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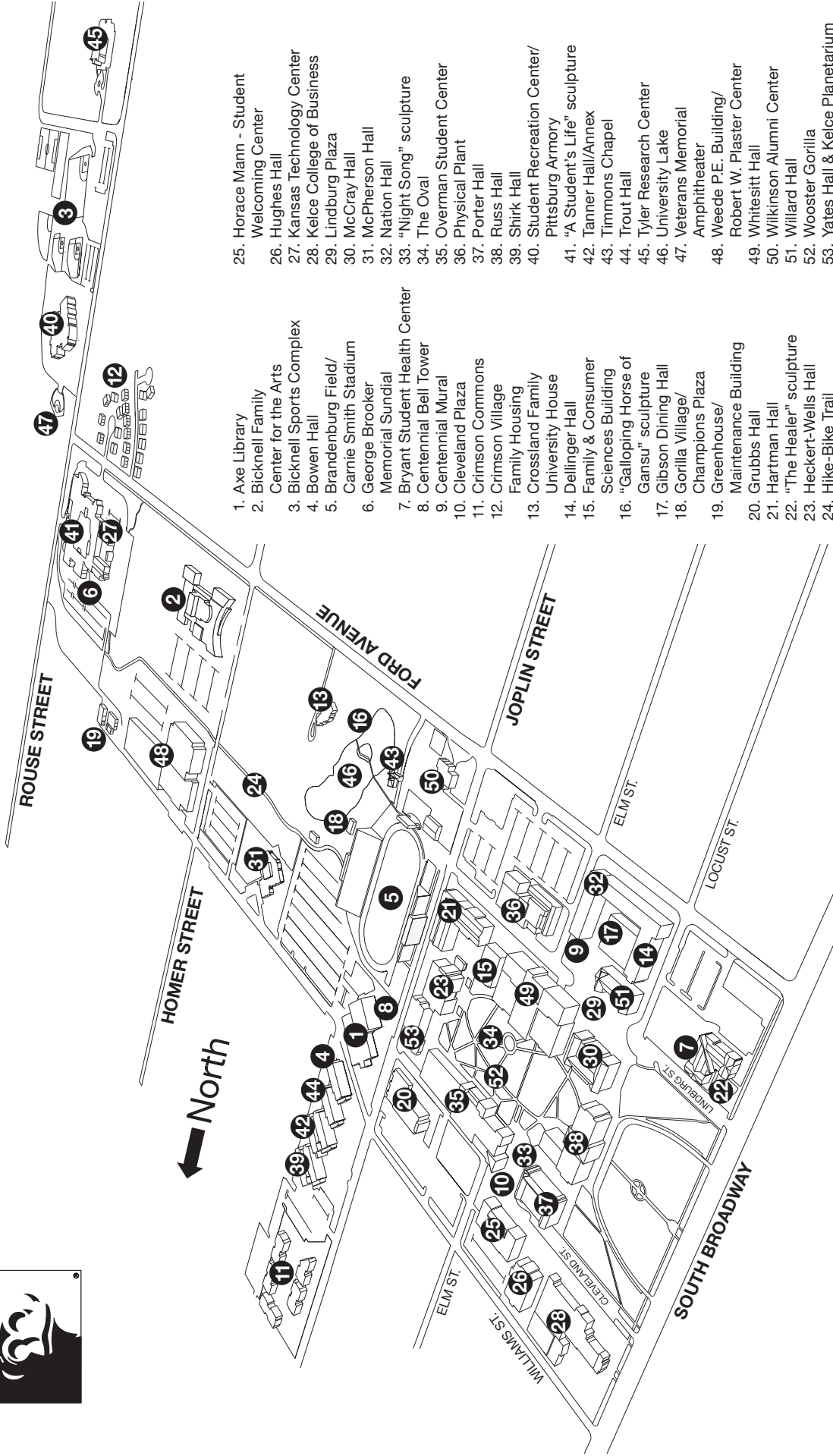
75th

Diamond Jubilee
Four-State Regional
Technology Conference

"Learn by Doing: Enhancing your CTE abilities!"

