GRADUATE PROGRAM IN

1865 THE UNIVERSITY OF MAINE

CIVIL AND ENVIRONMENTAL ENGINEERING

Program of Study

The Department of Civil and Environmental Engineering offers the Master of Science, and Doctor of Philosophy degrees. Areas of study include Environmental, Water Resources, Geotechnical, and Structural Engineering. A grade point average of at least 3.0 on a 4.0 scale is usually required for admission. The Department requires a TOEFL score of at least 600 for foreign students (original TOEFL documentation only) and GRE scores are considered in the evaluation of applications. The Graduate School charges a non-refundable application fee and will not process applications without receiving this fee. The Department of Civil and Environmental Engineering does not grant fee waivers.

Graduate courses and opportunities for advanced research are available in several areas of Civil Engineering. The Environmental and Water Resources Engineering areas include biological and chemical aspects of water quality and remediation; and surface and groundwater hydrology, including hydroclimatology and adaptive environmental management. Current active research areas in Structural Engineering and Mechanics include structural applications of composites, timber and reinforced timber structures, concrete materials, structural health monitoring, and computational mechanics. Geotechnical research areas include field and model scale investigation of soil-structure interaction, fundamental soil behavior, and site characterization and field monitoring.

Research Facilities

The University of Maine is located in a region having an extensive and diverse system of lakes, streams and rivers, providing one of the finest outdoor laboratories in the world for research on water quality and quantity. Our environmental labs are equipped with essential chemistry, microbiology and molecular biology research tools, and we have access to advanced analytical capabilities at the Sawyer Environmental Research Laboratory and other campus facilities. The University's Advanced Engineering Wood Composites (AEWC) Center houses state-of-the-art laboratories dedicated to the development and characterization of composites and wood. The nine integrated laboratories contain large-scale servo-hydraulic structural testing facilities, modern material testing equipment, and composite fabrication capabilities. More information can be found at www.aewc.umaine.edu. The geotechnical engineering laboratory space has recently been renovated and is equipped with high quality, advanced strength and consolidation testing devices. Additionally, the group maintains several in situ devices for field characterization and monitoring of geotechnical construction.

Financial Aid

The Office of Financial Aid, (207) 581-1324, handles all financial assistance. Applicants should fill out a Financial Aid Form after checking with the Office of Financial Aid regarding its deadline. Sometimes the Civil & Environmental Engineering Department has assistantships or stipends to offer. Eligible students admitted to the School will be notified.

Applying

Initial screening of applicants is done by the Department. Final determination of admissibility is made by the Graduate School of the University of Maine. The deadline for fall admission is February 1. Applications received after that date will be considered if space is available.

Correspondence

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Graduate Faculty

Eric N. Landis, Ph.D. (Northwestern University, 1993), Professor and Chair. Experimental mechanics, nondestructive evaluation, fracture, microstructure-property relationships for construction materials.

John A. Alexander, Ph.D. (Massachusetts Institute of Technology, 1970), Professor Emeritus. Engineering materials, infrastructure rehabilitation, engineering ethics.

Aria Amirbahman, Ph.D. (California, Irvine, 1994), Assistant Professor. Environmental chemistry, process dynamics and solute transport.

Willem F. Brutsaert, Ph.D. (Colorado State, 1970), Professor . Groundwater hydrology, mathematical modeling of hydrodynamic systems, water resources and water quality modeling.

Habib J. Dagher, Ph.D. (Wisconsin, 1985), Professor. Probabilistic mechanics, timber structures, advanced wood composites, concrete structures, bridges.

William G. Davids, Ph.D. (University of Washington, 1998), Assistant Professor. Structural engineering and computational mechanics; numerical modeling and finite element analysis; bridge design.

Per Garder, Ph.D. (Lund University, 1982), Professor. Transportation planning; forecasting, design & evaluation with emphasis on traffic safety & environmental aspects.

Dana N. Humphrey, Ph.D. (Purdue, 1986), Professor and Dean, College of Engineering. Geotechnical engineering, reinforced embankments, soil stabilization, behavior of stiff clay, use of waste materials in construction.

Melissa M. Landon, Ph.D. (University of Massachusetts Amherst, 2007), Assistant Professor. Geotechnical engineering, physical modeling of soil-structure interaction, fundamental behavior of fine-grained soils, site characterization.

Roberto Lopez-Anido, Ph.D., P.E., (West Virginia University, 1995), Assistant Professor. Mechanics of polymer matrix composites for infrastructure; modeling, design and experimental characterization of advanced composite systems; fatigue and durability of composite materials for construction; engineered wood composites; methods of structural analysis.

Jean MacRae, Ph.D. (University of British Columbia, 1997), Assistant Professor. Biological treatment of solid wastes for resource recovery, bioremediation, environmental microbiology.

Vijay Panchang, Ph.D. (Maine, 1985), Cooperating Professor. Mathematical modeling waves, tides, diffusion, coastal engineering, bridge hydraulics.

Bryan R. Pearce, Ph.D. (Florida, 1972), Professor. Coastal engineering, estuarine hydrodynamics and material transport, hydraulics.

Chet A. Rock, Ph.D. (Washington, 1974), Professor and Associate Dean, College of Engineering. Water quality, ecological effects of pollutants, wastewater treatment.

Thomas C. Sandford, Ph.D. (Illinois, 1976), Associate Professor. Geotechnical engineering; soil/structure interaction including piles, culverts, and abutments; soil-nail walls; reliability based design; soft clay behavior; and field monitoring.

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