

Area of Interest: Transportation

## General Arts and Science - Aviation Management

Ontario College Diploma

Program Code: 0438K01FWO

2 Years

Ottawa Campus

### Our Program

#### Launch your career as a commercial pilot.

The two-year General Arts and Science Ontario College Diploma with a concentration in Aviation Management program provides you with the knowledge and skills to become a commercial pilot.

Learn the required level of proficiency necessary to complete the Transport Canada Commercial Pilot License (CPL) written examination (CPAER) and practical flight test. Some classes take place at the Ottawa Flying Club, Rockcliffe Flying Club, Cornwall Aviation and the Canadian Aviation and Space Museum, providing all the skills needed to start your career.

Industry-professional instructors also teach you practical skills such as fuel handling, aircraft handling, and winter operations. Learn about cockpit resource management, maintenance skills and dispatching. Acquire a background in business and management, which prepares you for various facets of the aviation industry.

Experience up to 200 hours of flight experience at an Algonquin College approved flying partner. It is a non-funded activity that costs \$80,000+ over the two years and is subject to change without notice.

In your final semester, you can elect to take a course in either Instructor Rating, Float Rating or Initial Aeroplane Type Rating (IATRA), each of which will help you specialize for future employment opportunities.

Graduates may find employment with charter service companies as:

- line pilots flying passenger and freight
- land or sea-based pilots flying single and/or multi-engine airplanes.

Graduates may also pursue a career as a flight instructor.

### SUCCESS FACTORS

This program is well-suited for students who:

- Are organized in their work and pay attention to detail.
- Want to work in a challenging environment.
- Have strong observational and analytical skills.
- Are highly motivated and committed to attaining goals.
- Have good interpersonal skills.

### Employment

Graduates may find employment with charter service companies as line pilots flying passenger and freight, land or sea-based and single or multi-engine airplanes. Graduates who choose an Instructor rating may begin teaching ab-initio students on the principles of safe aircraft operations. Flight instruction is an entry-level position and one that is currently in demand worldwide. Due to the

recent increase in hiring within the airline industry many instructors have moved into the airlines leaving employment opportunities for graduates.

## Learning Outcomes

The graduate has reliably demonstrated the ability to:

- Develop, through general knowledge gained in a wide range of subjects, insight into both self and society.
- Develop flexibility and clarity of both thought and expression in order to develop communications competence to a level required by business and industry.
- Understand and utilize critical thinking processes and problem solving techniques.
- Examine and evaluate various aspects of our changing society to assist in developing a sense of personal and social responsibility as a citizen in society.
- Employ basic vocational skills drawn from the areas of the Humanities, Social and Behavioral Sciences of Vocational Studies (Business, Technology).
- Identify and apply discipline-specific practices that contribute to the local and global community through social responsibility, economic commitment and environmental stewardship.

## Program of Study

Level: 01	Courses	Hours
AVI8810	Private Pilot Ground School	98.0
AVI8811	Flight Training I	40.0
AVI8812	Practical Skills Prep I	28.0
AVI8842	Safety Management Systems	28.0
DAT8810	Computer Business Applications	42.0
MAT8810	Mathematics Essentials I	56.0
Level: 02	Courses	Hours
AVI8820	Commercial Pilot Ground School	98.0
AVI8821	Flight Training II	80.0
AVI8823	Aircraft Engines and Systems	56.0
AVI8843	Human Factors and Crew Resource Management	28.0
ENL1813T	Communications I	42.0
MGT8813	Management	56.0
Choose one from equivalencies:	Courses	Hours
GED0438K	General Education Elective	42.0
Level: 03	Courses	Hours
AVI8822	Practical Skills Prep II	28.0
AVI8830	Instrument Rating Ground School	84.0

AVI8831	Flight Training III	40.0
AVI8833	Applied Aircraft Maintenance	56.0
ENL8830	Communications II	42.0
MAT8820	Mathematics Essentials II	56.0
MGT8824	Marketing and Customer Service	42.0
<b>Level: 04</b>	<b>Courses</b>	<b>Hours</b>
AVI8832	Flight Dispatcher	28.0
AVI8841	Flight Training IV	40.0
AVI8844	Aviation Automation Technology	28.0
MGT8834	Business Essentials	56.0
SSC8810	Ethics and Environmental Sustainability	42.0
<b>Elective: choose 1</b>	<b>Courses</b>	<b>Hours</b>
AVI8840A	Instructor Rating	42.0
AVI8840B	Float Rating	42.0
AVI8840C	Initial Aeroplane Type Rating (IATRA)	42.0
<b>Choose one from equivalencies:</b>	<b>Courses</b>	<b>Hours</b>
GED0438	General Education Elective	42.0

## Fees for the 2023/2024 Academic Year

Tuition and related ancillary fees for this program can be viewed by using the Tuition and Fees Estimator tool at <https://www.algonquincollege.com/fee-estimator>.