Crossland Technology Center | November 6-8, 2024
Pittsburg State University | Pittsburg, Kansas

Pittsburg State University Campus Map

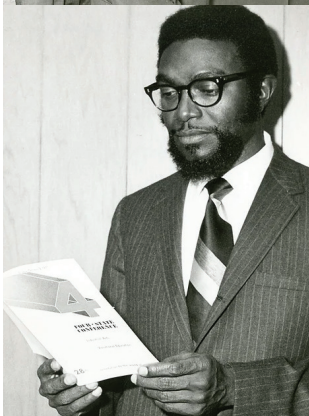


1. Axe Library
2. Bicknell Family Center for the Arts
3. Bicknell Sports Complex
4. Bowen Hall
5. Brandenburg Field/Carnie Smith Stadium
6. George Brooker Memorial Sundial
7. Bryant Student Health Center
8. Centennial Bell Tower
9. Centennial Mural
10. Cleveland Plaza
11. Crimson Commons
12. Crimson Village Family Housing
13. Crossland Family University House
14. Dellinger Hall
15. Family & Consumer Sciences Building
16. "Galloping Horse of Gansu" sculpture
17. Gibson Dining Hall
18. Gorilla Village/Champions Plaza
19. Greenhouse/Maintenance Building
20. Grubbs Hall
21. Hartman Hall
22. "The Healer" sculpture
23. Heckert-Wells Hall
24. Hike-Bike Trail
25. Horace Mann - Student Welcoming Center
26. Hughes Hall
27. Kansas Technology Center
28. Keice College of Business
29. Lindburg Plaza
30. McCray Hall
31. McPherson Hall
32. Nation Hall
33. "Night Song" sculpture
34. The Oval
35. Overman Student Center
36. Physical Plant
37. Porter Hall
38. Russ Hall
39. Shirk Hall
40. Student Recreation Center/Pittsburg Armory
41. "A Student's Life" sculpture
42. Tanner Hall/Annex
43. Timmons Chapel
44. Trout Hall
45. Tyler Research Center
46. University Lake
47. Veterans Memorial Amphitheater
48. Weede P.E. Building/Robert W. Plaster Center
49. Whitesitt Hall
50. Wilkinson Alumni Center
51. Willard Hall
52. Wooster Gorilla
53. Yates Hall & Keice Planetarium



History of the Four-State Regional Technology Conference

The FSRTC was first introduced as the Four-State Conference on Industrial Arts and Vocational Education in 1938 on the campus of then Kansas State Teachers College, Pittsburg, KS. After just a few short years, the conference grew from a very specialized conference to a general regional conference. The first conference consisted of five presentations which were "The Problems of the Supervisor", "Techniques for Shop Organization and Class Management", "Industrial Arts for the Superintendent and Principal", and "Philosophy of Education as Applied to Industrial Arts" and finally, "Improvement of Teachers in Service". All of the sessions were two hours long. Seven vendors took part in the first conference. The conference quickly grew from just over a dozen participants in 1937, to 287 participants after WWII in 1947, to a whopping 550 attendees in 1950. The conference recognized and added Technology Education in the mid-1980s reaching 350-400 attendees in the late 1980s. The conference has met 74 times since its first sessions. The name has not changed, however, the profession titles have changed over the years, using names like Industrial Arts, Vocational Education, Technology Education, Career & Technical Education, STEM, and Technology & Engineering Education. Although the name has changed the purpose has always remained focused on the teachers in the field, and on their professional development as educators.



Save the Date!

The **76th** Four-State Regional Technology Conference!
Crossland Technology Center | **November 13-14, 2025**
Pittsburg State University | Pittsburg, Kansas

Be sure to join us for our 76th anniversary of the Four-State Regional Technology Conference. Mark your calendars and plan to share this momentous occasion with us all in supporting classroom teachers through professional development opportunities. Help us in maintaining the focus of FSRTC.

These foci include:

- Providing plausible solutions to problems teachers face in their schools and classrooms.
- Allow teachers to share ideas on teaching methods, new materials, tools and machines used in their classrooms.
- Improve the status and perception of CTE, Technology & Engineering Education in public schools and beyond.
- Improve teachers sense of pride, enthusiasm and self-confidence in the profession.
- Provide personal and professional growth for those who participate.
- Provide a connection between vendors and the classroom through displays and presentations.

