

Reflection Questions on All the Matters About Quality...

BATCH 1 (covers pages 1-64)

1. In Joe's first meeting with Sandy and Ralph to discuss the cat furniture project, he observes that high quality products are more competitive and more profitable (page 10-12). Ralph comments that efficient production and high quality are highly integrated (pages 13-14). Within the context of the senior design program at the University of Idaho, do you agree with these comments? What does efficient production and high quality look like in a prototyping environment? Does the relative importance of efficient production and high quality change throughout the lifecycle of a capstone design project?
2. On pages 41-42, Zeb and Roger have a heated discussion about quality of the cat condo on Team 3's prototype. What do you think about the solution they and Joe agree to? What is the role of specifications and inspections in the context of a capstone design project? Should all known problems be identified and reworked before subsequent capstone tasks are performed? Why or why not?
3. On page 55, Mickey is incapacitated by toxic gases from the carpeting adhesive. What do you think about this incident and Joe's solution? What safety provisions are built into the senior design program? When and how serious should senior design teams address safety issues associated with their products?
4. Analyze Joe's journal. What best practices are illustrated? What lessons learned will you adopt for your own logbook in future engineering projects?

BATCH 2 (covers pages 65-130)

5. Team 2 has a problem with quality of purchased brackets and screws (pages 81-82). They work out solutions, which Joe generalizes to "Materials Quality" principles. What are two different types of issues associated with quality of purchased parts that might arise in a capstone design project? How should these be resolved?
6. Joe's "Design for Production" principles (pages 133, 121-142) include advanced thoughts for how designs affect work flow, based on incidents with customer change orders (page 9) (and last-minute schedule changes (pages 91-98). How much should project requirements be allowed to shift within a senior design project? What actions should be taken so to assure that clients, students, and faculty/staff are on the same page?
7. Sandy convinces Joe (pages 105-106, 136) that requirements compliance needs to be verified, no matter how good the design and execution processes for satisfying requirements. Do you think this is always true, or can it be overkill? How should customer requirements be verified in senior design? What are the implications if requirements are not met?
8. Analyze each of Joe's 10 rules of quality. Where/when do each of these apply to a senior design project?