

2024 AGRISKILLS

Sunday, June 23rd 8:00 a.m. - Noon

1. COOL ST 101 (SESSION 1 OF 3): METAL PROJECT CONSTRUCTION INTERMEDIATE AND ADVANCED THREE-SESSION SERIES**

This is a three-session workshop (Sunday morning & afternoon, and Thursday afternoon,) designed for Ag Mechanics teachers of all skill levels and seeks to add to the growing arsenal of projects we can select from to teach the skills and concepts our students need to master. This year, we are focusing on intermediate and advanced metal fabrication construction, as well as combination wood/metal project construction. Our goal is to give the participants hands-on experience in project planning and construction on projects such as shop tables, fire pits/BBQ, anvils, patio tables/benches, woodworking projects, and more. Participants can choose which project(s) to be involved with, but we recommend choosing one you would like to implement in your class next year. Discussion topics include teaching methods, project organization/planning, project funding, design changes based on tooling and/or materials, construction and finishing techniques, and tricks/tips. This workshop series is also a great way for new teachers to make connections.

- Limited to 50 participants.
- \$25 materials fee (paid once and covers all three sessions)
- Please bring welding or work gloves and safety glasses if you can. Loaners are limited.
- Some projects may be available to build and take home.

*Presenters: Morgan Rourke, Jake Dunn and Team
BRAE Labs 6 & 7*

2. ONSHAPE FOR OLD FOLKS (SESSION 1 OF 3)

Ever find yourself knee-deep in blueprints and thinking, "There's gotta be an easier way"? Well, buckle up because we're about to take you on a wild ride through the wild world of OnShape. Say goodbye to squinting at rulers and hello to designing projects with just a click! In this workshop, we'll show you how to wrangle those unruly projects with finesse and maybe even a few laughs. So, grab your reading glasses and get ready to digitally plow through your to-do list like never before!

- Limited to 40 participants
- Bring laptop

*Presenter: Corey Mesa and Johnny Lopes
Building 10, Room 203 Computer Lab*

3. AMIGA AG MECHTRONICS

Farm-ng is bringing robotic platforms to high schools. They are simple electric robotic platforms students can engineer, code and farm with. Skills require basic electrical knowledge, Python coding (we teach) and creativity for farming. Several High schools have purchased in California and more than 50 universities throughout the US. The machines are grant available through the Farm-school-Grant. <https://amiga.farm-ng.com/docs/getting-started>

- Limited to 40 participants
- Bring laptop

*Farm-ng Team Nathan Dorn (et. team)
Building 10, Room 206*

4. WHERE DO I START? AG CHEM EDITION

Did you just find out you're teaching Chemistry next year? Are you lost? Let's begin by planning a year of Ag Chem. "Where do I start?" "What's a pacing guide look like for this course?" and "What do I buy?" are all questions we will answer. Hear from an experienced Ag Chemistry Educator the basics of where to start and how to plan a successful year. You will leave with a solid outline as well as tips and tricks to making Ag Chem digestible for you and your students. This is intended for teachers who are new to teaching Ag Chem, preferably with 0-2 years experience with teaching the course. Special focus will be given on unit planning, and what material you can and cannot skip.

- Sample Syllabi, Unit Guides, Standards, Pacing Guides, and lessons provided
- Bring anything you have (digital or hard copy) to guide instruction provided by your school (former teacher's syllabus, etc.). If you have nothing, that is okay.

*Presenter: Ms. Amanda Bailey
Building 10, Room 126*

5. VINEYARD MANAGEMENT- HOW TO START AND OPERATE A SMALL VINEYARD

This workshop will discuss how to create an advisory committee/board overseeing the vineyard, including legal documents (non-profit, insurance, workman's comp for intern. Provide sample of written proposal to district and how to start a vineyard. Review finding a location for a vineyard (on-campus and off-campus) and basic considerations to observe when selecting a location (soil, walking distance, water, electricity, sun, and other factors). Create a plan to build and design the vineyard (three year plan) that include: land preparation, irrigation set-up, trellis set up, planting, and other factors to get vines ready for planting. If permissible, walk to a vineyard to show basic features of a vineyard: trellis, pruning strategies, water, electricity, irrigation system/filter, basic features show how to set up a vineyard in relationship to sun, shade, and nearby trees.

