

Week 3 Assignments: VCP – mechanical

Learning objectives for ME 323: Mechanics of Deformable Bodies

Upon completion of this course, students should be able to:

- 1) Recognize elementary principles of deformable body mechanics
 - a. Knowledge
- 2) Develop the ability to analyze a given problem in a simple and logical manner
 - a. Analyze
- 3) Apply to a given problem's solution the fundamental principles
 - a. Application
- 4) Perform analyses for stresses, strains, and deformations of simple solids and structures subjected to axial, torsional, flexural, and combined loads
 - a. Analyze
- 5) Design simple solids and structures to meet specified requirements for safety and/or performance
 - a. Synthesis

Mini-project

The students would be given design constraints for the creation of parts for a building. These constraints would include load to be supported, weight of parts, costs, geometrical limitations, etc. The students would then use their knowledge for solid mechanics to design a part that would best fit with the constraints given. The students would deliver to me a report that would contain support that their design met all of the constraints. This report would have calculations that showed the chosen geometry and materials would support the given loads and geometrical limitations, as well as, including costs for building the part.