Texas A&M announces initiative to increase engineering enrollment to 25,000 students

COLLEGE STATION, Texas — Texas A&M University System Chancellor John Sharp today announced plans for Texas A&M University to grow engineering enrollment to 25,000 students by 2025.

The 25 by 25 initiative was developed in response to the critical need to increase the engineering workforce of the state and the nation.

“Last year, more than 10,000 students applied for only 1,600 undergraduate slots available in the Dwight Look College of Engineering at Texas A&M, one of the top ranking public institutions for undergraduate and graduate degrees in engineering,” Sharp said. “And universities from other states have set up offices to recruit our top students out of Texas. As a land grant institution, we are taking measures to provide access to a high quality engineering education for more students to keep our nation competitive in the global landscape.”

The initiative has three guiding principles:

- Increase accessibility to engineering education at all levels;
- Transform the educational experience to better prepare students to engage in and meet the future needs of the engineering marketplace; and
- Deliver engineering education in a cost-effective and affordable manner.

The Dwight Look College of Engineering at Texas A&M is one of the largest and highly-ranked engineering programs in the nation, with more than 11,000 engineering students enrolled. Texas A&M has graduated thousands of engineers who are having an impact on the world by addressing issues of critical importance.

Texas A&M President R. Bowen Loftin underscored the need for making engineering education even more accessible to students.

“The demand for engineering education at Texas A&M has never been higher,” Loftin said. “The Texas Workforce Commission has projected the need for engineers entering the workforce will increase significantly over the next 12 years. Texas A&M is stepping forward to meet this critical need for our state and nation. M. Katherine Banks, vice chancellor and dean of engineering, said the 25 by 25 initiative is not just about increasing enrollment, but also about providing better instruction and student opportunities.

“We cannot grow in the way that universities have traditionally grown, by simply spending more,” Banks said. “We are looking at a model that ultimately leverages our existing resources to deliver a high-quality education in a cost effective manner. In addition to increasing our enrollment, we will be transforming engineering education to mold the engineer of the future.”
Curricula will be enhanced through technology-enabled learning, and an extensive Professor of Practice program will be established for industry leaders to return to the classroom.

“Through our innovative educational and recruiting efforts, Texas A&M will lead the way as we become the single largest engineering program in the United States,” Banks said. “At current growth rates, projections show that Texas A&M’s increase in engineering degree production will elevate Texas as second only to California in the number of engineering degrees granted per year.”

U.S. Sen. John Cornyn praised the program.

“In the global competition for the best and brightest minds in math and science, the United States should take a backseat to no one,” Cornyn said. “That is why I support efforts to provide visas to high-skill immigrants with graduate STEM degrees, and I am pleased that Texas A&M University has announced its commitment to increasing the enrollment and graduation rate of students in these fields.”

The 25 by 25 initiative has received strong support from former students, including Mark W. Albers, a 1979 graduate and senior vice president of Exxon Mobil Corporation.

“At ExxonMobil, we recognize from our own involvement in education, that to increase achievement in science, technology, engineering and math, our nation’s schools must challenge students with a strong curricula and we must support teacher training in the subjects they teach,” Albers said. “The 25 by 25 initiative does just that. Aggie engineers will be solving problems all around the world. Not just at companies, in the lab, or in the field, but they will be meeting the world’s most pressing needs.”

S. Shariq Yosufzai, a 1974 graduate and vice president of Chevron said, “As an alumnus of Texas A&M, I am excited by the transformational potential of the 25 by 25 initiative in engineering. Having recently served as chairman of the board of the California Chamber of Commerce, I had the opportunity to observe the impact of investment in the 1950s in California’s higher education system, which resulted in the state becoming the center of technology and innovation of the world. This 25 by 25 initiative could do the same thing for the state of Texas.”

STATEMENTS OF SUPPORT

Bill Flores, U.S. House of Representatives:
“Texas A&M’s 25 by 25 Initiative is great news for the University and for the State of Texas. This dedication to increased engineering education access will aid in innovation, investigation and investment for our country; all of which will ultimately facilitate economic growth and prosperity for American families. I applaud Texas A&M University for launching this initiative and look forward to supporting its success in meeting the needs of the engineering marketplace.”

