill necessary to safely fly a complex airplane. A grade will be issued upon taking the FAA Commercial Pilot practical exam. Students must possess a FAA 3rd Class or higher Medical Certificate. Aero Fees will be charged. Note: FAA minimum hours approved are 65 total hours for AVN 212. Prerequisite(s): AVN 209 with a grade of C or higher Corequisite(s): AVN 211 Credits: 1

AVN 310 Certified Flight Instructor or
This course will allow students to meet the requirements as specified by 14 CFR Part 61.187 or 14 CFR Part 141 Appendix F, as appropriate, and will allow students to meet the requirements necessary to complete the Certified Flight Instructor Airplane Practical Exam. Selected subject areas will include applicable Federal Aviation Regulations of this chapter that relate to Certified Flight Instructor pilot privileges, limitations, and flight operations, the fundamentals of instructing, including: The learning process; elements of effective teaching; student evaluation and testing; course development; lesson planning; and classroom training techniques. Also included are practical flight training modules necessary to gain the required aeronautical experience and proficiency applicable to recreational, private, and commercial pilot certificates appropriate to the aircraft category/class for which flight instructor privileges are sought. A grade will be issued upon taking the FAA Certified Flight Instructor Certificate. Students must possess an FAA Commercial Pilot Certificate with Instrument Privileges/FAA 3rd Class or higher Medical Certificate. Aero Fees will be charged. Prerequisite(s): AVN 212 with a grade of C or higher Corequisite(s): AVN 309 Credits: 1

AVN 410 Commercial Multi Engine Pilot Rating
This course prepares the Commercial Pilot with single-engine and instrument ratings to add multi-engine airplane privileges to his/her certificate. Commercial Pilot Flight training will enable the student to meet the prerequisite(s) specified in 14 CFR Part 61.63 or 14 CFR Part 141.57, as appropriate. Additionally, the student will gain practical experience applying the concepts of Crew Resource Management in the cockpit by utilizing a series of Flight Training Device sessions and defined flight training sessions. The student will be introduced to multi crew operations by applying newly acquired skills applicable to the multi crew environment such as Pilot Flying, Pilot Monitoring, advanced aircraft briefings, emergency and abnormal situations in various phases of flight, cockpit automation, Crew Resource Management to include crew communication and coordination, and Aeronautical decision making and judgment. Students must possess an FAA Commercial Pilot Certificate/FAA 3rd Class or higher Medical Certificate. Aero Fees will be charged. A grade will be issued upon taking the FAA Commercial Multi-Engine Practical Exam. Prerequisite(s): AVN 209 and AVN 212 with a grade of C or higher. Credits: 1

Admission to Farmingdale State College - State University of New York is based on the qualifications of the applicant without regard to age, sex, marital or military status, race, color, creed, religion, national origin, disability or sexual orientation.