2nd Quarter LaSTEM Advisory Council Meeting
Claiborne Building, Iowa Room
4/20/2023
Today’s Agenda

9:00 a.m. – 9:10 a.m.  I. Welcome and Roll Call
9:10 a.m. – 9:15 a.m.  II. Approval of 1st Quarter Meeting Minutes
9:15 a.m. – 9:30 a.m.  III. Competitive Process Overview and Regional STEM Center Recommendations
9:30 a.m. – 9:40 a.m.  IV. Outcomes and Recommendations from Focus Groups
  – Otey White & Associates/TCI
9:40 a.m. – 9:50 a.m.  V. Discussion of STEM Definition Development
9:50 a.m. – 10:00 a.m. VI. Summit Update
10:00 a.m. – 10:15 a.m. VII. VEX (REC Foundation)
  – Diana Fultz, Director of Regional Operations
10:15 a.m. – 10:30 a.m. VIII. Louisiana Department of Education
  – Jamie Mixon, STEM Specialist
- Roll Call

- Approval of 1st Quarter, 2023 Advisory Council Meeting Minutes
RFA Process Timeline

December 2022
2023-26 Regional STEM Center Request for Applications released.

February 2023
All current centers applied to continue; no new applications were submitted.

March 2023
Applications scored and rated by two outside consultants.

April 2023
Feedback provided to directors on individual applications and overall efforts.
STEMx: Advancing high-quality STEM education

We are a national network of STEM education leaders who collaborate to advance high-quality STEM education as a workforce and equity imperative.

- Convene STEM education leaders
- Advocate for STEM as a national priority
- Share what works in STEM education
RFA Review (STEMx)

Members

The STEMx™ network is a multi-state STEM network that provides an accessible platform to share analyze and disseminate quality STEM education tools to transform education, expand the number STEM teachers, increase student achievement in STEM and grow tomorrow's innovators.

The network is composed of leading STEM organizations across the nation.

31 States  40 Organizations
RFA Review (STEMx)

Policy Briefing & Advocacy Day
March 21 – 22, 2023
• Committee Briefing
  ▪ Taylor Ware, Legislative staff for Alma Adams
  ▪ Chips and Science

• Panel Discussion
  ▪ STEMx members
  ▪ Victoria Rubin, House Science Committee

• 47 meetings with Congressional reps
The LaSTEM Advisory Council believes every citizen of Louisiana should have access to Science, Technology, Engineering, and Mathematics (STEM) resources through a Regional STEM Center. The purposes of these Centers include:

• building strong foundations for STEM literacy;
• increasing diversity, equity, and inclusion in STEM; and
• preparing the STEM workforce of the future.
Building Strong Foundations for STEM Literacy

- STEM Talks
- Mobile STEM Labs
- STEM Pathways – develop, promote, expand
- Teacher/Industry Experiences
- Professional Development
  - Computer Science
  - EIE
  - Environmental Science
  - STEM Pedagogy
  - STEM Content
  - Engagement strategies
- Environmental Science Curriculum
- Geomatics Flight Plan
- PBL – Costal restoration
- Chemistry Road Show
- Engagement with OST programs
- STEM communication strategies
- Freshman Outreach & Mathematics Enrichment (FOrME!)
- EDP training
Programs

• Learning Blade
• TEALS
• Brain Food Truck
• Sea Perch Underwater Robotics
• Esports
• Robotics/FLL
• STEM Fest
• Astro Camps
• Young Science Explorers

• Chemistry Road Show
• Ocean Commotion
• Girl Scouts Design Challenge Day
• Touch a Truck
• National Girls Collaborative Project
• Jumpstart Pathways programs
• GSK Science in the Summer
• Carpentry Classes
• CSI mystery camp
• Starbase
Increasing Diversity, Equity, and Inclusion in STEM

