



## COURSE OUTLINE: AVF242 - NAVIGATION III

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Approved: Greg Farish, Chair, Aviation Technology - Flight

<b>Course Code: Title</b>	AVF242: NAVIGATION III
<b>Program Number: Name</b>	4061: AVIATION TECHNOLOGY
<b>Department:</b>	AVIATION TECHNOLOGY
<b>Academic Year:</b>	2023-2024
<b>Course Description:</b>	This course provides the preparatory ground instruction for radio navigation using VOR, ADF and GPS navigation aids. This is in preparation for the skills required for the Transportation Canada Commercial Flight Test.
<b>Total Credits:</b>	2
<b>Hours/Week:</b>	1
<b>Total Hours:</b>	15
<b>Prerequisites:</b>	AVF122
<b>Corequisites:</b>	There are no co-requisites for this course.
<b>This course is a pre-requisite for:</b>	AVT252, AVT257, AVT258, AVT259
<b>Essential Employability Skills (EES) addressed in this course:</b>	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.
<b>Course Evaluation:</b>	Passing Grade: 70%, B  A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
<b>Other Course Evaluation &amp; Assessment Requirements:</b>	In order to be excused from class, students must contact the professor either by calling extension 2666 and leaving a message or by sending an email. In either case, the message must be received 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:**

From The Ground Up  
 Publisher: Aviation Publishers Co. Ltd. Edition: 29th or higher is best  
 ISBN: 978-0-9730036-3-5

**Course Outcomes and Learning Objectives:**

<b>Course Outcome 1</b>	<b>Learning Objectives for Course Outcome 1</b>
Understand the theory and use of the VHF Omni Range (VOR)	theory of operation, the equipment, serviceability checks, orientation, intercepting inbound and outbound tracks, advantages and disadvantages, the HSI
<b>Course Outcome 2</b>	<b>Learning Objectives for Course Outcome 2</b>
Understand the theory and use of the Automatic Direction Finder (ADF) and the Non-directional Beacons (NDB)	theory of operation, the equipment, serviceability checks, orientation, intercepting inbound and outbound tracks, advantages and disadvantages, inaccuracies of the ADF, the RMI
<b>Course Outcome 3</b>	<b>Learning Objectives for Course Outcome 3</b>
Understand the theory of Global Positioning System (GPS) technology and use the GTN650 GPS that is used in Sault College aircraft and simulators	GPS theory, RAIM, databases, signal augmentation, the Garmin GTN650 and the Aspen usage
<b>Course Outcome 4</b>	<b>Learning Objectives for Course Outcome 4</b>
Understand and apply the use of radio navigation aids in preparation for the Sault College Commercial Qualification exam and the Transport Canada Commercial Pilot exam.	The theory and practical knowledge prepares students for the Transport Canada Commercial Pilot written exam and flight test, as well as the Commercial Qualification exam

**Evaluation Process and Grading System:**

<b>Evaluation Type</b>	<b>Evaluation Weight</b>
Final exam	50%
Tests	50%

**Date:**

June 1, 2023

**Addendum:**

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

