Certifications

Pre-Engineering, Robotics and Robotics in Manufacturing Fundamentals

The REC Foundation provides three industry certifications (Pre-Engineering, Robotics, and RMF) for schools, students in engineering related programs, and robotics clubs. These certifications were designed by a team of accomplished professionals composed of engineers, college professors, and high school teachers.

Presented by:

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SR Program Manager, Workforce Development

ROBOTICS EDUCATION & COMPETITION FOUNDATION

SUMMIT

VEX ROBOTICS PROGRAMS

Introduction

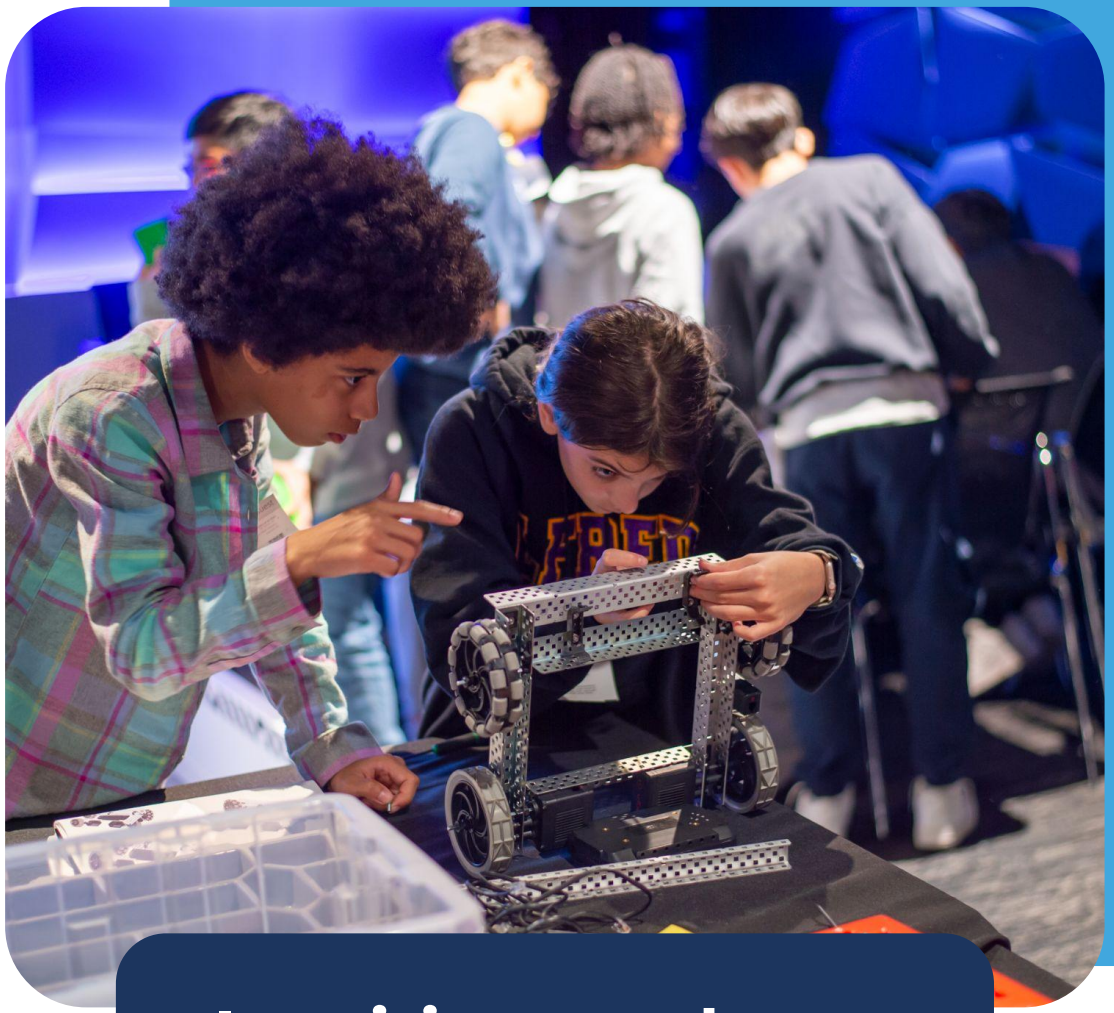
Mission & Vision

Mission

The Robotics Education & Competition 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.