• HBCUs
• Justice system, current/former
• Youth with Autism
• ALICE Populations
• Rural communities
• Single moms
• At risk youth
• Expanded access to dual credit science courses through lab kits
• General community outreach events
• Students at alternative schools

• Libraries
• Virtual camps – fewer restrictions
• Adult learners in camps
• Pre-service teachers
• Non-traditional teacher pathways
• Upskilling/reskilling programs for currently employed
• Pre-K learners
• Homeless students
• Migrant students
Preparing the STEM Workforce of the Future

- Internship programs
- Mentoring programs
- Workforce Summits
- Broadband Workforce Roundtable
- Mechatronics Apprenticeship Program
- Re-Entry Workforce Roundtable

- Summer camps as teacher PD
- Career talks Job Shadowing
- Renewable Energy Program
- Additive Manufacturing Camp
- Pathway programs
- Collaboration with industry partners and economic development organizations
Key takeaways and Next steps:

- The Regional STEM Centers have been highly successful in their first three-year cycle.
- The LASTEM model has received national attention.
- All RSCs were recommended for continuation.
- April 20: Council to vote on the recommendation to continue the existing nine (9) Regional STEM Centers for a second three-year cycle.
- May-June: Year 1 Cooperative Endeavor Agreements (CEAs) drafted.
- July 1: Year 1 CEA start date.
Welcome to Otey White and Associates
“We will always have STEM with us. Some things will drop out of the public eye and will go away, but there will always be science, engineering and technology. And there will always, always be mathematics.”

Katherine Johnson
NASA
WHY IS STEM IMPORTANT TO THE FUTURE OF LOUISIANA? 5 REASONS

01  CAREERS AND TALENT PIPELINE
   • Foundation for future careers
   • Pipeline of talent for current/future industries and business
   • Teaches critical thinking, problem solving, communication and collaboration-valued in all careers

02  TECHNOLOGY ENTREPRENEURS OF TOMORROW
   • STEM education nurtures future entrepreneurs
   • Tech based companies – LA’s future economic base

03  ENGAGES YOUTH IN EDUCATION
   • STEM’s hands-on experiences keep youth interested
   • Provides practical knowledge
   • “Think” and “Do” in STEM
WHY IS STEM IMPORTANT TO THE FUTURE OF LOUISIANA? (continued)

PATHWAY TO PROSPERITY IN LOUISIANA
- LA leading the nation in innovation in STEM education
- Can lead the nation in future businesses
- No region is left behind in LaSTEM

RETAIN LA’S TALENTED YOUTH
- Higher salaries
- More opportunities
WHAT DO YOU SAY ABOUT THE IMPORTANCE OF LASTEM TO LOUISIANA?

1. Economy is drastically changing - STEM pushes talent through the pipeline to attract and keep companies in our community.

2. LaSTEM is literally preparing the future of Louisiana.

3. LaSTEM is creating equity, teaching service and developing job opportunities.

4. STEM is the reason your life is easier, it affects everyday life.
WHAT DO YOU SAY ABOUT THE IMPORTANCE OF LASTEM TO EDUCATORS?

1. All students must be proficient in STEM for future careers and life.
2. Changes their lives and encourages them to adapt to change.
3. Teaches critical thinking, problem solving and collaboration.
4. Offers hands on experience that engages students in their education.

O'Butte STEM Network
WHAT DO YOU SAY ABOUT THE IMPORTANCE OF LaSTEM TO COMMUNITY?

1. All the tools that youth use at Walmart and McDonalds are controlled by robots and apps. STEM lets them control the apps, not the other way around.

2. Every future career and job will require knowledge of STEM.


4. Keeps you engaged with your children at all ages.
WHAT COULD BE IMPROVED? COUNCIL

Creating the Pipeline and Seeing it Flow

IDENTIFY
Available Resources

JOB MKT.
Demand

REGIONAL
Areas of Interest

APPLY
To STEM Network

Needs a Key Leader to Make it Work!
WHAT COULD BE IMPROVED? COUNCIL

More STEM skills tied to math

“Math always seems to be left out of STEM Initiatives.”

