

What are the most popular majors at Texas public universities?



Tony Flores, a computer science freshman at University of Houston, shows his design during a quick task at the Code [Coogs] club, at the University of Houston on Monday, Dec. 11, 2023 in Houston. Elizabeth Conley/Staff Photographer

Business, engineering, biology, health professions and computer science dominated as the most popular [areas of study](#) at Texas' [public universities](#) last year, according to state enrollment data.

University-reported figures from fall 2023 show the heaviest concentration of students majoring in business and STEM fields, where the job market has grown and the pay is perceived to be highest. Psychology was an exception as Texas' most frequently studied individual major, while other liberal arts and humanities degree programs, including English, foreign languages, and math and statistics, saw declines.

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The [data](#) — gathered by the Texas Higher Education Coordinating Board and analyzed by the Chronicle — speak to concerns about [student loan debt](#) and whether certain degrees are worth the cost, university officials said. Case in point is a decrease in students pursuing degrees without a specialty, or listing their major as “undeclared.”

“When I was going to school, the conversation was, ‘Dabble here, take courses there,’” said Carmen Carter, assistant provost at Prairie View A&M University. “Across the country, there’s not as much room to find your way.”

The decline in undeclared majors doesn’t mean that students are not transferring or even being encouraged to transfer to different degree plans, but several students said their choice to study certain fields was tied to increased specialization and the need to market their skills to get jobs.

The data obscures that jobs are changing quickly — meaning that majors need to change with them — and that employers want graduates with the knowledge to match. But educators say that businesses also want workers with the critical-thinking skills typically associated with liberal arts programs, and they value employees with skills that cross disciplines. (One example might be an English major competent in data analysis or artificial intelligence.)

“We need specialists,” said Sheldon Rothblatt, a professor emeritus of history at the University of California at Berkeley, who formerly studied the history of campus planning and declines in liberal arts education. “But we also need mental training that allows one to make some sort of sense of a world that, you will agree with me, is extraordinarily confusing.”

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Business and STEM leads at four-year publics

The Texas Higher Education Coordinating Board divides enrollment data into broader degree groupings and the majors that fall within those categories. More than 85,000 students last fall studied business, management, marketing and related support services, which contains 42 individual majors. Engineering followed as the next largest grouping with more than 52,000 students across 25 majors.

Following those were health professions, biological and biomedical sciences, and computer and information sciences and support services.

The findings came as no surprise to professionals who study the pathways from higher education into the workforce: Majors within those fields tend to have more direct routes to highly sought-after jobs in tech, business or health care.

"Business management, marketing and related support services, that group of majors provides a lot of agility for where they can go," said David Troutman, deputy commissioner for academic affairs and innovation at the state higher education agency. "Health professions, we cannot produce enough health majors to keep up with the sheer growth in Texas."

Pay is also a concern for students like University of Houston junior Daniel Sanchez, who switched from a degree in chemistry to chemical engineering after looking at chemistry job opportunities in the Houston area and finding them lacking.

"It was not worth it to continue the degree plan and pay a lot of money for that," Sanchez said. "I have to pay (loans) back somehow."

Psychology is the top individual major

The almost 29,000 students who majored in psychology made it an anomaly, as the top individual major at Texas public universities. The next four spots went to business and STEM: biology, business administration and management, registered nursing and kinesiology.

Those trends were consistent at many schools, including the University of Houston, Sam Houston State University and Prairie View A&M University. UH's largest undergraduate majors last year were business, psychology, computer science, exploratory studies, biology, health exercise science, mechanical engineering, computer information systems, and teaching and learning, according to college officials. Prairie View's largest majors included pre-nursing, kinesiology and biology.

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Quenby Mott, dean of the Kinkaid School's upper school, said it is common for her students to gravitate toward pre-med, business and engineering majors when applying for college. Some of that is natural, with more land grant colleges west of the Mississippi and more liberal arts schools in the northeast.

"If your mom works in business and your dad's an engineer, that's sort of the world that you know," Mott said. "What we try to do is crack it open to expose them to more opportunities."

Experts could only speculate about why psychology is so sought-after by students, aside from growing interest in mental health and students' ability to see the broader applications more easily than they might with other liberal arts majors. Five years after graduation, almost half of Texas students who majored in psychology went on to jobs in educational services or health care and social assistance, with the remainder split across various fields, according to US Census Bureau [data](#).

"If you think about where companies are going and trying to understand their consumers and trying to create user-centered design, it has elements of psychology built in," said Peter Beard, senior vice president for regional workforce development at the Greater Houston Partnership. "There are folks that are really trying to understand people in order to build products, in order to sell to them as well."

Growth areas align with the economy

The state higher education data also shows where the largest growth has occurred at four-year public universities: education, computer and information sciences, transportation and materials moving, legal professions and studies, and construction trades. Some of those have small base populations, meaning they aren't necessarily popular overall, but education and computer and information sciences are larger disciplines.

Astronomical growth in education majors can't be owed to more teachers entering the field, but to a [law change](#) in 2019 that allowed Texas schools to offer an undergraduate degree in education, university officials said. The previous law, in place since 1979, saw future teachers graduating with degrees in interdisciplinary studies at many Texas colleges, including Texas A&M University and Texas State University. More than 1,400 students majored in education in 2014, far fewer than the almost 14,000 who majored in the field in 2023, according to the higher education agency's data.

