Department of Civil and Environmental Engineering
Norfolk, Virginia 23529

Phone: 757-683-3753
Web site: http://www.odu.edu/cee

Programs

Opportunities
In this rapidly changing technological world, Master’s degrees are highly desirable and sometimes required to hold truly professional civil and environmental engineering positions in the industry, and in federal, state and municipal government agencies. Doctoral degrees are required for college-level teaching and for employment in research institutions. Many leading industries and agencies seek well trained doctoral graduates for performing highly sophisticated engineering tasks. Our graduate programs are designed to train the technological leaders of the future in civil and environmental engineering.

Potential Prerequisites for non-Civil/Env BS Holders

Programs

Admission
For Master's degree Programs, the applicant must hold an undergraduate degree (preferably in civil or environmental engineering). Applicants with bachelor’s degrees in other field of engineering/sciences may have to complete undergraduate prerequisite courses (see Potential Prerequisites section below). For Doctoral programs, an applicant must normally have a master’s degree or its equivalent in engineering or a related field. For both Master’s and Doctoral programs, two letters of recommendation and an essay about the applicant’s interest in the particular area, and goals and plans for the future are required. All applicants whose native language is not English must take TOEFL and have 550 point or above for regular admission. Submission of GRE is required, except for applicants who hold a BS degree (for Master program applicants) or a Master degree (for Ph.D. program applicants) in engineering disciplines from ABET accredited institutions in U.S.A. Application deadlines for domestic applicants, are June 1, Nov.1 and April 1, for Fall, Spring, Summer semester admission, respectively. Those for international applicants are April 15 for Fall, October 1 for Spring, and February 1 for Summer. Visit http://www.odu.edu/admission/graduate.

Requirements
Master’s degree programs offer three options: Master of Science (24 hours course work and 6 hours thesis work), Master of Engineering with project option (27 hours course work and 3 hours project), and Master of Engineering with course option (30 hours course works). The Ph.D. degree requires 24 hours of graduate course work and 24 hours of dissertation research. D. Eng. Program requires 36 hours of graduate course work and 12 hours of doctoral project research.

Tuition and Financial Aid
2018-2019 Tuition rate for graduate study is $523 per semester credit hour for Virginia residents and $1320 for non-Virginia residents. Teaching and research assistantships are available and are awarded on the basis of merit. TA/RA assistantships stipends range from $12,800 for masters and $15,000 for doctoral students and above. TA/RA recipients are expected to engage in 20 hours of teaching and/or research activity per week. Master's degree students holding TA/RA assistantships are eligible for in-state tuition rates. Doctoral students holding these positions are eligible for a complete tuition waiver.

Sahin N. Amiri, Ph.D. (Kansas State University), P.E., Lecturer, Computational mechanics (solid and fluid mechanics); geotechnical engineering; health monitoring of structures; aircraft cabin air quality.

Mecit Cetin, Ph.D. (Rensselaer P. I.), Professor, transportation engr., intelligent transp. systems; modeling and simulation; traffic signal control; freight transport.; big data & machine learning; dynamic tolling. Yunbyeong Chae, Ph.D. (Lehigh University), Assistant Professor, structural engr.; structural dynamics; earthquake engr.; real-time hybrid simulation; performance-based design of structures; control of structures.,

Mdje Erten-Unal, Ph.D. (Missouri U. of S. & T.), Associate Professor, environmental engr.; wastewater treatment; env. microbiology; haz. waste treatment; sustainable develop. (Director, Sust. Develop. Inst.).

Sherif Ishak, Ph.D. (University of Central Florida), P.E., Professor & Department Chair; transportation engr.; intelligent transportation systems; traffic simulation & modeling; traffic safety & driving behavior.

Isao Ishibashi, Ph.D. (U. of Washington), P.E., Professor & Graduate Program Director, geotechnical engineering; earthquake engineering; soil dynamics; soil-structure interaction; experimental methods.

Sandeep Kumar, Ph.D. (Auburn University), Associate Professor, sustainable chemical conversion processes, biofuels; thermochemical conversion of biomass; sub- and supercritical water/CO2 technology

Gangfeng Ma, Ph.D. (U. of Delaware), Associate Professor, Coastal engineering; coastal hazards; sea level rise and climate change; computational fluid mechanics.

Duc T. Nguyen, Ph.D. (U. of Iowa), Professor (also in MSVE department), structural engineering; parallel computational mechanics; numerical algorithms for transportation networks; optimization.

Zia Razzaq, D.Sc. (Washington University), P.E., University Professor, retrofitting buildings and bridges; flood/wind/fire/earthquake/impact resistant structures; stability; passive damping; FRP structures.