Vision

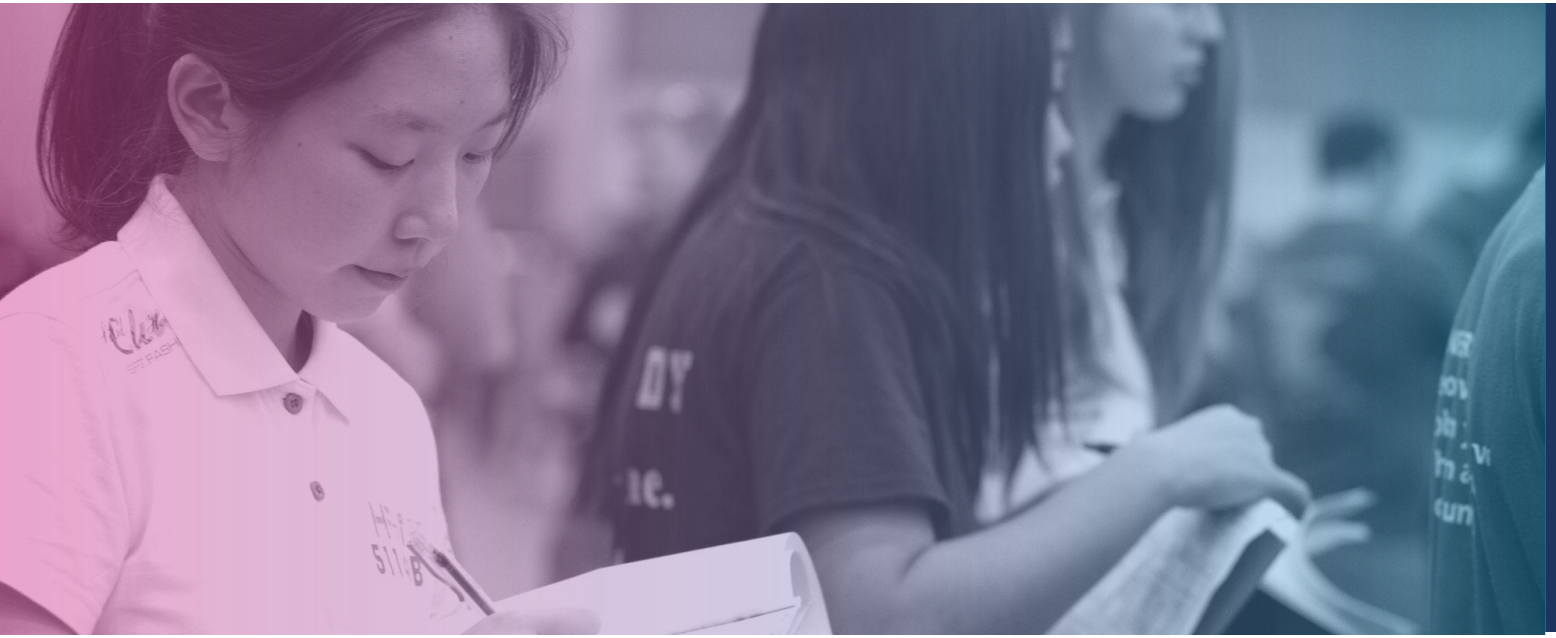
We see a future where every student designs and innovates as part of a team, overcomes failure, perseveres, and emerges confident in their ability to meet global challenges.



Inspiring students, one robot at a time.

About the RECF Certification Program

The RECF Certifications Program responds to a global need for more students in the Science, Technology, Engineering, and Mathematics (STEM) fields.



Along with a team of professional engineers, college professors, and high school teachers, the RECF created two industry certifications for students in engineering or robotics-related programs.