Do these sound like a direction you support? Have a voice in what happens at the conference and consider joining the Steering Committee. Time commitment is minimal and is open to everyone. If interested, please contact:

**Dr. Andrew Klenke (aklenke@pittstate.edu) or
Dr. Trevor Maiserouille (trevor.maiserouille@pittstate.edu)**

Current Members of the Steering Committee:

Dr. Andrew Klenke - Pittsburg State University
Dr. Byron McKay - Pittsburg State University
Dr. Trevor Maiserouille - Pittsburg State University
Eric Deneault - Fort Hays State University
Zach Pixler - Fort Hays State University
Kaci Dorton - Franklin Technology Center, Joplin, MO
Melissa Stebbins - Commerce Public Schools, Commerce, OK
Rod Murphy - Depco LLC
Preston Frazier - Pitsco Education
Andrea Kent - Pittsburg State University
Rocky Ristivo - Pittsburg State University
Greg Murray - Pittsburg State University
Dr. Don Colgrove - Pittsburg State University

Welcome to the 75th Four-State Regional Technology Conference!

For seventy-five years, the Four-State Regional Technology Conference has provided technical teachers throughout the region with unique professional development opportunities. The Four-State Regional Technology Conference is designed to present an exciting working conference where K-12 and post-secondary CTE, Technology and Engineering, and STEM teachers can actually engage in a series of targeted projects, activities, and teaching strategies that make technical education practical and fun in any classroom.

We hope that you will connect with other professionals and help us develop a beneficial network of enthusiastic and positive members who want to see technical education become the norm in classrooms across America. Make some new friends and renew old friendships while at this year's conference. We want this conference to be educational, experiential, and, most of all, fun for all of our attendees.

The FSRTC Steering Committee has developed an excellent program for you this year with over 18 workshops and 30 technical presentations. This year we are bringing back the wildly popular Axe Throwing Activity for our social event on Thursday, which was first introduced at the 73rd Conference. We also have two universities present (Pittsburg State University and Fort Hays State University) competing in the Southwest Regional Technology and Engineering Education Collegiate Association (TEECA) competitions. Be sure to network with these upcoming professionals anticipating entering our profession. These students will be competing in various activities such as Problem-solving, Manufacturing, and Communications Technology. A detailed schedule of these events is located towards the back of this program.

Finally, please be sure to thank all of the volunteers of this event. These include those working behind the scenes (e.g., registration booth, staff of the CTC, etc.), the presenters, and the members of the Steering Committee. They all have worked tirelessly and selflessly to ensure this conference has minimal issues as well as provide you with a quality program.

Have a fantastic conference!

Dr. Trevor Maiserouille

School of Technology and Workforce Learning

PSU Crossland College of Technology



Thursday Morning Workshops – Nov. 7

Location: Crossland Technology Center, 909 East Ford Pittsburg, KS 66762

9:00–9:50

Planetary Gear Sets

Presenter(s): Tim Dell

Room: N116

How to effectively teach students simple planetary gear sets: Students and instructors struggle with planetary gear sets. This presentation will give you the foundation to proficiently teach simple planetary gearsets. Your students will be able to explain to you 1. how to achieve the eight different power flows, 2. demonstrate the power flows, 3. estimate the gear ratios, and 4. to calculate the ratios.

Laser Scanning: What is it and how does it work?

Presenter(s): James Otter

Room: W111

An introduction to laser scanning technology and its applications in the construction industry. Attendees will learn how laser scanning captures precise 3D data for site analysis, project planning, and quality control, enhancing accuracy and efficiency in construction projects.

9:00–10:50

Environmental Graphic Applications: Vinyl Graphic Installation for Beginners

Presenter(s): Andrea Kent

Room: E103

Learn to produce and apply large format environmental graphics in this hands-on workshop.

Sharpening 101: An Encore to last year

Presenter(s): Vern Morton

Room: E131

Sharpening Workshop: An encore from last year. Bring your chisels, drill bits, lathe tools, jointer and planer knives for a hands-on sharpening experience

10:00–10:50

Jig and Fixture Design in Woodworking

Presenter(s): Jordan Backs

Room: E145

An overview of jig and fixture design and techniques for production from entry level to advanced systems used in CNC. Participants will understand the types of jigs/fixtures, material selection and implementation of those systems.

