ENVIRONMENTAL SCIENCE (PH.D.)

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Faculty

(Interdisciplinary, listed by their Primary Department)

Biology

Dr. H. Ahmad, Professor
Dr. I. Farah, Professor
Dr. C. Howard, Professor
Dr. H-C. Huang, Assistant Professor
Dr. N. Ibrahim, Assistant Professor
Dr. R. Kafoury, Associate Professor
Dr. R. Kulawardhana, Assistant Professor
Dr. A. Mbemi, Assistant Professor
Dr. A. Mohamed, Professor Emeritus
Dr. F. Noubissi, Assistant Professor
Dr. A. Patolla, Assistant Professor
Dr. J. Stevens, Professor
Dr. B. Thoma, Assistant Professor

Chemistry, Physics and Atmospheric Sciences

Dr. M. Fadavi, Professor
Dr. F. Han, Professor
Dr. G. Hill, Professor
Dr. A. Hossain, Professor
Dr. S. Islam, Assistant Professor
Dr. J. Leszczynski, Presidential Distinguished Professor
Dr. Y. Liu, Professor
Dr. D. Lu, Associate Professor
Dr. P. Ray, Professor
Dr. S. Reddy, Associate Professor

Civil and Environmental Engineering and Industrial Systems and Technology

Dr. K. Ali, Professor
Dr. F. Amini, Professor
Dr. Y. Li, Associate Professor
Dr. R. Whalin, Professor

Electrical and Computer Engineering, and Computer Science

Dr. N. Meghanathan, Professor
Dr. M. Manzoul, Professor

Mathematics and Statistical Sciences

Dr. T. Kwembe, Professor

Urban and Regional Planning

Dr. B. Herbert, Associate Professor
Dr. E. Merem, Professor

Program Mission

To produce highly skilled environmental scholars who in turn will provide for policy makers and the general public, scientific and factual information derived from laboratory and field applied research encompassing basic sciences, engineering and technology. As such, it is related to the assessment of water contamination, food contamination, air pollution, global warming, toxic and hazardous substances releases and associated environmental issues; and the development of cost effective methodologies and strategies to protect the environment and human health.

Program Objectives

1. To provide graduate students with essential knowledge, skills and aptitudes needed for successful careers in environmental science related jobs at various institutions including government agencies, academia and the environmental industry.
2. To protect the environment and human health by educating and training students on the interactions between the various components/systems of the environment, the complex and fragile nature of the environment, and how to sustain ecosystem integrity and protect human health.
3. To establish applied environmental science research initiatives that will lead to an authoritative base of knowledge concerning the State of Mississippi's environment and natural resources; by assessing and understanding the mechanisms by which physical, chemical, and biological agents generated by nature may cause alterations of ecosystem integrity, disability and diseases in man and other life forms.
4. To develop and understand cost-effective methodologies and means whereby the impact of various environmental pollutants may be prevented and/or controlled, and to integrate important knowledge and technologies in the physical, chemical, biological and social sciences needed to set policies and guidelines for appropriate utilization and management of vital resources.
5. To render services to the community through outreach programs, technology transfer for the protection of natural resources and the development of the economy, and communication to convey environmental science education to the public.

Admission Requirements

Admission to the doctoral program in Environmental Science is open to persons holding the master's degree in science, technology, engineering, or agriculture; demonstrated satisfactory performance on the Graduate Record Examination (GRE), and the Test of English as Foreign Language (TOEFL) for international students; and acceptable academic records.

All students seeking admission to this Ph.D. Program must meet the following criteria:

1. A Master's degree in natural sciences or related sciences from an accredited university. *An applicant with a Bachelor's degree only may be admitted when that student shows exceptional potential as determined by a GPA of **3.35** or better, a satisfactory GRE, and extraordinary work experience.*

2. A completed program application submitted to the Graduate School,
3. An official score on the Graduate Record Examination (GRE),
4. An overall GPA of 3.00 or above (on a 4.0 scale) on the highest earned degree,
5. Transcripts for all post secondary and graduate work attempted prior to a program application,
6. Recommendations from three major graduate professor's knowledgeable of the applicant's professional academic ability, job experiences, and leadership and research potential,
7. Acceptable evidence of a student's writing ability as determined by a writing sample,
8. A satisfactory TOEFL score for international students,
9. A successful interview with the program screening committee, and,
10. Recommendation for admission by the program screening committee.

