**Aircraft structures maintenance training standard**

**From**[**Transport Canada**](https://www.canada.ca/en/transport-canada.html)

**Theoretical Curriculum Requirements of STD 566 - Appendix C**

This guidance material is designed to provide an overview of the theoretical training objectives required by STD 566 - Appendix C; and may be used when reviewing documentation in support of the basic training requirements of 566.03(4)(b) and 566.07(2). Personnel reviewing basic training documentation may indicate the number of hours associated with each training area in the column provided (HOURS).

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| **Applicant Name:** |  | **File No:** | 5802- |

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| **Item** | **STD 566 - Appendix C Part 2 Curriculum area** | **Hours** | **STD 566 - Appendix C, Part 2 - examples of Theoretical Training Objectives** |
| 3.0 | **Technical Information** |  | * ATA System; Maintenance Manuals; Illustrated Parts Catalogs; SRM; MIL Spec; NAS; Service Bulletins; Shop records, work orders; Technical drawings; Aircraft hardware standards, Manufacturer's standards/specifications
 |
| 4.0 | **General** |  | * Shop mathematics; Basic physics; drafting standards; aircraft drawings; Fastener codes; Schematic diagrams; Dimensions and tolerances
 |
| 5.0 | **Aircraft Systems** |  | * Fixed/rotary wing theory of flight; flight control systems; propulsion systems, Hydraulic and pneumatic systems; Landing gear systems; Environmental systems; Ice protection systems; Fire protection systems; Emergency systems
 |
| 7.0 | **Airframe Structures & Designs** |  | * Major assemblies - fixed/rotary wing; Truss type, Monocoque/semi-monocoque fuselage construction; Types/arrangements of landing gear; types of wing/rotor arrangements/construction
 |
| 8.0 | **Structural Materials** |  | * Ferrous/Non-ferrous metals; composites, composite materials; wood; aluminum/titanium alloys; Monel; Stainless/Chrome-molybdenum steel; Superalloys
 |
| 9.0 | **Heat Treatment** |  | * Solution/Precipitation heat treatment; Quenching; Natural/Artificial aging; Normalizing; Annealing; Hardening; Tempering
 |
| 10.0 | **Corrosion Control** |  | * Surface, Intergranular, Exfoliation, Stress, Dissimilar metal, Fretting, Magnesium corrosion; nickel/chrome plating processes; galvanizing; Metal cladding; Anodizing; removal methods; cleaning processes
 |
| 11.0 | **Damage Assessment** |  | * inspection; liquid penetrant, Magnetic, Radiography, Ultrasonic, Eddy-current testing; Infrared thermography
 |
| 12.0 | **Sheet Metal Repairs** |  | * methods, techniques, and practices; inspection methods; repair/replacement assessment; repair materials
 |
| 13.0 | **Standard & Special Fasteners** |  | * Standard aircraft screws, bolts, nuts, washers, locking devices, rivets ; Special aircraft, bolts, nuts, rivets ; Panel and cowling fasteners
 |
| 14.0 | **Composite Repairs** |  | * protection methods/devices; Fiber materials; Honeycomb/solid/foam core materials; Damage assessment methods; Repair/replacement evaluation; Manufacturer's specified repair methods; Pre-impregnated fabrics
 |
| 15.0 | **Tubular Repairs** |  | * methods, techniques, and practices; Inspection methods for internal corrosion; replacement materials; Repair or replacement evaluation
 |
| 16.0 | **Wood Repairs** |  | * methods, techniques, and practices; solid aircraft woods; aircraft plywoods; defects in aircraft woods; Limitations on spar repairs; Visual, Stress inspection procedures
 |
| 17.0 | **Fabric Repairs** |  | * fabrics and grades; re-covering components; coating materials (dopes); additives; solvents and thinners; retarders; rejuvenators; fabric deterioration/strength testing
 |
| 18.0 | **Sheet Metal Fabrication** |  | * Protection; Transfer of measurements; Lay-out procedures; Flat pattern lay-out; Templates; Drilling jigs and assembly fixtures
 |
| 19.0 | **Composite Fabrication** |  | * Master mould construction methods; Autoclave curing procedures; Curing steps and cycles; Mould removal methods
 |
| 20.0 | **Fluid Lines & Conduits** |  | * Fluid lines identification codes; Pressure, return, breather and drain lines; fluid lines - rigid/semi-rigid pipe and tubing materials; bend distortion limits; Standard threaded pipe and tube fittings; flaring angles
 |
| 21.0 | **Thermoplastics** |  | * materials; Inspection; Installation precautions; Repair or replacement; Storage and surface protection
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| **Transport Canada review results:** |
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 |  | Acceptable for structured training. |
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 |  | Additional training required - for example . |
| **TC CASI/Officer (name / stamp)** \_\_\_\_\_\_\_ **Office:** \_\_\_\_\_\_\_ **Date:**\_\_\_\_\_\_ |

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