



TEXAS TECH UNIVERSITY  
National Wind Institute™



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# PH.D. DEGREE PROGRAM IN WIND SCIENCE & ENGINEERING

*A multidisciplinary program*

Questions regarding this program should  
be directed to the  
Ph.D. Coordinator at NWI

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[nwi.wisephdprogram@ttu.edu](mailto:nwi.wisephdprogram@ttu.edu)  
[www.depts.ttu.edu/nwi/education/PhD/index.php](http://www.depts.ttu.edu/nwi/education/PhD/index.php)

## TEXAS TECH UNIVERSITY HAS A WORLD-RENOWNED WIND SCIENCE AND ENGINEERING RESEARCH CENTER

With over five decades of research in wind science and engineering, the National Wind Institute (NWI) of Texas Tech University advances knowledge and innovation in renewable energy and wind hazard mitigation. Playing a leadership role, the NWI has developed nationally accepted standards, invented cutting-edge technologies, and produced alumni who are becoming leaders in industry, government, and academia.

The National Wind Institute offers world-renowned faculty, and advanced facilities including one of the world's largest tornado vortex simulators, a 67-acre dedicated field site, a 200m meteorological tower, state-of-the-art research radars, a fleet of 48 rapidly deployable weather stations, and the West Texas Mesonet.



### THE PROGRAM

The Ph.D. program in Wind Science and Engineering is the country's only interdisciplinary doctoral program related to wind. Our program seeks students who have a passion to explore new and exciting ideas. Current doctoral students are pursuing research in these areas:

- Wind Energy
- Wind Engineering
- Wind Science
- Wind Hazard Mitigation
- Economics of Disasters
- Enhancing Community Resilience

Each incoming student is matched with a faculty mentor to guide their academic journey which is usually completed within 4-5 years, depending on his or her educational background and individual progress.



### THE PARTICULARS

Students in the doctoral program are financially supported with the expectation that rigorous academic and professional standards are maintained. The doctorate curriculum requires at least 60 semester hours of graduate studies in addition to a dissertation. These 60 hours include core courses, field of emphasis courses, internship, and approved transfer credits.

Program applications usually require a Master's degree, but some students are considered with a Bachelor's degree in special cases. This is a highly selective program searching for students with backgrounds in engineering, economics, or physical/atmospheric sciences with innovative ideas.

Program graduates work in the wind energy industry, in consulting companies, at national laboratories, government agencies, and in academia. Our placement rate is 100% upon graduation.

### COURSEWORK REQUIREMENTS:

The Wind Science and Engineering Ph.D. program's required core courses include the following:

- ATMO 5319 - Boundary Layer Meteorology
- CE 5348 - Wind Engineering
- BECO 5310 - Economic Analysis for Business
- MGT 5372 - Leadership and Ethics
- STAT 5384 - Statistics for Engineers and Scientists I
- STAT 5385 - Statistics for Engineers and Scientists II

Coursework for students is tailored with the advice and consent of their faculty mentor to provide background for multidisciplinary dissertation research. Students are also required to complete 6-credit hours of off-campus external internship at an academic institution, in a governmental or private laboratory, or with a private company. Opportunities are also available to complete this internship requirement abroad.

### THE PLACE

Lubbock, Texas is a mid-sized city (population of 262,000) growing in size, industry and opportunities.

As a university town with 40,000 students, you can find activities and leisure opportunities ranging from Red Raider college sports to a thriving art and music scene. Just a half-day's drive to the Dallas-Fort Worth metroplex and to Austin, Lubbock offers all the conveniences of a major city without the hassles, and our airport provides an efficient gateway to other destinations.

For more information, please check the Lubbock Visitor's Bureau website at [visitlubbock.org](http://visitlubbock.org).

### IN OUR ALUMNI'S WORDS



**Maribel Martinez-Mejia, Ph.D.**  
Director of Emergency Preparedness, North Central Council of Governments  
Dallas-Fort Worth, Texas  
*"My multidisciplinary WISE education has proven to be beneficial in my career in emergency management..."*



**Franklin Lombardo, Ph.D.**  
Assistant Professor, Civil Engineering  
University of Illinois-UC  
*"The WiSE Ph.D. program was and still is ahead of its time in providing well-rounded multidisciplinary education and training."*



**Kevin R. Walter, Ph.D.**  
President, LCL Renewables, Kansas.  
*"For me, the interdisciplinary aspect of the program is a huge asset. It's rare to find people that can speak the languages of multiple subjects well enough to span the gaps found in most organizations."*



**Tanya Brown-Giammanco, Ph.D.**  
Director of Disaster and Failure Studies National Institute of Standards and Technology (NIST)  
*"The internship requirement for the PhD has helped many of us make connections to quickly find successful employment upon graduation, because people value the real-world experience that comes with it."*

