

# AVIATION MANAGEMENT

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## Program Outline

<b>Major:</b>	AVIA
<b>Length:</b>	3 Years
<b>Delivery:</b>	6 Semesters, plus 3 work terms
<b>Credential:</b>	Ontario College Advanced Diploma, Co-op
<b>Effective:</b>	2015-2016
<b>Location:</b>	Barrie
<b>Start:</b>	Fall (Barrie)

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### Description

This program is designed to give students knowledge and hands-on experience in Aviation and Management as well as provide co-operative work experience in the Aviation industry. A variety of aviation courses provide students with a solid understanding of the aviation industry in Canada and around the world. Students are given the opportunity to pass the examination to receive their Restricted Aeronautical Radio Operation License. Management courses are designed to give students an understanding of management practices and procedures in order to be prepared for future promotional opportunities.

### Career Opportunities

Graduates of the program obtain employment in general aviation and aviation operations positions where they may use their knowledge and skills to progress to more advanced positions. Graduates are employed in a wide variety of aviation fields such as Airline Management, Airport Management, Airport Planning, Flight Dispatch and Government Aviation agencies. In addition, the program provides graduates with a better chance of success in furthering their training with the Department of National Defense or to become Air Traffic Controllers, Commercial/Airline Pilots, and Flight Service Specialists.

### Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

- collaborate as a team member or team leader;
- practice strong interpersonal, communications and time management skills;
- synthesize, problem solve and use critical thinking skills to solve a variety of problems;
- apply integrity and initiative to meet professional challenges;
- utilize entrepreneur skills to foster positive social change in the community;
- promulgate the attitudes, values and ethics of good citizenship in the community and the workplace;
- employ general management skills in relation to the Aviation industry;
- utilize the ethical, environmental and safety issues within the Aviation industry;
- interpret aviation fundamentals, operations, and terminology;
- access and apply current computer technology and use technical equipment specific to the Aviation industry.

### **Practical Experience:**

Co-operative Education is a mandatory component of all Co-op programs at Georgian College; it has been designed as a process by which students integrate their academic education with work experience related to their programs of study. This integration affects much more than simply earning a salary, including the adjustment to the work environment and the development of professionalism. It also reinforces skills and theory learned during academic semesters, develops professional contacts, job knowledge and career path, improves human relations and communication skills, and promotes personal maturity and financial independence.

Students are requested to register, attend and participate in their scheduled co-operative education classes. These classes are scheduled for all first year students and are expected to be completed in order for students to proceed successfully to their first co-op work experiences. To ensure students are eligible to proceed onto any co-op work experience, students should refer to Promotional Status and Eligibility for Co-op as outlined in the College Calendar. Co-op policies and procedures can be located on our website: [www.georgiancollege.ca/student-services/co-op-and-career-services/students-tab/](http://www.georgiancollege.ca/student-services/co-op-and-career-services/students-tab/)

Georgian College follows the Co-operative Education guidelines set out by the Canadian Association for Co-operative Education (CAFCE) and Education at Work Ontario (EWO) by supporting the learning outcomes designed for the program specific graduate profile and curriculum as set out by the Ministry of Training, Colleges and Universities.

### **The Program Progression:**

Fall Intake - Barrie

Sem 1 | Sem 2 | Work Term 1 | Sem 3 | Work Term 2 | Sem 4

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Fall		Winter		Summer			Fall		Winter			Summer
2015		2016		2016			2016		2017			2017

Work Term 3		Sem 5		Sem 6
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Fall			Winter		Summer
2017			2018		2018

### **Articulation:**

A number of articulation agreements have been negotiated with universities and other institutions across Canada, North America and internationally. These agreements are assessed, revised and updated on a regular basis. Please contact the program co-ordinator for specific details if you are interested in pursuing such an option. Additional information can be found on our website at <http://www.georgiancollege.ca/admissions/credit-transfer/>

### **Admission Requirements:**

OSSD or equivalent with

- Grade 12 English (C or U)
- any Grade 11\* or 12 Mathematics (C, M, or U)

