

Graduate Program in Geotechnical Engineering

University of Massachusetts Amherst

(<http://geotech.ecs.umass.edu/>)

The Geotechnical Engineering Group at UMass Amherst is internationally recognized for excellence in teaching and research in Geotechnical Engineering. The objectives of the Master's degree program are to educate qualified students in the discipline of Geotechnical Engineering and prepare individuals for careers as practicing geotechnical engineers in the areas of soil mechanics, foundation engineering, and environmental geotechnics. The program has outstanding facilities for laboratory experimental research, field experimental research, spatial analysis, and numerical modeling.

Teaching/Research Interests of Geotechnical Engineering Faculty:

Ching S. Chang, Ph.D., P.E.

Granular Mechanics, Microstructural Geomechanics, Constitutive Laws for Geomaterials, Discrete Element Method, and Finite Element Method

Don J. DeGroot, Sc.D., P.E., Group Coordinator

Soil Behavior, Environmental Geotechnics, Site Characterization, Embankments on Soft Clays, and Laboratory Measurement of Soil Properties



William H. Hight, Ph.D., P.E.

Pavement Design and Analysis, Overlay Design, Geotechnical Properties of Base and Subgrade Materials, and Nondestructive Pavement Testing

Carlton L. Ho, Ph.D., P.E.

Earth Retention Systems, Geographic Information Systems, Slope Stability and Landslides, and Soil Dynamics and Earthquake Engineering

Alan J. Lutenecker, Ph.D., P.E., CEE Department Head

In Situ Testing of Soils, Behavior of Shallow Foundations, Design of Deep Foundations, Environmental Geotechnology, and Physico-Chemical Properties of Fine Grained Soils



Graduate Student Financial Support:

Graduate Research Assistants (RA) or Teaching Assistants (TA) that are offered full time support will typically receive the following financial assistance per year:

Stipend (cash): \$20,000

Tuition Waiver (in state): \$5,300

GEO Health Coverage: \$3,300

Curriculum Fee: \$6,700

Health and Welfare: \$645

Total Equivalent of RA or TA Appointment: \$36,000

Full time RAs and TAs are also assigned an office for their use with a desk and personal computer.



Course Load and Schedule:

Master's students are required to take 31 graduate credits beyond the B.S. degree to earn a Master of Science degree in Civil and Environmental Engineering. Core courses generally include Shear Strength and Soil Behavior, Geotechnical Materials Testing, In Situ Testing in Geotechnical Engineering and Advanced Foundation Engineering. Elective courses are also offered (e.g., Earthquake Engineering, Soil Dynamics, Computer Methods in Geomechanics, etc.). Students are required to take a minimum of one Geosciences class and 9 additional credit hours of graduate level elective coursework. This totals 7 to 8 graduate level classes (3 and/or 4 credits each). Additional credits for graduation include 6 credit hours of Master's Research Project and 1 credit hour of Geotechnical Seminar. Students typically take 3 classes their first two semesters and an additional 1 to 2 classes during their third/fourth academic semesters while working on their research thesis. Students who start in the Fall semester typically graduate after 18 to 24 months of study. There is also a non research professional practice option that can usually be completed in 9 to 12 months of full time study. Financial aid is not offered to students following this option.



For More Information:



More information on the Geotechnical Program is available at: <http://geotech.ecs.umass.edu/>. Now is the time to start preparing to apply for Summer/Fall 2008 acceptance. Application



material is available online at the Graduate School of UMass Amherst www.umass.edu