

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

COURSE TITLE: AERONAUTICS 2

CODE NO.: AVT 100-5 SEMESTER: TWO(2)

PROGRAM: AVIATION TECHNOLOGY (FLIGHT)

AUTHOR: EARL TURNER / JOE BRUCE

DATE JANUARY 1997 PREVIOUS OUTLINE DATED: OCTOBER 1991

APPROVED:



CHAIRPERSON

January 20, 1997
DATE

COURSE NAME: AERONAUTICS 2

CODE NO.: AVT 100-5

PREREQUISITE(S): The completion of semester 1 Intro To Flight. The successful completion of semester one .

I. PHILOSOPHY / GOALS: To teach the theory and practice of Aviation Technology, with emphasis in study and the completion of the Private Pilot License standard and attaining a grade of 70% or better overall .

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will:

- 1) have completed all D.O.T. written requirements toward the PPL as per the Study and Reference Guide, TP12880E.
- 2) meet the academic prerequisites for Semester 3 (hold a 3.0 GPA) .

III. TOPICS TO BE COVERED:

16 weeks - 4 periods per week

16 periods Navigation
16 periods Meteorology
16 periods Zlin Systems
16 periods Aeronautics General Knowledge

TOTAL 64 Periods

IV. LEARNING ACTIVITIES

NAVIGATION

METEOROLOGY

ZLIN SYSTEMS

AERONAUTICS GENERAL KNOWLEDGE

REQUIRED RESOURCES

From the Ground Up -
A. F. MacDonald
Study and Reference Guide for
Private Pilots

TP12880E -
Transport Canada
Aeronautical Information
Publication (AIP) Canada
Flying Training Manual -
Transport Canada
Canada Flight Supplement
GPH 205 - Transport
Canada

Charts-WAC F21
VNC Air 5001
LO Charts (Handouts)

Text - Pilots Operating
Handbook
Zlin Z242L
(Ground school copy)

NAVIGATION

<u>TOPIC NO.</u>	<u>SUGGESTED PERIODS</u>	<u>TOPIC DESCRIPTION</u>	<u>REFERENCE</u>
1	2	Definitions , Maps and Charts.	From the Ground Up A.I.P. Canada S.C. Handouts
2	2	Time and Longitude.	From the Ground UP A.I.P. Canada S.C. Handouts
3	3	Pilot Navigation . Navigation Computers	From the Ground Up A.I.P. Canada S.C. Handouts
TEST	1	Navigation topics covered to date.	
REVIEW	1	Test review.	
4	2	Triangle of Velocities and Preflight Preparation	From the Ground Up CFS.
5	1	Radio Theory , VOR, ADF, Loran C, GPS and other.	VNC Chart A-5001 CFS.
6	1	The Flight Supplement	CFS.
REVIEW	1	Review of Navigation	
FINAL EXAM	1	Final Exam - Navigation	
REVIEW	1	Review of Final Exam in preparation for D.O.T. Exam	

METEOROLOGY

<u>TOPIC NO.</u>	<u>SUGGESTED PERIODS</u>	<u>TOPIC DESCRIPTION</u>	<u>REFERENCE</u>
1	3	Weather Observations Reports, Forecasts and Maps	
EXERCISE	2	Maps, Forecasts	
TEST	1	Meteorology topics covered to date.	
REVIEW	1	Test review.	
2	2	The Upper Troposphere and Lower Stratosphere	Air Command Weather Manual TP9352E
3	2	Weather in North America	
4	2	Weather for Light Aircraft	
REVIEW	1	Review of Meteorology	
FINAL EXAM	1	Final Exam - Meteorology	
REVIEW	1	Review of Final Exam in preparation for D.O.T. Exam	

ZLIN 242 Systems

<u>TOPIC NO.</u>	<u>SUGGESTED PERIODS</u>	<u>TOPIC DESCRIPTION</u>	<u>REFERENCE</u>
1	2	Zlin Section 1 General	
2	2	Zlin Section 2 Operating Limitations	
3	2	Zlin Section 3 Emergency Procedures	
TEST	1	Zlin Systems Covered to date.	
REVIEW	1	Test review.	
4	1	Zlin Section 4 Normal Procedures	
5	1	Zlin Section 5 Performances	
6	2	Zlin Section 6 Weights and C of G Positions	
REVIEW	1	Review of the Zlin Systems	
FINAL EXAM	2	Zlin Type Check Examination	
REVIEW	1	Review of Final Exam .	

AERONAUTICS GENERAL KNOWLEDGE (OPERATIONS)

<u>TOPIC NO.</u>	<u>SUGGESTED PERIODS</u>	<u>TOPIC DESCRIPTION</u>	<u>REFERENCE</u>
1	2	Weight and Balance	
2	1	Aircraft Performance Charts	FGU - Air Navigation S.C. Handouts
3	4	The take-off, climb, cruise, descent and landing	
TEST	1	General Knowledge topics covered to date.	
REVIEW	1	Test review.	
4	2	Theory of Flight: Atmosphere, Pressure and Airports Lift, Drag, Thrust and Weight Forces acting on an airplane during flight Airspeed limitations Propellers and the Wing Practical application of Aerodynamics to flight	FGU - Theory of Flight Advanced Pilot Flight Manual - Kershner
5	2	Aircraft instrumentation	FGU - Instruments
REVIEW	1	Review of Aeronautics Operations	
FINAL EXAM	1	Final Exam - Aeronautics General Knowledge Operations Section	
REVIEW	1	Review of Final Exam in preparation for D.O.T. Exam	

COURSE NAME: AERONAUTICS 2

CODE NO. AVT-100-5

V. EVALUATION METHODS:

The student will be assessed by tests following the delivery of each topic or at least one mid term test. Weighting of each test within a topic will be 50% for all tests prior to the final , and 50% for the final exam. Each topic is then averaged together for the overall mark for final semester grade.

GRADE:

A+ - 93 - 100%
A - 87 - 92%
B - 80 - 86%
C - 70 - 79%
R - Below 70%

- To proceed into Semester Three a 3.0 GPA must be achieved (averaged over semester 1 & 2) .

- 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. Rewrites will not be permitted after the fact for compassionate reasons except as provided in the re-write policy below.

- **“R” grades in any subject at the end of a semester will result in termination from the program. Re-writes in aviation subjects are not permitted except as provided in the re-write policy below.**

- Attendance is mandatory for all Aviation classes unless approval is granted in advance.

- Although attitude, co-operation, etc., are not graded, students may be terminated based on their performance in this area. 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.

RE-WRITE POLICY

- No re-writes on mid-term tests.

- At the instructors discretion , an individual section of the AVT 100 may be re-written in the event of a failure provided the overall semester average is 70% or greater and the failed section is within 5% of a pass. (ie. 65% or above) If more than one section is failed, re-writes will not be permitted. The re-written section will be averaged with the failed section to determine the resulting mark which must be 70% or above to pass.

- No re-writes on any D.O.T. Written Exam.

VI. REQUIRED STUDENT RESOURCES

As per book list.

VII. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY:

Book Section - Various

Periodical Section - Various

Audiovisual Section - Various

VIII. SPECIAL NOTES

Students with special needs (e.g. Physical limitations, 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 students.