Read More

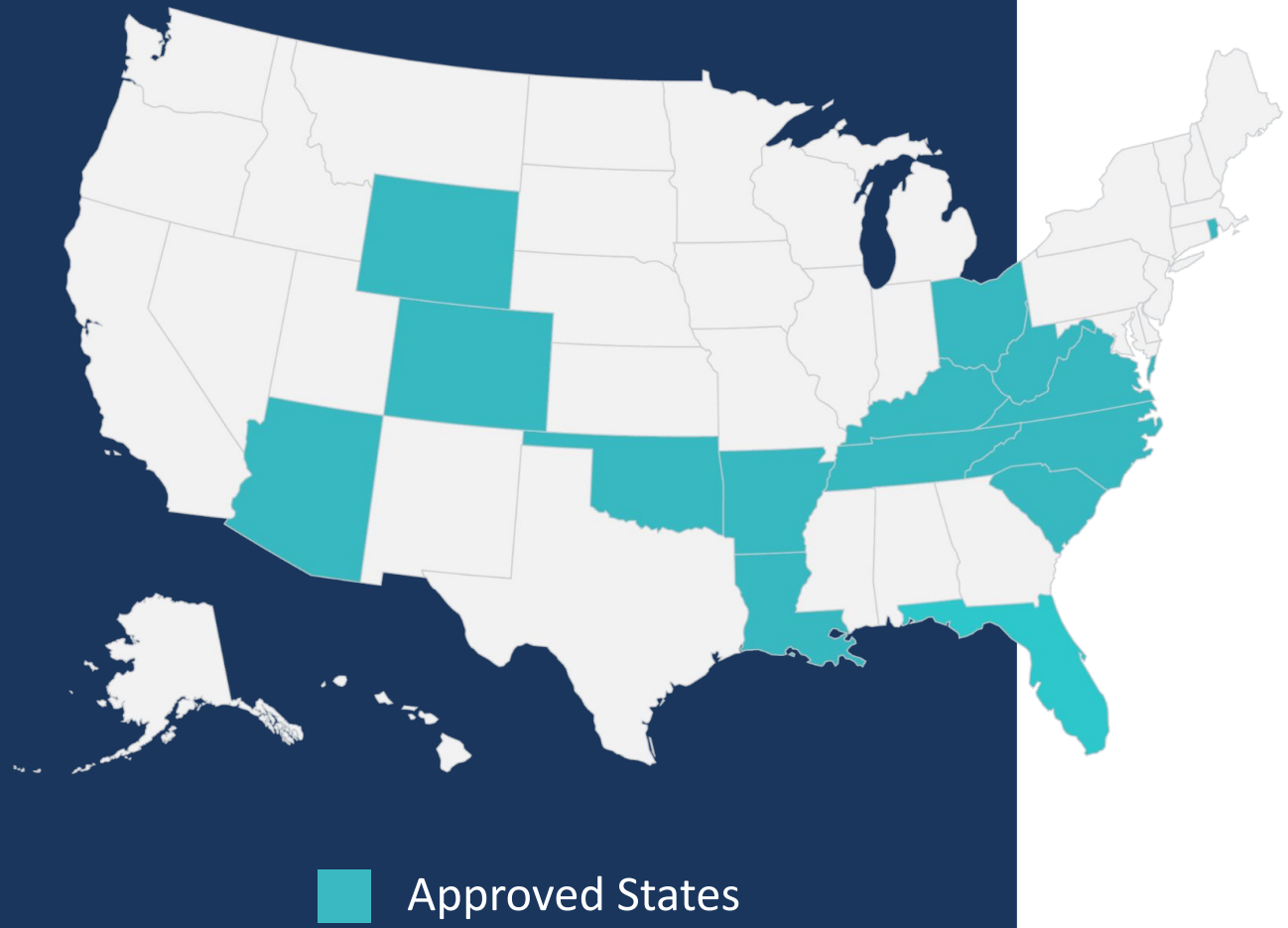
Certification Accountability

Periodic Review for Testing Accuracy

Testing Requirements based on student performance

- Testing Content updated in Knowledge and Occupational Skills document
- Industry Alignment with field-based corporations.