Beard, of the Greater Houston Partnership, qualified that the law change makes it difficult to tell whether more students are pursuing teaching, although education is a natural place to find growth alongside increases in local or state population. The same is true for health professions. Other growth areas — business and engineering, for example — occur because of expanding local economies, he said.

The job market generally aligns with how students are choosing to major, university officials and professionals said. Some of the areas, such as education and health professions, can't fill positions fast enough, and computer science majors have ample opportunities despite the impression that layoffs in the tech sector are making those jobs hard to come by.

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The majority of "tech" jobs are with businesses outside of the tech sector, including banks and insurance companies, said Munir Mandviwalla, a management information systems professor at Temple University. Since 2013, Mandviwalla has studied the entry-level IT workforce in partnership with the Association for Information Systems and has found even in the most recent years, graduates pursuing jobs in IT have better job placement rates than the average graduate.

"Those opportunities are still fantastic," he said. "Perhaps the tech firms will hire fewer of them, but then the insurance companies, the banks, hospitality industry, every other industry will be more than happy to grab them."

That reality hasn't been communicated well enough to the public, Mandviwalla said. University of Houston junior Nehaa Balaji said she plans to use her computer science degree to find a job in IT and doesn't view the job market as safe — but she's hopeful her technical skills will be attractive to employers.

Declines reported in some liberal arts, undeclared majors

In fall 2023, the fastest-shrinking groupings were undeclared; interdisciplinary studies; English literature and letters; foreign languages,

literatures and linguistics; and mathematics and statistics.

The decrease in undeclared majors is part of a larger push in higher education, UH Provost Diane Z. Chase said. She and Carter, at Prairie View, said that students are still encouraged to transfer majors but tell them that it is at least beneficial to start on a path to a specific degree.

"We want to make sure that students graduate in a timely fashion and with a few extra credits if possible, ideally none," Chase said.

The change within interdisciplinary studies is partly owed to the exodus of students from those majors into education. To meet employers' desires to see more students with cross-specialty appeal, colleges like UH and Prairie View have since launched versions of multidisciplinary degree plans where students can combine majors and form their own concentration, the provosts said.

Liberal arts and humanities majors are also declining, possibly because students don't see those as fields with clear career paths, college educators said. Mott, at Kinkaid, said she has to work to explain to her high schoolers how marketable those majors can be.

"We try to spend a lot of time really sort of unpacking that, talking about the fact that (many) students in medical school these days did not major in the natural sciences," Mott said. "Sometimes majoring in something outside of that area actually will expand your understanding of a human being, through studying literature, in a way that studying biology would not."

Carol Rodriguez, a transfer student at the University of Houston, said she plans to take one of the more traditional routes with her English major, into teaching. She often has to combat the view that the major isn't worth it.

"It's difficult, especially since everybody tells you you're not going to find a job," Rodriguez said. "It's not uncommon for people to assume I'm going into teaching."

English majors have more diverse career options than people might think: About 42% of Texas students entered education five years out of college. The rest splintered off into careers spanning health care, public administration and finance, among other fields.

"We need to do a better job in higher education in general, of explaining all of the transferable skills that a student can learn in an English major or foreign language major," said Anne Gaillard, Sam Houston State University's vice provost for academic affairs.

Specialization is key

Academic departments constantly evaluate market needs and are encouraged to rethink their curriculum or approach in response, said Chase, the UH provost. Sometimes the programs need more exposure to high schoolers, or more specialized skills need to be taught.

For STEM fields like engineering, some of the base skills learned in those majors will always be necessary for jobs, Mott said. But since the fields change quickly, businesses are increasingly working to credential employees — "upskilling" them — as new techniques come to light. Those business partnerships are common with community colleges and might start moving into the four-year university space, said Beard, with the Greater Houston Partnership.

For fields that carry the impression of being less specialized, including some in liberal arts, many students are encouraged to receive certificates that tell employers they have technical skillsets.

“What we’re seeing happening at the four-years is, they’re embedding microcredentials into popular majors like psychology and sociology,” Troutman said. “They can follow their passion in psychology, but they’re leaving with a certificate in project management or data analytics.”

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Chase cautioned that decreases in liberal arts and humanities majors aren’t representative of the fact that students take those courses in schools’ core curriculums, or that people might choose to minor in liberal arts or take them as electives.

Advocates for liberal arts education worry that the declines bode poorly for those programs, especially in states moving toward funding incentives for degree plans with higher employability. When that happens, the wealthier private colleges will be the places most likely to find more expansive liberal arts and social sciences programs, meaning the field might grow more limited to people from lower socioeconomic backgrounds, said Lynn Pasquerella, president of the American Association of Colleges and Universities.

The critical-thinking skills gained from liberal education are crucial to upholding the tenets of democracy, Pasquerella said, although the liberal arts have been attacked because some critics feel they are not teaching 21st-century skills or that they are pushing politically liberal agendas.

“The truth is that employers are looking for humanities graduates,” Pasquerella said.

“We know that students now are looking for more than work when they graduate from college,” she said. “They want careers that are going to align with their meaning, purpose and passion.”

At the state higher education agency, Troutman said the decreases in liberal arts are not large enough to be too concerned. Those fields remain important, and colleges are pivoting to ensure students can pursue their interests with good employment outcomes, he said.

"The arts — we know that, economically, it's not valued, but socially it is," Troutman said. "How do we lean into that to support students who want to be an artist or a dancer or to inspire others? Ultimately, creating 'credentials of value' and not creating 'credentials of harm' is my ongoing statement."

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