

CHM 257: Introduction to Material Science for Advanced Manufacturing

This class identifies the major categories of manufacturing materials (polymers, metals, ceramics and composites) and examines their mechanical and physical properties. Students will perform an analysis of the structure, behavior, and characteristics of materials to aid in the proper selection of materials for specific applications. In the laboratory portion of the class, students will perform hardness tests, heat treatments, and tensile tests to evaluate the effect of processing on resulting mechanical properties. Evaluation and analysis of the results will introduce the student to technical writing skills by preparing laboratory reports of experimental data.

Credits: 4

Program: Chemistry

Experimental Laboratory Credit: 2

Theory Credit: 3