Forward all Department of Education (DOE) requests and Inquiries to certifications@recf.org



Certification Accountability

Application and Renewals

- The State Department of Education (DOE) dictates the frequency of renewal of certifications.
- Approved in Arizona, Arkansas, Colorado, Florida, Kentucky, Louisiana, North Carolina, Ohio, Oklahoma, Rhode Island, South Carolina, Tennessee, Virginia, West Virginia, and Wyoming.

Industry Certification Benefits

The RECF Certifications Program is a response to a global need for more students in the Science, Technology, Engineering, and Mathematics (STEM) fields.

Read More

Workforce Development

Prepare Students for Industry before they graduate high school

Post-Secondary Preparation

Students arrive certified with a foundational level of knowledge

CTE Instruction Validation

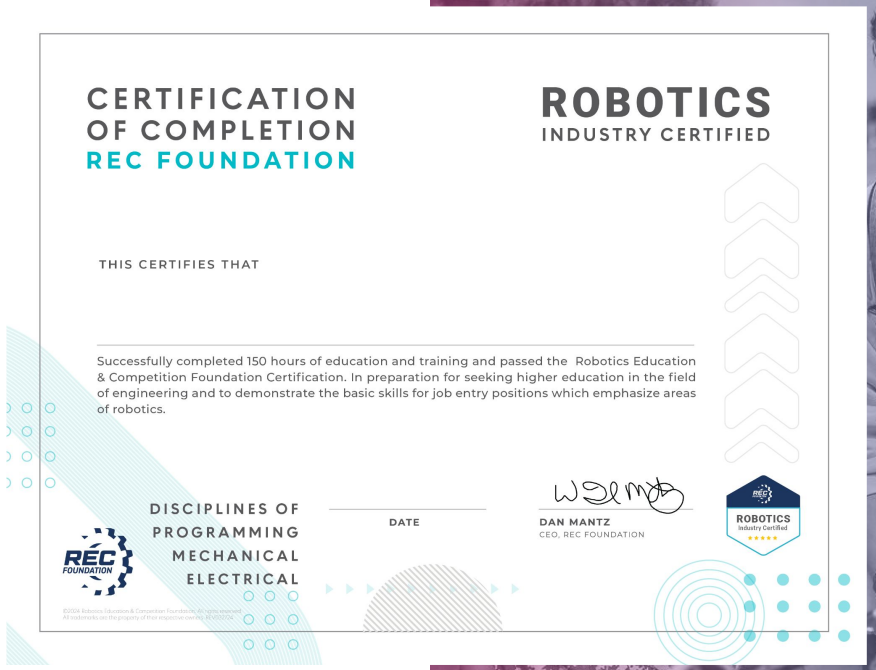
Used as the end-of-course assessment for engineering, technology, and robotics classes

Industry Certification Benefits

Certifications = Opportunities

Many States provide funding for student-earned Industry Certifications.

Industry internships and Post-Secondary schools give favorable weighting to students with REC Foundation Certifications.



- Perkins Funds
- Career Development Funds
- Industry recruitment
- Students may earn college credits or course credits

Certification Pathway

Pathway to Certifications

Certifications are divided into a Fundamentals of Engineering section and eight engineering area modules.

Note: Modules are available after passing Fundamentals of Engineering.

Modules available after passing Fundamentals of Engineering

1	Manufacturing Technology
2	Engineering Technology
3	Mechanical
4	Electrical
5	Computer Science and Engineering (Programming)
6	Chemical
7	Aerospace
8	Civil Engineering

Pathway to Pre-Engineering

Fundamentals of Engineering Test

- Requires 70% or higher to pass.
- 90 minute exam
- Approximately 100 questions

Plus TWO User-selected Module Tests

- Requires 70% or higher to pass
- 30 minute exam
- Approximately 25 to 30 questions

"I've never seen a job being done by a five-hundred-person engineering team that couldn't be done better by fifty people."
- **C. Gordon Bell**