All applications received are reviewed by a standing Environmental Science Doctoral Advisory Committee that recommends acceptance or denial of admission to the Graduate School. The Graduate School officially informs the prospective student of its decision for the University.

Transfer Credits

A maximum number of nine credit hours can be transferred into the Program. Courses for which transfer credits are sought must be at least 700-Level; must have been completed with a grade of B or better; and must be approved by the student's Advisory Committee, the Environmental Science Advisory Committee, the Dean of the College of Science, Engineering and Technology, and the Dean of the Division of Graduate Studies. Credit for thesis or dissertation research as well as "internship" course work in any form is not transferable.

Time Limit

No student will be granted a doctoral degree unless all requirements are completed within a period of ten (10) consecutive calendar years from the time of admission
to the program.

Financial Aid

Graduate research and teaching assistantships are available on a competitive basis to highly qualified students.

Residence

Students are required to spend one academic year in resident study on the campus. One academic year may include two adjacent regular semesters or one regular semester and one adjacent summer session. To satisfy the continuous residence requirement, the student must complete a minimum of eighteen (18) hours for the required period.

Candidacy Requirements

To be admitted to candidacy for the doctoral degree, a student must have:

1. Completed the formal coursework with a GPA of 3.0 or better.
2. Passed the Comprehensive Examination.
3. Filed with the Dean of the Graduate School, the dissertation proposal approved by the student's Advisory Committee, the Program Director and the Academic College Dean.

Degree Requirements

The program requires approximately two years of course work (40 semester hours) and a minimum of twenty (20) semester hours of dissertation research credit beyond the MS degree. The student's graduate committee will determine the exact program of study.

Additional requirements include:

1. Satisfactory performance on the Comprehensive Examination administered after the student has completed all course work; and,
2. Successful defense of the dissertation research. The final basis for granting the degree shall be the candidate's grasp of the subject matter in a specialized area of environmental science, and a demonstrated ability to express thoughts clearly and forcefully in both oral and written languages.

Code	Title	Hours
Required Courses		
ENV 700	ENVIRONMENTAL SYSTEMS	3
ENV 701	ENVIRONMENTAL CHEMISTRY	3
ENVL 701	ENVIRONMENTAL CHEMISTRY LAB	1-3
ENV 702	ENVIRONMENTAL HEALTH	3
ENV 711	APPLIED ENVIRONMENTAL BIOSTATS	3
ENV 751	WATERQUALITY MANAGEMENT	3
ENV 755	AIR QUALITY MANAGEMENT	3
ENV 800	ENVIRONMENTAL TOXICOLOGY	3
ENVL 800	ENVRNMNTL TOXICOLOGY LAB	1
ENV 801	RISK ASSESSMENT&MANAGMNT	3
ENV 900	SEMINAR	.5
ENV 900	SEMINAR	0.5
ENV 900	SEMINAR	0.5
ENV 900	SEMINAR	0.5
ENV 999	DISSERTATION RESEARCH	1-6
ENV 999	DISSERTATION RESEARCH	1-6
ENV 999	DISSERTATION RESEARCH	1-6
ENV 999	DISSERTATION RESEARCH	1-2
Total Hours		**32-50**

In addition to the required courses shown above, the student must complete a minimum of 12 semester hours selected from the elective courses listed below. Other electives in biological sciences, physical sciences, engineering, technology, and public policy will be added as developed.

Code	Title	Hours
Elective Courses		**12**
MATH 700	TPCS N MATH & STATS A N CDS&E	
MET 801	ENVIRONMENTAL METEOROLOGY	
ENV 715	PRINCIPLES OF BIOREMEDIATION	
ENV 717	INTRO TO REMOTE SENSING	
ENV 718	REMOTE SENSING APPLIED	
ENV 720	ENVNMNTL & OCCUPATION HEALTH	
ENV 721	SOLID WASTE MANAGEMENT & TREAT	
ENV 780	ENVIRONMENTAL EPIDEMIOLOGY	
ENV 802	ENVIRONMENTAL PHYSIOLOGY	

ENV 805	MEDICAL GEOLOGY	
Total Hours		**12**

The minimum total semester hours required for the doctoral degree is 60.