UW Board of Trustees Research and Economic Development Committee
Agenda
January 20, 2026, at 1:00 pm

Public Session:

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1.	**Grant Management Processes in Colleges** Briefing: VP Parag Chitnis Acting Executive Director Scott Quillinan, Interim Dean Danny Dale, Dean Kelly Crane, Associate Dean Brian Mealor	2
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Research and Economic Development
COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: **Research Development and Project Management Processes in CALSNR, CEPS and SER** – Kelly Crane, Danny Dale, Scott Quillinan

☒ OPEN SESSION

☐ CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

☒ Yes

☒ No

FOR FULL BOARD CONSIDERATION:

☐ Yes *[Note: If yes, materials will also be included in the full UW Board of Trustee report.]*

☒ No

☒ *Attachments/materials are provided in advance of the meeting.*

EXECUTIVE SUMMARY:
Deans from CALSNR, CEPS and SER will share their Research Development and Project management processes and any anticipated needs to ensure continued progress in increasing proposal numbers and quality.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS: **Information only**

WHY THIS ITEM IS BEFORE THE COMMITTEE: **Information only**

ACTION REQUIRED AT THIS COMMITTEE MEETING: **None**

PROPOSED MOTION: **N/A**

SER Proposal and Sponsored Project Management: The School of Energy Resources (SER) continues to expand its energy research activity. As this portfolio has grown, so has the complexity of proposal development, sponsor requirements, and project administration. Federal proposals now include extensive technical, administrative, and compliance components, requiring coordinated effort across many contributors. At the same time, SER frequently partners with industry, where expectations for responsiveness and clear communication are especially high.

To ensure sustainable growth and reduce administrative burden on faculty, SER created a dedicated Project Specialist team and a structured proposal development and project management framework. Project Specialists now support the full lifecycle of sponsored projects, helping coordinate proposal development, develop budgets and reporting structures, track milestones, manage documentation, and ensure alignment with sponsor and institutional requirements. This model complements existing university services while providing additional capacity tailored to SER's research pace and external partnerships.

Proposal Development and Project Management

Scott Quillinan, Acting Executive Director
School of Energy Resources

UNIVERSITY OF WYOMING | School of Energy Resources

THE WORLD NEEDS MORE COWBOYS.

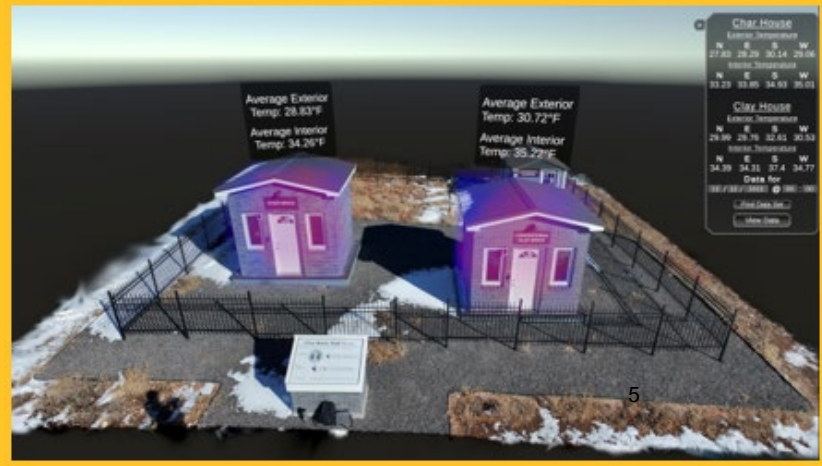
SER RESEARCH FUNDING

	FY23	FY24	FY25
Total one-time state	$21,379,175	$53,800,000	$46,500,000
Total non-state	$37,497,288	$112,256,121	$120,979,238
Total*	**$58,876,463**	**$166,056,121**	**$167,479,238**

Does not include $47 million in pending proposals

Key factors in success

- *67 principal investigators*
- *320 faculty, staff and students supported by SER*
- *4 project specialists*
- *State matching funds*



- Proposal development had reached full capacity — growth required a new system and added support
- PIs were spending nights and weekends writing and compiling proposals
- Federal grants require extensive non-technical content outside PI expertise
- University pre-award and post award support serves the whole campus
- SER works closely with industry partners who expect rapid response times
- In-house project support improves responsiveness, quality, and compliance

Bottom line: Dedicated Project Specialists reduce administrative burden, strengthen proposals, and enable sustainable research growth.

