THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Advanced Sheet Forming Laboratory

ISE 5521

Credit Hours:
1.50 - 1.50

Course Levels:
Undergraduate (1000-5000 level)
Graduate (5000-8000 level)

Course Components:
Lecture
Lab

Course Description:
Computational and experimental laboratory based hands-on introduction to the fundamentals and applications of sheet forming processes. Students who took a version of this course offered as a group studies may not receive credit.

Prerequisites and Co-requisites:
Prereq: 2500 or permission of instructor.

Course Goals / Objectives:
- Introduce students to the fundamentals and application of sheet forming processes Introduce students to the computational modeling of forming processes Provide hands-on experience to students in the forming of sheet metals
- Challenge students to use computational modeling in optimizing process parameters for the minimization of defects such as wrinkling, thinning and spring back
- Challenge students to demonstrate capability in applying theoretical and computational concepts to the forming a sheet metal part

Course Topics:
- Week 1: Introduction to the course and to the basics of industrial sheet forming
- Week 2: Lecture and tutorial on Computational Modeling
- Week 3 Sheet blanking Week 4 Sheet bending Week 5 Sheet drawing lecture 1hr/wk lab 2 hr/wk
- Week 6 Course Project on rectangular box by bending Week 7 Course project on rectangular oil pan or panel by drawing lecture 1hr/wk lab 2 hr/wk

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Designation:

Elective