Integration of science and technology in math curriculums
WHAT COULD BE IMPROVED? REGIONAL DIRECTORS

• Visibility and credibility
• Funding – Make it easier to spend your money, reduce rules
• Modify evaluation process – more frequent? Self ratings?
• Cohesive branding, not unanimous
• Better follow up to planning sessions – need action
• Better data network – need markets
• Asset map by region
• Timing of funding – missed opportunities
• Regional introduction and presentation at Summit
VISION

LASTEM promotes Science, Technology Engineering and Math programs through a statewide network of regional partners. Together we are building a science-driven future for the state by engaging youth and adults in STEM, developing talent for regional business and industry, and encouraging innovators to pursue their vision. In our region we are...
Louisiana leads the nation in STEM education

STEM engages youth with hands-on activities

STEM learning promotes problem solving, critical thinking, collaboration and communication

Every future career requires STEM education

Louisiana’s Pathway to Success

This is mission work
Our journey begins...
Technology is changing the way that the workforce creates and accesses information. Same is true for today’s modern classroom.
What is 21st Century Learning and Where Do You Begin?

- Interactive learning does not always mean technology alone.

- Learning must be an interaction between the educator, the information, and the audience.

- Buzz words are simply tools. Think of them like a pencil.

- In the 21st century, connecting information and outcomes is critical to growing our future workforce.

- The role LASTEM plays in education-workforce pathways provides us with opportunities to provide innovative solutions and teacher support.
According to a 2020 IBM study, human knowledge is doubling every 11-12 hours.

How can educators remain content experts? Can we keep up with ‘knowledge half-life’?

The ability to facilitate the ownership of information is becoming more important in this accelerated learning environment.
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Description</th>
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<tbody>
<tr>
<td>1990's</td>
<td>• SMET/METS is created • National Science Foundation created the</td>
<td>acronyms to connect relevant programs of study with rapidly emerging career</td>
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<td></td>
<td>acronyms to connect relevant programs of study with rapidly emerging</td>
<td>career opportunities.</td>
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<td>career opportunities.</td>
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<tr>
<td>2001</td>
<td>• STEM is born • METS/SMET rearranged to STEM, making it more</td>
<td>memorable and relevant to workforce.</td>
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<td></td>
<td>memorable and relevant to workforce.</td>
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<tr>
<td>2010</td>
<td>• STEAM is coined • Rhode Island School of Design championed the</td>
<td>inclusion of the Arts to better prepare future graduates for workforce.</td>
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<td>inclusion of the Arts to better prepare future graduates for</td>
<td>workforce.</td>
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<td>workforce.</td>
<td>• Highlighting the importance of <strong>creative and critical thinking</strong> in the</td>
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<td>• Highlighting the importance of <strong>creative and critical thinking</strong></td>
<td>STEM fields.</td>
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<td>in the STEM fields.</td>
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</tbody>
</table>
| 2012   | • STEM is further defined as ‘hands-on’, applied learning, K-grey   | education
|        | education                                                             | • ‘STEM Education: A Primer’, STEM education was defined as: *Teaching and  |
|        | • ‘STEM Education: A Primer’, STEM education was defined as:          | learning in the fields of STEM. It typically includes educational activities |
|        | *Teaching and learning in the fields of STEM. It typically includes   | across all grade levels—from pre-school to post-doctorate—in both formal   |
|        | educational activities across all grade levels—from pre-school to    | (e.g., classrooms) and informal (e.g., afterschool programs) settings.       |
|        | post-doctorate—in both formal (e.g., classrooms) and informal (e.g.,  |                                                                             |
|        | afterschool programs) settings.                                       |                                                                             |
| 2017   | • Act 392 establishes LaSTEM and Education-Workforce Pipelines • 2017 | LaSTEM Advisory Council developed the working vision as: To create a STEM   |
|        | LaSTEM Advisory Council developed the working vision as: To create a  | culture in Louisiana where every citizen is prepared to be successful in     |
|        | STEM culture in Louisiana where every citizen is prepared to be      | their daily lives and Louisiana is positioned as the go-to state for STEM   |
|        | successful in their daily lives and Louisiana is positioned as the   | talent.                                                                    |
|        | go-to state for STEM talent.                                          |                                                                             |
| 2020   | • Regional STEM Centers are operational across nine regions in       | Louisiana                                                                   |
|        | Louisiana.                                                           |                                                                             |
STEM education is a method of hands-on teaching and learning where students learn to apply academic content by creatively solving real-world problems with innovative design-based thinking to prepare students for future career opportunities.

