COURSE OUTLINE: AVT366 - AIRCRAFT SYSTEMS

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Course Code: Title	AVT366: AIRCRAFT SYSTEMS PREPARATION FOR FLIGHT
Program Number: Name	4061: AVIATION TECHNOLOGY
Department:	AVIATION TECHNOLOGY
Semesters/Terms:	19F
Course Description:	A study of electrical hydraulic, fuel, oil, oxygen, and fire fighting systems in the aircraft used for multi-engine training as well as in a modern, turbine, pressurized transport aircraft.
Total Credits:	2
Hours/Week:	4
Total Hours:	60
Prerequisites:	AFT13, AVT252, AVT253, AVT257, AVT259
Corequisites:	There are no co-requisites for this course.
This course is a pre-requisite for:	AFT370, AVT370, AVT375, AVT377, AVT378
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 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 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:	Passing Grade: 70%, B
Other Course Evaluation & Assessment Requirements:	The student will be assessed by a combination of attendance and deportment, quizzes, tests and a final exam. Weighting of each will be as follows: 20% for quizzes, 30% for all tests prior to the final exam and 50% for the final exam. A minimum mark of 70% (B) overall, as well as a minimum of 70% on the PA44 exam is required to pass the course. Unexcused absences will result in 2% deduction of the final mark for each occurrence, arriving for class late will result in a 1% deduction of the final mark for each occurrence, and violations of the dress code will result in a 1% deduction of the final mark for each occurrence. Refer to the SOP GEN 1.3 for dress code policies and SOP GEN 1.6.7 for policy regarding absence from classes Quizzes will be given without prior notice.

Students may request a deferment of a test or exam 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-ups will not be permitted after the fact for compassionate reasons.
A classroom code of conduct can be found in the SOP General section, and will be adhered to.
Attendance is mandatory for all Aviation classes unless approval is granted. In the case of illness, a phone call, voice mail or e-mail message is expected.
If a student expects to be late or will be delayed for any reason, every attempt should be made to contact the professor, or leave a message on voice mail or e-mail.
Although attitude, co-operation, etc., are not graded, students may be terminated based on their performance in this area (see section VI). These attributes are also considered in the selection of the Air Canada Award and other scholarships.
Dates of tests will be announced at least 1 week in advance.
Note: a pass mark of 70% on the PA44 exam 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.
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 in an effort 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)

Computer Program for King Air
Accessable by dedicated computers in the aviation department

Course Outcomes and Learning Objectives:

Course Outcome 1	**Learning Objectives for Course Outcome 1**
1. Describe the PA44 and its systems with sufficient detail to demonstrate a practical working knowledge.	1.1 Have a clear understanding of the terminology, abbreviations and definitions used in the flight manual. 1.2 Have a clear understanding of the technical description of the aircraft and its systems. 1.3 Know the operating limitations of the aircraft.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Apply the Normal and Emergency Procedures applicable to the PA44.	2.1 Practical knowledge of all checklist items including the rationale for each item. 2.2 Memorization of necessary memory items. 2.3 Ability to satisfactorily determine a procedure to use where there is no checklist procedure. 2.4 Practical knowledge of good flying practices.
Course Outcome 3	**Learning Objectives for Course Outcome 3**
3. Accomplish all necessary pre-flight tasks applicable to the PA44.	3.1 Perform weight & balance calculations. 3.2 Calculate performance requirements for take-off, climb, single engine flight, cruise, landing etc. 3.3 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
4. Be knowledgeable about the systems of a typical pressurized multi-engine turbine aircraft (the Beech King Air)	4.1 Engine & propeller operation. 4.2 Systems operation. 4.3 Normal & emergency procedures 4.4 Performance calculations

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Final Exam	50%
Quizzes	20%
Tests	30%

Date: August 1, 2019

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