SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE:	PLASTICS AND SEALANTS		
CODE NO. :	ASR109	**SEMESTER:**	2
PROGRAM:	AIRCRAFT STRUCTURAL REPAIR TECHNICIAN		
AUTHOR:	Paul Davis		
DATE:	January 2016	**PREVIOUS OUTLINE DATED:**	January 2015
APPROVED:	Colin Kirkwood **DEAN**		2015-2016
TOTAL CREDITS:	2		
PREREQUISITE(S):			
HOURS (Total):	32		

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:

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

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:

Aviation Maintenance Technician Handbook (FAA-H-8083-30)
Teacher Handouts
Power Points

V. EVALUATION PROCESS/GRADING SYSTEM:

Two multiple-choice tests with the following weight – Test #17 (50%)
Test #25 (50%)

Note: Students in the Aircraft Structural Repair Program require a minimum of seventy (70) percent in a course to obtain a passing grade. This equates to a "B" grade.

The following semester grades will be assigned to students in postsecondary courses:

Grade	**Definition**	*Grade Point Equivalent*
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00

CR (Credit)	Credit for diploma requirements has been awarded.
S	Satisfactory achievement in field /clinical placement or non-graded subject area.
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

VI. SPECIAL NOTES:

Attendance:
Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

Course attendance is mandatory. If a student is absent, he/she must have a valid reason – documentation is required.

Students having missed more than 5 percent of the program through absences, shall not qualify for experience credit from Transport Canada, and will not be granted make-up or re-write options for theory tests and shop projects.

If a student is absent for all of the in-class theory or shop demonstrations for which a test/project is assigned, he/she will not be granted permission to complete the test/project.

It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers will not be granted admission to the room.

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located in D2L and on the portal form part of this course outline.