Further information on fees can be found by visiting the Registrar's Office website at <https://www.algonquincollege.com/ro>.

Fees are subject to change.

Additional program related expenses include:

- **Supplies:** \$1,000 textbooks and incidental fees. For more information visit <https://www.algonquincollege.com/coursematerials>.
- **Flying Costs:** \$80,000 plus tax for two years are paid on a pay as you go basis.
- **Exam Costs:** \$2,000.
- **Note:** Flying costs additional to tuition, and ancillary fees are not a fundable activity and are subject to change without notice.

Contact the program coordinator for complete details.

## Admission Requirements for the 2024/2025 Academic Year

### College Eligibility

- Ontario Secondary School Diploma (OSSD) or equivalent. Applicants with an OSSD showing senior English and/or Mathematics courses at the Basic Level, or with Workplace or Open courses, will be tested to determine their eligibility for admission; OR
- Academic and Career Entrance (ACE) certificate; OR
- General Educational Development (GED) certificate; OR
- Mature Student status (19 years of age or older and without a high school diploma at the start of the program). Eligibility may be determined by academic achievement testing for which a fee of \$50 (subject to change) will be charged.

**Program Eligibility**

- English, Grade 12 (ENG4C or equivalent).
- Mathematics, Grade 12 (MAP4C with a grade of 60% or higher) or Grade 11 (MCF3M with a grade of 50% or higher) or equivalent.
- Applicants with international transcripts must provide proof of the subject specific requirements noted above and may be required to provide proof of language proficiency. Domestic applicants with international transcripts must be evaluated through the International Credential Assessment Service of Canada (ICAS) or World Education Services (WES).
- IELTS-International English Language Testing Service (Academic) Overall band of 6.0 with a minimum of 5.5 in each band; OR TOEFL-Internet-based (iBT) Overall 80, with a minimum of 20 in each component: Reading 20; Listening 20; Speaking 20; Writing 20; OR Duolingo English Test (DET) Overall 110, minimum of 110 in Literacy and no score below 95.

Not sure if you meet all of the requirements? Academic Upgrading may be able to help with that: <https://www.algonquincollege.com/access/>.

Should the number of qualified applicants exceed the number of available places, applicants will be selected on the basis of their proficiency in English and mathematics.

Applicants are required to successfully complete a Category 1 Aviation Medical Exam prior to the start of the first term of this program.

**Admission Requirements for 2023/2024 Academic Year****College Eligibility**

- Ontario Secondary School Diploma (OSSD) or equivalent. Applicants with an OSSD showing senior English and/or Mathematics courses at the Basic Level, or with Workplace or Open courses, will be tested to determine their eligibility for admission; OR
- Academic and Career Entrance (ACE) certificate; OR
- General Educational Development (GED) certificate; OR
- Mature Student status (19 years of age or older and without a high school diploma at the start of the program). Eligibility may be determined by academic achievement testing for which a fee of \$50 (subject to change) will be charged.

**Program Eligibility**

- English, Grade 12 (ENG4C or equivalent).
- Mathematics, Grade 12 (MAP4C with a grade of 60% or higher) or Grade 11 (MCF3M with a grade of 50% or higher) or equivalent.
- Applicants with international transcripts must provide proof of the subject-specific requirements noted above and may be required to provide proof of language proficiency. Domestic applicants with international transcripts must be evaluated through the International Credential Assessment Service of Canada (ICAS) or World Education Services (WES).
- IELTS-International English Language Testing Service (Academic) Overall band of 6.0 with a

- IELTS-International English Language Testing Service (Academic) Overall band of 6.0 with a minimum of 5.5 in each band; OR TOEFL-Internet-based (iBT) Overall 80, with a minimum of 20 in each component: Reading 20; Listening 20; Speaking 20; Writing 20.

