DISCOVER YOUR STORY IN AVIATION
From the first hot air balloons to modern fighter jets, we’ve come a long way in the field of flight and aerospace. In just over 200 years, we’ve moved from two-manned flight to aircraft that can carry more than 850 passengers. The industry was born with innovation in its DNA.

Aviation continues to be one of the most exciting professions of our time. Soaring through the skies and defying the laws of gravity is captivating – especially if you love adventure. From environmental innovation to technological advances, there’s no shortage of challenges for qualified pilots and professionals to tackle.

Having a university degree and the professional training to become a commercial pilot will give you the advantage you need – along with the skills and knowledge to fly with confidence.

*Let’s explore your story in Aviation at Waterloo.*
According to associate professor of aviation Suzanne Kearns, “Boeing predicts that between 2020 and 2039 the world will need 763,000 pilots, 739,000 maintenance technicians and 903,000 cabin crewmembers. In the coming decade alone, CAE projects that the civil aviation industry will require more than 260,000 new pilots – with 27,000 new pilots needed by the end of 2021.”

The aviation industry is cyclical and defies the status quo each time around. Though COVID-19 has been an unprecedented challenge for aviation professionals around the world, our collective passion for travel and exploration will drive post-pandemic recovery.

We’re leaders in aviation education and the industry has taken notice. We’ve established multiple partnerships with airlines to create expedited pathways from graduation to airline pilot positions.

Meet us online for more tips and stories:

- [uofwaterloo](https://uofwaterloo)
- [university.waterloo](https://university.waterloo)
PROGRAMS

SCIENCE AND AVIATION
BACHELOR OF SCIENCE

GEOGRAPHY AND AVIATION
BACHELOR OF ENVIRONMENTAL STUDIES
Things are looking up. The science of flight is fascinating – and even more so when you can take courses that teach the foundations of physics, chemistry, biology and earth sciences. Learn from award-winning professors in the Faculty of Science while you pursue both your BSc degree and commercial pilot licence. Test your skills in labs that reinforce classroom learning and join one of the most active student societies on campus – SciSoc. Enjoy a career in the aviation industry while understanding the underlying principles of drag, lift, speed and weight.

**SAMPLE COURSES:**
Introductory Earth Sciences, Communication in the Sciences, Introductory Environmental Sciences, Physics, Mathematics, Introduction to Aviation, Designing Effective Maps, General Chemistry

Chart your course and take flight. Experience the world as a geographer and pilot, from the soil below to 30,000 feet in the air. You’ll explore landforms, weather patterns, and use cutting edge technology like drones and geographic information systems (GIS) from one of Canada’s top-ranked geography departments – all while completing the flight training needed to acquire your commercial pilot licence. You’ll graduate with multi-engine and instrument ratings, and the skills needed to advocate for responsible industry practices through your knowledge of sustainable tourism and the environment.

**SAMPLE COURSES:**

**TRAINING**
Whether you choose Science and Aviation or Geography and Aviation, you’ll receive the same innovative aviation-industry and flight training.

**SAMPLE AVIATION CLASSES:**
Introduction to Aviation, Human Factors in Aviation, Aviation Safety, RPAS (UAV) Requirements for Geomatics

**POSSIBLE CAREER FIELDS**
(some may require further training)
- Commercial pilot
- Flight instructor
- Charter/ corporate pilot
- Military pilot
- Flight dispatcher

Waterloo Wellington Flight Centre (WWFC) is your school for flight training. Located 20 minutes from the University of Waterloo at the Region of Waterloo International Airport, it’s one of Canada’s top flight schools. When you start your training, you’ll fly in single pilot, non-high-performance aeroplanes (i.e., Cessna, Diamond, or Piper Seminoles). When you finish your training, you’ll be eligible to fly commercial aircraft.
PROGRAMS

AVIATION SPECIALIZATION

GEOGRAPHY AND ENVIRONMENTAL MANAGEMENT

BACHELOR OF ENVIRONMENTAL STUDIES

Take your career sky high.

Gain the skills and expertise you need to excel in the growing aviation or aerospace industries. Earn a three- or four-year Bachelor of Environmental Studies degree from one of the world’s best geography departments, where you’ll learn how to use tools such as geographic information systems and remote sensing, interpret weather patterns, read multi-layer maps, understand the impact of tourism, and advocate for sustainable practices within the aviation industry.

Take advantage of the program’s flexibility and enrol in independent flight training. Or apply into the co-op program to graduate with a prestigious Waterloo degree and up to 20 months of paid work experience. The choice is yours.

