

I. COURSE DESCRIPTION:

An introductory course on the working of typical small light aircraft engines and engine systems, and airplane construction with the emphasis on safety in both handling and recognizing abnormal conditions

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Appreciate the need for the smooth and proper handling of engines and airframes with regard to mechanical tolerances and aircraft performance.
2. Appreciate the need to stay current with the Canadian Air Regulations with regard to regular inspections of aircraft systems, and the timely action given to manufacturers' recommendations and aircraft advisories.
3. Understand the need for well developed airmanship skills when operating in severe weather conditions or in the vicinity of larger aircraft and the hazards they impose to both pilot and aircraft .
4. Understand the direction the engine and airframe industry is taking in future technologies and the need to stay educated and informed with current and future technologies.
5. Use the mathematical skills toward a higher degree of quantitative analysis of engine, airframe and aircraft performance.

Potential Elements of the Performance:

III. TOPICS:

1. Airframe construction methods
2. The operation of the internal combustion engine
3. Engine accessory and life limited components
4. Inspections according to the Canadian Air Regulations
5. Load factor calculations
6. Weight and balance

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

- From The Ground Up
- Handouts
- Power Point through WebCT/LMS

V. EVALUATION PROCESS/GRADING SYSTEM:

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: 30% for quizzes, 30% for all tests prior to the final exam and 40% for the final exam. A minimum mark of 70% is required to pass the course. Make-up tests are not permitted except in accordance with section VI of this outline.

- 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.
- If it is necessary to write a second final exam in order to pass the course, the highest grade achievable will be a "C". (See make-up policy in section VI)
- 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-ups will not be permitted after the fact for compassionate reasons.**
- **"F" grades in any subject at the end of a semester will result in termination from the Aviation program.**
- 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.
- A classroom code of conduct can be found in the SOP General section, and will be adhered to.

The following semester grades will be assigned to students:

Grade	<u>Definition</u>	<i>Grade Point Equivalent</i>
A+	90 – 100%	
A	80 – 89%	4.00
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
NR	Grade not reported to Registrar's office.	
W	Student has withdrawn from the course without academic penalty.	

VI. SPECIAL NOTES:

Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part of this course outline.