

The Wind Science and Engineering Research Center (WISE) Ph.D. degree program's required core courses include the following:

- **ATMO: Wind Science**
- **CE: Wind Engineering**
- **BA: Domestic & Global Economics**
- **STAT: Statistics for Engineers and Scientists I**
- **STAT: Statistics for Engineers and Scientists II**
- **ENGR: Leadership and Ethics in Engineering**
- **A three month external summer internship**

Current Faculty Members:

Atmospheric Science:

Brian Ancell, Ph.D.
Eric Bruning, Ph.D.
Song-Lak Kang, Ph.D.
Richard Peterson, Ph.D.
John Schroeder, Ph.D.
Christopher Weiss, Ph.D.

Business:

Bradley Ewing, Ph.D.

Civil Engineering:

William Pasewark, Ph.D.
Sang-Wook Bae, Ph.D.
Xinzhong Chen, Ph.D.
Ernst Kiesling, Ph.D.
Kishor C. Mehta, Ph.D., P.E.
Stephen Morse, Ph.D.

Economics:

Douglas A. Smith, Ph.D.
Andrew Swift, Sc.D., P.E.
Delong Zuo, Ph.D.

Electrical Engineering:

Dakshina DeSilva, Ph.D.
Robert McComb, Ph.D.
Stephen Bayne, Ph.D.
Michael Giesselmann, Ph.D.
Brian Nutter, Ph.D.
Vittal Rao, Ph.D.

Engineering Technology:

Daan Liang, Ph.D.

Mathematics:

Kathleen Gilliam, Ph.D.
Frits Ruymgaart, Ph.D.

Mechanical Engineering:

Jaime Chapman, Ph.D.
Darryl James, Ph.D.
Stephen Ekwaro-Osire, Ph.D.
S. Parameswaran, Ph.D.

Research Faculty:

Jerry Guynes, P.E.

If you have a passion for wind, you can develop your innovative idea into reality at Texas Tech University. From here, it's possible.



Questions regarding this program should be directed to:

Ph.D. Coordinator

Wind Science and Engineering Research Center

Texas Tech University

Box 41023 | Lubbock, Texas 79409-1023

P 806.742.3476 ext.321

www.wind.ttu.edu



TEXAS TECH UNIVERSITY

Wind Science and Engineering
Research Center

Ph.D Degree Program in Wind Science and Engineering - A Multidisciplinary Program



TORNADOES



WIND DAMAGE



WIND ENERGY



HURRICANES

Everything *wind*



Maribel Martinez, Ph.D., Assistant Emergency Management Coordinator, City of Amarillo, Texas.

“My multidisciplinary WISE education has proven to be beneficial in my career in emergency management...”



Kevin R. Walter, Ph.D, Director of Meteorology, TradeWind-Energy, Kansas.

“At Texas Tech, I found that the sky was the limit, and the environment was there to achieve as much as or as little as I endeavored.”

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

The Wind Science and Engineering Research Center (WISE) researches both the beneficial effects of the wind and how to mitigate wind-related damage to the built environment. Today, our center has developed the following:



The debris impact cannon at WISE

- Comprehensive FEMA adopted regulations on household and community storm shelters; also home of the National Storm Shelter Association (NSSA)
- The Enhanced Fujita (EF) scale to measure tornado wind speeds utilized by the National Weather Service
- Student-designed state of the art field equipment to study wind storms as they happen
- A growing network of 64 atmospheric Mesonet stations to provide up to the minute weather reports for agricultural and other needs.

TTU’s Wind Science and Engineering Research Center provides everything including student support, world-renowned faculty, and technologically advanced research facilities including one of the world’s largest tornado vortex simulators and a field-based 200M meteorological tower.

THE PROGRAM ITSELF...

The Ph.D. degree program in Wind Science and Engineering is the world’s only multidisciplinary doctoral program studying wind today.

Our program is built for you to succeed in whatever your professional goals may be, and seeks students who have a drive and passion to research new and exciting ideas in wind-related areas.

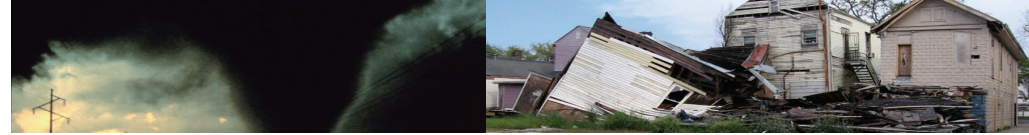
Doctoral student research encompasses four main areas:



One of the two TTU Ka-band mobile Doppler pulse compression systems utilized in WISE research.

- Wind energy
- Tornadoes
- Hurricanes
- Windstorm damage mitigation

Each incoming student is matched with a faculty mentor to guide their academic journey and the average program completion takes 3 to 4 years depending on the incoming student’s educational background and individual progress.



FREQUENTLY ASKED QUESTIONS

Q: Is there financial support for doctoral students?

A: WISE students are financially supported up to \$25,000 per year.

Q: What is required of me to earn this financial support?

A: Our first year students are required to complete the 6 core courses (see back page for list of courses). In addition, first year students are matched with faculty mentors who will teach them the research methods employed by the center. Second year and later students are required to act as teaching or research assistants to meet the financial requirements.



Research being conducted in the VorTECH simulator.

Q: Who is accepted into the program?

A: Students with Masters’ degrees are preferred, but students with Bachelors’ degrees are also considered. The program is highly selective as we search for individuals with backgrounds in engineering, physical or atmospheric sciences who are focused on designing and completing innovative wind-related research.

Q: Where are the graduates of the program working?

A: Our graduates work in the wind energy industry, national laboratories and government agencies, independent engineering consultants, private industry, and as professors in academia. We have a very successful rate of graduate placement.

LIFE IN LUBBOCK...

Lubbock, Texas, is a mid-sized city growing in population (currently 200,000), industry and resources. Here you can find many activities and leisure opportunities ranging from Red Raider college sports events to artistic exhibitions and an active music scene.

Lubbock is just a half-day’s drive to the Dallas-Ft. Worth metroplex and to Austin, and offers all the conveniences of a major city without the hassles.



An aerial view of the main campus of Texas Tech University in Lubbock.

You can travel across town in under 15 minutes by car, and can easily travel out of town through our international airport.

Please visit the Lubbock Convention and Visitor’s Bureau website at visitolubbock.org.



Hector Cruzado, Ph.D., Graduate Program Coordinator, Polytechnic University of Puerto Rico.

“I think it’s great that students get so many different options in the wind engineering area...”



Andrea Jackman, Ph.D., Senior Consultant, IBM, Fairfax, VA

“The more involved I get with my work, the more I appreciate the training I received in the WISE program...It taught me the importance of stepping out of disciplinary boundaries to find the best solution to a problem.”