What Is a STEM-Designated Degree Program?

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Attracting and retaining global talent spurs innovation and reinforces the U.S. as a leader in science, technology, and business. Science, technology, engineering, and mathematics (STEM) degree programs are key to this, drawing top minds from around the world.

STEM-designated degrees equip students for vital roles in the U.S. economy. These programs, established by the U.S. Department of Homeland Security, address workforce gaps in STEM fields. Graduates enter rapidly expanding industries, with international students particularly advantaged.

Immigrants, comprising 14.3 percent of the U.S. population, according to Pew Research Center, have a strong presence in STEM fields. These specialized degrees

offer a pathway to fulfilling U.S. careers, especially for foreign-born talent seeking to contribute their skills in high-demand fields.

- A total of 26 percent of foreign-born workers were employed in STEM occupations in 2021, according to the National Science Foundation (NSF).
- The American Immigration Council reports that immigrants account for 22.6 percent of entrepreneurs and 23.1 percent of STEM workers in 2024.

By equipping graduates to energize industries and drive innovation, STEM-designated programs enhance U.S. competitiveness. At the A. B. Freeman School of Business at Tulane University, these programs not only advance academics but also prepare future business leaders to thrive in an ever-changing world.

What Does It Mean to Have a STEM Designation?

STEM-designated degrees, recognized by the Homeland Security Department, prepare students to drive innovation in fast-growing industries and help them strengthen U.S. leadership in STEM.

As of July 2024, the list of STEM-designated programs from the Homeland Security Department includes a comprehensive range of programs across various disciplines. Although the exact number of programs is not specified, the list covers numerous fields of study, including engineering, biological sciences, mathematics, and physical sciences. Also included are related fields involving research; innovation; or development of new technologies using engineering, mathematics, computer science, or natural science.

Benefits of a STEM-Designated Degree

STEM workers accounted for 24 percent of the U.S. workforce in 2021, with this share steadily growing over the past decade, according to NSF. What STEM-designated degree programs offer is an opportunity for students to gain hands-on experience through labs, collaborative projects, and research, preparing them for real-world challenges in STEM fields. STEM-designated programs allow international students on an F-1 visa to extend their Optional Practical Training (OPT) by 24 months, giving them additional time for U.S. work experience and career growth.

A key benefit of enrolling in a STEM-designated degree program is to gain technical expertise, problem-solving skills, and innovative thinking to address workforce demands in advancing fields. Choosing a STEM degree offers a range of additional advantages, including the following:

- Graduates of STEM-designated programs play a pivotal role in fueling innovation and strengthening global competitiveness. In 2021, the U.S. had a larger proportion of foreign-born workers (26 percent) in STEM roles compared with U.S.-born workers (24 percent), according to NSF data. This underscores the significance of the contributions of international graduates.
- Many immigrants with advanced STEM degrees become leaders in fields like health care, engineering, and technology, driving progress and addressing workforce gaps. As reported by Inc., immigrants have started more than half of all billion-dollar U.S. businesses.
- STEM careers offer long-term stability and growth, particularly as technology evolves and baby boomers retire. The U.S. Bureau of Labor Statistics projects STEM occupations to grow by 10.4 percent from 2023 to 2033, exceeding the median annual growth of non-STEM occupations over the same period.
- Advanced education in STEM further enhances earning potential. According to NSF, workers in STEM roles earn a median of $19,100 more annually than their non-STEM counterparts.

STEM-Designated Degrees at the A. B. Freeman School of Business

By enrolling in a STEM-designated degree program, students gain the skills and expertise needed to succeed in innovation-driven industries while contributing to technological and economic progress. These programs emphasize research, creativity, and practical skills, equipping students to solve real-world challenges and remain competitive in an ever-evolving job market.

At Tulane’s business school, all MBA programs and specialized master’s degrees are STEM-designated, offering a robust education designed to develop forward-thinking, ethical professionals:

Master of Business Administration

MBA students benefit from top-tier faculty, experiential learning opportunities, and a focus on data-driven decision-making, environmental sustainability, and ethical business practices.

- **Full-Time MBA** (Two Years, New Orleans, Louisiana, Uptown Campus): Offers specializations in analytics, finance, strategy and marketing, or sustainability
- **Executive MBA** (17 Months, Hybrid Format): Includes a global strategy concentration with optional specializations in finance and management
- **Professional MBA** (Part-Time, Under Three Years): Provides evening classes with specializations in analytics, energy, marketing, finance, and strategic management
- **Online MBA** (24 Months): Features concentrations in business analytics, finance, and marketing

Master of Accounting

The Master of Accounting program prepares students for careers as a CPA or a financial analyst through rigorous coursework and specializations aligned with industry needs. Students collaborate with Tulane's distinguished faculty across accounting and related disciplines, offering the flexibility to craft an interdisciplinary education or deepen expertise in a specific area of accounting. Specialization options include Analytics, Risk Management, Structured Finance, and Taxation.

The program boasts strong career outcomes, with 90 percent of the 2023 graduating class securing full-time employment within six months at leading organizations, including PwC, EY, Deloitte, BDO, and ExxonMobil.

Master of Business Analytics

The Master of Business Analytics program prepares students for careers in strategic analysis, risk management, and data-driven problem-solving. Its industry-focused curriculum emphasizes translating complex data into actionable strategies, equipping graduates with in-demand skills.

Courses cover topics such as database management, machine learning, predictive and prescriptive analytics, data visualization, and cloud computing. Students gain hands-on experience with software applications and programming languages, such as Tableau, SQL, R, and Python.

The program boasts strong outcomes, with 95 percent of the 2023 class securing full-time employment within six months at top organizations, including Goldman Sachs, EY, Dell, NBCUniversal, and Ford.

Master of Energy Management

The Master of Management in Energy program prepares students for leadership roles across the energy sector. It offers specialized knowledge and skills for traditional and renewable energy industries. Focused on the business of energy, the program covers areas such as energy valuation, financial modeling, and risk management.
Developed with industry professionals and expert faculty, the curriculum includes advanced tools, databases, simulations, and project-based learning to address dynamic industry challenges.

The program boasts strong outcomes — 94 percent of 2023 graduates were employed within six months, with an average starting salary exceeding $96,000 — preparing students for impactful careers in the energy industry.

Prepare to Shape the Future in a STEM Career

STEM-designated degree programs help drive innovation and economic growth, preparing graduates to tackle real-world challenges and lead advancements across critical industries. From fostering entrepreneurship to fueling technological progress, these programs equip students with the skills, expertise, and hands-on experience needed to thrive in high-demand fields.

The Freeman School of Business at Tulane University offers STEM-designated degrees that offer a transformative education that empowers students to shape the future of technology and business. Learn how a STEM-designated degree from Tulane can prepare you to become a leader in your chosen STEM field.

Sources:

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- U.S. Bureau of Labor Statistics, Employment in STEM Occupations
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Interested in advancing your education and/or career? Learn more about Freeman’s wide range of graduate and undergraduate programs. Find the right program for you.