



MICRO ELECTRO MECHANICAL SYSTEMS CERTIFICATE PROGRAM

MEMS is an interdisciplinary field related to technologies used to fabricate nano to micro scale 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 or chemical properties on a single microchip. To learn more: www.mems.gatech.edu

MEMS Certificate Program Objective. 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.

MEMS Certificate Program Requirements. The flexible curriculum is based on the fabrication, design, and applications of MEMS.

Number of Credit Hours of Core Curriculum Courses: 6

Total Credit Hours of Certificate: 12

Admission/Placement Requirements: GPA 3.0, Graduate Level Standing

Start Date: Fall 2011

Points of Contact:

ECE - Bruno Frazier, Room 223 NRC, (404) 894-2030

MechE - Peter J. Hesketh, Room 317 Love, (404) 385-1358

Students from all other schools can contact either Professor Hesketh or Frazier

Courses in core program are the following cross-listed courses:

ChBE/ME/ECE 6229 Introduction to MEMS (offered in Fall Semester) (Instructor Prof. Hesketh/Sulchek)

ChBE/ME/ECE 6460 MEMS Devices (offered in Spring Semester) (Instructor Prof. Brand/Degertekin)

Breadth courses (chose two from following list):

ChBE 6710 Microfluidics (instructor Prof. Lu)

ECE 6200 Biomedical Applications of MEMS (instructor Prof. Frazier)

ECE 6422 MEMS Interface IC Design for MEMS and Sensors (instructor Prof. Ayazi)

ME 6449 Transducers and Signals (instructor Prof. Degertekin)

ME 6124 Finite Element Analysis (instructor Prof. Sitaraman)

ME 8833 Thin Film Properties (instructor Prof. Graham)