The CUA Experience
Founded more than a century ago as the national university of the Catholic Church in the United States, CUA is noted for its rich Christian tradition that emphasizes high ideals, a balanced life and intellectual development. Students are the highest priority at this research-oriented university located in the nation’s capital. The university offers more than 100 campus organizations ranging from sports teams to pre-professional groups. Students from all religious backgrounds are welcome.

The CE Faculty at CUA
Poul V. Lade, Ph.D., Professor and Chairman
Specialty: Geotechnical Engineering
William Kelly, Ph.D., P.E., Professor
Specialty: Environmental Engineering, Sustainable Development
Gunnar Lucko, Ph.D., Assistant Professor
Specialty: Construction Engineering and Management
Hsien Ping (Frank) Pao, Ph.D., Professor
Specialty: Fluid Mechanics, Environmental Engineering
Lu Sun, Ph.D., Assistant Professor
Specialty: Transportation Engineering, System Engineering, Applied Mechanics and Mathematics
Panos Tsopelas, Ph.D., Associate Professor
Specialty: Structural Engineering, Earthquake Engineering

The CUA Advantage
CUA is located in Washington, D.C., one of the largest and most dynamic technology centers in the United States. The department’s strong research focus and our proximity to this high technology corridor and its large number of government agencies provides incomparable advantages such as:

• Dedicated, full-time energetic faculty members who are on the cutting edge of research, complemented by adjunct faculty who are leaders in professional practice.

• Close research collaboration with Washington, D.C., area industries and government facilities.

CUA is one of only four Catholic institutions in the nation granting doctoral degrees in engineering.

Visit us on the Web
http://engineering.cua.edu/civil

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Civil Engineering

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Graduate Programs in Civil Engineering

The Department of Civil Engineering offers graduate programs leading to the Master of Civil Engineering, the Master of Science in Engineering, the Doctor of Philosophy and the Doctor of Engineering in the following areas:

Geotechnical Engineering

Geotechnical engineering deals with foundations for civil engineering structures and with the interaction between soil and structures. Characterization of soil behavior is a major determinant of soil-structure interaction under static, cyclic and dynamic loading conditions. The aims are therefore to determine the behavior of soils and other geological materials under various three-dimensional static and dynamic loading conditions using appropriate experimental techniques; to develop accurate constitutive models for this behavior; and to employ these constitutive models with numerical methods to predict soil-structure interaction and behavior of prototype geotechnical structures. Model experiments may be performed to study deformation and failure modes of geotechnical structures as well as soil-structure interaction. Instrumentation and investigation of select full-scale geotechnical structures provide prototype behavior against which the model and numerical predictions are compared.

Transportation Engineering

Transportation engineering covers the full spectrum of activities pertaining to the analysis, planning, design, construction, operation and management of integrated transportation systems. The program combines a long tradition of innovation in highway and traffic engineering with cutting-edge research and academic effort in the rapidly evolving transportation-systems engineering profession.

Systems Engineering

Systems engineering deals with the design and operation of large-scale complex systems. Within the civil engineering context, it usually deals with environmental systems, water resources systems, transportation systems, construction and urban planning. It uses methodologies derived from engineering design and the mathematics of operations research, stochastic and processes automatic control. There is heavy emphasis on the environmental, social, and economic aspects of large-scale engineering development. The basic building blocks of systems engineering are therefore highly interdisciplinary.

Environmental Engineering and Management

Environmental engineering and management is a unique graduate program designed for environmental professionals in the modern workplace. The program’s objective is to provide advanced education in the scientific and regulatory background, state-of-the-art engineering practice, and social and policy implications of environmental management.