While no previous flying experience is required, credit may be awarded to students with a Canadian private pilot licence.

Sample classes:
• Climate Change Fundamentals,
• Introduction to Geographic Information Systems (GIS),
• Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements,
• Human Factors in Aviation,
• Physical Climatology,
• Human Dimensions of Natural Hazards,
• Spatial Analysis,
• Perspectives on International Tourism,
• Geography of Transportation.

Choose from 70+ Geography Courses

Possible Career Fields

- Air traffic services
- Remotely-piloted aircraft systems (RPAS) industry
- Aerial and LIDAR surveying and remote sensing
- Rotary and fixed wing pilot (requires additional training)

Graduate with up to 20 MONTHS PAID EXPERIENCE through co-op
ADMISSIONS

Six grade 12 U or M courses, including the specific courses listed:

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>REQUIRED COURSES</th>
<th>ADDITIONAL REQUIREMENTS</th>
<th>ADMISSIONS AVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science and Aviation (regular only)</td>
<td>Advanced Functions (minimum final grade of 70% is required)</td>
<td>Transport Canada Category 1 Medical certification</td>
<td>Low 80s</td>
</tr>
<tr>
<td></td>
<td>Calculus and Vectors (minimum final grade of 70% is required)</td>
<td>Post-secondary program Information Session</td>
<td></td>
</tr>
<tr>
<td></td>
<td>English (ENG4U) (minimum final grade of 70% is required)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Any two of the following: Biology, Chemistry, Earth and Space Science, Mathematics of Data Management, Physics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geography and Aviation (regular only)</td>
<td>English (ENG4U) (minimum final grade of 70% is required)</td>
<td>Transport Canada Category 1 Medical certification</td>
<td>Low 80s</td>
</tr>
<tr>
<td></td>
<td>One Grade 12 U Mathematics course (minimum final grade of 70% is required)</td>
<td>Post-secondary program Information Session</td>
<td></td>
</tr>
<tr>
<td>Geography and Environmental Management (co-op or regular)</td>
<td>Any grade 12 U English (minimum final grade of 70% is required)</td>
<td>N/A</td>
<td>Low 80s</td>
</tr>
</tbody>
</table>

Data is subject to change at any time. Visit uwaterloo.ca/future-students for current requirements and tuition fees.

uwaterloo.ca/future-students

TUITION AND FEES

<table>
<thead>
<tr>
<th>PROGRAM(S)</th>
<th>APPROXIMATE TUITION FEES (PER YEAR)</th>
<th>APPROXIMATE FLIGHT TRAINING FEES (THREE-YEAR TOTAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science and Aviation Geography and Aviation</td>
<td>$8,000 for two terms for Canadian citizens and permanent residents</td>
<td>$80,000</td>
</tr>
<tr>
<td></td>
<td>$44,000 for two terms for international students</td>
<td></td>
</tr>
<tr>
<td>Geography and Environmental Management, Aviation Specialization</td>
<td>$8,000 for two terms for Canadian citizens and permanent residents</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>$44,000 for two terms for international students</td>
<td></td>
</tr>
</tbody>
</table>

STILL UNSURE? FIND YOUR CAREER FIT.

Need some support determining your professional goals and career path? Check out “Aviation Fundamentals” – an online self-study course. Developed in collaboration with the University of Waterloo and the United Nations International Civil Aviation Organization (ICAO), this is your introductory guide to the exciting fields and opportunities in the aviation industry.

uwaterloo.ca/aviation/icao

FLIGHT TRAINING NEXT STEPS

1. Submit your Transport Canada Category 1 certification by an approved civil aviation medical examiner to WWFC no later than August of your entry year. Students should confirm medical eligibility prior to accepting an offer of admission.

2. Review the FAQ and financing sections of our website, so you’re well informed of the financial and time commitments of our program.

3. Attend a post-secondary information session session with Waterloo Wellington Flight Centre.

4. Accept your offer by June 1, 2021.

COMMUNITY CONNECTIONS

Meet students who share your passion. Join the UW Aviation Student Society for industry networking, mentorship opportunities and social events.
ACKNOWLEDGEMENT OF TRADITIONAL TERRITORY

The University of Waterloo acknowledges it is situated on the Haldimand Tract, land granted to the Haudenosaunee of the Six Nations of the Grand River in the Haldimand Treaty of 1784. The Haldimand Tract and surrounding area, including our Stratford campus, is the traditional territory of the Attawandaron, Anishinaabeg, and Haudenosaunee.