Pathway to Robotics

Fundamentals of Engineering Test

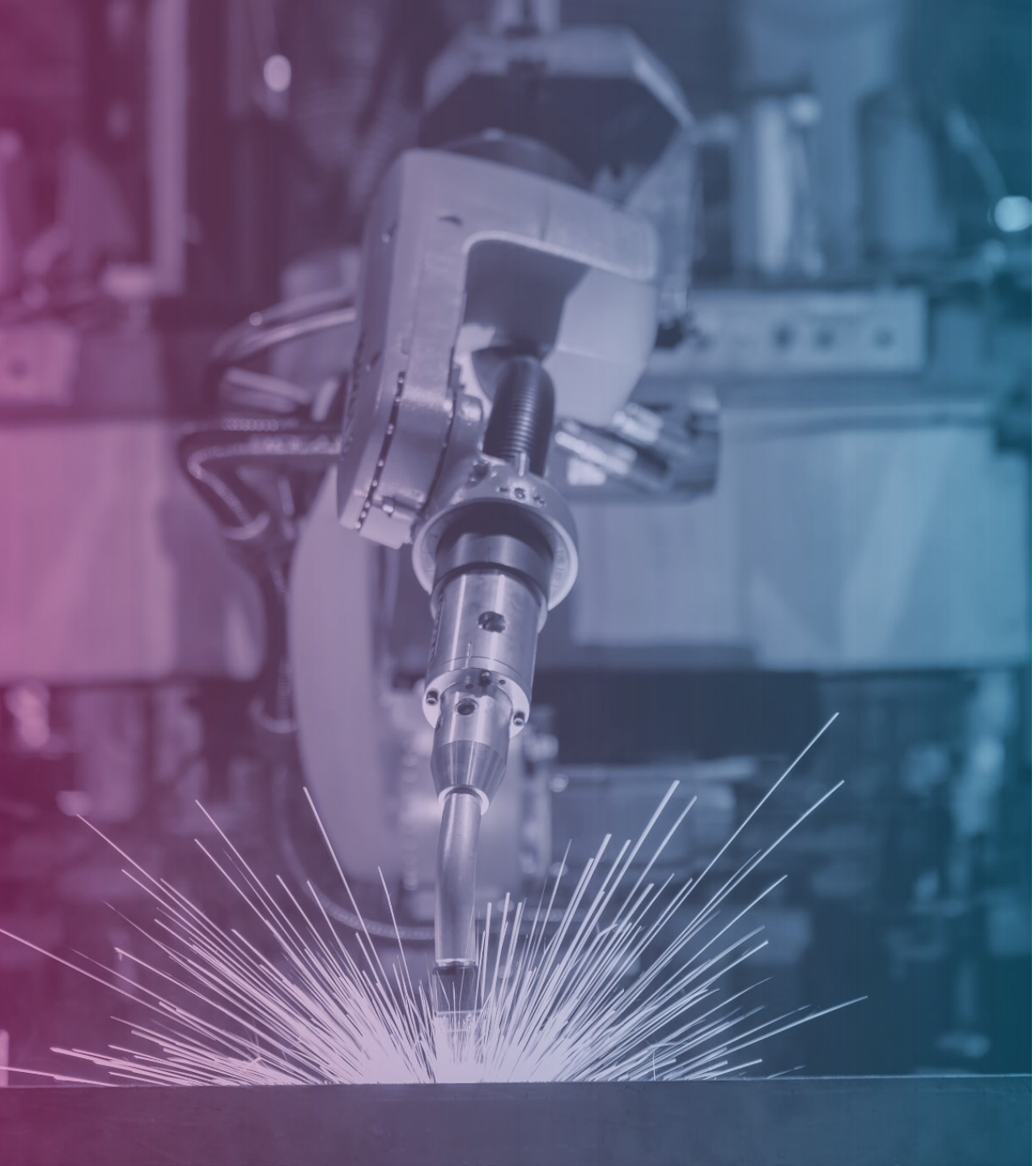
- Requires 70% or higher to pass.
- 90-minute exam
- Approximately 100 questions