K–12 STEM education encompasses the processes of critical thinking, analysis, and collaboration in which students integrate the processes and concepts in real world contexts of science, technology, engineering, and mathematics, fostering the development of STEM skills and competencies for college, career, and life.

STEM education provides opportunities for students to engage in authentic experiences in the classroom that are linked to local and global communities.

STEM – Science, Technology, Engineering and Mathematics. The goal of STEM and STEAM schools is to foster intellectual, entrepreneurial and technical talent and design thinking. This is vital to Ohio’s future economic growth and prosperity, which depends on an aligned education system to support the state’s economic development efforts and that helps all Ohio students become innovators and inventors, self-reliant and logical thinkers and technologically proficient problem solvers.

STEM education in Florida is focused on generating new ideas, concepts and theories that address real-world challenges and spur scientific breakthroughs.
• What’s next?
  • The Council will welcome all stakeholders to provide input on a definition of STEM for Louisiana
  • LaSTEM staff will report back at the 3rd quarter meeting with a draft definition for Council discussion/consideration
  • Definition in place by the end of the calendar year
2023 LaSTEM Summit Update

• October 17, 2023, CAJUNDOME and Convention Center

• Theme: STEM Today, Success Tomorrow

• Presentation slots are filled
  • 6 presentation breakout rooms
  • 5 workshop breakout rooms
  • 1 panel room

• Exhibitors and sponsors are invited to contact LaSTEM staff for more information

• Keynote: Mark Perna,
  • *Answering Why: Unleashing Passion, Purpose, and Performance in Younger Generations*

• General registration will open later this spring.
Inspiring **students**, one robot at a time.

**OUR MISSION**

The Robotics Education & Competition (REC) Foundation’s global mission is to provide every educator with competition, education, and workforce readiness programs to increase student engagement in science, technology, engineering, math, and computer science.

Presented by | Diana Fultz  
Director of Regional Operations
Vision

We see a future where every student designs and innovates as part of a team, overcomes failure, perseveres, and emerges confident in their ability to meet global challenges.
Robotics World Championship

ENDLESS POSSIBILITIES

World’s Largest Robotics Competition with over 4,000 teams

40,000+ attendees

Largest Robotics Competition Web Viewership

Coming back to Dallas, Texas
2022-2023 Louisiana Season

Registration
Over 301 teams registered for VRC, VIQC, VEX U or ADC

Events
The RECF event partners hosted 32 events during the season.

Cities
Teams from 106 Organizations and 46 cities participated during the season.
Build a Ecosystem for Support
Sometimes it takes a village….

We believe that robotics and STEM are for everyone, and strive toward an inclusive robotics community that is reflective of the diverse world we live in, and the one we want to leave behind.

- Host New Coach workshops
- Host events
- Volunteer at Events

ROBOTICS AND STEM SHOULD BE ABOUT BUILDING EVERYONE WITHIN THE COMMUNITY UP AND VALUING EACH PERSON’S VOICE AND OPINIONS.

- JADEN BALDWIN, VEX ROBOTICS MENTOR

● Host Key Volunteer Workshops
● Help Recruit Volunteers
Louisiana State Championships

Students excel in robotics when given an opportunity to perform in competitions.