Not sure if you meet all of the requirements? Academic Upgrading may be able to help with that: <https://www.algonquincollege.com/access/>.

Should the number of qualified applicants exceed the number of available places, applicants will be selected on the basis of their proficiency in English and mathematics.

**Applicants are required to successfully complete a Category 1 Aviation Medical Exam prior to the start of the first term of this program.**

## Application Information

### GENERAL ARTS AND SCIENCE - AVIATION MANAGEMENT Program Code 0438K01FWO

Applications to full-time day programs must be submitted with official transcripts showing completion of the academic admission requirements through:

ontariocolleges.ca  
60 Corporate Court  
Guelph, Ontario N1G 5J3  
1-888-892-2228

Students currently enrolled in an Ontario secondary school should notify their Guidance Office prior to their online application at <http://www.ontariocolleges.ca/>.

Applications for Fall Term and Winter Term admission received by February 1 will be given equal consideration. Applications received after February 1 will be processed on a first-come, first-served basis as long as places are available.

International applicants please visit this link for application process information: <https://algonquincollege.force.com/myACint/>.

For further information on the admissions process, contact:

Registrar's Office  
Algonquin College  
1385 Woodroffe Ave  
Ottawa, ON K2G 1V8  
Telephone: 613-727-0002  
Toll-free: 1-800-565-4723  
TTY: 613-727-7766  
Fax: 613-727-7632  
Contact: <https://www.algonquincollege.com/ro>

## Additional Information

**NOTE:** Students are **REQUIRED** to successfully complete a Category 1 Aviation Medical Exam prior to the start of the first term of this program.

Some classes are scheduled off campus at the Ottawa Flying Club, Rockcliffe Flying Club, Cornwall Aviation, and/or the Canada Aviation and Space Museum locations. Students are responsible for their own transportation and any associated cost.

**Student commitment:** Acquiring the necessary knowledge and skills to meet the requirements of this program demands a serious effort and focus by students. A strong commitment of dedication and discipline, as well as time and energy over-and-above classroom hours is required for students to successfully complete the program.

**Note:** Elective courses are subject to minimum enrolment. For details, consult with coordinator.

## Contact Information

Program Coordinator(s)

- Gregg Mapp, <mailto:mappgg@algonquincollege.com> , 613-727-4723, ext. 3426

## **Course Descriptions**

### **AVI8810 Private Pilot Ground School**

Students prepare for the Transport Canada Private Pilot Licence written exam (PPAER). Subjects covered include: (i) Air Law (Canadian aviation regulations) (ii) Aerodynamics and theory of flight (iii) Meteorology (iv) Airframes, engines and systems (v) Flight instruments (vi) Radio and electronic theory (vii) Navigation (viii) Flight operations (ix) Licensing requirements (x) Human factors, including pilot decision-making.

Prerequisite(s): none

Corerequisite(s):none

### **AVI8811 Flight Training I**

Students attain a minimum of 40 flight training hours while studying and practicing exercises to develop the knowledge and skills necessary to safely operate an airplane at the level of proficiency required to successfully complete the dual cross country flight training phase (including solo flight).

Prerequisite(s): none

Corerequisite(s):none

### **AVI8812 Practical Skills Prep I**

Through opportunities to examine concepts that may qualify for industry certification, students study the theory and concepts behind a variety of industry related practical skills. Consideration of topics like first aid, winter operations, de-icing and pre-heating, fuel handling, loading passengers and cargo, extends the students capabilities beyond proficiency in operating an aircraft.

Prerequisite(s): none

Corerequisite(s):none

### **AVI8820 Commercial Pilot Ground School**

Students develop the knowledge and skills required by a commercial pilot. Classes prepare students for completion of the Transport Canada Commercial Pilot Licence written exam (CPAER). Subjects include: (i) Air law (Canadian aviation Regulations) (ii) Aerodynamics and theory of flight (iii) Metrology (iv) Airframes, engines and systems (v) Flight instruments (vi) Radio and electronic theory (vii) Navigation (viii) Flight operations (ix) Licensing requirements, and (x) Human factors including pilot decision making.

Prerequisite(s): AVI8810 and AVI8811

Corerequisite(s):none

### **AVI8821 Flight Training II**

Students complete a minimum of 80 flight training hours to develop the advanced skills necessary to fly a fixed wing single engine aircraft to the level of proficiency required of a Commercial Pilot. Specific skill areas addressed include dual flight instruction, solo flight, a 300nm cross-country, instrument and night flying.

