

Climate Week: Faculty reflect on the future of climate change education at Tulane

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As Climate Week draws to a close, Tulane faculty are reflecting on what they have learned through their lectures and participation in climate change events across the country over the past week. One emerging theme is the growing demand for a

climate-educated workforce. With global economies preparing for a post-COVID-19 economic resurgence, many experts agree that climate-smart investments are critical for advancing global sustainability and social equity goals.

Global leaders converging this week at the United Nations and elsewhere have begun to roll out comprehensive plans for reducing carbon emissions. On Tuesday, China pledged to transition its national economy to being carbon neutral by 2060. Led by a diverse coalition of stakeholders, including Fortune 500 companies and civic advocates, the United States is anticipated by many experts to be not too far behind. “In order to transition to an effective and just ‘net-zero’ economy, nearly every economic sector and corresponding workforce must adapt to new skills and modes of critical thinking,” said Jesse Keenan, associate professor of real estate in the Tulane School of Architecture.

A group of Tulane faculty believe that American universities will increasingly play a critical role in educating a workforce with the knowledge and skills needed to both mitigate and adapt to climate change. “If our goal is to prepare students to make a positive impact on the world when they leave Tulane, we must provide them with knowledge of the scope of the climate change problem, as well as the tools to do something about it,” said Alex Gunderson, assistant professor of ecology and evolutionary biology.

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Mead Allison, a professor and chair of river-coastal science and engineering, believes that “[t]he key is to advance interdisciplinary training to understand complex, climate-linked problems and to engage in problem solving as a part of a group of specialists.” Echoing these remarks, Dean Iñaki Alday of the School of Architecture noted that, “climate change, creativity and managing complexity are potential new categories that cross fields in a general education model that unites the various degree programs of our students.”

With over a dozen climate change-focused courses at Tulane this year, the university is building upon its legacy as a national leader in environment and public service-centered education. From the sciences to the liberal arts, climate change is

quickly becoming a core element of the university's curriculum. "My mission is to help students understand how and why climate change and environmental problems are rooted in the way society is organized," said Amalia Leguizamón, associate professor of sociology.

"Within a decade or so, climate change will become a stand-alone undergraduate major at many U.S. universities; this is already happening at a number of universities here and abroad. Such a major will consist of multiple tracks, including a science track and a policy-oriented track," says Torbjörn Törnqvist, the Vokes Geology Professor. To highlight this emerging trend, this past summer Columbia University announced the creation of a groundbreaking school dedicated entirely to climate change research and solutions. While this may not be in the cards for Tulane any time soon, Törnqvist believes that, in the interim, "it is likely that one climate change course will eventually become a requirement for every NTC (Newcomb-Tulane College) student."

To set the stage for a broader integration of undergraduate, graduate and professional climate change curriculum, "[w]e could establish a climate change consortium across schools lead by subject matter experts," Reggie J Ferreira, associate professor and director of the Disaster Resilience Leadership Academy, said.

Other faculty believe that it is also critical that each department and school reflect on how issues of social inequality and climate change are internalized within their respective core curriculum. The School of Architecture has memorialized climate change as a central tenet of its educational mission. Recently, the school became the first school of design in the United States to sign on to the industry-led coalition [Architect's Declare](#) that is striving to adapt professional practices and training. "Through research-studio and thesis, amongst other courses, our curriculum is committed to addressing climate change by speculating on how to reform cities facing structural social inequalities and ecological challenges," said Margarita Jover, associate professor of architecture.

Many faculty see specialized professional training in law and business as critical to meeting the emerging demands from the private sector for a climate-educated workforce. Tulane Law School is transitioning to a broader integration of climate-related considerations across a wide variety of legal practices that have not historically had a strong relationship with environmental challenges. "I believe that

climate change will play an increasing role in shaping property law, maritime law, securities regulation, and international law—just to name a few," said Mark Davis, research professor of law and director of the Institute on Water Resources Law & Policy.

In public health and medicine, climate change is increasingly driving not only research but also clinical practices. "The challenge is to invest in transdisciplinary teaching and research that addresses the inextricable link between human and ecological health," said Dr. Maureen Lichtveld, professor and Freeport McMoran Chair in the School of Public Health and Tropical Medicine. In practice, Lichtveld highlights that clinicians must be increasingly equipped to understand the broad scales of global health, such as when, "sand storms from the Sahara Desert [which are increasingly exacerbated by climate change] impact pulmonary and cardiac health in the Caribbean."

"Whether it is the tremendous work of our health professionals on the frontlines of cascading crises or our finance and chemistry faculty working to advance sustainable energy markets and technologies, we have the opportunity to build on the cornerstones laid by Professor Thomas Sherry, Professor Oliver Houck and others to design an education that is at the center of nurturing tomorrow's climate leadership," Keenan said.

For more information on opportunities for climate action and engagement, please visit [Tulane's Office of Sustainability](#).