

ESM 460 ADVANCED ENGINEERING LABORATORY (REQUIRED)

Credit: 3

Course Catalog description:

Students work in teams to perform advanced laboratory projects that emphasize the structure-property relationship. Emphasis on statistical analysis, multivariate fitting of data, and technical manuscript preparation.

PRE- OR COREQUISITE(S): ESG 312 Engineering Laboratory, ESG 333 Materials Science II: Electronic Properties

TEXT(S) OR OTHER REQUIRED MATERIAL: None

COURSE LEARNING OUTCOMES	SOS	ASSESSMENT TOOLS

COURSE TOPICS

- Hall Effect
- Range and Stopping Power of Different Materials of Alpha-particle radiation: (discontinued)
- High T_c Superconductor:
- Interfacial and Surface Energies via Contact Angle Measurements:
- The Effect of Substrate Mechanical Properties on Cell Growth
- The Mossbauer Effect: (discontinued)
- Fracture Toughness of Polymer Interfaces:
- Magneto Optic Effect:
- The process of Spinodal Decomposition and Coarsening in Polymer Blends

CLASS/ LABORATORY SCHEDULE:

ESM	350	Advanced Engineering Lab	LEC	1	M	11:45 AM	1:05 PM
			REC	R01	RECF	2:20 PM	3:15 PM
			LAB	L01	M	1:30 PM	4:20 PM
			REC	R02	RECF	1:15 PM	2:10 PM
			LAB	L02	M	4:30 PM	7:20 PM

CURRICULUM

This course contributes 3 credit hours toward meeting the required 48 hours of engineering topics.

STUDENT OUTCOMES (SCALE 1-3):

A	B	C	D	E	F	G	H	I	J	K

3 – Strongly supported

2 – Supported

1- Minimally supported

LEAD COORDINATOR(S) WHO PREPARED THIS DESCRIPTION AND DATE OF PREPARATION: