HONOURS BACHELOR OF AVIATION TECHNOLOGY (FPR)

About the Program

This four-year program is the only aviation technology-based degree program in Canada. Seneca has been the national leader in aviation education for more than 50 years. Responding to emerging industry demands, Seneca is now educating students at the degree level. Our program provides a rigorous aviation technology-based curriculum developing your theoretical and practical knowledge of aviation technology.

You will gain the knowledge and experience to safely operate complex aircraft. You will also learn business management, airport operations and planning and air carrier administration to gain a larger sense of the variety of careers in the aviation industry.

Flight Training

This program is a Transport Canada approved Integrated Airline Transport Pilot training program that prepares students to be Commercial Airline Pilots. Intensive flight and simulator training is an integral part of this rigorous degree program. Eight semesters of flight training is a required component of the program. Two of these intensive training semesters will occur during the summer months.

Students who are unable to achieve a satisfactory rating in their flight training after a set number of attempts will be withdrawn from the Honours Bachelor of Aviation Technology program and will be ineligible for re-admission. Please note that flight training is carried out seven days per week and students will be required to fly weekends during their training.

Promotion Policy

Attendance to all classes is a Transport Canada requirement for promotion. Students must pass all Transport Canada exams, which have higher pass grades.

Credential Awarded

Honours Bachelor Degree

Duration

8 Semesters (4 Years)

Starts

September

Program and Course Delivery

This program is offered in person. Students are required to come on campus to attend classes.

Skills

Throughout this program you will develop the following skills:

- Operate multi-engine aircraft using manually prepared flight plans
- Operate automated flight systems
- Business management
- Airport operations and planning
- Air carrier administration
- Understand the technological and human factors that affect successful operation of an aircraft

Work Experience
Mandatory Degree Work Term

A work experience that includes at least one term in a formal work environment. The work term(s) may be a paid or unpaid position that is completed between two academic semesters and requires a minimum of 420 hours of work. Students must be in good standing and meet all identified requirements prior to participating in the work experience. The successful completion of the work term(s) is required for graduation. Eligibility for participation does not guarantee that a work position will be secured. Additional fees are required for the mandatory degree work term regardless of success in securing a work position.

Degree Structure

Year	September	January	May
Year 1	Semester 1	Semester 2	Intensive Flight Training
Year 2	Semester 3 / Flight Training	Semester 4 / Flight Training	Intensive Flight Training
Year 3	Semester 5 / Flight Training	Semester 6 / Flight Training	Intensive Flight Training or Work Term
Year 4	Semester 7 / Flight Training	Semester 8 / Flight Training	

Your Career

Graduates of the program can explore the following career options:

- Professional pilot
- Flying instructor
- Air traffic controller
- Civil aviation inspector

Additional Information and Opportunities

- Student Success Data (https://www.senecapolytechnic.ca/programs/fulltime/FPR/AABI-Accreditation.html)
- Royal Canadian Air Force Pilot Training Program (RCAF) (https://www.senecapolytechnic.ca/school/aviation/rcaf.html)

Program of Study

Course Code	Course Name	Weekly Hours
Semester 1		
AER100	Aeronautics Fundamentals	4
COM100	Technical Communications	4
ELE100	Electricity Fundamentals	5
ISR104	Computer Fundamentals	3
MEC110	Mechanics	4
MTH110	Mathematics	4
Semester 2		
AER200	Advanced Aeronautics	2
CHM300	Chemistry	3

ELE200	Fundamentals of Electronics	4
MEC200	Mechanics II	4
MTH200	Mathematics II	4
PHY200	Fluid Mechanics	6
Summer 1		
Intensive Flying		
plus: Liberal Studies Course (1)		3
Semester 3		
AVN300	Instruments and Avionics Fundamentals	3
COM400	Advanced Technical Communications	3
MTH300	Mathematics	3
MTS300	Materials Science	3
plus: Liberal Studies Course (1)		3
Semester 4		
ARO400	Fundamentals of Aerodynamics	3
ASD400	Aircraft Structural Design	3
AVN400	Advanced Instruments and Avionics	3
MET400	Meteorology	3
THE300	Thermodynamics	3
Summer 2		
Intensive Flying		
BAB100	Introduction to Canadian Business	3
Semester 5		
ARO500	Advanced Aerodynamics	3
ASY500	Basic Aircraft Systems	3
BAB100	Introduction to Canadian Business	3
FLP500	Flight Propulsion	4
HUM500	Human Factors Ethics and Safety	3
Semester 6		
AAS700	Advanced Aircraft Systems	3
ACP700	Air Carrier Procedure	3
ASC600	Aircraft Stability and Control	3
BAB700	Management Principles and Practices	3
CPA600	Computer Programming Aerospace	2
SMS600	Safety Management System	3
WTP200	Work Term Preparation	1
Summer 3 - Work Term		
FPR881	Aviation, Work Term	35
Semester 7		
ADM600	Air Carrier Administration	3
ADV700	Advanced Aircraft Design	3
FLO600	Flight Operations I	3
FSL100	Introductory French I for Degree Students	3
LSP700	Applied Research Methodology	3
Semester 8		
ADV800	Advanced Aircraft Design	3
AOP800	Airport Planning	3
FLO800	Flight Operations II	3

LSP800	Applied Research Project	3
plus: Liberal Studies Course (1)		3

Fly Courses

The following courses will be scheduled throughout your regular semesters and summer semesters, as required.

