

**AcademiCast Transcript**  
**Texas Tech University**  
**October 17, 2012**

Pierce: This is “AcademiCast”—Texas Tech University’s podcast series from the Office of the Provost. I’m Rachel Pierce, and I’ll be covering the top academic stories on campus. Later in the program, Provost Bob Smith will spotlight Integrated Scholar Linda Allen.

First, the news...

Texas Tech has broken ground on the new home of the Bob L. Herd Department of Petroleum Engineering. The new building will be located in the northeast corner of the engineering key. The building will span about 40,000 feet to accommodate classrooms and research space.

Whitacre College of Engineering Dean Al Sacco said the new facility will be essential for advancing teaching and research in the area of petroleum engineering.

Sacco: We’re at the edge of the Permian Basin, the heartland of energy in this country, that we ought to be not one of the top, but the top petroleum engineering departments in the nation.

Pierce: Construction of the petroleum engineering building is expected to be complete in the fall of 2013.

In other engineering news, the college is keying into the area of cybersecurity. The National Science Foundation has awarded \$300,000 to the college, which will collaborate with the School of Law to provide cybersecurity education for undergraduate and graduate engineering students.

The Office of the Provost is adding a familiar face to its leadership. Peggy Miller, who has served as interim dean of the Graduate School, was promoted to vice provost. Miller is covering many of the responsibilities of Vice Provost Valerie Paton, who will pursue a fellowship at the TTU Health Sciences Center in El Paso. At the Graduate School, chemistry professor Dominick Casadonte was appointed as interim dean.

Further expanding Texas Tech’s academic specialties, the Honors College has established The Institute for the Study of Western Civilization. The institute is led by Stephen Balch, a political science professor who comes to the university after leading the National Association of Scholars for 25 years. Balch is also a recipient of the President’s National Humanities Medal.

Integrated Scholars dedicate themselves to a course of lifelong learning. Their emphasis on teaching, research, and service helps to promote scholarly engagement. And in doing so, Integrated Scholars advance Texas Tech’s role in educating, serving, and inspiring others to pursue a path of lifelong learning. In this edition of “AcademiCast,” Provost Bob Smith spotlights Integrated Faculty Scholar Linda Allen.

Smith: Finding solutions to mathematical problems and discovering nature's mysteries have always been sources of great enjoyment for Mathematics Professor Linda Allen.

Allen: I was always interested in mathematics. I was interested in thinking about mathematics and solving problems. But I also grew up in the country, so I was interested in hiking and in nature. So when I went to undergraduate school, I took lots of courses in mathematics and biology—majoring in mathematics, minoring in biology.

Smith: Professor Allen's interests led her to graduate studies in mathematical ecology—or the quantitative description of interactions of humans or other organisms with their physical environment. By using mathematical analyses of events arising in ecosystems—in particular the spread of infectious diseases—Professor Allen's work has led to insights that hold increasing relevance to societies.

Allen: What I do is I model the spread of disease within a population, from person to person; and now I'm interested in modeling the spread of disease in one individual, how our immune system responds and is it able to take care of that infection.

Smith: Professor Allen also helps to ensure that future generations can comprehend such complex topics by sharing modeling techniques in her undergraduate and graduate mathematics classes. She also delivers presentations in mathematics short courses and workshops. Additionally, she provides students with valuable research opportunities. Indeed, connecting with students has been key to Professor Allen's integrated scholarship, and she notes that it continues to be the most enjoyable aspect of her work.

Allen: I think what I enjoy most is working with students, whether it's a research project for an undergraduate or a thesis or dissertation for a graduate student. It's really rewarding working with the students because they get excited when they learn that you can use mathematics to solve biology problems. And I think that's what my purpose is too. As a researcher and a teacher to get the next generation excited about mathematics and learn tools that cross disciplinary boundaries. Mathematics is the link—I think it is—the link that ties all sorts of fields together.

Smith: Professor Allen explains that research has been central to engaging her students and colleagues. And she believes that it is essential for faculty, especially new faculty, to develop their research interests early on in their academic careers along with seeking out opportunities to work with others.

Allen: Establish a very strong foundation in their research, something that they're really passionate about. Because then you can engage your students and your colleagues in your research, because you're enthusiastic about it. Then, second, I would probably tell them that they should look for opportunities for themselves and also for their students at workshops and research conferences to make connections, to establish a network.

Smith: The Nobel laureate geneticist, Barbara McClintock, once noted, "I was just so interested in what I was doing I could hardly wait to get up in the morning and get at it. One of my friends, a geneticist, said I was a child, because only children can't wait to get up in the morning and get at it." We imagine from her testimony that Professor Allen feels similarly, and through her dedication to high quality and integrated teaching, research & service, she has made valuable contributions to the field of mathematics. Indeed, in 2010, Allen's accomplishments earned her the distinction of being appointed a Paul Whitfield Horn Professor—the most prestigious

designation bestowed upon a faculty member by the Texas Tech University System Board of Regents. Today, "AcademiCast" praises Allen for her continued work as an academician as she adds the title of Integrated Scholar.

Thanks for listening! I'm Bob Smith.

Pierce: Thanks, Dr. Smith!

That concludes this edition of "AcademiCast." If you would like to hear more about Texas Tech's Integrated Scholars or the other stories featured here, visit our website at **[academicast.ttu.edu](http://academicast.ttu.edu)**. Thanks for listening, and join us again in two more weeks for the latest academic news from Texas Tech University.