Plus THREE Specific Module Tests -

(Mechanical, Electrical and Programming)

- Requires 70% or higher to pass
- 30 minute exam
- Approximately 25 to 30 questions

“Don’t let anyone rob you of your imagination, your creativity, or your curiosity. It’s your place in the world; it’s your life. Go on and do all you can with it, and make it the life you want to live.” - **Mae Jemison**



Pathway to Robotics in Manufacturing Fundamentals

Exam Requirements

- Requires 70% or higher to pass.
- 90-minute exam
- Approximately 100 questions

More Information

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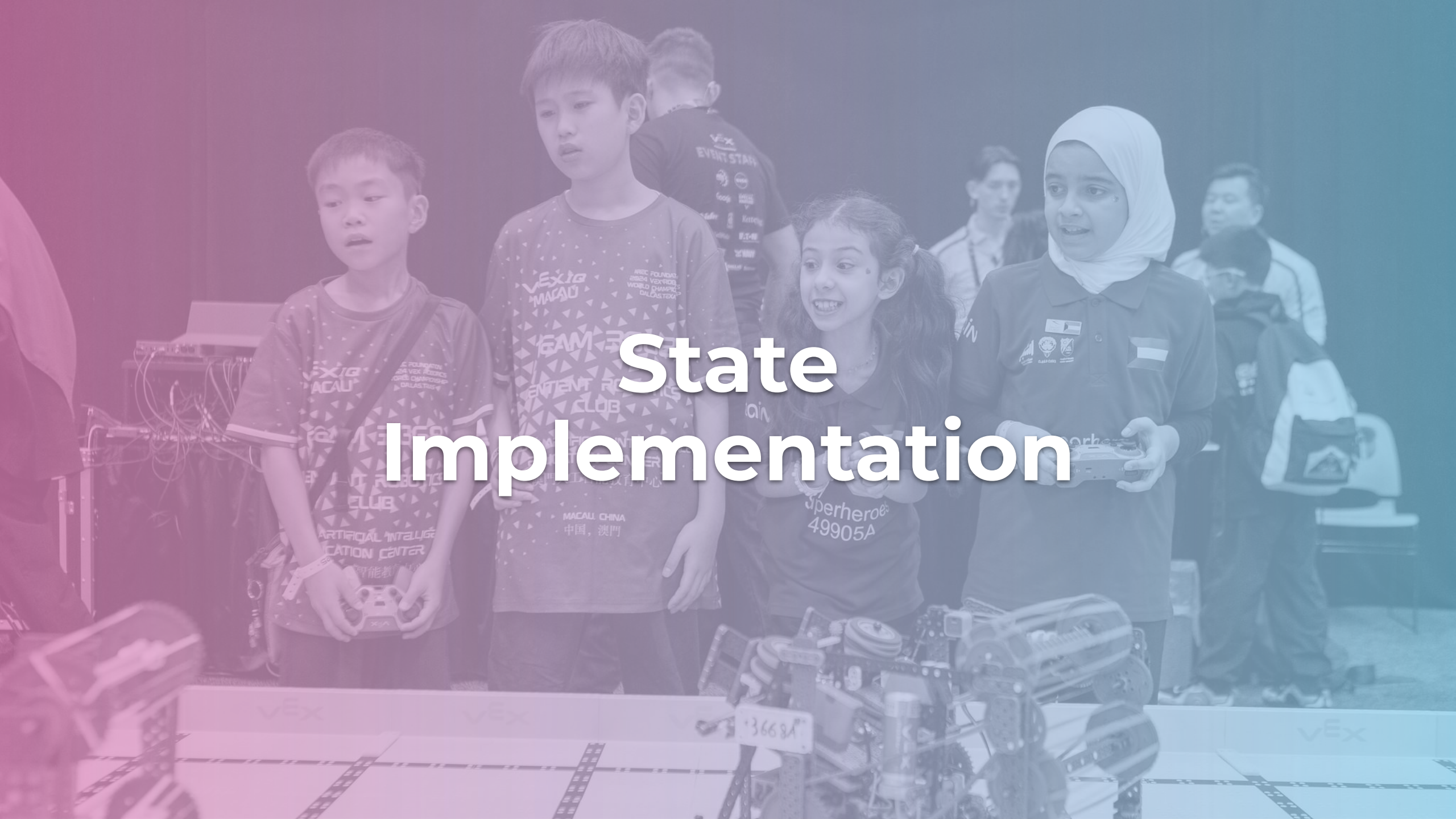