\*Minimum of 60% in Grade 11 College or University level Mathematics (MBF3C or MCF3M)

Mature students, non-secondary school applicants (19 years or older), and home school applicants may also be considered for admission. Eligibility may be met by applicants who have taken equivalent courses, upgrading, completed their GED, and equivalency testing. For complete details refer to: [www.georgiancollege.ca/admissions/policies-procedures/](http://www.georgiancollege.ca/admissions/policies-procedures/)

Applicants who have taken courses from a recognized and accredited post-secondary institution and/or have relevant life/learning experience may also be considered for admission; refer to the Credit Transfer Centre website for details: [www.georgiancollege.ca/admissions/credit-transfer/](http://www.georgiancollege.ca/admissions/credit-transfer/)

### **Additional Information:**

International and Landed immigrant applicants to the Aviation Management Program should be aware that the ability to obtain a valid security clearance is a condition of employment (Co-op or Graduate) with some international airports in Canada and is

definitely a requirement for employment (Co-op or Graduate) at the Greater Toronto Airport Authority.

Students who have resided or worked outside of Canada within the last five years may have difficulty meeting Transport Canada's information standards. Unfortunately, due to security requirements, the Greater Toronto Airport Authority, airline and airside tenants, Transport Canada, Nav Canada, the Department of National Defense, and many international airports across Canada may not consider applicants from International Students and Landed Immigrants who have resided or worked outside of Canada within

the last five years. The foregoing is for your information only. Students should follow up with any prospective employer to determine their own candidacy.

**Other Program Information:**

Past and concurrent flight training will be recognized and course exemptions will be considered based on previous education and work experience. Georgian College has made special arrangements with a local flight training facility for FLIGHTLAB at a reduced rate. These costs are over and above student tuition fees.

College scheduled Field Trips are a mandatory component of the Aviation Management program and must be attended by the student.

**Graduation Requirements:**

- 29 Mandatory Courses
- 2 Communications Courses
- 3 Optional Courses
- 4 General Education Courses
- 3 Co-op Work Terms

**Graduation Eligibility:**

To graduate from this program, the passing weighted average for promotion through each semester, from year to year, and to graduate is 60%. Additionally, a student must attain a minimum of 50% or a letter grade of P (Pass) or S (Satisfactory) in each course in each semester unless otherwise stated on the course outline.

**Mandatory Courses**

- ACCT1000 Financial Accounting Principles 1
- AVIA1000 Aviation Orientation
- AVIA1001 Aviation Operations
- AVIA1003 Airport Management
- AVIA1005 Flight Lab
- AVIA2000 Aircraft Characteristics
- AVIA2001 Advanced Flight Lab

AVIA2002 Navigation and Navigation Aids  
AVIA2006 Introduction to Aerodynamics  
AVIA3000 Air Cargo, Customs and Logistics  
AVIA3001 Airport Planning  
AVIA3004 Human Factors in Aviation Safety  
AVIA3005 International Aviation and Management  
AVIA3007 Airline Management  
AVIA3009 Security Management Systems for Aviation (SeMS)  
AVIA3010 Safety and Emergency Management  
BUSI3001 Supervision  
COMM1021 Dynamic Presentations  
COMP1062 Database and Office Management  
COMP2022 Computer Applications - Spreadsheets  
ECON1000 Microeconomics  
ECON2000 Macroeconomics  
GOVT1001 Government and Aviation  
LAWS2000 Business Law  
MATH1008 Introduction to Business and Technical Math  
METE3000 Meteorology  
MGMT2012 Introduction to Project Management  
MKTG1000 Introduction to Marketing  
STAT2000 Statistics 1

#### Communications Courses

To be selected at time of registration from the College list, as determined by testing.

