

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

COURSE TITLE: AFRONAUTICS 5

CODE NO.: AVT 205-4 SEMESTER: FIVE (5)

PROGRAM: AVIATION TECHNOLOGY (FLIGHT)

AUTHOR: EARL TURNER

DATE: JANUARY 1994 PREVIOUS OUTLINE DATED: OCTOBER 1991

APPROVED: *L.P. Chazuth* 94-01-31
CHAIRPERSON DATE

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COURSE NAME: AERONAUTICS 5

CODE NO.: AVT205-4

PREREQUISITE(S): Will hold a Private Pilot Licence with a night endorsement and have satisfactorily completed semester four academics.

I. PHILOSOPHY/GOALS: To teach the theory and practice of Aviation Technology, with emphasis in study and the completion of the Commercial Pilots Licence Standard and attaining a grade of 70% or better overall and a 60% pass of all segments of the D.O.T. written Commercial Pilot Examination.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will:

- 1) have completed all D.O.T. written requirements toward the CPL as well being up to the flight standard of the CPL.
- 2) be admitted into Semester 6 academics.

III. TOPICS TO BE COVERED:

16 weeks - 4 periods per week

16 periods Navigation

16 periods Meteorology

16 periods Air Law

16 periods Aeronautics General Knowledge

TOTAL 64 Periods

IV.

LEARNING ACTIVITIES

NAVIGATION

METEOROLOGY

AIR LAW

AERONAUTICS GENERAL KNOWLEDGE

REQUIRED RESOURCES

From the Ground Up -
A. F. MacDonald
Study and Reference Guide
for Commercial Pilots-
Transport Canada
Aeronautical Information
Publication (A.I.P) -
Canada
Flying Training Manual -
Transport Canada
Canada Flight Supplement
GPH 205 - Transport
Canada

Charts - WAC Chart F21
VNC Air 5001
LE Charts

Air Command Weather
Manual (TP9352E)

Down But Not Out

Psychology of Wilderness
Survival

Pilots Operating Handbook
Cessna 152 1978
Cessna 172N 1977

NAVIGATION

<u>TOPIC NO.</u>	<u>SUGGESTED PERIODS</u>	<u>TOPIC DESCRIPTION</u>	<u>REFERENCE</u>
1	2	VOR Holds & Approaches	A.I.P. Canada CAP S.C. Handouts
2	2	ADF Holds & Approaches	A.I.P. Canada CAP S.C. Handouts
3	2	ILS Approach	A.I.P. Canada CAP S.C. Handouts
4	1	Cross Country Using LE Charts and Interpretation of LE Charts	LE Charts CFS.
TEST	1	Navigation topics covered to date.	
REVIEW	1	Test review	
5	1	Cross Country Using WAC Charts and Interpretation of WAC Charts	WAC Chart F21 CFS.
6	2	Astro Compass and Practical Usage	FGU - Air Navigation
7	1	The Flight Supplement	C.F.S.
REVIEW	1	Review of Commercial Written Exam format	
FINAL EXAM	1	Commercial Qualification Exam Navigation Section	
REVIEW	1	Review of Final Exam in preparation for D.O.T. Commercial Exam	

METEOROLOGY

<u>TOPIC NO.</u>	<u>SUGGESTED PERIODS</u>	<u>TOPIC DESCRIPTION</u>	<u>REFERENCE</u>
1	3	Weather Observations Reports and Forecasts	A.I.P. Canada - MET
EXERCISE	2	Maps, Forecasts	
TEST	1	Meteorology topics covered to date.	
REVIEW	1	Test review	
2	2	The Upper Troposphere and Lower Stratosphere	
3	2	Weather in North America	
4	2	Weather for Light Aircraft	
REVIEW	1	Review of Commercial Written Exam format	
FINAL EXAM	1	Commercial Qualification Exam Meteorology Section	
REVIEW	1	Review of Final Exam in preparation for D.O.T. Commercial Exam	

AIR LAW

<u>TOPIC NO.</u>	<u>SUGGESTED PERIODS</u>	<u>TOPIC DESCRIPTION</u>	<u>REFERENCE</u>
1	3	General, Aerodromes, Communications	A.I.P. Canada - GEN, AGA, COM. VFR Chart Supp.
2	4	Rules of the Air VFR & IFR	A.I.P. Canada - RAC. Section
TEST	1	Air Law topics covered to date.	
REVIEW	1	Test review	
3	2	Search and Rescue, Licensing Registration and Airworthiness	A.I.P. Canada - SAR, LRA. S.C. Handouts
4	1	Airmanship, Notams, Aeronautical Information Circulars	A.I.P. Canada - Air, Map, Notam AIC
5	3	Commercial Air Service Operations	ANO Series VII No. 3
REVIEW	1	Review of Commercial Exam Format	
FINAL EXAM	1	Commercial Qualification Exam Air Law Section	
REVIEW	1	Review of Final Exam in preparation for D.O.T. Commercial Exam	

AERONAUTICS GENERAL KNOWLEDGE

<u>TOPIC NO.</u>	<u>SUGGESTED PERIODS</u>	<u>TOPIC DESCRIPTION</u>	<u>REFERENCE</u>
1	2	Weight and Balance for Commercial Navigation	FGU - Air Navigation S.C. Handouts
2	1	Aircraft Performance Charts	FGU - Air Navigation S.C. Handouts
3	1	Airframes	FGU - Airframes
4	3	Aero Engines	FGU - Aero Engines
TEST	1	General Knowledge topics covered to date	
REVIEW	1	Test review	
5	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
6	2	Aircraft instrumentation	FGU - Inst.
REVIEW	1	Review of Commercial Exam Format	
FINAL EXAM	1	Commercial Qualification Exam Aeronautics General Knowledge Section	
REVIEW	1	Review of Final Exam in preparation for D.O.T. Commercial Exam	

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

The student will be assessed by tests following the delivery of each topic. The final exam for each topic will be the appropriate section of the Commercial Qualification exam. 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 be recommended to write the Commercial written exam, the Sault College Commercial Qualification Exam must be passed with a minimum of 70% overall and 70% in each of the four segments. An "R" grade will be awarded for AVT in the event of a failure regardless of the resulting overall average.

- D.O.T. exams are not included in college grades although a minimum of 70% as well as a pass of all segments is required to continue on course. An "R" grade will be awarded for AVT in the event of a failure.

- 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.

- An overall G.P.A. of 2.8 is considered minimum acceptable achievement level in the second and third year of the program. Students with a lower G.P.A. will be counselled.

- "R" grades in any subject at the end of a semester will result in termination from the program. Rewrites in aviation subjects are not permitted.

- 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.

VI. REQUIRED STUDENT RESOURCES

As per book list.

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 (FILMS, FILMSTRIPS, TRANSPARENCIES)

VIII. SPECIAL NOTES

Students with special needs (eg. 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.