- FLY100 - First Solo
- FLY200 - Solo Cross Country
- FLY300 - Private Pilot Licence
- FLY400 - Complex Aircraft Check on Type
- FLY401 - VFR Navigation Progress Test
- FLY500 - Multi-Engine Rating
- FLY501 - Commercial Pilot Licence Flight Test
- FLY600 - Single Engine Instrument Flying Validation
- FLY601 - Group One Instrument Rating
- FLY700 - Multi Crew Air Taxi Turboprop - Pilot Monitoring
- FLY800 - Multi Crew Airline Turbojet
- FLY900 - Multi Crew Air Taxi Turboprop - Pilot Flying

Seneca has been granted a consent by the Minister of Colleges and Universities to offer this degree for a seven-year term starting Feb. 5, 2021. In conformity with the Minister's criteria and requirements, Seneca will submit an application for the renewal of the consent for this program 12 months prior to the expiration of the consent. Seneca shall ensure that all students admitted to the above-named program during the period of consent will have the opportunity to complete the program within a reasonable time frame.

Program Learning Outcomes

This Seneca program has been validated by the Credential Validation Service as an Ontario College Credential as required by the Ministry of Colleges and Universities.

As a graduate, you will be prepared to reliably demonstrate the ability to:

- Independently operate multi-engine aircraft, in instrument meteorological conditions using manually prepared flight plans.
- Support flight operations by applying the principles of aircraft design and performance, and operating procedures.
- Build interpersonal relationships by applying the principles of leadership, communication, and problem solving skills while working independently and in groups.
- Operate automated flight systems through critical phases of flight.
- Maintain, through proper airmanship, the safe operations of multi-engine aircraft by accounting for human, legal, mechanical, and geographic factors.
- Engage in continuous learning to advance career development and support a professional pilot image.
- Manage stress by applying Crew Resource Management (CRM) skills and practicing personal wellness strategies.
- Support the sustainable operation of airports by analyzing the role and impact of government, safety, budgeting, and licensing.

Admission Requirements

- Ontario Secondary School Diploma (OSSD) or equivalent, including six Grade 12 U or M#courses with a minimum overall average of 65%,

or a mature applicant (https://www.senecapolytechnic.ca/registrar/ canadian-applicants/admission-requirements/mature-applicants.html).

- Required courses with minimum final grade of 65% in each and minimum four-course average of 70%:
  - English: Grade 12 ENG4U
  - Calculus and Vectors: Grade 12 MCV4U
  - Advanced Functions: Grade 12 MHF4U
  - Physics: Grade 12 SPH4U
- All applicants must meet the Bachelor of Aviation English Proficiency requirement (https://www.senecapolytechnic.ca/registrar/canadian-applicants/admission-requirements/english-proficiency.html). If you do not meet this criteria, you must complete an acceptable English language proficiency test and earn an appropriate score. Test results should be sent to ontariocolleges.ca.

Learn about Seneca's free, English language course for students who don't meet the high school requirements (https:// www.senecapolytechnic.ca/registrar/canadian-applicants/admission-requirements/upgrading-options/english-12u-equivalency.html), as well as recommended upgrading for applicants who don't meet their academic subject requirements. (https://www.senecapolytechnic.ca/registrar/ canadian-applicants/admission-requirements/upgrading-options.html)

Additional Information

- Admission to this program is highly competitive. Applicants are ranked based on academic strength in the four required courses. Only the top ranked applicants will be offered a seat in the program.

- After admission but before beginning the program you must:
  - Pass a medical exam administered by a designated Transport Canada Aviation Medical Examiner; meet Transport Canada's Physical and Mental Requirements Category 1.
  - Not have any criminal convictions that would preclude you from holding an airport security clearance.
- In order to fly to the United States during flight training, it is strongly recommended that you have a valid Canadian passport or a United States entrance visa.

Notes

- Although not required for admission, Grade 11U Chemistry is recommended for your success in the program.
- It is common practice for the aviation industry to require police criminal checks and drug testing for employment. Consistent with these industry practices and for the safety of flight operations, it is possible that random drug screening could occur at any point during your tenure as a student.

Pathways

As a leader in academic pathways, we offer a range of options that will allow you to take your credential further in another Seneca program or a program at a partner institution.

To learn more about your eligibility, visit the Academic Pathways (https:// www.senecapolytechnic.ca/pathways.html) web page.

Last updated: August 3, 2025 at 10:26 a.m.