1

GRADUATE EMBEDDED CERTIFICATE IN MICRO ELECTRO MECHANICAL SYSTEMS

Micro Electro Mechanical Systems (MEMS) is an interdisciplinary field related to technologies used to fabricate nano to microscale devices and system-on-a-chip. The MEMS devices and systems embed electrical, mechanical, chemical, and hybrid mechanisms to realize devices and systems for a broad array of applications such as physical sensors, biomedical systems, and complex multi-functional nano-micro systems. MEMS combine expertise from many disciplines, including but not limited to all fields of engineering, biology, chemistry, informatics, medicine, and physics.Typical MEMS devices combine sensing, processing and/ or actuating functions.They typically combine two or more electrical, mechanical, biological, magnetic, optical orchemical properties on a single microchip.

The objective of the program is to provide a means for students interested in this interdisciplinary field a mechanism to obtain a concentration in MEMS and to gain acknowledgement for this achievement.

Program of Study

(Code	litle	Credit Hours
(CHBE/ECE/ ME 6229	Introduction to MEMS	3
(CHBE/ECE/ ME 6460	Microelectromechanical Devices	3
S	Select two (2):		6
	CHBE 6710	Microfluidics & Appl	
	ECE 6422	Interface IC Design for MEMS and Sensors	
	ECE 6450	Introduction to Microelectronics Technology	
	ECE 6200	Biomedical Applications of Microelectromechanical Systems	
	ME 6124	Finite-Element Method: Theory and Practice	
	ME 6449	Acoustic Transducers and Signal Analysis	
	ME 6776	Integrated Low-cost Microelectronics Systems Packaging	
_	ME 8833	Special Topics in Thermal Sciences (Thin Film Properties)	

Total Credit Hours

12