1. ME 5221, Computer Assisted Product Realization

2. 4 credits, 4 hours.


4. Textbook: Not applicable

5. Specific course information:
   b. Prerequisites: ME 3221, CSCI 1113.
   c. Elective course for ME students.

6. Course outcomes (related ABET student outcomes indicated in square brackets):
   a. A knowledge of theoretical, practical and economic aspects of part and process design. [1,2,4,6]
   b. An understanding of the capabilities of integrated CAD/CAM systems. [2]
   c. An ability to develop a complete process design and product life cycle for an injection molded plastic part. [1,2,4,6,7]
   d. An ability to work in a team to produce a part. [3,5]
   e. An ability to provide formal technical justifications for part and process designs in written and oral reports. [3]

7. Course topics:
   a. Specification of product performance
   b. Analytical and numerical analysis
   c. Injection molding
   d. Design and manufacturing of molded polymer parts
   e. Finite element analysis
   f. Modeling of polymer processing
   g. Molding and machining process design
   h. Mold and part production
   i. Part testing