MSE 3010 Materials Processing Laboratory
Fall 2016

Department of Materials Science and Engineering

Instructor:	Jeff Bates
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Office Hours:	Fridays 1:00 pm – 2:00 pm
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Pre-requisites:	Full Major Status in Materials Science & Engineering
Lecture:	MW 2:00 – 2:50pm WEB L120
Lab:	M or W 3:00 – 5:00pm MCE 1037
Credit Hours:	3
Text(s):	Canvas
Course Description:	This is a laboratory course focused on providing hands on experience in fabricating parts using current materials processing technologies. Students choose two projects lasting a half semester each from various traditional and new materials.
Course Outcomes:	a. An ability to apply mathematical, scientific, and engineering knowledge to solve materials related problems b. An ability to design and conduct experiments, characterize materials, and properly interpret data in order to understand materials behavior d. An ability to function on teams whose members have interdependent and complimentary skills

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e. An ability to identify, formulate, and solve materials-related problems
g. An ability to communicate technical information effectively in oral and written form
h. An ability to acquire a broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
k. An ability to use the techniques, skills, and modern engienering tools necessary in mateirals engineering practices

Content Overview:

This class will explore processing methods for the following materials: polymer, ceramic, and other materials. Ceramic processing will compare slip-casting and dry pressing fabrication. Polymer materials will compare monomers used in a network polymer, their function in the polymer structure, and how to optimize the stimuli-response of the material.

A course calendar will accompany this syllabus.

NOTE: Late work will receive a 10% penalty per day

Grading & Evaluation Methods:

10% Solid Works Project
20% Lab Report #1
10% Lab #1 Presentation
20% Lab Report #2
10% Lab #2 Presentation
20% Lab Report #3
10% Processing Presentation

A 95%-100%
A- 90%-95%
B 80%-90%
C 70%-80%
D 65%-70%
E 0%-65%

Key Dates:

Monday, September 5th – Labor Day – No School
Friday, August 26th – Last day to add and drop classes
Monday – Friday October 9th – 16th – Fall Break
Friday, September 16th – Last day to withdraw from classes
Thursday – Friday November 24th – 25th – Thanksgiving Break – No School

Thursday, December 8th – Last day of classes
Friday, December 9th – Reading Day

Americans with Disabilities Act Statement:

"The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodation in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations."

Faculty and Students' Responsibilities:

"All students are expected to maintain professional behavior in the classroom setting, according to the Student Code, spelled out in the Student Handbook. Students have specific rights in the classroom as detailed in Article III of the Code. The Code also specifies proscribed conduct (Article XI) that involves cheating on tests, plagiarism, and/or collusion, as well as fraud, theft, etc. Students should read the Code carefully and know they are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, and I will do so, beginning with verbal warnings and progressing to dismissal from class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee."