SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE:	Advanced Flight Systems		
CODE NO. :	AVT363-2	**SEMESTER:**	Six
PROGRAM:	Aviation Technology (Flight)		
AUTHOR:	Colin Reid		
DATE:	Jan 2015	**PREVIOUS OUTLINE DATED:**	Sept 2013
APPROVED:	_____ Chair		January 21 2015 DATE
INSTRUCTOR	Colin Reid		
TOTAL CREDITS:	2		
PREREQUISITE(S):	AVT245		
HOURS/WEEK:	2		

I. COURSE DESCRIPTION:

This course is designed to familiarize the student with modern Flight Management Systems (FMS). General philosophy of the FMS will be studied as well as modes of operation. The course of study will focus on FMS Principles, Pilot interface, and Procedures. Topics will include programming the FMS from Origin to Destination, including vertical and lateral revisions to the Flight Plan. The Flight Management Guidance System of the Airbus family of aircraft will be studied.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Explain what a Flight Management System is and its purpose.

   Potential Elements of the Performance:

   - System definition

2. Explain the benefits air operators and pilots gain when using a FMS.

   Potential Elements of the Performance:

   - An introduction to FMS capabilities and how these affect the airline operation

3. Identify components of the FMS and have an understanding of each component interaction.

   Potential Elements of the Performance:

   - Description of FMS components
   - Identify other aircraft and system components used by the FMS for data input and output
   - Location of components on aircraft/flight deck
   - Interfaces between system and pilot

4. Describe different levels of FMS technology.

   Potential Elements of the Performance:

   - Understand and explain that different levels of automation are dependent on aircraft and FMS manufacturer combination
   - Operational differences
   - Demonstrate FMS operation and data insertion from initialization to landing

5. Identify components of the Electronic Flight Information System and understand that they are electronic versions of the traditional navigation and flight instruments.

   Potential Elements of the Performance:

   - Description of Electronic Flight Information System components
   - Location of components in aircraft
   - Recognize the presentation of traditional navigation and flight instrument data
   - Be familiar with additional Electronic Flight Information System capabilities

6. Recognize the wide range of information and its presentation through the Electronic Flight Information System.

   Potential Elements of the Performance:

   - Description of available system information
   - Recognize the additional information available compared to traditional flight and navigation instruments

III. TOPICS:

1. Flight Management System
   - Introduction
   - Benefits
   - Components
   - System capabilities
   - Preflight to post-flight operation
2. Electronic Flight Information System
   - General description
   - Abnormal procedures
   - Display methodology and logic

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Honeywell A320-FMS Pilot's Guide (provided)

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
- 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**.
- 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	**Definition**	*Grade Point Equivalent*
A+	90 – 100%	4.00
A	80 – 89%	
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. *For all AVT and AVF classes there is an additional incentive not to miss class. Please refer to Section V Evaluation Process/Grading System for further information.*

VII. COURSE OUTLINE ADDENDUM:

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