- Materials will be provided in hard print and on a flash drive

*Presenter: Charles Van Riper
Building 156, Room 103*

6. MILK QUALITY AND DAIRY FOODS – HOW TO

This workshop will go through all sections of the contest and give coaching tips. Included will be how to make the milks for the contest so as a coach you can make them for practice. We will also go over the basics of the "new" team event presentation. This is a fun contest that is easy to get kids interested in and would go hand in hand with a food science class or pathway.

- Limited to 30 participants

*Presenter: Monique Reid
Building 17, Rooms 101 & 102*

7. FROM COOP TO CUTTING BOARD: EXPLORING EGG-CITING CAREERS, ACTIVITIES AND CERTIFICATIONS IN POULTRY PROCESSING

This workshop is focused on providing essential knowledge and educational tools to support student career readiness in the poultry industry. The workshop will provide you with a toolkit to introduce the basics of poultry production and the supply chain (i.e. a brief Poultry 101), and will provide an overview of career opportunities in the poultry industry. This information will prepare you to complete the industry-backed Broiler Key Welfare Indicators Certification online course, which aims to introduce practical and critical knowledge skillsets for learners in the broiler industry. Learning topics include welfare assessment, measurement, and improvement for critical areas of practical welfare evaluation. The credential developed by the Center for the Optimization

of Poultry (COOP) is backed by the International Poultry Welfare Alliance, and was developed based on advisory personnel from organizations such as Foster Farms, Cargill, and McDonalds. By the end of the workshop, you will improve your teaching capabilities in these subject areas as a means to prepare your students with the prerequisite knowledge needed to complete and be certified in the Broiler Key Welfare Indicator modules.

- \$25 (\$25 per certification up to \$100)
- Wear proper PPE (long pants, close toed shoes, no jewelry, hair tied back)
- Bring laptop
- Curriculum for high school students. 1-4 Certification Opportunities for teachers

***Presenters: Jesse Bower – COOP Content Manager and Curriculum Specialist
Meat Processing Center, Building 155***

8. SAE MANAGEMENT IN AET – SAE CASE STUDIES TO SIMULATE STUDENT RECORDS

This workshop will place each participant in the role of the student as you document SAEs from the most basic experience of a Foundational SAE, unpaid and paid Placement, and basic entrepreneurship SAEs. We will then move to a complete livestock SAE using the livestock managers.

- Example SAE records provided.

***Presenter: Dr. Roger Hanagriff – AET
Building 10, Room 215***

9. TEACHING AGRISCIENCE WITH PHENOMENA

Come work together to backward design an NGSS-based unit in an agriscience class for next year. We'll work together to develop big idea questions, utilize activities to connect content, and create engaging agriculture phenomena to help excite your students. Let's work together to leave with something that gets us ready for the following year. The result will be a planned unit that follows NGSS standards, allows for a student-led classroom and includes notebook strategies for Ag Biology, Ag Chemistry, and Ag Systems. Please bring a computer, classwork, and some excitement to help us brainstorm together!

- Curriculum samples will be provided
- Bring your own curriculum guides to make sure we can work purposefully

***Presenter: Jessica Sweet & Savanah Rhine
Building 10, Room 124***

10. PRACTICAL APPLICATIONS OF DNA AND BIOTECH IN FOOD TESTING AND UNDERSTANDING MACROMOLECULES

Part I - Was it a vicious potato salad or devilish deviled eggs? In this hands-on lab, you'll use scientific reasoning and experimental design to determine the source of a real-life foodborne illness outbreak using gel electrophoresis. Pour, load, run, and analyze a gel - all in a single class period. Part II - Teach macromolecules without the crazy prep! In this micro-scaled lab activity, students test for starch, glucose, protein, lipids and DNA, without the need for large volumes of reagents, cleaning test tubes, or boiling reagents. Then students apply their knowledge and test various unknown samples.

- Limited to 30 participants

***Presenters: Erika Fong
MiniOne Systems
Building 10, Room 105***

Sunday, June 23rd 1:00 p.m. – 5:00 p.m.