SER Project Specialists

Role in Project Management & Closure

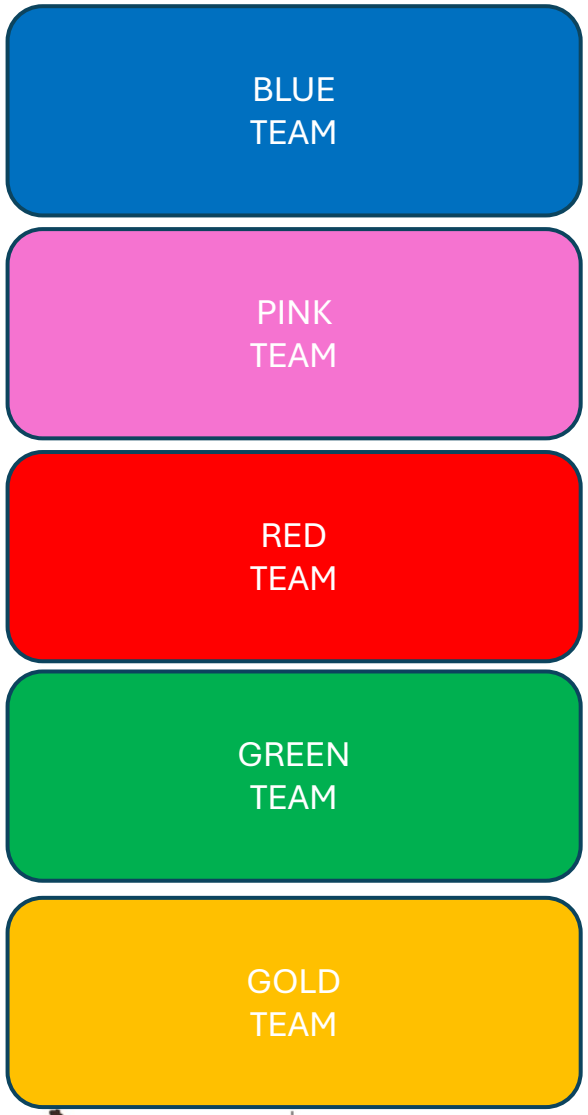
Project Initiation & Setup
- Support proposal development and sponsor submissions
- Establish budgets, timelines, reporting structures, and team coordination
- Ensure compliance with SER and University requirements

Active Project Management
- Track milestones, deliverables, and spending
- Coordinate internal and external communication
- Maintain documentation and reporting for sponsors
- Flag risks early and support course-correction

Project Closure
- Ensure final deliverables and reports are submitted
- Confirm budgets are reconciled and closed
- Archive records and documentation
- Support lessons-learned and knowledge transfer

Overall Impact
- Provide structure and continuity across the project life cycle
- Reduce administrative burden on PIs
- Improve sponsor confidence and project success

SER Proposal Development Process



Blue Team – Strategy & Readiness Review
- Review FOA and eligibility
- Assess feasibility and mission alignment
- Identify PIs, partners, and resource needs
- Flag cost-share requirements

Pink Team (50–65% Draft) – Development Review
- Conduct first full-draft review
- Provide constructive feedback
- Identify gaps, risks, and improvement areas

Red Team (80–90% Draft) – Technical Review
- Deep technical and scientific review
- Validate clarity, rigor, and competitiveness
- Ensure alignment with sponsor priorities

Green Team – Budget & Compliance Review
- Validate budget accuracy and assumptions
- Confirm compliance with sponsor and institutional policy

Gold Team – Final Approval & Submission
- Final quality control check
- Confirm readiness for submission
- Approve and submit

University of Wyoming | School of Energy Resources

WORKFLOW | REVIEW TEAMS | SCHEDULED MEETINGS

Success Factors

Creation of an Internal Proposal Development Team and Process

- Expertise in project management, organization, strong communicators, and knowledge of DOE applications
- Skilled at crafting compelling proposals, beyond grant writing