Prerequisite(s): AVI8810 and AVI8811

Corerequisite(s):none

### **AVI8822 Practical Skills Prep II**

To enhance their value to potential employers, students continue the expansion of their knowledge and skills through wilderness survival training and emergency First Aid. Students also examine the requirements of healthy lifestyles for pilots and importance to maintain category 1 Aviation Medical



Certificate.

Prerequisite(s): none

Corerequisite(s):none

### **AVI8823 Aircraft Engines and Systems**

Students examine the operating principles involved in the functions of an aircraft and its systems. Principles of physics, aerodynamics, electricity and electrical systems form the basis of the knowledge that students explore. In addition to a consideration of aircraft maintenance requirements, students become familiar with routine maintenance and servicing operations. Practical examples and hands-on experience are emphasized.

Prerequisite(s): none

Corerequisite(s):none

### **AVI8830 Instrument Rating Ground School**

Students undertake the in-depth training required for an advanced rating. Topics to be covered include Multi-Engine Flying, Canadian Aviation Regulations, Instrument Flight Rules (IFR) and Procedures, Meteorology III, Instruments, and Radio and Radar Systems.

Prerequisite(s): AVI8820 and AVI8821

Corerequisite(s):none

### **AVI8831 Flight Training III**

Students expand their knowledge, skills and flying time with a concentrated focus on instrument procedures and multi-engine aircraft operations. Students log a minimum of 40 hours total flight time during this term.

Prerequisite(s): AVI8810 and AVI8821

Corerequisite(s):none

### **AVI8832 Flight Dispatcher**

Students develop the practical skills and knowledge required to be employed as a flight dispatcher. Education as a flight dispatcher enhances graduating students' value to potential employers by broadening their capabilities beyond proficiency in operating an aircraft.

Prerequisite(s): AVI8820 and AVI8821

Corerequisite(s):none

### **AVI8833 Applied Aircraft Maintenance**

Building on knowledge and skills acquired earlier in the program, students work with actual aircraft components and systems. Practical examples and hands-on experience are emphasized. Classes may be scheduled off campus at the Canada Aviation and Aerospace Museum.

Prerequisite(s): AVI8823

Corerequisite(s):none

### **AVI8840A Instructor Rating**

Students complete all of the training required to prepare to become a Transport Canada certified flight training instructor. Thirty hours entail one-on-one instruction with a class I Flight Instructor outside of classroom hours, and are an additional cost based on ground instruction rates. Twenty hours are in class group work focusing on instructional design and techniques.

Prerequisite(s): AVI8820 and AVI8831

Corerequisite(s):none

**AVI8840B Float Rating**

Students complete the required training for the Float (Seaplane) operations that open up opportunities as a bush pilot in commercial freight and passenger charter services in remote areas and Northern Canada.

Prerequisite(s): AVI8810 and AVI8811  
Corerequisite(s):none

**AVI8840C Initial Aeroplane Type Rating (IATRA)**

Students prepare to complete the Transport Canada written exam (IATRA). This class prepares students to hold a type rating on larger aircraft and complete further type training with employers after graduation.

Prerequisite(s): AVI8820 and AVI8831  
Corerequisite(s):none

**AVI8841 Flight Training IV**

Students choice of Aviation Electives determines their flight training environment. In any of the chosen options, the practical training requires a minimum of 40 hours of flying either on floats, instrument flying and/or as an instructor candidate.

Prerequisite(s): AVI8820 and AVI8831  
Corerequisite(s):none

**AVI8842 Safety Management Systems**

The principles and processes used to establish and function within a safety system are integral to all aspects of practical skills training in aviation. Students learn the principles of a safety management system as they relate to all aviation operators ranging from small charter services through to major airlines.

Prerequisite(s): none  
Corerequisite(s):none

**AVI8843 Human Factors and Crew Resource Management**

Effective and efficient functioning of a flight crew in the cockpit of a large aircraft requires important skills. Students consider the multi-crew environment and develop the skills to manage people and tasks in a highly complex and challenging environment. Students also review the environmental impact on the human body during flight as part of human factors training.

Prerequisite(s): AVI8810  
Corerequisite(s):none

**AVI8844 Aviation Automation Technology**

New generation aircraft are better equipped and can provide the pilot with a great deal of useful information that can enhance safety and situational awareness. Students explore the technology used in today's modern aircraft cockpit, such as Flight Management Systems, Auto Pilot/land systems and GPS Technology.