Foundational knowledge on Hybrid, EV versus ICE ownership

Presenter(s): Tim Dell & Trent Lindbloom

Room: N116

This presentation is provided by PSU automotive professor Dr. Trent Lindbloom, PSU's resident HEV/EV expert and PSU automotive professor Dr. Dell, who owns an EV. It will help participants understand the fundamental differences between the different technologies and the pros and cons to owning the different types of vehicles." Questions will be answered relating to the different types of chargers, travel ranges and charging speeds.



Thank You to Our 2024 Sponsors!



Thursday Morning Workshops – Nov. 7

Location: Crossland Technology Center, 909 East Ford Pittsburg, KS 66762

10:00–11:50

Robotics in the Classroom: Empowering Educators with AIR

Presenter(s): Norm Phillips Room: W218

****LIMITED TO 16 PARTICIPANTS**** An engaging hands-on session inspired by the “Adventures in Robotics” teacher workshop. This workshop will provide educators with practical experience using Lego Education Spike Prime sets, introduce effective strategies for integrating robotics into the curriculum, and offer insights into fostering student creativity and problem-solving skills in STEM education. Ideal for educators looking to bring a simple solution to cutting-edge robotics projects in their classrooms, this session will leave you equipped with the tools and confidence to inspire the next generation of innovators.

10:00–12:00

Fundamentals of Surveying

Presenter(s): James Otter Room: W111

Learn surveying skills you can teach your students in this application based workshop. A variety of tools and techniques will be addressed for basic layout to finding lot pins on a construction site.

11:00–11:50

Graphics Round Table Discussion

Presenter(s): GC Faculty Room: E107

Assisting educators in adapting curriculum design and customizing their STEM lessons to integrate project-based learning into existing STEM subjects. This session will also include demonstrations with free simulation ideas.

Carbon Fiber Parts from 3D Printed Molds, an Easy Way to Make Durable Parts

Presenter(s): Dan Spielbusch Room: W121

Assisting educators in adapting curriculum design and customizing their STEM lessons to integrate project-based learning into existing STEM subjects. This session will also include demonstrations with free simulation ideas.



Thursday Afternoon Workshops – Nov. 7

Location: Crossland Technology Center, 909 East Ford Pittsburg, KS 66762

12:30–1:50

VENDOR SHOWCASE/LUNCH EXHIBITS –VENDOR ENGAGEMENT

Presenter(s): Jim Oatman / Vendors

Room: S102 & Hallways

A working lunch with vendors. Includes hands-on demos of equipment. In addition to the break times, teachers are encouraged to visit with vendors during this two hour lunch and learn. Jim Oatman will have a workshop titled “Veteran Flag Project.”

2:00–2:50

Artificial Intelligence Pros and Cons: “Open Pandora’s Box” versus “Solution for all Problems”

Presenter(s): Tatiana Goris

Room: E120

The surge in interest in AI as an enabling tool for education has a myriad of implications. It carries multiple pitfalls in learning by changing the landscape of educational, but also has some positive advantages as well. A review of national discussion on the topic.

Carbon Fiber Forging

Presenter(s): Dan Spielbusch

Room: N118

2:00–3:50

Teaching Electronics by Building Your Own Electronics Trainer

Presenter(s): Matt Brown

Room: W102

Participants will learn how to use an instructor built electronics trainer, and be provided with resources to build their own during this hands-on workshop.

Mini Foundry Metal Casting Kit (possible grant opportunity for your school to get a Mini Foundry)

Presenter(s): Russ Rosmait

Room: S125

Metal casting in your classroom is not only possible, but practical as well. Participants will learn how to produce metal castings using a table top set-up. Each participant may be eligible for a free metal casting kit.

Student Packaging Projects

Presenter(s): Christel Benson & Traci Hughes *Room: E104*

Learn to develop packaging projects in your classroom. Hands-on start to finish project completed in this session.

CNC Routing and PathPilot

Presenter(s): Depco

At Depco

Participants will learn how to use an instructor built electronics trainer, and be provided with resources to build their own during this hands-on workshop.

Thursday Afternoon Workshops – Nov. 7

Location: Crossland Technology Center, 909 East Ford Pittsburg, KS 66762

2:00–3:00

RoboX Robotics

Presenter(s): Depco

Room: W104

RoboX is an innovative, gamified education platform for Career Tech Education using industrial robotics.

