



COURSE OUTLINE: AVF122 - NAVIGATION I AND II

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Approved: Greg Farish, Dean, Aviation

Course Code: Title	AVF122: NAVIGATION I & II
Program Number: Name	4061: AVIATION TECHNOLOGY
Department:	AVIATION TECHNOLOGY
Academic Year:	2023-2024
Course Description:	This course starts with the basic elements involved in Dead Reckoning Navigation. These elements are then combined to enable pilots-in-training to pass the navigation section of the Transport Canada Private Pilot written exam and to learn the techniques that pilots use for navigating in flight. This knowledge is also the basis for the Transport Canada Commercial Written exam in second year, and is also preparatory ground instruction for the Private Pilot Licence
Total Credits:	2
Hours/Week:	2
Total Hours:	30
Prerequisites:	ATQ112
Corequisites:	There are no co-requisites for this course.
This course is a pre-requisite for:	AFT130, AFT131, AFT132, AVF242
Vocational Learning Outcomes (VLO's) addressed in this course:	4061 - AVIATION TECHNOLOGY VLO 1 Aviation Technology - Flight
Please refer to program web page for a complete listing of program outcomes where applicable.	
Essential Employability Skills (EES) addressed in this course:	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 A minimum program GPA of 2.0 or higher where program specific standards exist is required



Other Course Evaluation & Assessment Requirements:

for graduation.

Projects handed in late: handed in next day after due date: 25% deduction. 2 days late: 50% deduction. Three days: 75%. Projects will not be accepted after that and a mark of zero awarded.

In order to be excused from class due to illness or other unforeseen circumstance, students must contact the professor by email or Teams, or leave a message at extension 2666 prior to the start of class.

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.

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:

flight computer
Electronic (CX-3 or E6B) and/or manual CIRCULAR E6-B flight computer

navigation plotting instruments
Douglas protractor, ICAO ruler

Sault Ste Marie VFR Navigation Chart (VNC)
AIR 5001 VNC

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
Review navigation material taken during the prerequisite course	Threshold knowledge test
Course Outcome 2	Learning Objectives for Course Outcome 2
Understand Earth`s magnetism	Variation, converting from True to Magnetic, The Magnetic Compass, compass errors, magnetic dip
Course Outcome 3	Learning Objectives for Course Outcome 3
Learn Dead Reckoning Techniques	preparing VFR navigation charts, nav calculations, retrieve airport information from aeronautical publications
Course Outcome 4	Learning Objectives for Course Outcome 4
Prepare for a cross country flight in preparation for AFT130 in the summer	Completion of two projects that will guide students in the learning how to complete the Sault College navigation log and prepare for a cross country
Course Outcome 5	Learning Objectives for Course Outcome 5
Understand radio theory and	

	some of the basic principles of radio navigation aids	Radio theory, VOR, transponders, GPS
Evaluation Process and Grading System:	Evaluation Type	Evaluation Weight
	Exam	40%
	Projects	10%
	Tests	50%
Date:	December 8, 2023	
Addendum:	Please refer to the course outline addendum on the Learning Management System for further information.	