

MSE 425: Senior Thesis

<i>Course description:</i>	Research in materials science and engineering.
<i>Number of credits:</i>	3 (0-9). This course is required.
<i>Course Coordinator:</i>	Yuehe Lin
<i>Prerequisites by course:</i>	MSE 320; MSE 323, senior standing; certified major in Materials Science Engineering
<i>Prerequisites by topic:</i>	<ol style="list-style-type: none">1. Metallographic preparation methods.2. Visible light microscopy.3. Scanning electron microscopy.
<i>Postrequisites:</i>	None
<i>Textbooks/other required materials:</i>	None
<i>Course objectives:</i>	<ol style="list-style-type: none">1. To obtain first-hand experience with research in the field of materials science and engineering.
<i>Topics covered:</i>	Independent research.
<i>Expected learning outcomes:</i>	Each student will be assessed on the following points: <ol style="list-style-type: none">1. defining a research project.2. identifying equipment and facilities necessary to carry out the project.3. becoming aware of the available literature in your field of study.4. designing and carrying out experiments.5. obtaining and analyzing results/data.6. preparing a senior thesis.7. presenting your thesis to the faculty.8. publishing a paper in a recognized journal or conference proceedings. (<i>optional</i>)
<i>Class schedule:</i>	None.
<i>Laboratory schedule:</i>	Two 3-hour laboratory sessions per week, for one semester. Can be repeated for credit.
<i>Contribution to meeting the professional component:</i>	Engineering Topics

Relationship of course to student outcomes:

3 strongly supported; 2 supported; 1 minimally supported

Student Outcomes Pre-Fall 2018
(ABET EC2000)

Student Outcomes Fall 2018 forward
(ABET EC2019)

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	1	2	3	4	5	6	7	8	9	10	11
3	3			2	2	3				2		2	2	2	3		3	1	1	3			2	2	3

Prepared by: Andrea Butcherite and Dr. Yuehe Lin

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