DET2246 - Tool Design

Credits:	3 (1/2/0)
Description:	The objective of this course is to develop an understanding of jigs, fixtures and dies and their function in part production. Students will analyze component pieces, classifications of jigs and fixtures, design criteria and costs associated with building and implementing various types of tooling.
Prerequisites:	• CADD1400 • CADD1410 • DET1106
Corequisites:	• CADD2200 • CADD2210
Pre/Corequisites*:	
Competencies:	1. Analyze tool design objectives and designer responsibilities. 2. Analyze and explain the different categories of jigs and fixtures. 3. Calculate part costs using manufacturing-specific variables and formulas. 4. Calculate labor expenses related to production utilizing specific process parameters. 5. Calculate tool costs relative to design criteria. 6. Apply design economics to a production scenario using a comparative analysis matrix. 7. Design, detail and document the design specifications for a leaf jig. 8. Design, detail and document the design specifications for a box jig. 9. Generate files for three-dimensional prototypes based on design geometry.
MnTC goal areas:	None

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