State Implementation

Implementation Planning Phase

Questions to Consider

1. Check requirements
2. Are you wanting to test
    - Single class with a single teacher?
    - Single school with multiple teachers?
    - Entire School District?
3. Who is leading the Administration? (voucher tracking, test results, reporting process)
4. Who will be the test Proctor? (Note: Teachers/Coaches may not proctor their own students)
5. Do you want to test on the Pre-Engineering Certification, the Robotics Certification, or both?
6. How many students are testing? How many retakes are expected? This helps determine the number of vouchers needed.

Requirements

- Approved Industry Certification with State DOE
- Testing follows State DOE Guidelines
- (Most states) Teacher has the same certification as is tested
- Proctor agreements and Non-Disclosure agreements signed

Student Success
Reteach & Retest

- **70% Passing Standard** on all tests
- Students may **retake an exam**
  - After waiting a minimum of 20 days (or longer if required by state DOE)
  - Up to 3 times in an academic year
- **Unused testing vouchers** do not expire, so a student can delay until the Knowledge and Occupational Skills are ready
- Vouchers are available for redemption **by any student**
- School Districts can cover the testing costs with Career Development Funds, pending approval and addition to the Louisiana Industry-Based Certification (IBC) State Focus List

Final Note Accomodations

Some states allow for accommodations when taking Industry-Based Certifications

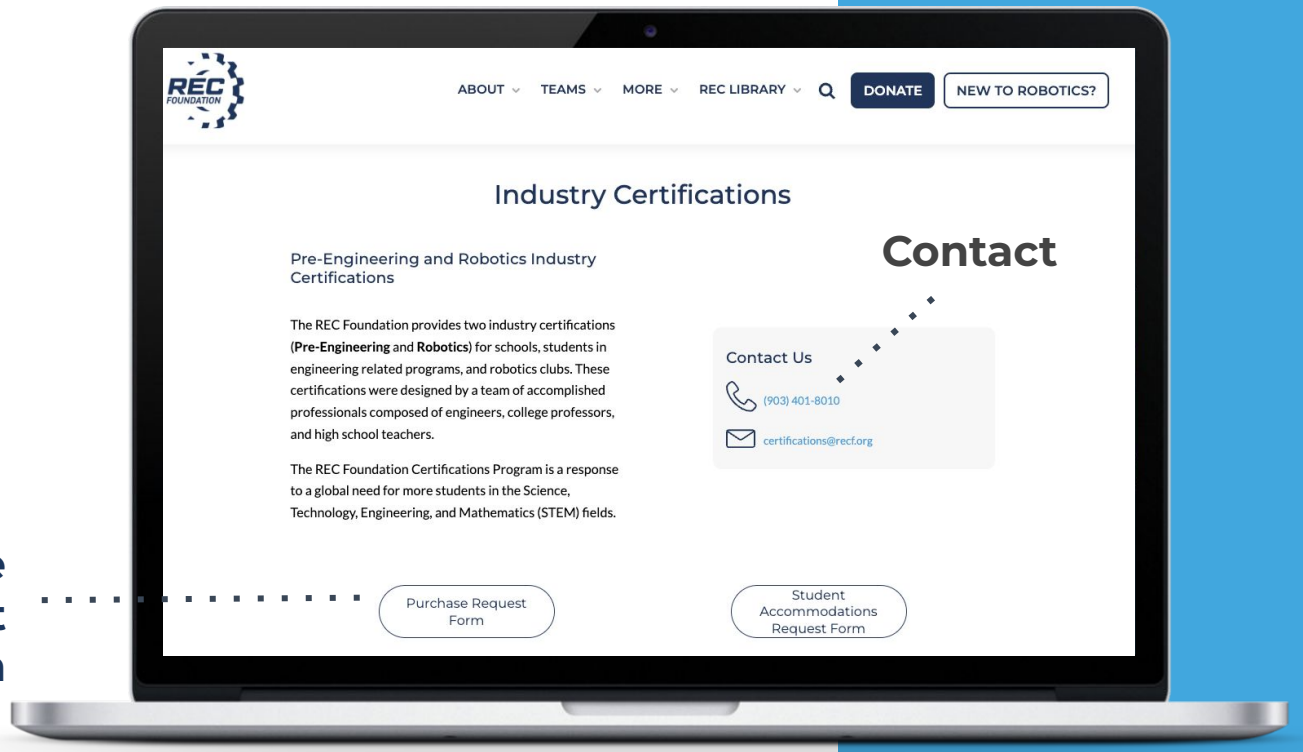
- Parent/Guardian completes the Online Accommodations Request Form
- The Accommodations Request Form is submitted and then reviewed by the RECF.
- Once approved, the accommodations are applied to the student's testing account and are valid for any test the student takes.
- Extra time - 50% or 100% extra time is provided via the approved accommodation.