#### Optional Courses

To be selected from College list

#### General Education Courses

To be selected from College list

#### Co-op Work Terms

COOP1011 Aviation Work Term 1  
COOP2010 Aviation Work Term 2  
COOP3007 Aviation Work Term 3

#### Course Descriptions:

ACCT1000 Financial Accounting Principles 1 42.0 Hours

This course provides the student with knowledge of basic accounting procedures and theory. Students are taught the steps of the accounting cycle that result in useful information for decision makers. Also included are adjusting entries, the preparation of financial statements, merchandising activities, and accounting information systems.

#### AVIA1000 Aviation Orientation 42.0 Hours

This introductory course provides students aspiring to a career in aviation with a background to all facets of the industry including aircraft knowledge, weather sense, air navigation techniques, airline structure, airport layout, and the air traffic control system. Moreover, students are given the opportunity to pass the examination to receive their Restricted Aeronautical Radio Operators License Certification.

#### AVIA1001 Aviation Operations 42.0 Hours

This course introduces the student to the basics of aviation operations. Areas of study include airline operations, airport operations and air traffic control operations and how these three areas work together to create and maintain airline scheduled operations. Aviation terminology is emphasized and current events that will shape the future of aviation will be analyzed and discussed.

#### AVIA1003 Airport Management 42.0 Hours

This course provides an understanding of the airport as an essential part of the air transport system. The course investigates the airport functional departments, examines the airport master planning process, and reviews the operational and management services of both large and small airports and considers environment parameters.

#### AVIA1005 Flight Lab 10.0 Hours

This course introduces the practical aspects of flight from the cockpit of an aircraft thereby enhancing the theoretical portion of the aviation program. The course consists of in-flight instruction and ground briefing. Flightlab will run concurrent with Aviation Orientation (AVIA1000) in Semester 1.

#### AVIA2000 Aircraft Characteristics 42.0 Hours

This course builds on your knowledge of aircraft operating systems and economics of operation. You will learn aircraft recognition procedures and techniques. The course also covers aircraft performance degradation in adverse weather conditions, the theory of rotary craft flight and control, instrumentation, jet engine theory and performance.

P- AVIA1000 Aviation Orientation

#### AVIA2001 Advanced Flight Lab 10.0 Hours

This course continues and enhances the principles introduced in AVIA 1002 Flight lab. It enhances the VFR navigation of the program through a cross country flight and reinforces navigation and navaids concepts from the cockpit of an aircraft thereby enhancing the theoretical portion of the aviation program. The course consists of in-

flight instruction and ground briefings and will run concurrent with Navigation and Navigation Aids in semester 4.

P- AVIA1000 Aviation Orientation

AVIA2002 Navigation and Navigation Aids 42.0 Hours

An indepth study of air navigation methods, equipment, procedures, and how they relate to Air Navigation Systems. The student is given the opportunity to practise various navigation techniques in both a classroom and simulator setting. There is emphasis on advanced visual techniques and the proper use of a wide variety of electronic-based aids to navigation. VFR Navigation for transborder flight using GPS Waypoints for AVIA 2001 Advanced Flight Lab, preplanning is completed in this course.

P- AVIA1000 Aviation Orientation or P- AIS4122 Aviation Orientation

AVIA2006 Introduction to Aerodynamics 42.0 Hours

This course provides a study of the motion of air and the forces acting on bodies moving through the air. In addition, a detailed examination of how and why airplanes fly and the devices used to monitor and control flight is conducted. Finally, the various design concepts that affect stability and performance are introduced.

AVIA3000 Air Cargo, Customs and Logistics 42.0 Hours

This course begins with a look at the history and development of the air cargo and logistics industry in Canada and around the world. Current practices and procedures are examined as well as the analysis of the role of airlines, freight forwarders, airport cargo facilities, cargo security and the various agencies involved with air cargo. Current events relating to cargo will be discussed.

AVIA3001 Airport Planning 42.0 Hours

Students are introduced to the fundamentals of airport planning and design.

AVIA3004 Human Factors in Aviation Safety 42.0 Hours

This course examines the major causative agent in aircraft accidents: the human being. Emphasis is placed on psychological and physiological factors which enhance the accident probability. Included is a detailed analysis of Ergonomics (human engineering) and its influence.