Lamar Smith, U.S. House of Representatives, Chairman of the Committee on Science, Space and Technology:
“It is exciting that [Texas A&M] recognizes the importance of engineering education by setting a goal of enrolling 25,000 engineering students by 2025. The Committee on Science, Space and Technology strives to ensure science, technology, engineering and mathematics education programs are adequately addressing America’s workforce needs. The plan for the 25 by 25 initiative to increase the number of engineering students will be an important step in building a stronger, technically-trained workforce.”

Craig C. Brown, president and CEO of Bray, International, Inc.
“We are a Texas-based company with sales and manufacturing locations in over 50 countries. As a result, we experience daily the increasing need and advantages of having a dynamic supply of engineers to fulfill the
future growth potential for Texas in our global environment. Texas A&M’s 25 by 25 program reflects a vision for the continued success and leadership of Texas in the future. The demand for engineers is much greater than the current supply, and will continue to grow.”

About the A&M System
The A&M System is one of the largest systems of higher education in the nation, with a budget of $3.5 billion. Through a statewide network of 11 universities, seven state agencies and a comprehensive health science center, the A&M System educates more than 120,000 students and makes more than 22 million additional educational contacts through service and outreach programs each year. Externally funded research expenditures exceed $780 million and help drive the state’s economy.

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About Texas A&M University
Texas A&M University is one of the nation’s largest and most prestigious public universities, with more than 53,000 students and membership in the Association of American Universities. Located in College Station, Texas A&M has been recognized nationally as a leader in serving the public good (Washington Monthly) and producing graduates ready to enter the workforce (Wall Street Journal). With a distinguished faculty that includes many of the top experts in their respective fields, research conducted at Texas A&M represents an annual investment of more than $700 million, ranking among the top 20 universities in the country and contributing significant economic benefits to the state, nation and world.

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About the Dwight Look College of Engineering
With nearly 400 tenured/tenure-track faculty members and more than 11,000 students, the Look College is one of the largest engineering schools in the country, ranking third in undergraduate enrollment and eighth in graduate enrollment. The college is ranked seventh in graduate studies, eighth in undergraduate programs, and second in research expenditures among public institutions by U.S. News & World Report, with seven of the college’s 12 departments ranked in the Top 10.

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The Texas A&M University 25 by 25 Initiative is a transformational program to increase access for qualified students to pursue engineering education at Texas A&M University to an enrollment of 25,000 engineering students by 2025.

**Guiding Principles:**
- Increase accessibility to engineering education at all levels;
- Transform the educational experience to better prepare our students to engage in and meet the future needs of the engineering marketplace; and
- Deliver engineering education in a cost effective and affordable manner.

**Highlights:**
- Strategically increase the number of engineering students at all levels by approximately 1,100 each year for the next 12 years to reach a total of 25,000 engineering students by 2025 (Anticipated degree distribution will be 75% undergraduate, 15% MS, and 10% PhD.)
- Increase the number of engineering degrees awarded to reach a total of 5,000 degrees per year by 2025 (An increase of 1,400 undergraduate, 900 MS, and 250 PhD degrees).
- Transforming today’s classrooms to a 21st century educational paradigm where classrooms are seen as a collaboratorium; technology-enabled learning and shared facilities will result in increased efficiency of classroom and laboratory utilization on campus. The net effect will be a more cost effective education delivery system with a higher quality learning experience for students. (Pilot program involving new engineering design test bed facility is underway).
- Enhance our curriculum by utilizing innovative pedagogies and integrating experiential learning opportunities into the engineering program at all levels. Through establishment of an extensive Professors of Practice program, leaders in industry will return to the classroom and contribute to preparing the new generation of engineers. These new engineers will be uniquely prepared to address tomorrow’s challenges for society and industry.
- Develop partnerships with community colleges to increase the number of transfer students prepared to meet the rigorous engineering curriculum at Texas A&M. (Pilot program at Blinn College today with 500 pre-engineering students will increase to 2,500 by 2025).
- Create outreach programs to connect with P-12 students, specifically focused on development of curricula to assist students with understanding engineering problem-solving and applications, along with training of teachers to deliver these new curricula to students at all levels. (Expanding our pilot program (E3) from 100 teachers today to 1,000 teachers by 2025).
- Expand remote learning opportunities through eight new on-line professional MS degree programs (our goal is 1,000 on-line students by 2025), extensive blended remote/campus courses, and technology short courses.
- Double the percentages of women and minority students at the undergraduate level of Texas A&M engineering by 2025 as well as increase completion rate of entering engineering students to 75%.
- Through our innovative educational and recruiting efforts, Texas A&M will become the single largest engineering program in the United States while simultaneously enhancing the academic experience for our students. With Texas A&M’s increase in engineering degree production, Texas will be second only to California in the number of engineering degrees granted per year (Texas is currently ranked third in that category).
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FOR IMMEDIATE RELEASE

