**Environmental Engineering program**

**Doctor of Philosophy (Ph.D.) Degree**

**DEGREE INFORMATION**

**Program Admission Deadlines:**

**Fall:** February 15

**Spring:**  October 15

**Summer:** February 15

**Minimum Total Hours:** 78

**Program Level:** Doctoral

**CIP Code:** 14.1401

**Dept. Code:** EGX

**Program (Major/College):** ECE EN

**Approved:** 2013**CONTACT INFORMATION**

**College:** Engineering

**Department:** Civil and Environmental Engineering

**Contact Information:** [www.grad.usf.edu](http://www.grad.usf.edu/)

**PROGRAM INFORMATION**

The Ph.D. degree is awarded in recognition of demonstrated scholarly competence and ability to conduct and report original and significant research in Environmental Engineering.

The field of Environmental Engineering has long been known for its breadth and ability to adapt to the new technological, societal, and global problems facing the environment. Major research areas include water quality engineering; air quality engineering; fate and transport of contaminants in the environment; environmental biotechnology and nanotechnology; waste management; sustainability and ecological engineering; surface water hydrology and hydraulics; groundwater hydrology; water reuse; green engineering; renewable energy; fate of emerging contaminants; and humanitarian engineering with a focus on the developing world. Graduates of the program are prepared for careers in academia, governmental agencies, nongovernmental organizations (NGOs), or private industry and firms involved in planning, design, research and development, or policy.

**Accreditation:**

Accredited by the Commission on Colleges of the Southern Association of College and Schools.

**Major Research Areas:**

Water quality engineering; air quality engineering; fate and transport of contaminants in the environment; environmental biotechnology and nanotechnology; waste management; sustainability and ecological engineering; surface water hydrology and hydraulics; groundwater hydrology; water reuse; green engineering; renewable energy; fate of emerging contaminants; and humanitarian engineering with a focus on the developing world.

**ADMISSION INFORMATION**

Must meet University requirements (see Graduate Admissions) as well as requirements listed below.

**Program Admission Requirements**

* + - * Undergraduate GPA ≥ 3.3 preferred;
      * GRE with preferred minimum scores of V 150 (45th percentile), Q 159 (75th percentile) AW 4.0 (55th percentile) .
      * TOEFL (International applicants only) 79 (550 paper based exam) or IELTS 6.5
      * Resume provided at the time of application
      * Three (3) letters of reference provided at the time of application
      * Statement of Purpose provided at the time of application
      * Exceptions made on a case-by-case basis where warranted.

**DEGREE PROGRAM REQUIREMENTS**

**Total Program Hours: 78 hours minimum post-bachelors**

**48 hours minimum post-masters**

*Core course requirements – 13 credit hours*

*Other courses – 36 credit hours minimum*

*Dissertation - 20 credit hours’ minimum*

*Directed Research/Dissertation/Other – 9 credit hours minimum*

**Coursework requirements - 49 hours minimum**

Core Courses – 13 hours

CGN 6945 1 Graduate Research Methods

ENV 6002 3 Physical & Chemical Principles in Environmental Engineering

EES 6107 3 Biological Principles

ENV 6666 3 Aquatic Chemistry

1 course (3 credits) from the following list of sustainability courses:

CGN 6933 3 Green Engineering for Sustainability

CGN 6933 3 Green Infrastructure for Sustainable Communities

ENV 6510 3 Sustainable Development Engineering

Additional Courses – 36 hours

36 additional credits of coursework in Environmental Engineering or related areas, of which at least 3 credits must be structured coursework in Environmental Engineering specifically. These 36 credits may include up to 9 credits of Independent Study and/or 6 units of Master’s Thesis, pending the approval of the Department, the College, and the Office of Graduate Studies. Directed research and/or dissertation credits may not be counted towards this coursework requirement.

**Qualifying Exam**

Doctoral students are expected to pass a qualifying examination no later than the semester following the completion of 48 credits of coursework beyond a bachelor’s degree. At minimum, the Exam will include a written dissertation proposal and oral defense by the Dissertation Committee. A written exam in the area of concentration may also be required. Poor performance on the Qualifying Exam based on the judgment of the Committee may result in the student failing the exam. If a student does not pass on the first attempt, he/she may request in writing to repeat the Exam. Students who fail the Qualifying Examination the second time will be dismissed by the Program.

**Dissertation Requirements - 20 hours minimum**

CGN 7980 20 Dissertation

A minimum of 20 credits of dissertation, an approved PhD dissertation, and a dissertation defense are required. Students may not sign up for dissertation credits until they have defended their proposal and advanced to candidacy (see Qualifying Exam, above).

**Additional Requirements - 9 hours minimum**

Nine (9) credits of additional coursework, dissertation, or directed research are required.

**Publication Requirement**

Students must have at least one paper accepted to a peer-reviewed journal or peer-reviewed conference based on their research carried out during their doctoral studies at USF.

**COURSES**

See [http://ugs.usf.edu/course-inventory](http://www.ugs.usf.edu/sab/sabs.cfm)