AVIA3005 International Aviation and Management 42.0 Hours

This course explores the world's regional economies and cultural differences. It discusses the different strategies available to managers to be effective in today's dynamic global economy. International aviation's role and its managements' responses to economic globalization are covered through studies of recent events occurring in the industry.

AVIA3007 Airline Management 42.0 Hours

The primary focus of this course is the development, structure and business conduct of major airlines in the marketplace today. Students are introduced to the various internal departments of an airline and their relationship to each other. Students are also introduced to external opportunities and threats to the future viability of the various air carriers (the effects of deregulation, airline partnerships, the role of the commuter carriers, and the contracting out of services.) Wherever possible, case studies are used to enhance student skills in research, problem solving and solution application.

**AVIA3009 Security Management Systems for Aviation (SeMS) 42.0 Hours**

This course equips students with the knowledge necessary to plan, develop, implement, and evaluate aviation security management procedures. Students will be introduced to the history of aviation security, current and future security challenges, as well as proposed security solutions.

**AVIA3010 Safety and Emergency Management 42.0 Hours**

This course equips students with the knowledge necessary to plan, develop, implement and evaluate aviation Safety Management Systems (SMS) and emergency planning procedures. Students investigate the role that regulatory, organizational and human factors play when incorporating a Safety Management System. This course also equips students with the knowledge necessary to plan for and deal with the various types of emergencies encountered in the aviation Industry.

**BUSI3001 Supervision 42.0 Hours**

In this course, the student will study ways to manage others in a changing workforce, by developing a thorough understanding of the basic principles, concepts, and vocabulary of employee supervision. The sessions are interactive and provide students with opportunities to discuss and participate in a variety of approaches to supervision.

**COMM1021 Dynamic Presentations 42.0 Hours**

Students develop the ability to design and deliver audience specific messages using media. Individually and collaboratively, students deliver presentations for use in academic, professional, and social settings. Self and peer critiques provide opportunities for reflection and enhanced presentation skills.

P- COMM1016 Communication Essentials or P- COMM1018 Communications 1 (ODE) or P- COMM1000 new COMM model implemented Fall 2012, no longer offering COMM 1000/1001 or P- COMM9000 Communications Option or (P- CPT3 CPT Reading Comprehension and P- CPT4 CPT Sentence Structure)

**COMP1062 Database and Office Management 42.0 Hours**

This course covers basic functions in database and office management software and advanced functions of word-processing and presentation applications. The word-processing portion includes using headers, footers, and table of contents, bibliographies, end notes and footnotes, creating newsletters and flyers and mail merging. The database portion presents students with the essential aspects of database



design, implementation, and maintenance. Students also learn to build professional presentations. Effective office organization skills are developed using communication software including calendar, task, and file management.

#### COMP2022 Computer Applications - Spreadsheets 42.0 Hours

This course is designed to allow the student hands-on microcomputer experience through the utilization of an integrated application combining electronic spreadsheets, graphics and database.

#### COOP1011 Aviation Work Term 1 560.0 Hours

Co-operative Education is a mandatory component of the Aviation Management Program at Georgian College and is a requirement for graduation. Co-operative Education provides students with the skills to conduct a self-directed and college-directed job search. Students are required to attend and participate in scheduled co-op classes CPHR 0001 (12 sessions) prior to their first co-op work experience. Students are responsible to obtain a co-op work experience with an approved employer related to the profile of the graduate for a period of 14 weeks, typically in the summer semester. It should be noted that due to the nature of the industry students may be required to re-locate for the duration of the work term and provide own transportation to and from their place of employment. In addition, students may be required to pass a Transport Canada Security clearance prior to being accepted for a position.

#### COOP2010 Aviation Work Term 2 560.0 Hours

Students are required to attend a scheduled debriefing session. This session will be scheduled in the first month for all Work Term 1 returning co-op students entering Semester 3. This session is intended to allow students to validate and submit supporting documentation for Work Term 1 credit. This must be achieved before proceeding to Co-op Work Term 2. Students are responsible to obtain a second co-op work experience with an approved employer related to the profile of the graduate for a period 14 weeks, typically in the winter semester.

