THE UNIVERSITY OF UTAH

MSE 5801 – Materials Characterization Lab Internship

Department of Materials Science and Engineering

Instructor:	
Office:	
Office Hours:	
Phone:	
Email:	

Pre-requisites:	Full Major Status in Materials Science & Engineering
Credit Hours:	3

Course Description:

MSE 5800 will allow students to earn academic credit for successful completion of a Materials Science and Engineering-related internship. To have an internship fulfill a Technical Elective requirement, students must earn a total of 3 credit hours and complete a graded Technical Report. The internship progress will be monitored, evaluated, and graded by the Internship Program Advisor. Students must take an active role in finding and applying for an appropriate internship before enrolling for the course.

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
c. An ability to select or design a materials based system, component, or process to meet desired needs within realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
d. An ability to function on teams whose members have interdependent and complementary skills
e. An ability to identify, formulate, and solve materials-related problems, and understand the structure, properties, processing, and performance of materials

g. An ability to communicate technical information effectively in oral and written form

Choose an item.

i. A recognition of the need for, and an ability to engage in life-long learning

Choose an item.

k. An ability to use the techniques, skills, and modern engineering tools necessary in materials engineering practices

Choose an item.

Content Overview:

For a content overview visit: https://mse.utah.edu/internship/

Grading & Evaluation Methods:

Grading

Technical Report	55%
Employer Evaluation	30%
Attendance	10%
Student Evaluation	5%

Approximate grading scale:

100-92%	A
91-89	A-
88-87	B+
86-82	B
81-79	B-
78-77	C+
76-72	C
71-69	C-
68-67	D+
66-62	D
61-60	D-
<59%	F

Late Technical Report Policy

Technical Reports will be accepted up until the last day of finals for the semester, but will be penalized by a grade drop. For Technical Reports turned in after the posted deadline (deadlines posted on https://mse.utah.edu/internship/), the highest grade a student can receive on the report is a B, if turned in within one week after the deadline. For any papers turned in past the one week extension, the highest grade a student can receive on the report is a C. Absolutely no Technical Reports will be accepted after the last day of finals.

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."

Internship Student Final Grade				
Requirements	**Percent**	**Total possible points**	**Points**	**Total**
Technical Report	**55%**	**55**	0	**0**
Employer Evaluation	**30%**	**75**	0	**0**
Attendance	**10%**	**50**	0	**0**
Student Evaluation	**5%**	**10**	0	**0**
			Total:	**0**

Technical Report Grading Rubric

	Criteria	Levels of Achievement					Total
		Poor 1 Points	Fair 2 Points	Good 3 Points	Very Good 4 Points	Excellent 5 Points	
Abstract	The abstract provided a brief summary of the paper.						0
Technical Report	Level of detail that describes the technical aspects of the internship.						0
	This paper went beyond being a log of daily tasks, but reflected research, analytical methods, and problem solving methods applied to the tasks performed.						0
	This paper thoroughly displayed technical results and the impact of such results.						0
	Level of examples used to show the application of the student's education and knowledge of work performed.						0
	Use of illustrations (tables, figures, drawings)to enhance the discussion.						0
Conclusion	The conclusion provided a summary of how the projects and responsibilities of the internship relate to theories learned in the classroom.						0
	The conclusion provided a summary of how the experience will help them in their classes.						0
	The conclusion provided a summary of what they discovered about the work place environment that will help them conduct a career search after graduation.						0
Formatting	The paper meeting formatting expectations: typed, double-spaced, spelling and grammar checked.						0
						Tota	0

	Criteria	Levels of Achievement			Total
		YES 1 Point	No 0 Point	NA 1 point	
Additional Requirements	The paper was 12-15 pages in length.				0
	Was a title page included?				0
	Was a job description provided?				0
	Was an updated resume provided?				0
	Was the technical report turned in on time?				0
				Total	0

Total	0

Employer Evaluation

	Criteria	Levels of Achievement						Total
		Strongly Disagree 1 Points	Disagree 2 Points	Somewhat Agree 3 Points	Agree 4 Points	Strongly Agree 5 Points	N/A 5 Points	
Professionalism	This student had a positive attitude while at work:							0
	This student took direction well:							0
	This student behaved in a professional manner:							0
	Overall, this student was a valuable employee:							0
Learning Outcomes	Do you feel the student has the ability to apply mathematical, scientific, and engineering knowledge to solve materials-related problems?							0
	Do you feel the student is able to design and conduct experiments, characterize materials, and properly interpret data in order to understand materials behavior?							0
	Do you feel the student is able to select or design a materials based system, component, or process to meet desired needs within realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturing, and sustainability?							0
	Do you feel the student has the ability to function on multidisciplinary teams whose members have interdependent and complimentary skills?							0
	Do you feel the student has the ability to identify, formulate and solve materials-related problems?							0
	Does the student understand the professional and ethical responsibilities of engineering?							0
	Do you feel the student is able to communicate technical information effectively in oral and written form?							0
	Do you feel the student has acquired a broad education necessary to understand the impact of engineering solutions in global, economic, environmental, and societal context?							0
	Can the student recognize the need for, and an ability to engage in life-long learning?							0
	Do you feel the student has an understanding of contemporary issues and materials applications that affect the materials science and engineering profession?							0
	Do you feel the student has the ability to apply techniques, skills and modern engineering tools necessary in materials engineering practices?							0

Total	0
Total Points:	75
Total Points Possible (Excluding NA responses):	75

Attendance								
Criteria		Levels of Achievement						Total
		60% or less of the time = Did not met expectations 10 Points	70% of the time = Seldom met expectations 20 Points	80% of the time = Met expectations some of the time 30 Points	90% of the time = Met expectations most of the time 40 Points	100% of the time = Met expectations 50 Points	N/A	
Professionalism	This student met attendance expectations:							0

Student Evaluation				
Criteria	Levels of Achievement			Total
	No 0 Points	Adequate 5 Points	Yes 10 Points	
Student completed evaluation:				0