2:30–4:30

Basic Motor Controls

Presenter(s): Clint Meyers & Ed Moore

Room: E223

Learn how to control motors used in machines in this hands-on workshop. Concepts such as start-up, motor ratings, speed, polarity, voltage will be discussed and applied in this workshop.

3:00–4:00

Job Satisfaction in CTE/TEE: Early Insights & What They Mean for Our Future

Presenter(s): Josie Gagel

Room: W102

What motivates teachers to stay in the field of CTE/TEE education, and what drives them away? Come and learn about the early findings of a job satisfaction survey answered by nearly 100 CTE/TEE teachers in the state of Kansas, and how we can use that information to recruit and retain our teachers!

Thursday Night Social – Nov. 7

Location: 216 S. Broadway Street Pittsburg, Kansas 66762

7:00–9:00

This year our social event will be held at Main Street Axe Company. This event is limited to the first 50 attendees to register for the social event due to capacity limits. This event is paid for by the Steering Committee (excluding drinks). Snacks will be provided. Join us for a fun evening of networking, team-building, and laughter!



Friday Morning Workshops – Nov. 8

Location: Crossland Technology Center, 909 East Ford Pittsburg, KS 66762

8:00–1:00

Vendor Engagement

Presenter(s): Vendors

In the Hallways

Coffee and Donuts with Vendors – Sponsored By PSU TEECA Jungle Java Café

9:00–9:50

Three C's to approaching diversity: Commonality, Connections, and Comfortableness

Presenter(s): Rebeca Book

Room: W121

This session focuses on strategies for recruiting and engaging special populations in Career and Technical Education (CTE) programs. Participants will explore how to build common ground, create meaningful connections, and foster a comfortable, inclusive environment to enhance diversity and access within CTE pathways.

9:00–10:00

Unleashing Creativity: Mastering the Art of Light Painting for Photographers

Presenter(s): Rocky Restivo

Room: E203

Unleashing Creativity: Mastering the Art of Light Painting for Photographers.

Staying Ahead: Navigating STEM Teacher Preparation in Response to the ever-evolving State Guidelines

Presenter(s): Heather Blundell

Room: W102

Assisting educators in adapting curriculum design and customizing their STEM lessons to integrate project-based learning into existing STEM subjects. This session will also include demonstrations with free simulation ideas.

9:00–10:50

Steambending Wood (WORKSHOP)

Presenter(s): Vern Morton

Room: E131

An introduction to steambending, tools and procedures. Learn the what, how and why of steambending. Participants will have a list of materials needed to create a steambending system, how the system works, and how to overcome issues associated with bending wood.

Friday Morning Workshops – Nov. 8

Location: Crossland Technology Center, 909 East Ford Pittsburg, KS 66762

10:00–10:50

Shop Swap

Presenter(s): Trevor Maiserouille

Room: W102

The “Shop Swap” professional development session is designed for shop class teachers to exchange practical ideas, techniques, and resources for enhancing hands-on learning in their classrooms. This collaborative environment encourages educators to share best practices, innovative projects, and solutions to common challenges, fostering creativity and improvement in technical education.

10:00–11:00

Making Coding Available to All Students

Presenter(s): Byron McKay

Room: W103

This session focuses on strategies for integrating coding into various educational settings, ensuring equitable access for students of all backgrounds and skill levels. Participants will explore inclusive teaching practices, resources, and tools that make coding more approachable, fostering digital literacy and problem-solving skills across diverse student populations.

Teacher Shortage and its Impact on Schools

Presenter(s): Allan Sharrock

Room: W104

The teacher shortage is real. How has this impacted schools in the midwest and what lies ahead. An overview of the profession.

10:00–11:50

Automotive Air Conditioning Gauge Diagnostics

Presenter(s): Scott Norman

Room: N103

Learn how to teach A/C gauge diagnostics to your students. This workshop will break down A/C gauge readings into 9 different fault scenarios to diagnose “ The workshop will then teach how to conduct 18 different diagnostic test to determine the root cause of the problem for the abnormal gauge readings. Many live vehicles will be used with A/C problems in the refrigerant loop of the HVAC system. Both R-134a and R-1234yf systems are covered.

11:00–11:50

Understanding the plastics industry: Teaching your students what career opportunities they have.

