

Newsletter

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2021 Sustainable Alternative Energies Summer Boot Camp

An Intensive "Boot Camp" Teacher Training Combining Academic Professional Development with Vocational Site Visits to Alternative Energy Providers

*Thanks to funding provided by:
Frank and Becky Levinson (Session 1)
Duke Energy Foundation (Session 2)*

Hosted on the Rose-Hulman Campus
June 20 - June 25 (Session 1)
July 11 - July 16 (Session 2)

PRISM will be facilitating two different sessions of the Sustainable Alternative Energies Summer Boot Camps for Indiana teachers. The boot camps take place on the Rose-Hulman Institute of Technology campus. STEM teachers, grades 4 -12, teaching units in their curriculum on sustainable and alternative energies are invited to apply. The purpose of this program is to provide the participating teachers a true "boot camp experience" in sustainable alternative energies combining academic professional development with vocational site visits to some alternative energy providers in Indiana. Some site visits may be in the form of virtual visits relative to COVID-19 protocol.

During the boot camps, teachers are to be developing standards-based, practical, and comprehensive lessons for units on sustainable alternative energies. Time will be given each day to help guide the development of lesson plans. Teachers will also be given time to share their ideas and collaborate each day.

Upon completion, and after fully participating in the institute, each teacher will receive a kit of supplies containing materials for all the lab activities done during the institute. Teachers can also receive, upon completion of the institute, 45 Professional Growth Points (PGP's) to apply on their Indiana Teacher's License renewal.

All participants will be housed in a residence hall on the Rose-Hulman Institute of Technology campus during the institute. Meals will be provided through the Food & Dining Services (Café Bon Appetit) in the student union.

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Eligibility Requirements:

1. Teachers must be active Indiana teachers teaching units on sustainable alternative energies in grades 4-12.
2. Priority will be given to teachers that have 0-10 years of teaching experience.
3. The Duke Energy Boot Camp (July 11 – 16) has a requirement that ALL participating teachers must reside within a Duke Energy Service area.

Main Topics	Site visits could include:
U.S. Power Grid	Duke Energy Cayuga Power Plant, Cayuga, IN
Energy Conservation	MISO Headquarters, Carmel, IN (Virtual this year)
Coal-fired Power Plants	MSD of Wayne Township (Solar Farm and more)
Natural Gas Power Plants	NIPSCO Power Plant, West Terre Haute, IN
Fuel Cells	Hoosier Energy Merom Power Plant, Merom, IN
Solar Energy	Benton County Wind Farms
Wind Energy	Natural Gas Combined-Cycle Power Plants

COVID-19 Protocol:

- All participating teachers must provide a photo of their certificate of COVID-19 vaccination that will be held on file at Rose-Hulman Health Services. Vaccinations (2 shot series, Pfizer & Moderna, or the Johnson and Johnson single shot) must have been completed at least 2 weeks prior to the first day of the boot camp (6/20/21 or 7/11/21).
- In lieu of the vaccination requirement, teachers must provide a negative COVID-19 test result done within 5 days of the first day of the boot camp.
- Students, faculty, staff and all visitors will wear a face mask at all times while inside any Rose-Hulman facility, including common areas, corridors, classrooms, laboratories, conference rooms, and multi-purpose rooms. Outside, face masks are required where physical distancing is difficult to maintain. Everyone should plan to have a mask with them at all times.
- Social distancing is another important aspect of RHIT protocol. Participants need to maintain at least 6 feet from others where possible, eliminate contact with others (hand-shaking, hugging), avoid touching common surfaces where possible, and ensure frequent hand-washing or hand-sanitizing.

Apply online at: www.rose-prism.org. You must create an account on our website. After setting up an account, you will need to click on Event Registration on the front page (left-hand side under Main Menu). Then, click on the drop-down menu and select:

Session 1: Levinson Sustainable Energy Boot Camp 2021

Session 2: Duke Energy Sustainable Energy Boot Camp 2021

Complete the online registration form and submit.

[Contact us](#) if you have any questions.

Resources for Teachers



Learning math can be fun at-home or in school with Prodigy resources. Prodigy connects in-class learning to at-home math practice. Students are engaged in math as they explore the Prodigy Math Game world, where they answer math questions to complete quests. Student progress can be visualized by teachers and parents as they complete activities. A parent account gives parents access to a curriculum progress report and monthly report cards, delivered straight to a parent's inbox. While students play, real-time data creates progress, comprehension and coverage reports for teachers in real time with no grading being required. All of Prodigy's Math Game's education content is free, forever.

For more information: <https://www.prodigygame.com/main-en/>



Ptable is a true web application that is more interactive and has a dynamic layout that sets it above many of the other online interactive Periodic Tables. It is full featured and contains a wealth of accessible information on each of the chemical elements. Some key features include:

- Visual trends - Does atomic radius increase or decrease with group? Select it and the color of all elements will change in proportion to their values.
- Data is acquired from primary sources and curated libraries such as the Wolfram|Alpha. Layout and presentation were reviewed by the world's foremost periodic table academic Eric Scerri and match the official layout offered by IUPAC.
- States of Matter Slider – by dragging above the nonmetals on the Periodic Table, one can see the states of matter of each element at specific temperatures.
- Orbitals - Complete orbital readout for each element's ground state, quantum numbers, oxidation states, and diagram following Hund's rules. Hover over each electron pair for a 3-D view of that orbital.
- Isotopes – by clicking on an element in the isotope view, one can view an overlay of all the known isotopes of chemical elements.
- Compound mixing – By clicking of elements in the compound's tab, one can see possible compounds each of the chemical elements form.
- Time machine – if discovery year tab is selected, the user can use the slider to “go back in time” and display only the elements that were discovered already by that year.