1. COOL ST 101 (SESSION 2 OF 3): METAL PROJECT CONSTRUCTION INTERMEDIATE AND ADVANCED THREE-SESSION SERIES**

This is a three-session workshop (Sunday morning & afternoon, and Thursday afternoon,) designed for Ag Mechanics teachers of all skill levels and seeks to add to the growing arsenal of projects we can select from to teach the skills and concepts our students need to master. This year, we are focusing on intermediate and advanced metal fabrication construction, as well as combination wood/metal project construction. Our goal is to give the participants hands-on experience in project planning and construction on projects such as shop tables, fire pits/BBQ, anvils, patio tables/benches, woodworking projects, and more. Participants can choose which project(s) to be involved with, but we recommend choosing one you would like to implement in your class next year. Discussion topics include teaching methods, project organization/planning, project funding, design changes based on tooling and/or materials, construction and finishing techniques, and tricks/tips. This workshop series is also a great way for new teachers to make connections.

- Limited to 50 participants
- \$25 materials fee (paid once and covers all three sessions)
- Please bring welding or work gloves and safety glasses if you can. Loaners are limited.
- Some projects may be available to build and take home.

*Presenters: Morgan Rourke, Jake Dunn and Team
BRAE Labs 6 & 7*

2. ONSHAPE FOR OLD FOLKS (SESSION 2 OF 3)

Ever find yourself knee-deep in blueprints and thinking, "There's gotta be an easier way"? Well, buckle up because we're about to take you on a wild ride through the wild world of OnShape. Say goodbye to squinting at rulers and hello to designing projects with just a click! In this workshop, we'll show you how to wrangle those unruly projects with finesse and maybe even a few laughs. So, grab your reading glasses and get ready to digitally plow through your to-do list like never before!

- Limited to 40 participants
- Bring laptop

*Presenter: Corey Mesa and Johnny Lopes
Building 10, Room 203 Computer Lab*

3. SO I HAVE TO TEACH AG. MECHANICS

Working model, I get to teach Ag Mechanics, how do I develop a budget for required projects, Safety test and how or why should I keep them.

- Lab fee \$25
- Limited to 25 participants

*Presenter: Frank Orique and Jared Castle
BRAE Shop 1*

4. OHM'S OASIS, A DETAILED DEEP DIVE INTO TEACHING DC ELECTRICAL SYSTEMS!

Sparks will fly, but fear not – it's just our sense of electrifying humor charging up the room! Join us for 'Ohm's Oasis, a detailed deep dive into teaching DC electrical systems!'

Get ready to switch on the excitement as we illuminate the path to electrifying education! This workshop is tailor-made for high school ag teachers eager to spark interest in DC electrical systems. Unplug the ordinary and plug into a hands-on experience that will not only enlighten your students but also leave them buzzing with curiosity. What's in store? Well, we're not just flipping switches; we're flipping the script on DC circuits education. Our comprehensive workshop includes ready-to-use curriculum materials that will make even Ohm's Law crack a smile. And that's not all – you'll walk away with a fully functional DC Electrical Trainer, ready to bring the power of learning to your classroom. But wait, there's more wattage! We're not just handing you the keys to the circuit kingdom; we're also giving you the blueprint to build your own trainers. Our supply list will empower you to turn ordinary materials into extraordinary educational tools. It's like DIY with a dash of volts and a sprinkle of watts! And because every electrician needs their toolbox, we're not leaving you in the dark. You'll receive a curated list of tools necessary for your trainers, ensuring you're amped up and ready to roll when the school bell rings. So, charge up your enthusiasm and join us for a shockingly good time at the Ohm's Oasis, a detailed deep dive into teaching DC electrical systems!' – where learning about DC electrical systems is as electrifying as it gets. Let's spark a revolution in the classroom together!

- Lab fee of \$20
- Limited to 30 participants
- Participants will leave with ready-to-use curriculum, a fully functional DC Electrical Trainer, and lists of tools and supplies needed.