An event worthy of Champions!

34 teams will represent Louisiana in the 2023-2024 VEX Worlds Championship. Between April 24- May 5th.
1. In-Person Tournaments
2. In-Person Leagues
3. In-Person Skills
4. Live Remote Skills (LRS)
Day of the Event

Common Tournament Activities

Team Check-in & Pit Setup
Inspection
Practice
Event Meeting
Opening Ceremonies

Queuing
Qualification Matches, Robot Skills, & Judging
Final Matches
Awards
The Event Partner (EP) acts as the coordinator of a planning team that organizes REC Foundation program events, whether they are tournaments, leagues, scrimmages, and/or workshops. The EP is the leader who acts as the liaison between the REC Foundation and the planning team that runs an event.

The EP agrees to uphold:

- Commitment to Event Excellence
- Qualifying Criteria
- Code of Conduct & Student Centered Policy
- All game rules and regulations
Key Volunteers

1. Head Referee
2. Judge Advisor
3. Judges
4. Tournament Manager
CERTIFICATIONS

Drive Team - Head Referee - Event Partner - Judge

https://certifications.vex.com/
1. Field Resetters
2. Queuing
3. Inspector
4. Scorekeepers
5. Emcee
6. Check In

Volunteers
Why Robotics?

- Engages students in accessible STEM activities
- Develops communication and cooperation skills
- Develops education and employment skills
- Employers recognize robotics students
- Because it’s fun!
VEX Robotics Students Increased in STEM Careers

As a result of their participation in the program

- Engineering: 84%
- Programming: 70%
- Science: 70%
- Robotics: 90%
- Mathematics: 65%
LaSTEM Advisory Council Meeting
April 20, 2023
LDOE’s STEM Collaboration

- Louisiana’s STEM Initiative
  - History
  - Overview and updates on LDOE's key STEM efforts
  - Current collaboration structures and future opportunity
LDOE’s Goals and Priorities

**Six Critical Goals**

- Students enter kindergarten ready.
- Students will achieve mastery on third-grade assessments and enter fourth grade prepared for grade-level content.
- Students will achieve mastery on eighth-grade assessments and enter ninth grade prepared for grade-level content.
- Students will graduate on time.
- Students will graduate with a college and/or career credential.
- Students will graduate eligible for a TOPS award.

**Educational Priorities**

- Ensure every student is on track to a professional career, college degree, or service.
- Remove barriers and create equitable, inclusive learning experiences for all children.
- Provide the highest quality teaching and learning environment.
- Develop and retain a diverse, highly effective educator workforce.
- Cultivate high-impact systems, structures, and partnerships.
Louisiana’s STEM Initiative
History of Louisiana’s STEM Initiative

- ACT 392 creates LeSTEM
- BSE adopts Louisiana Student Standards for Science for K-12
- Louisiana STEM Pathways Launch
- BSE approves STEM Diploma Seals
- BSE tuition program launches CTEP opportunity renewed through BoR
Louisiana’s High School STEM Pathways

1. Partner
Schools partner with one or more of our pathway providers. Providers bring knowledge, curriculum, teacher training, and implementation support. Schools bring eager students, exceptional teachers, and effective leaders.

2. Train
Teachers attend intensive, high-quality training. Teachers learn to effectively teach pathway courses and may earn certificates or graduate credit.

3. Learn
Students take 4–8 rigorous pathway courses. Content includes pathway-specific hard skills, universal soft skills, and workplace-based experiences.

