

# AVIATION SAFETY (ASE)

## About the Program

In this three-year advanced diploma program, you will receive a comprehensive education in a variety of essential safety techniques relevant to the aviation industry. You will learn Canadian aviation industry regulations, and business, leadership and technical skills required to implement policies and procedures to begin your career in a variety of aviation companies including commercial airlines, flight schools, insurance companies and airports.

## Credential Awarded

Ontario College Advanced Diploma

## Duration

6 Semesters (3 Years)

## Starts

September

## Program and Course Delivery

This program is offered in Seneca's flexible delivery format. Using interactive learning spaces, professors teach in person to students in a physical classroom or lab and stream to students online at the same time. In courses delivered in the flexible format, students have a choice of coming to campus for an in-person experience or learning online.

## Skills

Throughout this program you will develop the following skills:

- Risk assessment and analysis
- Trending analysis and flight data analysis
- Incident reviews and investigations
- Auditing functions
- Database management and safety management
- System development and implementation

## Work Experience

### Optional Co-op

Students meeting all academic requirements may have the opportunity to complete an optional co-op work term(s) in a formal work environment. In most cases the work term(s) is a full-time paid position completed between two academic semesters. In programs with limited co-op opportunities, additional academic requirements and a passing grade on a communication assessment may be required for eligibility. Eligibility for participation does not guarantee a work position will be secured. Additional fees are required for those participating in the optional co-op stream regardless of success in securing a work position.

Review eligibility requirements for work-integrated learning (<https://www.senecapolytechnic.ca/employers/seneca-works/work-integrated-learning/eligibility.html>)

## Work-Integrated Learning Model

Year	September	January	May
1	Semester 1	Semester 2	Semester 3
2	Work Term	Semester 4	Semester 5
3	Work Term	Semester 6	

## Your Career

Graduates of the program can explore the following career options:

- Aviation safety officer
- Flight dispatcher
- Emergency response co-ordinator
- Safety management system co-ordinator
- Accident investigator

## Program of Study

Course Code	Course Name	Weekly Hours
<b>Semester 1</b>		
ACA121	Aviation Computer Applications	3
AER121	Aeronautics I	3
AVM121	Aviation Management I	3
AVS121	Aviation Studies I - History and Standards	3
COM101 or COM111	Communicating Across Contexts Communicating Across Contexts (Enriched)	3
MTH120 or MTH121	AVO/ASE Math Bridge Mathematics	4-6
<b>Semester 2</b>		
FDP221	Flight Dispatch I	3
FLP221	Flight Planning I	3
MET321	Meteorology	3
MTH221	Mathematics	3
SMS221	Safety Management System I - Documentation and Implementation	3
plus: General Education Course (1)		3
<b>Semester 3</b>		
ASO321	Airside Operations	3
AVM321	Aviation Management II	3
FPD321	Flight Planning and Dispatch	3
HAS321	Health and Safety	3
TEC400	Technical Communications	3
WTP100	Work Term Preparation *	1
plus: General Education Course (1)		3
<b>Work-Integrated Learning Term</b>		
ASE331	Aviation Safety, Co-op *	30
<b>Semester 4</b>		
ALO421	Airline Operations	3
EPP421	Emergency Planning and Preparedness	3
SEC421	Aviation Security	3
SMS421	Safety Mgmt. System II - Quality Control and Assurance	3

TPL421	Transport Logistics - International Customs & Freight	3
plus: General Education Course (1)		3
<b>Semester 5</b>		
ALE521	Aviation Leadership and Ethics	3
AVM521	Aviation Management III	3
DDM521	Database Development and Management	3
HUM521	Human and Organizational Factors	3
MTH521	Mathematics III - Statistics	3
SMS521	Safety Management Systems III Program Development	3
<b>Work-Integrated Learning Term 2</b>		
ASE332	Aviation Safety, Co-op II *	30
<b>Semester 6</b>		
AI621	Accident and Incident Investigation	3
AVP621	Aviation Project Course	3
HAS621	Health and Safety	3
PPM621	Project and Finance Management in Aviation	3
SAF621	Airport Operations and Safety	3
SMS621	Safety Management System IV : Risk Assessment	3

\* Work-Integrated Learning option only

## 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:

- develop a safety management system to comply with international standards and domestic aviation laws and regulations within a corporate and operational aviation environment.
- apply aviation risk and quality management principles and programs to continuously improve practices and safety cultures for aviation.
- manage aviation operations, including flight dispatch and flight planning in an integrative operations control center to support a safe and secure aviation culture.
- make operational decisions that consider economic sustainability and business growth within the aviation industry.

- integrate key aviation business functions to optimize operations at an airline, corporate aviation environment, and at an airport.
- communicate on a radio in an aviation environment using appropriate Industry Canada guidelines.
- perform cardio-pulmonary resuscitation and emergency first aid according to recognized industry standards of expertise.

## Admission Requirements

- Ontario Secondary School Diploma (OSSD), or equivalent, or a mature applicant (<https://www.senecapolytechnic.ca/registrar/canadian-applicants/admission-requirements/mature-applicants.html>)
- English: Grade 12 C or U, or equivalent course
- Mathematics: Grade 12 C or U, or equivalent course

Canadian citizens and permanent residents may satisfy the English and/or mathematics requirements for this program through successful Seneca pre-admission testing. (<https://www.senecapolytechnic.ca/registrar/canadian-applicants/admission-requirements/mature-applicants.html>)

Recommended upgrading for applicants who do not meet academic subject requirements (<https://www.senecapolytechnic.ca/registrar/canadian-applicants/admission-requirements/upgrading-options.html>).

## International Student Information

International admissions requirements vary by program and in addition to English requirements (<https://www.senecapolytechnic.ca/international/apply/how-to-apply/admission-requirements/english-requirements.html>), programs may require credits in mathematics, biology, and chemistry at a level equivalent to Ontario's curriculum, or a postsecondary degree or diploma, equivalent to an Ontario university or college. Program-specific pre-requisite courses and credentials are listed with the admission requirements on each program page. To review the academic requirements please visit: Academic Requirements - Seneca, Toronto, Canada ([senecapolytechnic.ca](https://www.senecapolytechnic.ca)) (<https://www.senecapolytechnic.ca/international/apply/how-to-apply/admission-requirements/academic-requirements.html>).

## 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.

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