SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE MARIE, ON

COURSE OUTLINE

Course Title: PLASTICS AND SEALANTS

Code No.: ASR1090 Semester: 2

Program: AIRCRAFT STRUCTURAL REPAIR

Author: STEVE LACHOWSKY

Date: Dec. 2002 Previous Outline Date: Dec. 2001

Approved: _____ _____
Dean Date

Total Credits: 2
Prerequisite(s):
Length of Course: 2 Hrs./Wk. Total Credit Hours: 36

PLASTICS AND SEALANTS ASR1090

COURSE NAME COURSE NUMBER

I. COURSE DESCRIPTION:

Students will research and study the various types of plastics used in aircraft and screen installation. Basic plexiglass repairs will be discussed and repairs completed. Aircraft structural sealants will be researched and in-class presentations on application of sealant and personal safety emphasized.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

(Generic Skills Learning Outcomes placement on the course outline will be determined and communicated at a later date.)

Upon successful completion of this course the student will demonstrate the ability to:

1) Select and describe plastic groups, form drill and saw plastics and complete permanent or temporary repairs.

Potential Elements of the Performance:

- identify and describe the common groups of plastics
- demonstrate general handling and storage procedures for plastics
- demonstrate approved cleaning and maintenance procedures dealing with plastics
- discuss the various methods of forming plastics
- describe single and compound curve forming of plastic sheets
- perform drilling and sawing practices when maintaining or fabricating plastic items
- identify the various methods of cementing plastics
- perform both permanent and temporary repair of plastics
- discuss the types of transparent plastics found on aircraft
- explain the difference between thermo plastics and thermo setting plastics
- identify the advantages and disadvantages of plexiglass Vs glass wind screens
- identify transparent plastics and laminated plastics
- discuss safety precautions associated with mixing glues and repair chemicals used to repair plastics

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE (Continued)

2) Select proper sealants for repairs by reading charts, remove old sealants, mix and apply sealants to various repairs, discuss pressure sealing and understand the personal safety requirements.

Potential Elements of the Performance:

- describe the term structural sealing and how it applies to various sections of an aircraft structure
- identify the various sealants required for a repair by referring to charts
- remove sealants as per assignments
- complete various types of sealant repairs
- discuss various terms associated with sealants
- discuss “pressure sealing” of aircraft structures
- identify and operate the equipment used to apply sealants to aircraft structures
- identify one part sealants and two part sealants
- describe when sealants should be replaced
- discuss personal safety precautions when mixing or applying aircraft sealants

III. TOPICS:

1) Plastics
2) Sealants

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

A/C 65-15A Textbook
Teacher Handouts

V. EVALUATION PROCESS/GRADING SYSTEM

Two Written Tests (2) – each accounts for 50% of Final Grade

GRADING:
A+ - 94 – 100%
A - 86 - 93%
B - 78 - 85%
C - 70 - 77%
R - REPEAT

ASSIGNMENTS: See special notes

VI. SPECIAL NOTES:

- Special Needs
  If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, learning disabilities), you are encouraged to discuss required accommodations with the instructor and/or contact the Special Needs Office, Room E1204, Ext. 493, 717, 491 so that support services can be arranged for you.

- Retention of Course Outlines
  It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other post-secondary institutions.

- Disclaimer for Meeting the Needs of the Learners

- Substitute Course Information is available at the Registrar's Office.

- All assignments must be completed. Any assignments not completed will result in the
  removal of 10% from the final grade in ASR109.

VII. PRIOR LEARNING ASSESSMENT

Students who wish to apply for advanced credit in the course should consult the instructor.