Development of a Clear and Effective Proposal Development Process

- Effective workflows and timeline management
- Streamlined communication and collaborative workspace
- Installed constructive review process

Establishment of a Feedback Loop and Lessons Learned

- Debriefs on proposal development and "Best Practices"
- Webinars and Training Sessions for Research Staff

Key Components

1. Buy-in from researchers
2. Alignment with SER mission and federal funding priorities
3. Cost share support from the State (e.g., WEA and Energy Matching Fund)

Meet the team

Tiffany Bishop

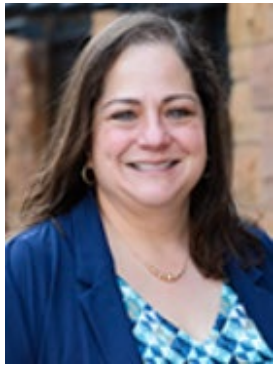
Specialties:

- POC – Proposal Development
- Intellectual Property
- Federal Funding Compliance

David Lucke

Specialties:

- Data Management
- Funding opportunity tracking
- Federal Reporting



Martha Reisch

Specialties:

- Sponsored Research Agreements and Industry Partnerships
- Non-financial contracts
- Subaward Management

Kaleb Peterson

Specialties:

- Project budget development and forecasting
- Procurement compliance

- Each project specialist also maintains an individual proposal/project portfolio where they assist in project management and offer administrative support

Proposal Development and Project Management

Scott Quillinan, Acting Executive Director
School of Energy Resources

UNIVERSITY OF WYOMING | School of Energy Resources

THE WORLD NEEDS MORE COWBOYS.

To: Research and Economic Development Committee of the Board of Trustees
From: Daniel Dale, Interim Dean, College of Engineering & Physical Sciences
Re: Executive summary of remarks to UW Board of Trustees
Date: 21 January 2026

The College of Engineering & Physical Sciences (CEPS) has a full-time grant writer that is embedded in the College. This position is funded equally by CEPS and REDD.

CEPS has several staff positions dedicated to managing the financial aspects of grants. These staff members are centrally located together on the 4th floor of the Engineering Education and Research Building. Having the financial staff collocated promotes a positive team culture and facilitates efficient cross-training and collaboration.

CEPS has three main needs for promoting research development and managing existing projects:

- Expanded technical staffing
- Increased machine shop capacity
- Strengthened grant development and collaboration support

Notes:
1. Expanded technical staffing: additional lab technicians are needed to operate and maintain complex instrumentation, ensure compliance, and train undergraduate and graduate.
2. Increased machine shop capacity: our shops team is lean and we need enhanced support beyond senior design and capstone projects so that research, prototyping, and externally funded projects can be executed safely, efficiently, and on schedule
3. Strengthened grant development and collaboration support: dedicated resources for proposal development are needed and for cultivating a culture of cross-disciplinary teamwork that builds on our existing research strengths.

Executive Summary – CALSNR Research Perspectives

Research and Economic Development Committee UW BoT January 21, 2026

The College of Agriculture, Life Sciences, and Natural Resources (CALSNR) is among UW's leaders in the acquisition of external funding to support our research enterprise. Last year, CALSNR exceeded $40 million in research expenditures, and research grant funding accounted for nearly 40% of our annual budget. CALSNR is also a university leader in community-engaged, stakeholder-driven, and Wyoming industry-sponsored research. Our faculty provide research-based solutions to some of Wyoming's most challenging agricultural, natural resource, and wildlife management issues. CALSNR faculty working at our Research and Extension Centers in Lingle, Sheridan, Powell, and Laramie ensure our research remains "Wyoming relevant" and locally impactful.

CALSNR manages research proposals hand in glove with the Research and Economic Development Division. All sponsored projects are routed through REDD's process in coordination with their Pre-Award team via the ROAMWyo system. Individual investigators or research teams develop the bulk of the submission documents, including narrative, budget, justification, and supporting documents – often in coordination with REDD staff. Areas for potential improvement in our cooperative work with REDD include clarity and timeliness of communication during the proposal development and submission phase, handling of "nonconforming" projects and sponsors that operate differently than large federal funding institutions, and additional clarity around processes for requesting exceptions to standard procedures.