P- COOP1011 Aviation Work Term 1

#### COOP3007 Aviation Work Term 3 560.0 Hours

Work Term 3 students are required to attend a scheduled debriefing session. This session will be scheduled in the first month for all returning co-op students entering Semester 5. This session is intended to allow students to validate and submit supporting documentation for Work Term 3 credit. Students are responsible to obtain a third co-op work experience with an approved employer related to the profile of the graduate for a period 14 weeks, typically in the fall semester.

P- COOP2010 Aviation Work Term 2

#### ECON1000 Microeconomics 42.0 Hours

This course provides an introduction to the principles and methods of economic analysis. The course examines how households and firms make economic decisions. It

also analyzes the efficiency of scarce resource allocation under a range of market structures.

#### ECON2000 Macroeconomics 42.0 Hours

This course is designed to give students an understanding of how the overall economy operates and what economic indicators tell us about its health. The course explores government options for stabilizing the economy, and the impact of international trade. It is highly recommended that students take Microeconomics (ECON 1000 or equivalent) prior to taking this course.

#### GOVT1001 Government and Aviation 42.0 Hours

This course examines the structure of governments and develops the student's awareness and understanding of how it impacts on the international aviation community. Special emphasis is given to the International Civil Aviation Organization's (ICAO) regulatory, financial and safety control of aviation.

#### LAWS2000 Business Law 42.0 Hours

This course covers the legal framework within which business takes place. The student learns how to avoid legal problems. Major topics include: the Canadian legal system, torts, contract law, the Sale of Goods Act, consumer protection, and employment law.

#### MATH1008 Introduction to Business and Technical Math 42.0 Hours

This course provides a foundation in mathematics for students requiring both applied business and technical mathematical skills. Mathematical techniques are applied to a range of business and technical problems thus providing students with the necessary skills for introductory finance and calculus courses.

#### METE3000 Meteorology 42.0 Hours

The atmosphere is studied with respect to energy exchanges with the earth and sun, the theory of normal and severe weather occurrences and atmospheric instrumentation. Environmental problems which impact on atmospheric equilibrium are discussed as well as their climactic implications. Sky observation and recording, aviation weather report interpretation and weather hazardous to flight comprise the aviation component.

#### MGMT2012 Introduction to Project Management 42.0 Hours

This course provides students with an overview of project management and the essential tools needed to deliver successful projects on time and on budget. Students will learn the fundamental principles of project management including: project initiation, project definition, creation of work breakdown structures, scheduling using Gantt charts and network diagrams, risk management, budgeting and controlling resources, quality assurance, auditing and project termination.

#### MKTG1000 Introduction to Marketing 42.0 Hours

This is an overview course with primary focus on marketing products and services to the ultimate consumer. Emphasis is placed on the basic marketing premise that customer needs must be satisfied in order to achieve company objectives. The student gains insight into the complex and interdependent variables involved in developing successful marketing strategies. The strategic marketing planning process is introduced, along with the specific concepts and principles involved in the four key components of the marketing plan - Product, Price, Distribution, and Promotion Strategies.

#### STAT2000 Statistics 1 42.0 Hours

This course is designed to develop students' skills in organizing and summarizing information. It also provides an introduction to the techniques of inferential statistics (that is, drawing conclusions about populations on the basis of sample data). Students are expected to have and further develop their skills with spreadsheet software.

#### **Course Description Legend**

P = Prerequisite; C = Concurrent prerequisite; CO= Corequisite

*Information contained in College documents respecting programs is correct at the time of publication. Academic content of programs and courses is revised on an ongoing basis to ensure relevance to changing educational objectives and employment market needs. The college reserves the right to add or delete programs, options, courses, timetables or campus locations subject to sufficient enrolment, and the availability of courses.*