*Presenters: Arthur Faria, Larry Dinis, and Nick Deftereos
BRAE Shop 3*

5. IRRIGATION

The first half of this workshop will focus on using Maezzi Injectors for chemigation applying fertilizer in the right amount at the right time in the right place. The second part of this workshop will focus on using weather-based models or evapotranspiration for irrigation scheduling.

- Some example labs and presentation will be provided

*Presenters: Charlie Abee and John Petrosso
Building 11, Room 304 Computer Lab*

6. FORESTRY CDE

Technical skills on how to coach a forestry team.

*Presenter: Matt Pritchard
Building 11, Room 302*

7. TASTE THE SCIENCE WITH FOOD SCIENCE CDE

Food Science CDE is making a comeback! Do you teach Farm to Fork, Agriscience, Food Science or just like food?? Don't miss out on increasing opportunities for your own students with an industry aligned contest. We will discuss each component of the contest and methods for coaching your own team. Coach enough teams? Use the materials to enhance your curriculum! FFA meetings are better with food, so how could it not work for classroom and SAE??

- Food samples provided may contain allergens

*Presenter: Kenny Saephan and Lauren Giannone
Building 10, Room 126*

8. CREATING, BUILDING, AND EXPANDING A HORTICULTURE AND/OR A TURFGRASS / SPORTS FIELD MANAGEMENT PROGRAM

This information/resource workshop will be focused on BOTH a school Horticulture program and a Turfgrass and Sports Field Management class. The Horticulture focus will be on sharing curriculum resources, school greenhouse/nursery operations, plant sales, resources, and equipment. The Turfgrass and Sports Field Management course presentation will focus on this "untapped niche" in horticulture, new curriculum, resources, equipment, and the opportunities available to expand your horticulture program, student interests and engagement. Attendees are encouraged to bring a flash drive (32mb or higher) for free resources/information that you can upload and take back to your programs.

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*Presenters: Dave Gossman
Building 10, Room 204 Computer Lab*

9. CULTIVATE CURIOSITY WITH HANDS-ON HYDROPONICS

Explore soilless farming techniques that engage students in science and sustainability. Gain practical skills, from setting up a hydroponic system to crafting dynamic lesson plans. During this workshop you will learn how to construct and run a simple bucket deep water culture hydroponic system for growing almost any plant. We'll discuss how the system can be used in the classroom to teach many subjects from Biology and Chemistry to Economics and Statistics. Additionally, we'll go over best practices for starting seedlings, transplanting, and harvesting and storage.

- Laptop optional
- Participants will receive a PDF or paper copy of instructions for creating their own Bucket deep water culture hydroponic system.
- Please wear long pants and closed toed shoes and be ready to get your hands dirty.
- Limited to 35 participants

*Presenters: Dr. Sara Kuwahara
BRAE Shop 4, 08A-004*

10. NEW TEACHER'S & SEASONED, LEARN THE INSIDE OF AET FROM REPORTS TO AIG INFO

Learn how to find the information to improve your program numbers on the AIG. How to read SAE reports and get the most out of your students. Learn how to improve student participation and results in AET. Follow the reports and learn short cuts on student inputs. We will cover all areas that teachers need to know: where to find reports, how to upload them, find missing students SAE.

*Presenters: Ronald Sa
Building 10, Room 215 Computer Lab*

11. THE FUNGUS AMONG US - USING MOLECULAR BIOLOGY TO DETERMINE THE VALLEY FEVER HOT SPOT!

Valley Fever (VF), a respiratory infection, attributed to inhaling the pathogenic fungus *Coccidioides*. The fungus predominantly thrives within the soil of the southwestern United States and certain regions in Central America. Favorable environmental conditions, characterized by wet winters and hot summers, coupled with strong wind patterns, create ideal circumstances for the proliferation and dispersion of its spores. In this activity, you will use DNA electrophoresis as a diagnostic tool to screen "soil samples" from various CA counties for VF's genetic signature, assess

the prevalence in these geographic areas, and learn about the human impact this disease has especially in agricultural areas.

- Limited to 30 participants

***Presenters: Erika Fong
MiniOne Systems
Building 10, Room 105***

Thursday, June 27th 1:00 p.m. - 5:00 p.m.

