



COURSE OUTLINE: AVT366 - AIRCRAFT SYSTEMS

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Approved: Greg Farish, Chair, Aviation Technology - Flight

Course Code: Title	AVT366: AIRCRAFT SYSTEMS PREPARATION FOR FLIGHT
Program Number: Name	4061: AVIATION TECHNOLOGY
Department:	AVIATION TECHNOLOGY
Academic Year:	2023-2024
Course Description:	A study of electrical hydraulic, fuel, oil, oxygen, and fire fighting systems in the aircraft used for multi-engine training such as the Piper Seminole, as well as in a modern, turbine, pressurized transport aircraft.
Total Credits:	2
Hours/Week:	4
Total Hours:	56
Prerequisites:	AVT247
Corequisites:	There are no co-requisites for this course.
This course is a pre-requisite for:	AVT363, AVT369, AVT370, AVT375
Vocational Learning Outcomes (VLO's) addressed in this course:	4061 - AVIATION TECHNOLOGY VLO 1 Aviation Technology - Flight
<small>Please refer to program web page for a complete listing of program outcomes where applicable.</small>	
Essential Employability Skills (EES) addressed in this course:	EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication. 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 8 Show respect for the diverse opinions, values, belief systems, and contributions of others. EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals. EES 10 Manage the use of time and other resources to complete projects.



	EES 11 Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	<p>Passing Grade: 70%, B</p> <p>A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.</p>
Other Course Evaluation & Assessment Requirements:	<p>Evaluation Considerations:</p> <p>Students will be assessed by a combination of attendance and deportment, quizzes, a final exam and project. Weighting of each will be as follows: 30% for quizzes, 40% for the PA44 exam 30% for the presentation/ project. A minimum mark of 70% (B) overall, as well as a minimum of 70% on the PA44 exam is required to pass the course. This is necessary to indicate that the student has sufficient knowledge to safely operate the aircraft systems and is a necessary part of the qualifications which allow the student to fly the aircraft.</p> <p>Dates of tests will be announced at least 1 week in advance.</p> <p>Quizzes will be given without prior notice.</p> <p>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.</p> <p>Attendance:</p> <p>Attendance is mandatory for courses which appear on the student`s formal Ground School Record required by Transport Canada.</p> <p>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.</p> <p>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.</p> <p>Classroom Conduct:</p> <p>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.</p> <p>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.</p> <p>Student Support and Students at Risk:</p> <p>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.</p> <p>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</p>



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:

1. Piper Seminole (PA44) Information Manual (manual part number 761-873 applicable to aircraft SN 4496001 and up)
Edition: Manual part number 761-873
If purchasing from other than the book store, please ensure that you get the correct SN
2. Sault College Approved Maintenance Schedule PA44
Downloadable from the Internet (Link on LMS)

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
Describe the PA44 and its systems with sufficient detail to demonstrate a practical working knowledge.	Have a clear understanding of the terminology, abbreviations and definitions used in the flight manual. Have a clear understanding of the technical description of the aircraft and its systems. Know the operating limitations of the aircraft.
Course Outcome 2	Learning Objectives for Course Outcome 2
Apply the Normal and Emergency Procedures applicable to the PA44.	Practical knowledge of all checklist items including the rationale for each item. Memorization of necessary memory items. Ability to satisfactorily determine a procedure to use where there is no checklist procedure. Practical knowledge of good flying practices.
Course Outcome 3	Learning Objectives for Course Outcome 3
Accomplish all necessary pre-flight tasks applicable to the PA44.	Perform weight & balance calculations. Calculate performance requirements for take-off, climb, single engine flight, cruise, landing etc. Determine that maintenance requirements have been met and that the aircraft is certified and fit for flight.
Course Outcome 4	Learning Objectives for Course Outcome 4
Technically explain an aircraft system.	Develop and present an in-depth analysis of an aircraft system. Assimilate and compile the appropriate information. Deliver the information in a clear and concise manner.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Presentation	30%
Quizzes	30%
Tests	40%

Date:

June 2, 2023

Addendum:

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

