



Adhesive Bonding and Mechanical Joining of Plastics

WELDENG 7407

Credit Hours:

2.00 - 2.00

Course Levels:

Graduate (5000-8000 level)

Course Components:

Lecture

Course Description:

Fundamentals of adhesive bonding science and technology and methods for mechanical joining of plastics including fasteners, snap-fits, press-fits, swaging, and staking.

Prerequisites and Co-requisites:

Prereq: Grad standing, or permission of instructor.

Course Goals / Objectives:

- Understand structure and properties of polymeric adhesives
 - Ability to understand theories of adhesion
 - Understand and be able to develop procedures for adhesive bonding
 - Ability to analyze and design mechanical joints using fasteners
 - Ability to analyze and design mechanical joints using snap and press fits
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Course Topics:

- Introduction to structure and properties of polymeric adhesives.
 - Theories of adhesion.
 - Adhesive bonding procedures and rapid curing methods.
 - Design and testing of adhesive joints.
 - Analysis and design of snap-fits.
 - Analysis and design of press-fits.
 - Analysis and design of bolted joints.
 - Staking and swaging.
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Designation:

Elective