1. COOL ST 101 (SESSION 3 OF 3): METAL PROJECT CONSTRUCTION INTERMEDIATE AND ADVANCED THREE-SESSION SERIES**

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- Bring laptop

*Presenter: Corey Mesa and Johnny Lopes
Building 10, Room 203 Computer Lab*

3. ROBOTICS IN AGRICULTURE

Embark on an immersive journey into the realm of hands-on robotics in agriculture with this dynamic workshop. This hands-on experience delves into the use of diverse devices, including microcontrollers, Raspberry Pi, AI, and robotics software, and agricultural robots, seamlessly integrating them into agricultural robotics education. Participants will gain practical insights into harnessing artificial intelligence tools to help teach agricultural robotics in high school. From using sensors to programming autonomous farming machines, this workshop promises an exhilarating fusion of technology and agriculture, empowering enthusiasts to drive innovation in the field.

- Limited to 35 participants
- Handouts, microcontrollers and robotic kits will be provided

*Presenters: Bo Liu
BRAE 8A-3E*

4. EMPOWERING EDUCATORS: INNOVATIVE MARKETING STRATEGIES IN AGRICULTURE

"Empowering Educators: Innovative Marketing Strategies in Agriculture" offers a practical dive into marketing within the agricultural sector. This workshop will guide educators through the essentials of branding, digital marketing, and effective communication strategies tailored for agricultural products and services. Participants will engage in hands-on activities, from crafting a brand story highlighting agriculture's values to using social media to connect with consumers. By the end of this session, educators will be equipped with actionable insights and tools to enrich their teaching and inspire students in agricultural marketing. Join this AgriSkills session to learn about the potential of agricultural marketing in your teaching and empower the next generation of industry leaders.

*Presenter: Dr. Christiane Schroeter
Building 10, Room 206*

5. TRAILER KNOWLEDGE & SKILL DEVELOPMENT

There is no need to be intimidated with the thought of pulling a trailer. We will take a look at all the things you will need to know about trailering. This will include safety, hitching, and the practice of operating bumper pull and gooseneck trailers.

*Presenters: Mr. Steve Parker
Parking Lot H-1
Wine & Viticulture Parking Lot*

6. INTRODUCTORY HORTICULTURE LESSONS/PROJECTS

New to horticulture and don't know where to start? We will cover lessons and projects for Ag Biology and other Horticulture related courses that can be done with a very little money and very little space. Projects perfect for Middle school and High School.

- Curriculum and samples provided

*Presenter: Amy Lewandoski
Building 17, Rooms 101 & 102*

7. WHERE DO I START? AG CHEM EDITION

Did you just find out you're teaching Chemistry next year? Are you lost? Let's begin by planning a year of Ag Chem. "Where do I start?" "What's a pacing guide look like for this course?" and "What do I buy?" are all questions we will answer. Hear from an experienced Ag Chemistry Educator the basics of where to start and how to plan a successful year. You will leave with a solid outline as well as tips and tricks to making Ag Chem digestible for you and your students. This is intended for teachers who are new to teaching Ag Chem, preferably with 0-2 years experience with teaching the course. Special focus will be given on unit planning, and what material you can and cannot skip.

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*Presenter: Ms. Amanda Bailey
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- Curriculum samples will be provided
- Bring your own curriculum guides to make sure we can work purposefully

*Presenter: Jessica Sweet & Savanah Rhine
Building 10-124*

9. WEEK ONE, DAY ONE, PROJECT ONE: STARTING THE YEAR OFF RIGHT IN THE SHOP

The transition between the first day of school and the first project is very difficult to master but crucial for setting your year up right. The less experience you have in the shop, the more important these first days of school become to your success. In this workshop we will discuss tactics for getting students through shop safety tests and into their first project all in first couple days! We will complete a simple woodworking project together and you will leave with a project plan and several safety tests. This workshop is for any teacher/candidate that is new to teaching or new to the shop... If you fit that description, I promise, I speak your language and this is the workshop for you.

- Limited to 20 participants
- Lab fee \$10

*Presenter: Kelly O' Day
BRAE Shop 1*

10. NEW TEACHER'S & SEASONED, LEARN THE INSIDE OF AET FROM REPORTS TO AIG INFO

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