Additional support for identification of funding opportunities, proposal review, supporting documents, and other processes has recently been offered by a relatively new Grant Development Manager position. We have not yet realized the full potential of this position.

A unique feature of CALSNR research funding is the capacity research dollars received from USDA to support broad agricultural research through the Wyoming Agricultural Experiment Station (AES) since we are the state's land grant institution. These "non-competitive" funds require an approximately 1:1 non-federal match. There are four main funding requests associated with these dollars that are routed through REDD's proposal process. However, once funds are received, management and distribution internal to the college and managed through AES. Individual researchers, departments, or interdisciplinary teams submit project proposals directly to the AES office, which then arranges for peer reviews of each of the projects, works with investigators to revise, then submits to USDA on behalf of the project team. Once projects are approved by USDA,

investigators request funds from AES for project-related expenses allowable within USDA guidelines. All reports are approved and submitted by AES.

CALSNR's research accomplishments are largely attributable to the expertise, initiative, commitment, and resourcefulness of individual faculty members. Most of our departmental faculty balance their research expectations with teaching, service, and Extension responsibilities. In terms of position appointments, we support 53 total FTEs of "research" (not including Post Doctoral Research Associates or Research Scientists), which is distributed among 139 faculty positions.

We foster excellence in research through the following strategies:

1. Recruit and retain faculty members with apparent capacity, demonstrated accomplishment, and a current trajectory of research productivity.
    a. Current cohort of accomplished researchers, and UW's R-1 designation.
    b. Start-up investments
    c. Facilities (on-campus, R&E Centers, WSVL, Red Buttes, and the RMH)
    d. Graduate Assistants, and other research support personnel
2. Support the research enterprise at faculty, departmental and college levels.
    a. Grant development manager position (Shared w/ REDD)
    b. Wyoming Agricultural Experiment Station Funding (47 projects, 53 GRA's)
    c. Phased-in teaching expectations for early career faculty
    d. Wyoming Cooperative Research Unit
    e. INBRE and COBRE
3. Creating a college and departmental cultures which reward and recognize research outcomes.
    a. RT&P, performance appraisals, and leadership opportunities
    b. Allocating fiscal, facility, and human resources in consideration of research productivity.

As an R-1 institution, UW must consider research outcomes as a critical attribute in assessing the "productivity" of Colleges, Academic Departments, and individual faculty members (those with research appointments).

Research and Economic Development
COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Research Excellence Presentations: SI and Tier 1 K-12 Teacher Outreach and Inreach</u> – Erin Klauk, Karagh Brummond, Suresh Muknahallipatna

☒ OPEN SESSION
☐ CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:
☒ Yes
☒ No
FOR FULL BOARD CONSIDERATION:
☐ Yes *[Note: If yes, materials will also be included in the full UW Board of Trustee report.]*
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EXECUTIVE SUMMARY:
7 Wyoming K-12 Teachers will share their experiences with and how the collaborations with UWs Science Initiative Roadshow and ESP4T Engineering Summer Programs for teachers and ML4HST - Machine learning for High School Teachers have enhanced the experiences they are able to provide students in Wyoming.

Kaitlyn Larson

- **School district affiliation**: HEM Jr. Sr. High School (7-12th); Carbon County School District 2
- **Brief Summary**: This presentation will highlight how the Science Initiative Roadshow enhances classroom learning by giving students hands-on, memorable experiences that deepen their understanding of science concepts. Student reflections show that interacting with live animals, exploring circuits, and engaging with real brains make abstract ideas more tangible and exciting. Activities like water conservation demonstrations help students connect classroom content to real-world systems, making learning "cooler and more interesting." By bringing authentic, touchable science into the school, the Roadshow strengthens curiosity, reinforces core STEM ideas, and provides meaningful opportunities for students to explore how scientific principles apply to the world around them.

Cory Scimeca

- **School district affiliation**: Laramie High School (9-12th); Albany County School District 1
- **Brief Summary**: Drawing on her experience teaching psychology at Laramie High School, Cory Scimeca will share how the Science Initiative Roadshow has elevated her classroom by boosting excitement, deepening engagement, and connecting students with current research across multiple fields. She will highlight how Roadshow activities bring kinesthetic, brain-based learning to life and strengthen community connections that spark curiosity beyond the classroom. Cory will also discuss how these visits support recruitment to UW, while enriching her own professional learning and teaching practice.

