

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY
SAULT STE. MARIE, ONTARIO**



Sault College

COURSE OUTLINE

COURSE TITLE: Navigation 2
CODE NO. : AVT122-1
PROGRAM: Aviation Technology (Flight)
AUTHOR: Louis St Pierre
DATE: Dec 2007
SEMESTER: Two
PREVIOUS OUTLINE DATED: Dec 2006
APPROVED:

DEAN or CHAIR

DATE

TOTAL CREDITS: 1
PREREQUISITE(S): AVT112
HOUR/WEEK: 1

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The School of the Natural Environment, Technology and Skilled Trades
extension 2681

I. COURSE DESCRIPTION:

This course carries on from the knowledge learned in AVT112, with an emphasis on the practical application of the Dead reckoning navigation.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Effectively and quickly use the CR-5 Flight Computer

Potential Elements of the Performance:

conversions, $v=d/t$, true airspeed, density altitude, headings, groundspeed, winds in flight, 1-in-60 rule, cross-wind component for landings, all done quickly and efficiently

Note: no other flight computer will be allowed.

2. retrieve and interpret airport information

Potential Elements of the Performance:

learn to use the Canada Flight Supplement

3. apply Dead Reckoning techniques as required by Private and Commercial Pilots

Potential Elements of the Performance:

flight planning, navigation log usage, chart preparation, calculation of navigation data, weight and balance, fuel analysis, using checkpoints for groundspeed calculation, drift correction, lost procedures

4. radio theory and basic navigation aids

Potential Elements of the Performance:

radio theory, VOR, transponders, GPS

5. Understand and apply the theory and techniques of dead reckoning navigation, as well as theory of radio navigation aids, required for the completion of the navigation portion of the Transport Canada Private Pilot Exam

Potential Elements of the Performance:

this course prepares students for the Private Pilot exam and the Commercial Pilot exam as well as the applicable qualification exams

III. TOPICS:

1. CR-5 flight computer
2. the Canada Flight Supplement
3. Dead Reckoning Navigation and Preparation for Cross Country Flight
4. Radio Navigation
5. Preparation for the Private Pilot and Commercial Pilot written exams

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

From The Ground Up
Flight Training Manual
Sault Ste Marie VNC
Toronto VNC
Toronto VTA
Jeppesen CR-5 Navigation Computer
Canada Flight Supplement
Aeronautical Information Publication
Navigational Plotting Instruments

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: 20% for quizzes, 30% for all tests prior to the final exam and 50% 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-up tests or exams 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 in this course:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 -100%	4.00
A	80 - 89%	3.00
B	70 - 79%	2.00
C	assigned if a make-up exam was required to complete the course	0.00
F (Fail)	below 70%	
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:

Attitude and Conduct

Attitude plays an important role in your ability to exercise good judgement. Although attitude is not being graded, it affects your ability to learn as well as your safety as a student and future as a professional pilot. Students who display a strong tendency towards any of the five hazardous attitudes pose a grave risk to themselves and others. For this reason, students exhibiting one or several hazardous attitudes will be counselled and if necessary, will be put on a behavioural contract. If this is ineffective in modifying unacceptable behaviour, then the student will be withdrawn from the program.

The five hazardous attitudes are identified as Anti-authority, Impulsivity, Invulnerability, Machismo, and Resignation. These hazardous attitudes are described in "Human Factors for Aviation – Basic Handbook" on pages 151 and 152.

Make-up Policy

- No make-ups on tests occurring prior to final exams.
- No make-ups on quizzes.
- If the final grade achieved for this course is less than 70%, a second final exam may be written at the discretion of the professor for this course. The second exam will be

averaged with the first exam to determine the resulting exam mark, and the final grade will then be calculated.

- In the event that a second final exam is required, the highest achievable overall grade for this course will be a C
- Any student that requires 90% or greater on a make-up exam to pass the course will not be allowed to write a make-up exam.

Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 703 so that support services can be arranged for you.

Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Communication:

The College considers **WebCT/LMS** as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the **Learning Management System** communication tool.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Code of Conduct*. Students who engage in academic dishonesty will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII. DIRECT CREDIT TRANSFERS:

Direct credit for this course is not allowed.