COURSE OUTLINE: AVT247 - GEN KNOWLEDE AVIAT

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Approved: Greg Farish - Dean

Course Code: Title	AVT247: GENERAL KNOWLEDGE AVIATION
Program Number: Name	4061: AVIATION TECHNOLOGY
Department:	AVIATION TECHNOLOGY
Academic Year:	2025-2026
Course Description:	This course expands on the general knowledge of theory, aerodynamics, engines, airframes and instruments with a quantitative analysis and greater depth. Other topics relate to formulae and performance charts dealing with weight and balance, cruise performance, multi-engine operations, unusual attitudes, recognition of system failures and emergency procedures. A passing mark General Knowledge section of the CPAER qualification exam will be a requirement to be successful in this course.
Total Credits:	2
Hours/Week:	2
Total Hours:	30
Prerequisites:	AVF117, AVF245, AVT119
Corequisites:	There are no co-requisites for this course.
This course is a pre-requisite for:	AVT258, AVT259, AVT366
Essential Employability Skills (EES) addressed in this course:	EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication. EES 3 Execute mathematical operations accurately. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 6 Locate, select, organize, and document information using appropriate technology and information systems. EES 7 Analyze, evaluate, and apply relevant information from a variety of sources. EES 11 Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	Passing Grade: 70%, A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
Other Course Evaluation & Assessment Requirements:	Evaluation Considerations: Students will be assessed by a combination of attendance and deportment, quizzes, tests, and a final exam. To successfully complete the course, students must achieve a minimum score of 70% on the designated section of the qualifier corresponding to the course code. This section

will serve as the final examination for the course.

Dates of tests will be announced at least 1 week in advance.

Quizzes will be given without prior notice.

Students may request a deferment of a test for compassionate reasons. Compassionate Grounds for deferment will include but not be limited to death of an immediate family member, personal illness, or recent diagnosis of a serious illness of a family member. Make-up evaluations will not be permitted without prior notice regardless of the circumstances.

Attendance:

Attendance is mandatory for courses which appear on the student`s formal Ground School Record required by Transport Canada.

To be excused from class due to illness or other unforeseen circumstance, students must inform their instructor/professor via email prior to the start of class. A make-up class may be required.

Unexcused absences will result in 2% deduction from the final mark for each occurrence. Arriving for class late will result in a 1% deduction from the final mark for each occurrence.

Classroom Conduct:

A classroom code of conduct can be found in the Sault College Student Code of Conduct policy, on the Sault College Website. This along with the list of Unacceptable Behaviours in the Sault College Aviation`s SOPs must be adhered to.

Violations of the dress code will result in a Letter of Warning (LOW). Refer to the Sault College Aviation Standard Operating Procedures (SOPs) manual, Section 10, for dress code policies.

Student Support and Students at Risk:

Student support services are provided through Sault College`s Student Services department. All students are encouraged to use these services to enhance their learning experience. Services like peer tutoring provides support from Aviation students in years ahead, who have demonstrated success in the program.

If a faculty member determines that a student is at risk of not being successful in their academic pursuits and has exhausted all strategies available to faculty, student contact information may be confidentially provided to Student Services to offer even more assistance with options for success. Any student wishing to restrict the sharing of such information should make their wishes known to the coordinator or faculty member.

Books and Required Resources:

From the Ground Up by MacDonald
Publisher: Aviation Publishers Co. Ltd. Edition: 30th
ISBN: 1990849024

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
Describe and explain Airframes, Engines and Systems of modern aircraft.	Explain in detail how carburation works in aircraft as well as the effects of ancillary controls regarding engine power. Describe the principle and operation of fuel injection systems in

		aircraft. Understand electrical system fundamentals, typical layouts and safety devices found in aircraft.
	Course Outcome 2	**Learning Objectives for Course Outcome 2**
	Describe and explain Theory of Flight principles.	Explain Newton`s Laws and how they apply to aircraft. Describe Bernoulli`s principle. Describe the various forces acting on an aircraft in flight. Describe and explain various types of wing designs found on aircraft along with how it affects performance.
	Course Outcome 3	**Learning Objectives for Course Outcome 3**
	Describe and explain common flight instruments found on aircraft.	Explain how Pitot Static systems work on aircraft as well as identify any errors that could be associated with the system. Describe how gyroscopic instruments work on aircraft, their principle of operation and common errors associated with these instruments.
	Course Outcome 4	**Learning Objectives for Course Outcome 4**
	Demonstrate analytical skills to solve aircraft performance.	Analyze performance charts found in aircraft and online to calculate or determine projected aircraft performance in various situations.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Final Exam	50%
Midterm	50%

Date: August 28, 2025

Addendum: Please refer to the course outline addendum on the Learning Management System for further information.