4. Succeed
Completers leave with a head start on college and/or their career, typically with industry-based credentials, college credits, employability skills, and workplace experience.
# Louisiana STEM Pathways

## Pre-Engineering

### Overview
The Louisiana pre-engineering pathway provides a pre-engineering program for both TOPS University and TOPS Tech diploma-seeking high school students. Through hands-on projects and interaction with industry professionals, the curriculum prepares students to compete in the 21st century by engaging them in understanding the fundamentals of engineering in the classroom as well as in the workplace. Students will understand the careers available to them in the field of engineering as well as learn key skills such as teamwork, oral and written technical communication, and work ethic that will serve them well whether they pursue an advanced degree or immediately join the workforce.

### College Ready
- Aerospace Engineering
- Biological Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Computer Science
- Construction Management
- Electrical Engineering
- Environmental Engineering
- Industrial Engineering
- Mechanical Engineering
- Petroleum Engineering

### Career Ready
- Mechanical Drafter
- Mechanical Engineering Technician
- Architectural and Civil Drafter
- Surveying and Mapping Technician
- Computer Programmer
- Computer Integrated Manufacturing

### Core Courses

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>Intro to Engineering Design (LSU Partnership)</td>
<td>1108801</td>
<td>Intro to Computational Thinking for STEM (LSU Partnership)</td>
<td>067160</td>
</tr>
<tr>
<td>Robotics (LSU Partnership)</td>
<td>1702780</td>
<td>PETW Engineering Design and Development</td>
<td>110882</td>
</tr>
<tr>
<td>PETW Technology &amp; Engineering Design and Development</td>
<td>110882</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering Design &amp; Development (LSU Partnership) OR</td>
<td>110881</td>
<td>PETW Civil Engineering and Architecture OR</td>
<td>110941</td>
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<tr>
<td>Principles of Engineering (LSU Partnership)</td>
<td>110884</td>
<td>AP Computer Science Principles</td>
<td>067177</td>
</tr>
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</table>

### Additional Courses

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Code</th>
<th>Credit Hours</th>
<th>5-Point Scale</th>
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<tbody>
<tr>
<td>Engineering Economy (LSU Partnership)</td>
<td>144200</td>
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<tr>
<td>Principles of Engineering (LSU Partnership)</td>
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<td>Robotics (LSU Partnership)</td>
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<tr>
<td>PETW Engineering Essentials</td>
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<td>PETW Aerospace Engineering</td>
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<tr>
<td>PETW Civil Engineering and Architecture</td>
<td>110941</td>
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<tr>
<td>PETW Digital Electronics</td>
<td>110821</td>
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<td>PETW Environmental Sustainability</td>
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<tr>
<td>PETW Computer Science Essentials</td>
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<tr>
<td>Computer Integrated Manufacturing (TCC)</td>
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<tr>
<td>AP Computer Science Principles</td>
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<td>AP Computer Science A</td>
<td>061775</td>
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<tr>
<td>AP Calculus AB</td>
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<tr>
<td>AP Calculus BC</td>
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<td>1</td>
<td></td>
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<tr>
<td>Statistical Reasoning OR</td>
<td>161381</td>
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<tr>
<td>AP Statistics</td>
<td>161382</td>
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<td></td>
</tr>
<tr>
<td>Biology OR</td>
<td>161372</td>
<td>1</td>
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### Credentials Included
Students who successfully complete the four required courses may be prepared to obtain the Autodesk Inventor Certified Users Advanced credential (Statewide Advanced BSC).
### MOTION AND STABILITY: FORCES AND INTERACTIONS

**Performance Expectation**
Define a simple design problem that can be solved by applying scientific ideas about magnets.

**Clarification Statement**
Examples of problems could include constructing a latch to keep a door shut or creating a device to keep two moving objects from touching each other.

