



## COURSE OUTLINE: ASR109 - PLASTICS & SEALANTS

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Approved: Corey Meunier, Chair, Technology and Skilled Trades

<b>Course Code: Title</b>	ASR109: PLASTICS & SEALANTS	
<b>Program Number: Name</b>	4067: AIRCRAFT STRUCT TECH	
<b>Department:</b>	AIRCRAFT STRUCTURAL REPAIR	
<b>Semesters/Terms:</b>	20W	
<b>Course Description:</b>	The proper methods used to manufacture and repair aircraft plexiglass parts will be learned through a combination of in-class theory and shop demonstrations. Various types of aircraft sealants will be discussed.	
<b>Total Credits:</b>	2	
<b>Hours/Week:</b>	2	
<b>Total Hours:</b>	32	
<b>Prerequisites:</b>	There are no pre-requisites for this course.	
<b>Corequisites:</b>	There are no co-requisites for this course.	
<b>Vocational Learning Outcomes (VLO's) addressed in this course:</b>	<b>4067 - AIRCRAFT STRUCT TECH</b>	
<b>Please refer to program web page for a complete listing of program outcomes where applicable.</b>	VLO 2	Demonstrate a working knowledge of the principles of aircraft design by applying theory and shop practice.
	VLO 4	Read and follow blueprint, shop drawings and manufacturer`s manuals necessary in all manufacturing and overhaul facilities.
	VLO 6	Carry out any repair according to specifications, stated job procedures and the requirements of the Department of Transport Regulations.
<b>Essential Employability Skills (EES) addressed in this course:</b>	EES 1	Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.
	EES 2	Respond to written, spoken, or visual messages in a manner that ensures effective communication.
	EES 4	Apply a systematic approach to solve problems.
	EES 5	Use a variety of thinking skills to anticipate and solve problems.
	EES 6	Locate, select, organize, and document information using appropriate technology and information systems.
	EES 7	Analyze, evaluate, and apply relevant information from a variety of sources.
	EES 10	Manage the use of time and other resources to complete projects.
	EES 11	Take responsibility for ones own actions, decisions, and consequences.
<b>Course Evaluation:</b>	Passing Grade: 70%, B	
<b>Other Course Evaluation &amp; Assessment Requirements:</b>		
<b>Course Outcomes and Learning Objectives:</b>	<b>Course Outcome 1</b>	<b>Learning Objectives for Course Outcome 1</b>



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	1. Select and describe plastic groups, form drill and saw plastics and complete permanent or temporary repairs.	1.1 identify and describe the common groups of plastics 1.2 demonstrate general handling and storage procedures for plastics 1.3 demonstrate approved cleaning and maintenance procedures dealing with plastics 1.4 discuss the various methods of forming plastics 1.5 describe single and compound curve forming of plastic sheets 1.6 identify the various methods of cementing plastics 1.7 discuss the types of transparent plastics found on aircraft 1.8 explain the difference between thermo plastics and thermo setting plastics 1.9 identify the advantages and disadvantages of plexiglass Vs glass wind screens 1.10 identify transparent plastics and laminated plastics 1.11 discuss safety precautions associated with mixing glues and repair chemicals used to repair plastics
	<b>Course Outcome 2</b>	<b>Learning Objectives for Course Outcome 2</b>
	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.	2.1 describe the term structural sealing and how it applies to various sections of an aircraft structure 2.2 identify the various sealants required for a repair by referring to charts 2.3 remove sealants as per assignments 2.4 complete various types of sealant repairs 2.5 discuss various terms associated with sealants 2.6 discuss pressure sealing of aircraft structures 2.7 identify and operate the equipment used to apply sealants to aircraft structures 2.8 identify one part sealants and two part sealants 2.9 describe when sealants should be replaced 2.10 discuss personal safety precautions when mixing or applying aircraft sealants

**Evaluation Process and Grading System:**

<b>Evaluation Type</b>	<b>Evaluation Weight</b>
Assignments	10%
Test #17	45%
Test #25	45%

**Date:** August 29, 2019

**Addendum:** Please refer to the course outline addendum on the Learning Management System for further information.