Gary C. Schaefer, Ph.D. (Syracuse Univ.), Professor, environmental engr.; fate and transport of contaminants in natural systems; lake oxygenation; aquatic chemistry; physicochemical treatment processes.

Ben J. Stuart, Ph.D. (Rotgers Univ.), P.E., Professor, Senior Associate Dean, environmental engr.; sustainable systems; algal biofuels & bioproducts; waste management; nutrient cycling; wastewater treatment.

Navid Tahvildari, Ph.D. (Texas A&M University), Assistant Professor, coastal engineering; environmental fluid mechanics; nonlinear wave dynamics; ocean mixing; internal waves; inverse modeling.

Xizi Wang, Ph.D. (Iowa State U.), P.E., Associate Professor, water resources, hydrological processes, ecohydrology, watershed analysis/modeling, climate change, stormwater, flooding and drought.

Jaewon Yoon, Ph.D. (North Dakota State U.), Associate Professor, University Professor, environmental engineering; water quality modeling and management; stochastic and geospatial methods.

Yewei Zheng, Ph.D. (University of California, San Diego), Assistant Professor, geotechnical engineering; geosynthetic; geotechnical earthquake engineering; unsaturated soils; soil-structure interaction.

Faculty and Research Activities

757-683-3753
Web site: http://www.odu.edu/cee

 dzieci574@odu.edu

Office: C1201 Old Dominion University

Admission Requirements

Potential Prerequisite Courses for M.S. and M.E. in Civil Engineering:

MATH211 Calculus I
PHYS221N Univ. Phys. I
ECE301 Structures I
MATH212 Calculus II
CS150 or CEE305 Comput.
CEE332 Soil Mechanics
MATH307 Ord. Diff. Eq
CENG204 Statics
CEE330 Hydrodynamics
CHEM312 Calculus III
MAE205 Dynamics
CEE340 Hyd. & Water Res. 
PHYS231N Univ. Phys. I
ECE220 Mech. of Deform. Bodies
CEE410 Concrete Design I

Potential Prerequisite Courses for M.S. & M.E. in Env. Engineering:

MATH211 Calculus I
PHYS231N Univ. Phys. I
MATH212 Calculus II
PHYS222N Univ. Phys. II
MAE205 Dynamics
MATH307 Ord. Diff. Eq
CHEM121 Found of Chem. I
CEE330 Hydrodynamics
MATH312 Calculus III
CHEM123 Found of Chem. I
CEE340 Hyd. & Wat. Reso.
CS150 or CEE305 Comput.
CEE350 Env. Poll. & Contr.
**Master’s degree courses (continued from the previous column)**

### Category C (3 credit hrs. each) - Lower Level Courses for Civil & Env.
- CEE 514 Masonry Structures Design
- CEE 515 Steel Structural Design
- CEE 516 Wood Structures Design
- CEE 530 Foundation Engineering
- CEE 531 Earth Structures Design with Geosynthetics
- CEE 532 Introduction to Earthquake Engineering
- CEE 533 Geomaterials Stabilization
- CEE 540 Hydraulic Engineering
- CEE 546 Urban Stormwater Hydrology
- CEE 547 Groundwater Hydraulics
- CEE 550 Water Distribution & Wastewater Collection System Design
- CEE 552 @ Air Quality
- CEE 554 @ Hazardous Waste Treatment
- CEE 555 @ Pollution Prevention & Green Engineering
- CEE 558 @ Sustainable Development
- CEE 560 Advanced Analytical Techniques in Env. Engr.
- CEE 559 Biofuels Engineering
- CEE 570 Transportation Fundamentals
- CEE 571 Transportation Operation I
- CEE 574 Transportation Data Analytics
- CEE 582 @ Introduction to Coastal Engineering

### Category D - Other Graduate Courses

Graduate level courses from other programs. These courses must be related to the program of study and must be approved by the academic advisor.

- **MATH or STAT Category**
  - CEE 700 @ Civil and Environmental Eng. Experimental Design
  - CEE 701 Applied Mathematics for Civil and Environmental Engineers
  - or a graduate MATH or STAT course.

* Double listings in A and B Categories.
@ Available in distance learning mode.

The required minimum course distributions are summarized below table for the various Master's degrees. Note that Transportation Engineering program (a field of Civil Engineering) has a different master degree requirement (visit Master Degree Handbook in CEE web site for details).

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<th>M.S. (Thesis) Credit Hours</th>
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<th>M.E. (Course) Credit Hours</th>
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※ For MS and ME Project options, no more than 9 credit hours can be at 500 level.
(Updated: November 13, 2018)