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Texas A&M University on Right Track to Help U.S. Stay Competitive
New Initiative will double school’s enrollment of engineering majors by 2025

Washington, D.C. – The Council on Competitiveness applauds a new initiative by Texas A&M University, which today announced it is aiming to double its enrollment in the school’s Dwight Look College of Engineering from 11,000 to 25,000 students by 2025.

Texas A&M’s 25 by 25 initiative comes in response to recommendations by the President’s Council of Advisors on Science and Technology (PCAST) that U.S. universities produce a million more STEM graduates over the next decade.

“This is exactly the kind of bold move that is critical to training and preparing the skilled workforce we so desperately need to maintain our competitive edge in the global economy,” said Deborah L. Wince-Smith, President & CEO, Council on Competitiveness.

“I congratulate Chancellor John Sharp for his vision and leadership on A&M’s 25 by 25 initiative,” Wince-Smith continued, “And I look forward to tracking and sharing the outcome of how this new program will engage students and meet the future needs of the engineering marketplace.”

Texas A&M’s plan to recruit and educate a new crop of engineers includes transforming the learning experience by integrating hands-on opportunities at all levels and by reaching out to P-12 instruction to incorporate problem-solving content more relevant to engineering.

The university is also developing partnerships with community colleges to increase the number of transfer students prepared to meet the challenging engineering curriculum at Texas A&M.

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ABOUT THE COUNCIL ON COMPETITIVENESS

The Council on Competitiveness is a non-partisan and non-governmental organization. It is the only group of corporate CEOs, university presidents and labor leaders committed to the future prosperity of all Americans and enhanced U.S. competitiveness in the global economy
Thank you, Chancellor Sharp, President Loftin, Dr. Banks, and members of the Board of Regents – for the opportunity to provide a business perspective on the 25 by 25 initiative.

The world faces many challenges. And among the most pressing will be how to provide the energy needed to raise the standards of living of millions of people all around the globe.

To provide the food, water and transportation solutions for a growing population, all the while protecting the planet we all call home.

Few professions will be more instrumental in meeting these challenges than tomorrow's engineers. That's because engineers solve problems. It's in their DNA.

Engineers are the bridge between scientific discoveries in the lab and applications that work in the real world. It's their ingenuity and innovation that enable economic development and advancement. And it's their integrity that will support the technologies that allow us to move forward together safely and responsibly.

So the world needs engineers and engineers of the highest caliber. And the United States needs strong engineers to maintain its business and technology leadership position.

That's why I'm supporting Texas A&M's 25 by 25 initiative.

At ExxonMobil, we recognize from our own involvement in education, that to increase achievement in science, technology, engineering and math, our nation's schools must challenge students with a strong curriculum and we must support teacher training in the subjects they teach.

The 25 by 25 initiative does just that.

The initiative won't just focus on expanding programs for undergrads, grad students and Ph.D.'s. It will focus on early outreach to connect with students in the formative years of their education. It will also support teachers through training and curriculum with engineering applications for students all the way through high school.
With the 25 by 25 initiative, Aggie engineers will be solving problems all around the world. Not just at companies, in the lab or in the field, they will be meeting the world's most pressing needs.

So let me close by thanking the leadership at Texas A&M University for having the courage and the vision to help meet these needs by launching the 25 by 25 initiative.
FUTURE ENGINEERING EDUCATION COMPLEX