DET2250 - Reverse Engineering Applications

Credits:	4 (1/3/0)
Description:	The objective of this course is for students to develop a set of production drawings of an existing product. Students will be required to reverse engineer the product and create all necessary views, layouts, annotations and instructions required for the product to be manufactured and assembled, while collaborating with a work group similar to those found in industry.
Prerequisites:	• CADD2200 • CADD2210 • DET1106 • DET2246
Corequisites:	
Pre/Corequisites*:	
Competencies:	1. Produce working drawings with accurate measurements based on existing part geometry. 2. Produce and implement a part numbering system to identify parts, sub-assemblies and assemblies. 3. Produce and implement a design and revision schedule for modeling, assembling, detailing and documenting the product. 4. Coordinate part, assembly and detail drawing assignments for the product design team. 5. Generate a comprehensive genealogy chart to accurately identify all vendor parts, designed parts, sub-assemblies and assemblies. 6. Produce comprehensive detail drawings for part designs. 7. Produce exploded sub-assembly drawing layouts utilizing balloons and a bill of materials to accurately identify sub-assembly parts. 8. Produce exploded assembly drawing layouts utilizing balloons and a bill of materials to accurately identify sub-assemblies. 9. Analyze component design data to assess accuracy of part dimensions. 10. Apply appropriate sub-assembly level constraints to analyze component functionality and degrees of freedom. 11. Apply appropriate assembly level constraints to analyze sub-assembly functionality and degrees of freedom. 12. Apply appropriate mechanical fasteners for design functionality.
MnTC goal areas:	None

**Can be taking as a Prerequisite or Corequisite.*

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