GEOSENSING SYSTEMS ENGINEERING AND SCIENCES

NCALM.CIVE.UH.EDU

CHARTING THE FUTURE OF GEOSPATIAL TECHNOLOGY

UNIVERSITY of HOUSTON | ENGINEERING

WHAT IS GEOSENSING SYSTEMS ENGINEERING AND SCIENCES?

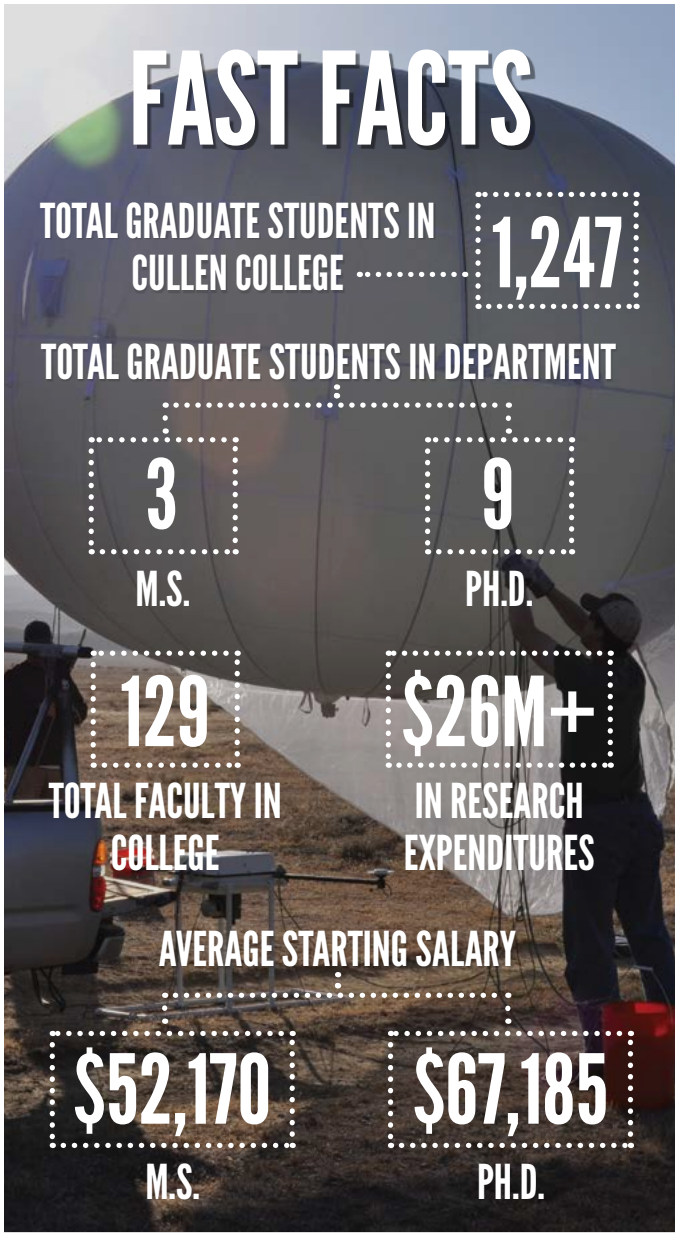
Geosensing systems engineering and sciences is an interdisciplinary program focusing on the use of airborne mapping to meet the needs of private industry, government agencies and academic institutions. Graduate students will be trained to use a tool called LiDAR, or Light Detection and Ranging. With LiDAR, researchers fly a plane over an area they want to map, shooting hundreds of thousands of laser bursts per second at the ground. How that light returns to its source can be used to create extremely detailed topographical maps, even through dense vegetation and murky water. The maps produced from UH LiDAR data have supported hundreds of research projects for both private and government agencies. These maps have helped locate an ancient civilization in the Honduran rainforest, identify levees in danger of failing, chart land erosion following hurricanes, create flood maps for urban areas, find near-drought conditions in seemingly healthy plants, map the sea floor, chart areas prone to landslides and identify how the presence of life impacts geographical features.

WHY THE UNIVERSITY OF HOUSTON?

The geosensing systems engineering and sciences program is the only graduate program of its kind in the world! As the geospatial technology sector continues to grow, so does the demand for scientists who are trained to use technologies such as LiDAR. The graduate program in geosensing systems engineering at UH was established in direct response to industry workforce needs, and students are expected to prepare proposals for private and government agencies for financial support of their own research projects. Graduate students in the program have the advantage of working with and being taught by the world's leading experts on airborne laser mapping through the UH National Center for Airborne Laser Mapping (NCALM). NCALM is funded by the National Science Foundation and is jointly operated with the University of California, Berkeley.

WHAT CAN I DO WITH A GEOSENSING SYSTEMS ENGINEERING AND SCIENCES GRADUATE DEGREE?

Geosensing systems engineering and sciences graduate studies provide opportunities to students in a wide assortment of disciplines that cross traditional areas of engineering and scientific specialties to produce next-generation global engineers and scientists. According to the U.S. Department of Labor, the global demand for graduates who are trained in geospatial technologies and geographic information systems (GIS) is vastly outgrowing the supply of such qualified graduates. Recent estimates by the Department of Labor show the shortfall in advanced level of GIS-trained individuals to be approximately 4,000 in the U.S. alone. Graduates of the geosensing systems engineering and sciences program at the UH Cullen College of Engineering will be prepared to embark on academic, national laboratory or industrial research careers in engineering and science. Payscale.com reports that graduates with an M.S. in geosensing systems engineering earn an average annual salary of $52,170, with Ph.D. graduates earning $67,185.



WHAT TYPES OF GRADUATE DEGREES DO YOU OFFER IN GEOSENSING SYSTEMS ENGINEERING AND SCIENCES?

The UH Cullen College of Engineering offers an M.S. degree and Ph.D. degree in geosensing systems engineering and sciences.

FOR MORE INFORMATION

For more information on eligibility and admission requirements, please visit ncalm.cive.uh.edu/gses/geosensing