<table>
<thead>
<tr>
<th>Science &amp; Engineering Practices</th>
<th>Disciplinary Core Ideas</th>
<th>Crosscutting Concepts</th>
</tr>
</thead>
</table>
| 1. Asking questions and defining problems: Asking questions (science) and defining problems (engineering) in 3-5 builds on K-2 experiences and progresses to specifying qualitative relationships.  
   - Define a simple design problem that can be solved through the development of an object, tool, process, or system and includes several criteria for success and constraints on materials, time, or cost. | TYPES OF INTERACTIONS  
Electric and magnetic forces between a pair of objects do not require that the objects be in contact. The sizes of the forces in each situation depend on the properties of the objects and their distances apart and, for forces between two magnets, their orientation relative to each other. (5-PS2B.1) | PATTERNS  
Patters can be used as evidence to support an explanation. |
| 2. Developing and using models | DEFINING AND DELIMITING ENGINEERING PROBLEMS  
Possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria). Different proposals for solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account. (5-ETS1A.2) | |
| 3. Planning and carrying out investigations | | |
| 4. Analyzing and interpreting data | | |
| 5. Using mathematics and computational thinking | | |
| 6. Constructing explanations (for science) and designing solutions (for engineering) | | |
| 7. Engaging in argument from evidence | | |
| 8. Obtaining, evaluating, and communicating information | | |
Louisiana High School STEM Pathways: Expanding Offerings and Scaling Opportunity

Since 2018, participation in high-quality STEM pathway coursework has expanded statewide.

- **53** school systems implementing
- **28,200** student enrollments in specialized STEM pathway coursework

*data obtained from 2018-2022 course code usage reports*
Scaling High-Quality Science and Engineering

Since the adoption of the Louisiana Student Standards for Science in 2017, the Department has made great strides in supporting teachers, schools, and systems in making high-quality science and engineering a reality for all students. Highlights of our ongoing work include the following:

• identifying high-quality materials and high-quality professional learning
• providing guidance, resources, and funding opportunities to support decision making and implementation efforts at the local level
• developing a Science Content Leader specialized distinction to build local leadership capacity
STEM Diploma Seal for Graduates

Students who successfully complete four required courses from a STEM Pathway earn a Silver STEM Diploma Seal.

Students who successfully complete the four required courses and four additional pathway courses earn a Gold STEM Diploma Seal.
Class of 2023 STEM Endorsements

This year’s graduating class has earned the following STEM diploma endorsements.

*as reported by LEAs and verified through course code use
Improving STEM Teaching and Learning through Micro-Credentials (2019-2025)

Through a grant from U.S. Department of Education, we are working to design and test an assessment series for teacher competencies in STEM.

<table>
<thead>
<tr>
<th>partners</th>
<th>LDOE, Bloomboard, RAND, and LSU</th>
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<tbody>
<tr>
<td>key goals</td>
<td>1. Develop, pilot, and refine a scalable, competency-based set of assessments for Louisiana teachers. 2. Implement and study the assessments with a randomly selected sample. 3. Improve teaching and student learning through implementation. 4. Improve, spread, and sustain the model.</td>
</tr>
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</table>
Updates from the STEM EIR Study

18 STEM micro-credentials on teacher competencies such as:
Technical Reading & Writing Skills
Project-Based Learning
Computational Thinking

24 teachers attempted one or more micro-credentials
1,680 students impacted by teachers participating in micro-credentials
Louisiana’s STEM Initiative at LDOE

Louisianans’ educational journeys crescendo with high school experiences and continue as students:

Persist through Graduation.  
Explore and define a plan for the future.  
Accelerate journey to career readiness, and  
Build a feasible path to post-secondary education.
Louisiana’s STEM Initiative

The Department’s ongoing partnership with LaSTEM can be characterized by three main structures:

- **direct guidance, resources, and assistance** for schools, systems, and families to support high-quality STEM opportunities Pre-k-12
- **ongoing collaboration with the LaSTEM Council, leadership, and regional centers** to support joint initiatives and thought partnering for continuous improvement
- **fueling synergistic activities** that contribute to the overall STEM ecosystem
New Business and Adjournment

- LaSTEM sponsorship opportunities available

- Call For Summit sponsors and exhibitors now open!

Available Council members, Directors and their teams, stay to meet with Otey White and Associates.