Find Out More

Industry Certifications Webpage

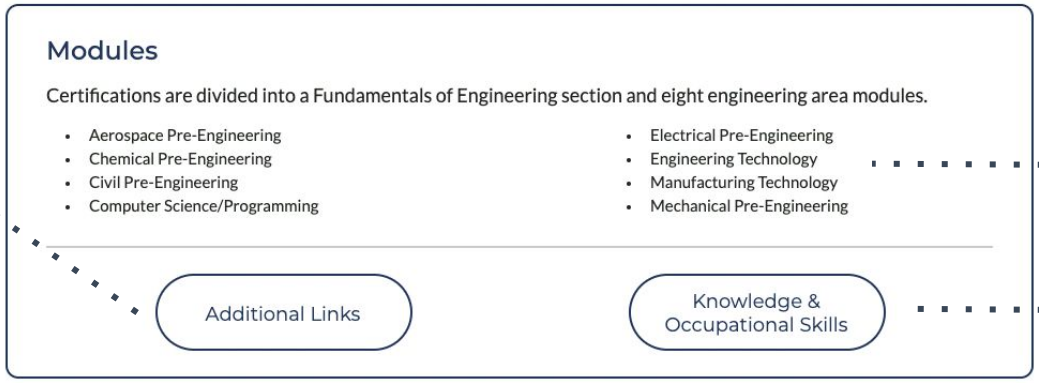
Certifications

Link to online purchase request order form



Contact

Testing process, resources, and additional info



Eight industry modules

Suggested curriculum

Pre-Engineering	1	10	25	50	100	200
Pricing	$50	$500	$1,250	$2,500	$4,500	$9,000
Robotics	1	10	25	50	100	200
Pricing	$60	$600	$1,500	$3,000	$5,400	$10,800
RMF	1	10	25	50	100	200
Pricing	$55	$550	$1,375	$2,750	$5,500	$11,000

Pre-Engineering

certification pricing

1 unit $50

10% Off Discount*

- 2-99 units: $50 each
- 100 units* $4,500.00
- 10% discount is off of
- the 100 units pricing

Robotics

certification pricing

1 unit $60

10% Off Discount*

- 2-99 units: $60 each
- 100 units* $5,400.00
- 10% discount is off of the 100 units pricing

RMF

certification pricing

1 unit $55

NO 10% Off Discount*

- 2-99 units: $55 each
- 100 units $5,500.00

Contact

We are here for you

Please forward all Department of Education (DOE) requests and inquiries to the contact information below.

Address

1519 Interstate 30 West

Greenville, Texas 75402

Phone & Email

903 401 8010

certifications@recf.org

Resources