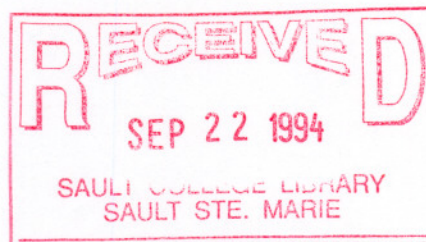


SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE



COURSE TITLE: AIRCRAFT SYSTEMS

CODE NO: AVT270-3

SEMESTER: VII

PROGRAM: AVIATION TECHNOLOGY (FLIGHT) PROGRAM

AUTHOR: B. GOVETT

DATE: FEBRUARY 1994

PREVIOUS OUTLINE DATED: JUNE 1986

APPROVED: *R.P. Cloutier*
Dean, School of Engineering Tech.

96-08-15
Date

COURSE NAME: AIRCRAFT SYSTEMS

CODE NO.: AVT270-3

TOTAL CREDIT HOURS: 3

PREREQUISITE(S):

Successfully completed the sixth semester to the Commercial Pilot Licencing Standard.

I. PHILOSOPHY/GOALS:

The primary objective of this course is to give students a thorough knowledge of all systems in the multi-engine aircraft on which they receive their advanced training. Therefore, students will be required to know the systems of the Twin Comanche in addition to the Twin Otter aircraft.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will:

1. Will have successfully completed a multi-engine licence endorsement on the Twin Comanche.
2. Will have successfully completed block test subject matter with a mid-term specifically on the Twin Comanche Aircraft.
3. A semester final specifically on the Twin Otter Aircraft.

III. TOPICS TO BE COVERED:

1. Twin Comanche
2. Twin Otter
3. Airport Visit Twin Comanche

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IV. LEARNING ACTIVITIES

PA 30 TWIN COMANCHE

Introduction to the PA 30
Aircraft

Twin Comanche Airport Visit

Operating speeds and
limitations

Emergency Procedures

Pre-flight examination and
flying controls

Hydraulic system and Landing
gear and brake system

Power plant and review

Fuel system and instruments

Electrical systems

Heating & Ventilating system and Accessories

Automatic Pilot

Weight and Balance

Review

Final PA 30 Aircraft operators Exam

Mid-Semester

REQUIRED RESOURCES

Aircraft Piper Twin Comanche
Manual, Piper PA 30 Service Manual

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LEARNING ACTIVITIES

DHC-6 TWIN OTTER

Introduction to the Twin Otter Aircraft (Slide Series)

General - Review Questions

Flight Controls - Review Questions

Fuel System - Review Questions

Hydraulic System - Review Questions

Pneumatic System - Review Questions

Ice & Rain Protection

Lighting System

Landing Gear

Flight Instruments - Review Questions

Electrical System - Review Questions

Test on Annunciator, Caution Lights

Test on Airspeed limitations

Test on Switches, Overhead consol

Review Questions

Final Exam DHC-6 Systems, Controls

Dimensions, Weights & C/G Limits

REQUIRED RESOURCES

DHC-6 Twin Otter Pilot Training Manual & Slide & Transparencies Series

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

The student will be assessed by tests following the delivery of each topic. The weighting of each test may vary depending on the importance and hours of instruction. Tests are totalled and reduced to a percentage for final semester grade.

Grade:

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

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, cooperation, 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.

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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 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.