Presenter(s): Jeanne Norton

Room: W121

Circularity-focused lectures and hands-on laboratory activities improve student understanding of their role as future professionals in the plastics industry and the role that materials selection, part and mold design, and plastics manufacturing have on creating a more sustainable world with the benefits that plastic has provided in modern society.

Friday Morning Workshops – Nov. 8

Location: Crossland Technology Center, 909 East Ford Pittsburg, KS 66762

11:00–11:50

Utilizing the Shark Tank approach for CNC/CAM Group Projects

Presenter(s): Trevor Maiserouille

Room: W102

This session introduces educators to a dynamic, entrepreneurial framework for engaging students in CNC and CAM group projects. Participants will learn how to structure projects where students pitch their designs to a panel, fostering creativity, critical thinking, and real-world problem-solving skills in a competitive, collaborative setting.

Snap, Edit, Share: Empowering Next-Gen Creators with Mobile Media Skills

Presenter(s): Rocky Restivo

Room: E203

Learn how to engage students in proper mobile media photography during this presentation. Bring your phones to learn first hand how to use them effectively.

11:00–12:20

AWIEF: The Woodworking Teacher's Connection to Industry. All the resources you need

Presenter(s): Charlie Phillips

Room: E120

The Architectural Woodworking Institute's Educational Foundation strongly supports the woodworking teacher with curriculum, credentialing and scholarships for their students. This presentation will provide woodworking teachers with resources for their classroom, lab and students. Come find out what you're missing.

11:00–12:50

Basic Residential Wiring

Presenter(s): Clint Meyers & Ed Moore

Room: E223

If you are teaching residential wiring or want to, this hands-on lab will show you how to do so safely and correctly. NEC guidelines and techniques will be shown on basic circuits including outlets, lights, single pole switches and three-way switches.



Friday Afternoon Workshops – Nov. 8

Location: Crossland Technology Center, 909 East Ford Pittsburg, KS 66762

12:00–12:50

Empower Your Students: Enhancing Construction Education with Industry-Based Software and Writing Integration

Presenter(s): Nathan Howard

Room: W102

This presentation introduces the basics of Procore and Bluebeam, two industry-standard construction software tools, adapted for high school settings. Learn how these platforms can give your students a competitive edge in construction while integrating writing and math skills across the curriculum. Discover practical examples of using these tools to meet secondary education standards in both technical and academic subjects.

Applications for 3D image capture

Presenter(s): Jason Ward

Room: S222

Participants will learn about and explore 3d image capture applications and techniques in this hands-on presentation.

1:00–2:00

Lunch & Closing Session: SHIPS Drawing

Presenter(s): Andrew Klenke

Room: S102

Chicken Lunch, Closing Session, Awards, and Ships Drawing.



Conference at a Glance

Thursday Nov. 7, 2024

Morning Workshops | 9:00am - 11:00am

Registration Table Open | 8:00am - 8:00pm

Afternoon Workshops | 12:30pm - 4:00pm

Social Event | 7:00pm - 9:00pm

Friday Nov. 8, 2024

Registration/Breakfast | 8:00am - 8:30am

Opening Session/Remarks | 8:30am - 9:00am

Morning Workshops | 8:00am - 11:00am

Afternoon Workshops | 12:00pm - 1:00pm

Interest Session Three | 11:00am - 11:45am

Lunch and Closing | 1:00pm - 2:00pm

TEECA Awards Session | 2:00pm - 3:00pm





"Preparing Professionals to Teach Technology and Engineering Principles"
Competitive Events Schedule

November 6

6:00 pm

TEECA Welcome

6:15 pm

Teaching Lesson | Sign up for slots

Technology Challenge | Instructions given on-site

7:00 pm

Problem Solving | Receive on-site prompts and instructions.

Communications | Teams meet with coordinator for clarifications and questions.

Teaching Lesson | Presentation of lesson to judges.

7:30 pm

Problem Solving | Solution model testing.

November 7

8:00 am

Coffee & Donuts

Manufacturing | Set up booth at FSRTC. Present and promote product as available throughout the day.

12:00 pm

Lunch & Learn

4:00 pm

Manufacturing | Present product and manufacturing system to judges.

November 8

8:00 am

Coffee & Donuts

9:00 am

Communication | Turn in deadline.

1:00 pm

Lunch and Closing | Showcase Communication videos

2:00 pm

TEECA Awards