COURSE OUTLINE: AVT369 - IFR NAVIGATION

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Course Code: Title	AVT369: NAVIGATION AND INSTRUMENT PROCEDURES
Program Number: Name	4061: AVIATION TECHNOLOGY
Department:	AVIATION TECHNOLOGY
Academic Year:	2024-2025
Course Description:	This advanced Instrument Flight Rules (IFR) course delves into comprehensive IFR flight planning, focusing on Canadian domestic routes and high-level operations. Students will explore aircraft system requirements, advanced IFR procedures, and the challenges of flight operations near thunderstorms. The course also covers the use of weather detection devices, ensuring pilots are equipped to navigate challenging weather conditions. Through practical applications and in-depth study, participants will enhance their proficiency in managing complex IFR scenarios.
Total Credits:	3
Hours/Week:	3
Total Hours:	45
Prerequisites:	AVT258, AVT366
Corequisites:	There are no co-requisites for this course.
This course is a pre-requisite for:	AVT370, AVT371, AVT377
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**4061 - AVIATION TECHNOLOGY** VLO 1 Aviation Technology - Flight
Essential Employability Skills (EES) addressed in this course:	EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication. 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 for graduation.
Other Course Evaluation & Assessment Requirements:	To be excused from class due to illness or other unforeseen circumstances, students must email the faculty member before the start of class. Students may request a deferment of a test for compassionate reasons, including but not limited to the death of an immediate family member, personal illness, or a recent diagnosis of a serious illness in a family member. Make-ups will not be permitted after the fact for compassionate reasons. Test dates will be announced at least one week in advance. If a faculty member determines that a student is at risk of not succeeding academically and has exhausted all available strategies, the student`s contact information may be confidentially provided to Student Services to offer additional support. Any student wishing to restrict the sharing of their information should inform the coordinator or faculty member.
Books and Required Resources:	Instrument Procedures Manual by David Holland Publisher: Aviation Publishers Co. Limited Edition: 5th Edition ISBN: 978-0-9730036-9-7 Aeronautical Information Manual Downloadable from Transport Canada`s web site Canada Air Pilot - CAP 4 Available by subscription from Nav Canada or electronic format from other suppliers - see Nav Canada website for list of providers Canada Flight Supplement Available by subscription from Nav Canada or electronic format from other suppliers - see Nav Canada website for list of providers
Course Outcomes and Learning Objectives:	

Course Outcome 1	**Learning Objectives for Course Outcome 1**
Depart, navigate enroute, hold, approach, and execute a missed approach-all seamlessly utilizing instrument flight rules.	This course covers essential IFR procedures, including departure protocols like taxi, clearances, and takeoff criteria, enroute operations such as position reporting, altitude management, and clearances, and holding procedures, including various hold types and entry techniques. It also explores arrival procedures, focusing on descents, standard arrivals, and approach clearances, as well as missed approach procedures, including missed approach points, holds, and alternate airports.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
Demonstrate proficiency in executing advanced IFR procedures for complex flight scenarios.	By the end of this course, students will be able to apply RVO/LVO standards, commercial take-off minima, take-off alternate requirements, and noise abatement procedures in advanced IFR operations.
Course Outcome 3	**Learning Objectives for Course Outcome 3**
Develop expertise in	By the end of this course, students will be able to apply ATC

	advanced IFR flight planning to optimize safety and efficiency in complex airspace environments.	special procedures for high-level operations, navigate Canadian domestic routes, and ensure compliance with aircraft approval and system requirements in advanced IFR flight planning.
	Course Outcome 4	**Learning Objectives for Course Outcome 4**
	Develop the expertise to navigate and manage flight operations safely in the vicinity of thunderstorms.	By the end of this course, students will be able to analyze and respond to microbursts, low-level wind shear, and wake turbulence, ensuring safe flight operations near thunderstorms.
	Course Outcome 5	**Learning Objectives for Course Outcome 5**
	Effectively utilize weather detection devices to enhance flight safety and decision-making in various IFR conditions.	By the end of this course, students will be able to proficiently interpret stormscope data, weather radar, and radar displays, including understanding attenuation, to make informed decisions during IFR operations.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Final Exam	40%
Midterm Exam	30%
Quizzes	30%

Date: August 22, 2024

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