Prerequisite(s): AVI8830  
Corerequisite(s):none

**DAT8810 Computer Business Applications**

Students learn a variety of business software applications. Students produce assignments using the Microsoft Office suite of products. Bright Space and other computer-based training products are tools used to support and enrich the classroom learning and to familiarize the learner with this



educational software. It is recommended that for the online component, students should have MS Office on their laptop.

Prerequisite(s): none

Corerequisite(s):none

### **ENL1813T Communications I**

Communication remains an essential skill sought by employers, regardless of discipline or field of study. Using a practical, vocation-oriented approach, students focus on meeting the requirements of effective communication. Through a combination of lectures, exercises, and independent learning, students practise writing, speaking, reading, listening, locating and documenting information and using technology to communicate professionally. Students develop and strengthen communication skills that contribute to success in both educational and workplace environments.

Prerequisite(s): none

Corerequisite(s):none

### **ENL8830 Communications II**

Clarity, concision and comprehensibility are fundamental features of workplace communication. Through a combination of written assignments and oral presentations, students' ability to create detailed, succinct and coherent communication is developed.

Prerequisite(s): ENL1813T

Corerequisite(s):none

### **GED0438 General Education Elective**

Students choose one course, from a group of general education electives, which meets one of the following five theme requirements: Arts in Society, Civic Life, Social and Cultural Understanding, Personal Understanding, and Science and Technology.

Prerequisite(s): none

Corerequisite(s):none

### **GED0438K General Education Elective**

Students choose one course, from a group of general education electives, which meets one of the following four theme requirements: Arts in Society, Civic Life, Social and Cultural Understanding, and Science and Technology.

Prerequisite(s): none

Corerequisite(s):none

### **MAT8810 Mathematics Essentials I**

Technical calculations are essential skills in the aviation field. Students first study the manipulation of numerical and algebraic expressions and solve a variety of measurement problems. Students study lines and angles, basic geometric and solid geometric figures. Students also manipulate trigonometric functions and solve problems involving the trigonometry of right triangles and vectors. Students solve related applied problems drawn from their field of study.

Prerequisite(s): none

Corerequisite(s):none

### **MAT8820 Mathematics Essentials II**

Technical calculations are essential skills in the aviation field. Students first review the manipulation of algebraic expressions; solve systems of linear equations, quadratic equations and equations involving fractions. Students manipulate radicals and algebraic expressions with fractional exponents. Students study exponential and logarithmic functions and solve exponential and

logarithmic equations. Students depict data using Bar Graphs, Histograms, Pie charts and Scatter plots.

Prerequisite(s): none

Corerequisite(s):none

### **MGT8813 Management**

Students explore the development and principles of modern management practices. Class discussions and activities consider the roles and functions, critical tasks and emerging issues facing today's managers. Emphasis is placed on the changing workplace, work teams and the role of technology in organizations. Throughout, students are encouraged to be effective problem solvers, strong leaders and valuable decision makers. These are skills that make them an invaluable asset to any business.

Prerequisite(s): none

Corerequisite(s):none

### **MGT8824 Marketing and Customer Service**

Students explore the principles of marketing, market research, product pricing and costing, service as a primary product to the concepts, advertising methods, target marketing, factors in consumer preference and assessment of guest satisfaction. Students work on team projects that offer experience in learning customer service concepts and principles.

Prerequisite(s): none

Corerequisite(s):none

### **MGT8834 Business Essentials**

Students develop the basic skills required to operate or work in a small business. The economy and its impact, business finance and various business organizations (sole proprietorship, corporations) are discussed. Students receive job readiness training and resume assistance.

Prerequisite(s): DAT8810 and MGT8813 and MGT8824

Corerequisite(s):none

### **SSC8810 Ethics and Environmental Sustainability**

Through examination of the basic components of ethical thought and moral decision making, students learn to identify areas of ethical concern, discuss those areas with respect and sensitivity to divergent views and make decisions on ethical issues using these components. This process increases and enlivens the moral sense and sensitivity of the students, enabling them to conduct themselves with integrity in their professional and personal lives. In addition, students examine the impact on the environment and seek opportunities to reduce the human impact on climate change.

Prerequisite(s): none

Corerequisite(s):none