

Louisiana Believes

STEM Diploma Pathways

Agenda

- Why focus on STEM?
- Current K-16 JumpStart Pathways
- Future Vision and Next Steps

Louisiana STEM Initiative

Over the next 12 years, Louisiana and the nation will see a surge in the number of job opportunities available in the fields of Science, Technology, Engineering and Mathematics, also known as STEM.

ACT's 2018 Louisiana State of STEM report showed that 51% of Louisiana students indicated having an interest in STEM majors and/or careers, but only 10% met the STEM benchmark demonstrating their readiness for math and science coursework in college.

In order to better meet workforce demands, the Louisiana Department of Education, the Louisiana Board of Regents, the LaSTEM Council and the Governor's office have teamed up to ensure Louisiana's students have exposure to STEM courses and credentials starting in elementary school and continued through college.

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STEM Pathways

A recent call to action initiated by Louisiana industry, higher education, and the statewide LaSTEM Council focuses on this issue, shining a light on the need for a curriculum relevant to STEM careers, including but not limited to traditional math and science. The need for STEM courses that connect to college and to work, as well as the need for teachers prepared to teach these courses, is evident in our state.

Louisiana STEM Pathways are part of the Jump Start Initiative, Louisiana's innovative career and technical education (CTE) program. The STEM Pathways better prepare students to seek a STEM degree in college or enter the workforce having earned certifications in high-wage career sectors. STEM Pathways are designed for students seeking either a TOPS Tech Diploma or University Diploma.

Current STEM Pathways

LSU Pre-Engineering

Through hands-on projects and interaction with industry professionals, students begin to understand the fundamentals of engineering in the classroom as well as the workplace.

College Ready: Aerospace, Biological, Chemical, Electrical, Industrial, etc.

Career Ready: Mechanical Drafter, Architectural and Civil Drafter, Surveying and Mapping Techniques, etc.

Credentials: Certified SolidWorks Associate (CSWA) and/or Carnegie Mellon CS-STEM Network Certification in RobotC.

Current STEM Pathways

Environment Protection and Sustainability

Provides students with knowledge and skills necessary to provide solution to combat coastal erosion and prepares for the workforce that will be tasked with implementing solutions.

College Ready: Animal Science, Biology, Coastal Environmental Science, Forestry, Marine Biology, Plant and Soil System, etc.

Career Ready: Compliance Officer, Conservation Scientist, Environmental Engineer, Wastewater Engineer, etc.

Credentials: Water Production Operator, GIS Technician Level 1, CTS General Marine Transportation Technology

Current STEM Pathways

LSU Digital Design and Emergent Media

Designed with a 21st century approach to media production, this pathway develops skills and creativity for producing digital storytelling, production skills, programming experience, and emergent media practices.

College Ready: Communication Studies, Computer Science, Digital Art, Graphic Design, Landscape Design, etc.

Career Ready: Animation Apprenticeship, Computer and Information Systems Assistant, Film Industry (Gaffer, Grip, Production Runner), Radio Production, etc.

Credentials: Adobe Photoshop, Adobe Premier, CIW IBA, CIW Web Foundations, etc.

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Future STEM Pathways and Course Offerings

In June BESE passed a [proposal](#) to count several of these STEM courses as core academic credits for the TOPS University and Jump Start Career Diploma. Additionally, BESE and the Board of Regents approved [additional proposal](#) for courses in these STEM pathways to count for TOPS weighted GPA credit. Under this proposal, students pursuing STEM courses and pathways would be able to apply their STEM credits toward admission to and funding four two- and four-year colleges.

STEM Pathways Under Development:

LSU:

[Computational Thinking and Computer Science](#)

[Biomedical Sciences](#)

Xavier University:

[Pharmacy Pathway](#)

Cyber Innovation Center:

[Cyber Engineering](#)

P-TECH Louisiana

Pathways in Technology Early College High Schools (P-TECH) for grades 9-14 is coming to Louisiana this fall and will be located in East and West Baton Rouge Parishes. The schools are the result of a partnership established between IBM, DOW Chemical, the Louisiana Department of Education and the Louisiana Community and Technical College System.

P-TECH is a public-private partnership model that blends classroom learning with workplace experiences, giving youth an opportunity to earn both a high school diploma and an associate degree in a technology discipline.

P-TECH Louisiana

Businesses that are engaged with P-TECH schools provide students with mentorships, paid internships, and structured workplace visits -- as well as first-in-line consideration for job interviews for students who successfully complete the program.

Pilots for 2018-2019 include the CyberSTEM Academy, co-located at Tara High School in East Baton Rouge, and will work with IBM. Port Allen and Brusly High Schools in West Baton Rouge will work with Dow.

Contact Information

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