

Aircraft Structural Program Review Summary Points – March 19, 2019

Attendees:

Dr. Anthony Parker, Albany; Jon Byrd, Georgia Northwestern; Robert Strub, Savannah; Randy Rynders, Central Georgia; Paul O’Dea, Central Georgia; Jason Wisham, South Georgia; Brian Malloy, Robins Air Force Base; Todd Hoffman, Gulfstream; Terry Emmons, Gulfstream; Robert Jorge, Gulfstream; Blaze Nofi, Gulfstream; Jeff Hoffmnan, Robins Air Force Base; Philip Hodge, Robins Air Force Base; Sandra King, TCSG; and Steve Conway, TCSG.

Industry Needs:

Participants identified skills needed for jobs in this field. Responses included: show up for work on time; drill straight holes to contour; install flush fasteners on contoured surfaces; read blueprints and electronic TOs; know how to sink and countersink properly; be aware of composites manufacturing and repair; use an autoclave, heat oven and heat bonding; repair holes or other cold fixes; be able to identify various fasteners and materials; install mechanical fasteners; understand torque; use sealants properly; perform fastener removals; drill holes to proper depth or stops; understand foreign object damage (FOD); use PPE and understand OSHA regulations; properly install hydraulic lines and safety wiring; understand use of shop equipment and proper tooling; be able to run wiring harnesses; use perma-swage for splicing hydraulic lines; use critical reading skills for scanning technical information. Students should also know basic computer navigation skills, shop math calculations, and use of basic measuring devices such as rulers.

Aircraft Structural Program Outcomes Review:

Six program outcomes were reviewed and discussed. The group agreed that outcome number 6 should be removed as annual training plans are work related and not program related. The group also agreed that outcome number 2 involving sheet metal should be reworded as follows:

Program graduates will be able to competently assemble, fabricate, and service sheet metal/composites for the construction and repair of aircraft structures.

Aircraft Structural Courses:

The group reviewed and discussed the ASTT courses. The following comments were recorded:

- ASTT 1010 (Basic Blueprint Reading) – learning outcome 1 under Orthographic Drawings can be removed; learning outcome 2 under Features can be removed as well.
- ASTT 1020 (Aircraft Blueprint Reading) – learning outcome 4 under Engineering Numbering and Revision System should be moved up to number 1 in the list; learning outcomes 8 and 9 under Body/Field of the Drawing can be combined into one; learning outcomes 2 and 3 under Configured, Method, and Undimensioned Drawings can be combined; if shop math needs to be added to the program as a competency it can be inserted into this course.
- ASTT 1030 (Structural Fundamentals) – learning outcome 2 under Fasteners should have “stress” replaced with “tension loads”; learning outcome 10 under Hand Tools should have “select speed” added; learning outcome 12 under Hand Tools should add “for drill motor

and ratchet guns”; learning outcome 14 under Hand Tools should remove “tip for fastener used” and replace with “set for rivet being used”; learning outcomes 21 and 22 under Hand Tools should swap order; and learning outcomes 23 and 24 under Hand Tools should be moved over to ASTT 1040.

- ASTT 1040 (Structural Layout and Fabrication) – learning outcomes 3, 10, 14, 18, 20, and 24 can be removed from under Stationary Equipment as they are all repeated; learning outcome 32 under Stationary Equipment should be reworded to say “Bevel or chamfer the metal edges”.
- ASTT 1050 (Aerospace Quality Management) – no changes but it should be noted this course can easily be adapted to on line delivery.
- ASTT 1070 (Aerodynamics) – the one learning outcome under Control Surfaces should have the word “fabrique” removed and “spoilers” inserted.
- ASTT 1090 (Composites and Bonded Structures) – learning outcome number 5 under Safety should have “MSDS” replaced with “SDS”; learning outcome number 3 under Inspection Techniques should be moved up to number 1 in the listing and the word “repair” should be replaced with “damaged”; learning outcomes 4 and 5 under Inspection Techniques should be moved down to number 6 under Application.
- ASTT 1100 (Sealants) – learning outcome number 5 under Safety should have “MSDS” replaced with “SDS”.
- ASTT 1110 (Corrosion Control) – learning outcome number 4 under Corrosion Theory should have “metals” replaced with “materials”; the learning outcome under Corrosion Prevention should have “paint” replaced with “prime”; learning outcome 16 under Non Destructive Inspection can be removed as it is redundant.
- ASTT 1120 (Aircraft Metallurgy) – learning outcome 4 under Safety should have “material” removed; learning outcome 3 under Heat Treatment should have “agent” replaced with “aging”.
- ASTT 1180 (Aircraft Technical Publications) – no changes proposed but computer navigation skills can be added as a competency area if needed.
- ASTT 1190 (Internship) – no changes proposed

Additional Discussion and Future Work:

Before closing Steve stated that he would send out the curriculum document with suggested edits in just a few days for all to review and make any further edits. After that it could be sent out statewide for industry review and comments. Next month the faculty would reconvene in a curriculum work group and work on streamlining and adjusting the program as needed. Dr. Parker informed the group that Albany Tech can provide quality process training to any college personnel in the system. Randy stated that he would try and find some information on the old composites TCC that existed some time ago.