

0908466	Micro-Electro-Mechanical Systems (MEMS)	(3 Cr. Hrs.)
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Prereq./Coreq. (0908351)

An overview of MEMS. Material and Fabrication Techniques: MEMS materials, silicon, metals and metal alloys, polymers, Fabrication Techniques, deposition, lithography, etching, bulk and surface micromachining, wafer bonding, thick-film screen printing, electroplating, LIGA, porous silicon, electrochemical etch stop, focused ion beam etching and deposition, polymeric micromachining, three dimensional microfabrication. MEMS Sensors: Mechanical transduction, piezo resistivity, piezoelectricity, capacitive techniques, optical techniques, resonant techniques, vibration excitation and detection mechanisms, resonator design