COURSE OUTLINE: AVF115 - AIRFRAMES, ENGINES

Prepared: Ryan London
Approved: Greg Farish, Dean, Aviation

Course Code: Title	AVF115: AIRFRAMES, ENGINES AND ZLIN SYSTEMS
Program Number: Name	4061: AVIATION TECHNOLOGY
Department:	AVIATION TECHNOLOGY
Academic Year:	2024-2025
Course Description:	A study of the topics necessary to determine that an aircraft is ready for flight, including: deferring aircraft defects and associated paperwork, an overview of airframes, engines, a study of the systems and performance of aircraft related to flight training.
Total Credits:	2
Hours/Week:	2
Total Hours:	30
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
This course is a pre-requisite for:	AFT120, AVF245
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**4061 - AVIATION TECHNOLOGY** VLO 1 Aviation Technology - Flight
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 11 Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	Passing Grade: 70%, B

	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. Weighting of each will be as follows: 30% for quizzes, 30% for all tests prior to the Final Exam and 40% for the Final Exam. A minimum mark of 70% (B) overall is required to pass 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 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 Publisher: Aviation Publishers Co. Limited Edition: 30th

ISBN: 1990849024

Sault College Aviation Technology Maintenance Policy and Control Manual (MPCM) Downloadable from the Internet (Link on LMS)

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
Demonstrate a practical working knowledge of airframes and engines.	Demonstrate knowledge of piston engine cycles, theory of operation, describe typical aviation engine layouts. Describe propeller terminology, different types of propellers, the operation of the propeller as it relates to Sault College flight training aircraft. Describe the types of aviation fuel, hazards while handling and contaminates found. Describe various construction techniques found in aircraft manufacturing, as well as materials used and concerns regarding corrosion. Identify different airframe styles, wing placements and landing gear construction. Describe the stress and strain limitations imposed on airframes, as well as load limitations.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
Describe the aircraft and its systems with sufficient detail to demonstrate a practical working knowledge.	Demonstrate knowledge of various terminology, abbreviations and definitions used in typical flight manuals.
Course Outcome 3	**Learning Objectives for Course Outcome 3**
Determine that the aircraft is certified & fit for flight.	Demonstrate understanding of the Maintenance Policy and Control Manual. Demonstrate understating of Maintenance and Servicing requirements of aircraft. Demonstrate understanding of Sault College dispatch procedures.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Final Exam	40%
Quizzes	30%
Tests	30%

Date: July 31, 2024

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