

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

COURSE TITLE: INTRODUCTION TO FLIGHT

CODE NO: AVT 101

SEMESTER: ONE

PROGRAM: AVIATION TECHNOLOGY

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PREVIOUS OUTLINE DATED: SEPTEMBER 1990

APPROVED: LP Chagnett
Dean, School of Engineering Tech.

93-08-01
Date

COURSE NAME: INTRODUCTION TO FLIGHT

CODE NO. AVT101-4

TOTAL CREDIT HOURS: 65

PREREQUISITE(S):

I. PHILOSOPHY/GOALS:

Aeronautics is a very complex course of study, consisting of a number of subjects within the overall definition. The course has therefore been divided into separate blocks of instruction with course outlines for each block.

First and second semester Aviation studies will closely adhere to the Study and Reference Guide for Private Pilots (TP5717E) (See attached copy.)

To provide the student with a basic knowledge of aeronautics in preparation for the Aviation Technology (Flight) Program.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will:

Meet the requirements to enter Aviation AVT100-5.
Acquire the knowledge necessary to write:

- a) The Sault College Private Pilot Exam
- b) The Transport Canada Private Pilot Exam

III. TOPICS TO BE COVERED:

Block	Approximate Times
1 Meteorology	17
2 Navigation	17
3 Theory of Flt & Instruments	15
4 Air Law & Operations	16
TOTAL	<u>65</u>

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NAVIGATION

LEARNING ACTIVITIES

Students will investigate, study and understand the principles of:

Types of Navigation
Latitude and Longitude
Time and Longitude

Earths Magnetism
Compass
Aeronautical Charts
- Lambert Conformai
- Transverse Mercator

Types of Canadian Charts

- Chart information

Units of Distance and Speed

Formula and Transposition of Formula

DR Navigation

MID-TERM TEST - NAVIGATION

Plotting Instruments

- Douglas Protractor
- Ruler (ICAO)
- Map air 5001 Sault Ste. Marie
- Triangle of Velocities

Preparation of a Map for Flight

- Ten Degree Drift Lines
- Ten Nautical Mile Markers
- Double Drift Correction Method
- Opening and Closing Angles
- Pilotage and DED Reckoning

Navigation Problems

- Discuss - Circular (slide) rule
 - Air Position
 - Ground Position

TEST

REQUIRED RESOURCES

FGU P140-142

AIP-GEN 1-7 - L-10

FGU P142-146

FGU P149-154

FGU P148-149

Hand out

FGU P117-118

VNC-5001

FGU P118-121

FGU P121-131

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METEOROLOGY

LEARNING ACTIVITIES

Students will investigate, study and understand the principles of:

The Atmosphere, Clouds

Pressure and Winds

Humidity, Temperature and Stability

Air Masses and Fronts

MID-TERM EXAM

Clouds, Precipitation and Fog

Thunderstorms

Weather Radar and Stormscopes

Icing

Turbulence

Weather Signs

Weather Information

Weather Charts

FINAL EXAM

RESOURCES REQUIRED

FGU 98-101

FGU 101-108

FGU 108-112

FGU 112-118

FGU 118-121

FGU 122-124

FGU P. 125-126

FGU 126-128

FGU 128-129

FGU P. 131

FGU P. 131-132

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THEORY OF FLIGHT AND INSTRUMENTS

LEARNING ACTIVITIES

Students will investigate, study and understand the principles of:

Parts of an A/C

General Theory of Flight- 4 Forces

Aircraft Structure

Aircraft Controls and Trim

Aircraft Categories and Class

Lift/Drag

Wing Design

Axes of an A/C

Stability

Flight Performance

Stalls, Spins, Spirals

Flight Instruments

REQUIRED RESOURCES

FGU P. 6-

FGU P. 15-16

FGU P. 6-9

FGU P. 10-12

FGU P. 30

FGU P. 15-19

FGU P. 19-22

P. 22-23

FGU P. 23-24

FGU P. 25-27

FGU P. 27-29

FGU P. 30-40

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AIR LAW & COMMUNICATIONS

LEARNING ACTIVITIES

Students will investigate, study and understand the principles of:

Aerodomes & Traffic Procedures

Pilot and Aircraft Licencing - AIP LRA Section

Canadian Airspace System

Rules of the Air

MID-TERM EXAM

Air Traffic Rules & Procedures

Radio Communications
Facilities & Procedures

FINAL EXAM

REQUIRED RESOURCES

FGU 75-81

AIP-AGA Section

FGU 82-87 (AIP-RAC Section)

FGU P 87-89 (AIP-RAC ANNEX Section)

FGU 90-97
AIP: RAC Section
AIP: COM Section
FGU P. 170-178

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V. EVALUATION METHODS: (INCLUDES ASSIGNMENTS, ATTENDANCE REQUIREMENTS ETC.)

Written tests - mid-term and final semester.

50% + 50% --> final grade --> letter

All blocks of instruction are grouped together. Test results are totalled and reduced to a percentage for mid-term and final marks. Grades will be indicated as follows:

A+	93% - 100%
A	87% - 92%
B	80% - 86%
C	70% - 79%
I	Below 70% (applies only to mid-term)
R	Below 70% (applies to final)

In the event of a failure in the AVT101-4, the highest grade awarded will be a "C". Failure of two or more AVT101-4 subjects will result in an "I" grade at mid-term or an "R" grade at the end of the semester.

VI. REQUIRED STUDENT RESOURCES

Study and Reference Guide - Private and Comm. Licences - TP5717E
"From the Ground Up"
Map - Sault Ste. Marie - AIR 5001 - VNC
Airman's Information Publication
Douglas Protractor
ICAO Chart Rule
One year Amendment Service
Transport Canada

VII. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY:

Book Section (title, publisher, edition, date, library call number if applicable - see attached example)

Periodical Section (Magazines, Articles)

Audiovisual Section (Videotape, Filmstrips, Transparencies)

VIII. SPECIAL NOTES

Students with special needs (eg. physical limitation, visual impairments, hearing impairments, learning disabilities) are encouraged to discuss required accommodations confidentially with the instructor.

Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of the students.