



## **SDA—Structural Design and Analysis for Aerospace Engineers**

**New 24-hour course developed and taught by Tom Sarafin, Instar’s founder**

### **Testimonials**

#### **December 2020 Live Webinar for Open Enrollment**

Which parts of the course did you find most interesting or useful?

- “Combination of analysis and design”
- “Direct industry applicability”
- “When linear-elastic theory applies or not”
- “Benefits of FBD on simplified structure to understand load paths and possible failure mechanisms”
- “Complexity of single parts (designs) is not bad when labor (associated with multiple parts) is far more expensive”
- “Failure mode identification ahead of analysis.”
- “Failure mode breakdown—so useful for an engineer beginning a new design or reviewing a completed one”
- “Honestly, the bolted joint content; one could tell there is so much more there to explore”
- “Apples to Apples, this will probably always ring in my head during analysis now”
- “Mechanics of materials, great comparison and discussion”
- “Really highlighted what (material) properties we are looking for for certain applications”
- “All of the section on the design side of the analysis”
- “The difference between proportional limit and yield (stress)”
- “The most interesting parts were the link between industry examples/lessons learned and topic. The most useful were the specific points you underscored—failure modes, load paths, allowable(s) to use and why, FBD. Also the concept of proportional limit was very useful, and the reminder to take advantage of ductility—or understand it.”
- “Example problems and class problems, especially problems related to statics and load paths”
- “I really liked how you brought it back to basics. As a structural engineer that just switched companies from (one) with well defined methods to one where you have to get creative, it was a nice refresher.”

“The review of statics was humbling and a great reminder.”

“Very good course that covers most topics a stress engineer would face. Good for the new engineer or the old one looking to refresh the basics.”

“This course was a great refresher for some topics I was already familiar with and was eye opening on (others). Working at a company that asks for MEs to do both design and analysis, this was a great course to make sure my team and I have the knowledge and skillset required to build great products and meet our objectives with high confidence.”

## DABJ Testimonials

“The course condenses many aspects of ... general practices in structural design and analysis into a very informative as well as entertaining 3 days. Both the theoretical and practical sides of design, analysis, and engineering in general blend together beautifully – with introspective as well as interactive presentation of the material an added bonus.”

From a single class participant who has taken other courses taught by Tom Sarafin:

“Thanks for the wonderful course. Tom hit on all the reasons we do what we do and why we do it. Tom has reminded us of our guiding first principles.”

“Common sense isn't very common anymore. Tom's full of it and you can quote me.” (Love this one!)

“We're all on the same team, don't want any casualties, hardware or otherwise, and empowering someone to say “no” with good reasons can literally save lives. You, as a good teacher ... encourage the student to exceed a ‘plain and simple no’ to become instead a “so how about we make it robust like this, where it's insensitive to (uncertainties).”

“Than you for your service to the industry, Tom!”