Ptable.com is a great resource for chemistry teachers and students!

For more information: <https://ptable.com/>

Resources for Teachers



Mathway is an app that provides students with math tools that they need to understand and solve problems. Mathway is a great resource for students, teachers, and parents. Help for math from basic math skills to Calculus, Statistics, Finite Math and Chemistry is provided through Mathway. Problems can be entered into the interface and students will be provided a solution for the problem and a link to view a tutorial is provided with each problem input. Students and teachers can open example problems on Mathway to illustrate how to approach solving the various types of problems. Mathway's long-term goal is to make quality on-demand math assistance accessible to all students.

For more information: <https://www.mathway.com/>



Duolingo makes learning another language much easier and more convenient for people rather than taking a formal course. Duolingo has over 30 languages to learn. Lessons are setup to be short most being 5 minutes or less. Apps are available for download to iOS or Android devices. Duolingo can also be great for students taking foreign language courses to provide lessons and activities outside of the normal classroom. Teachers can also very effectively integrate Duolingo into their online courses or eLearning programs.

For more information: <https://www.duolingo.com/>

Professional Development Opportunities

STEM Teach Indiana



Graduate and undergraduate classes, workshops and conference scholarships are available at NO COST to Indiana teachers through the STEM Teach Indiana Program.

The primary concentration of funds will be for high school teachers needing graduate level courses in STEM discipline areas to meet the Higher Learning Commission (HLC) requirement for teaching dual-credit courses by 2023. Graduate courses in content areas such as biology, chemistry, physics, mathematics, psychology, and technology may be available. Tuition and textbooks/materials for the professional development are also included.

The three additional areas of STEM Teach for this fourth iteration are:

- Online STEM Workshops offered by local colleges and universities to boost STEM instruction in the classroom for elementary, middle and high school teachers.
- Graduate and undergraduate courses offered through colleges and universities to assist teachers with enhancing STEM instruction and/or adding a STEM content area to their existing teaching licenses.
- Scholarships for teachers to attend STEM-based statewide conferences or raffles for STEM project classroom kits.

Courses will be offered for a minimum of six semesters to include Spring 2020, Summer I 2020, Summer II 2020, Fall 2020, Spring 2021, Summer I 2021 and possibly Summer II 2021 if funding allows. Courses may be offered in an online or hybrid approach. Since teachers from all regions of Indiana are eligible to apply, an online course format for graduate level courses is often the method of course delivery preferred by teachers due to their various locations, time zones and school schedules.

To be eligible for STEM Teach IV, teachers must be currently teaching in an Indiana school. All applicants are required to submit a letter of verification from a school administrator.

Before you apply to STEM Teach IV, view an informational document [here](#).

Application window for teachers NEW to STEM Teach open February 8 – March 19, 2021.

Summer 2021 Course Registration Dates:

- Priority registration for dual credit teachers open March 12 – April 2, 2021
- Registration for all K-12 teachers open March 15 – April 2, 2021

For more information: <https://stemteachindiana.org/>



An empowering community of educators, Keep Indiana Learning (KInL) is a collaborative group that is transforming the landscape of education in Indiana. The group has an overlying objective to eliminate barriers to equitable, engaging, learning experiences for all educators. KInL was created by the Central Indiana Educational Service Center. It is supported by all the Education Service Centers in Indiana. KInL provides resources and best practices where educators, families, and students can connect and learn from peers across the state. KInL has a broad array of

professional learning opportunities for teachers. Professional learning opportunities range for live events including workshops to “on demand events” and virtual webinars. This Spring, KInL is hosting a free speaker’s series:

- [Inquiry-based Learning In Blended, Hybrid, And Virtual Environments](#), facilitated by John Spencer
- [Bringing Poetry To Life](#), facilitated by Cometry
- [Stop Calling Them Soft Skills!](#), facilitated by Trevor Muir
- [The Power Of A Teacher](#), facilitated by Adam Saenz

Summer conferences and other learning experiences for Indiana educators are also available through KInL and the Central Indiana Educational Service Center.

For more information: <https://keepindianalearning.org/spring-speaker-series/>

What PRISM Can Do For You!

- Easily find the perfect teaching and learning resources from our library of over 5,000.
- Store your classroom materials online so that they are available to you from any computer.
- Select from free learning resources that emphasize visualization, rich context, staged-problem solving, and electronically enabled collaboration / communication.
- Save a list of your favorite resources for quick retrieval.
- Reach your students more effectively by using web media for the digital age.
- Augment your own dynamic presence in the classroom with teaching tools that mirror the skills needed for success in higher education and the 21st Century workplace.
- Create and share lesson plans that teach your subjects utilizing your favorite resources.
- Earn PGP points by completing PRISM led online Moodle course – either Beginning Moodle or Intermediate Moodle courses are available to you at no cost several times throughout the year.

Through our strong support from the [Lilly Endowment](#) and others, we are constantly growing and improving. Check our site regularly to see what new resources you can use in your classroom.

www.rose-prism.org