Diane Cook

- **School district affiliation**: Snowy Range Academy (5th Grade); Albany County School District 1
- **Brief Summary:** Diane Cook will share how four years of collaboration with the Science Initiative Roadshow has transformed students' learning through hands-on, place-based science experiences. By working in small groups aligned to their interests, students engaged directly in the scientific process, collecting data in the field, asking research questions, and applying what they learned to real investigations. Over two full days outdoors and a half day dedicated to creating posters, students synthesized their findings and presented their work, strengthening both their scientific reasoning and communication skills. The Roadshow's structure allows students to connect meaningfully with their environment while experiencing authentic research from start to finish.

Adrienne Unertl

- **School district affiliation:** Uinta County School District #1
- **Brief Summary:**
    - **ESP4T** - Summer program provides hands on projects using Arduinos and Raspberry Pis for me to build, troubleshoot and test before implementing in my classroom. I am also provided materials and support through the school year. Years attended all but 1.
    - **ML4HST** - Summer program that has evolved to showcase ways to implement machine learning with students by showing me how to use data sets to train and test models, making learning relevant. I am the Teacher Mentor and have attended every year.

Colin Wilson

- **School district affiliation**: Uinta County School District #1
- **Brief Summary:**
    - **Benefits of ML4HST and ESP4T for Evanston High School** - I am presenting in order to share the significant benefits ML4HST and ESP4T have brought to my teaching and Evanston High School. These programs directly inspired the creation of a new course centered on Machine Learning and a major unit in our introductory class. Students are not only thoroughly engaged but are also acquiring cutting-edge skills relevant to their futures. The impact is tangible: several students have incorporated these technologies into senior projects, and many others are now pursuing these fields in college due to this exposure.

Jodi Adams

- **School district affiliation:** Lincoln County School District #1
- **Brief Summary:** ESP4T has given teachers the ability to take the latest technology straight to the students we work with. This program enables us to learn the hardware and coding to be able to teach and inspire young students to explore the world of computer engineering.

  The support from the University with the materials and guidance from Dr. Suresh and the grad. students lets us bring materials into the schools that our district would never be able to afford on our own. I will be starting a club for elementary students who are looking for an activity beyond sports. This program supports teachers with the opportunity for credits, new technology and experiences, amazing technical support, food and lodging and a stipend. I truly appreciate the experience and knowledge this program has given me and my students.

Katie Mitchell

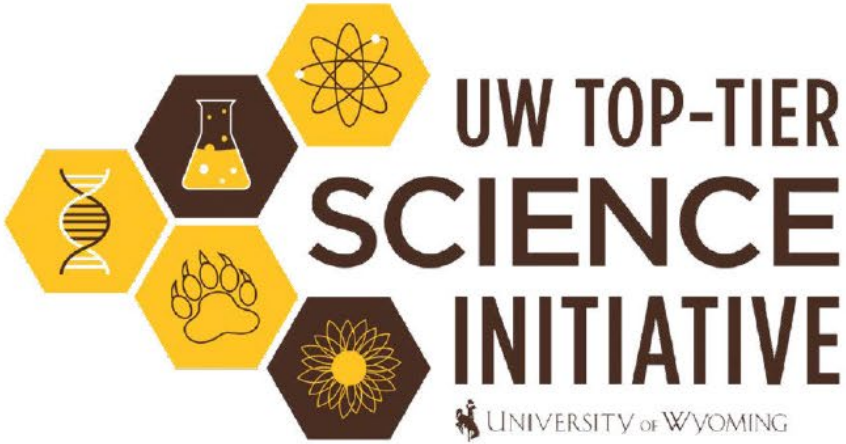
- **School District affiliation:** Laramie County School District #1

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS: **Information only**

WHY THIS ITEM IS BEFORE THE COMMITTEE: **Information only**

ACTION REQUIRED AT THIS COMMITTEE MEETING: **None**

PROPOSED MOTION: **N/A**



The Science Initiative Roadshow

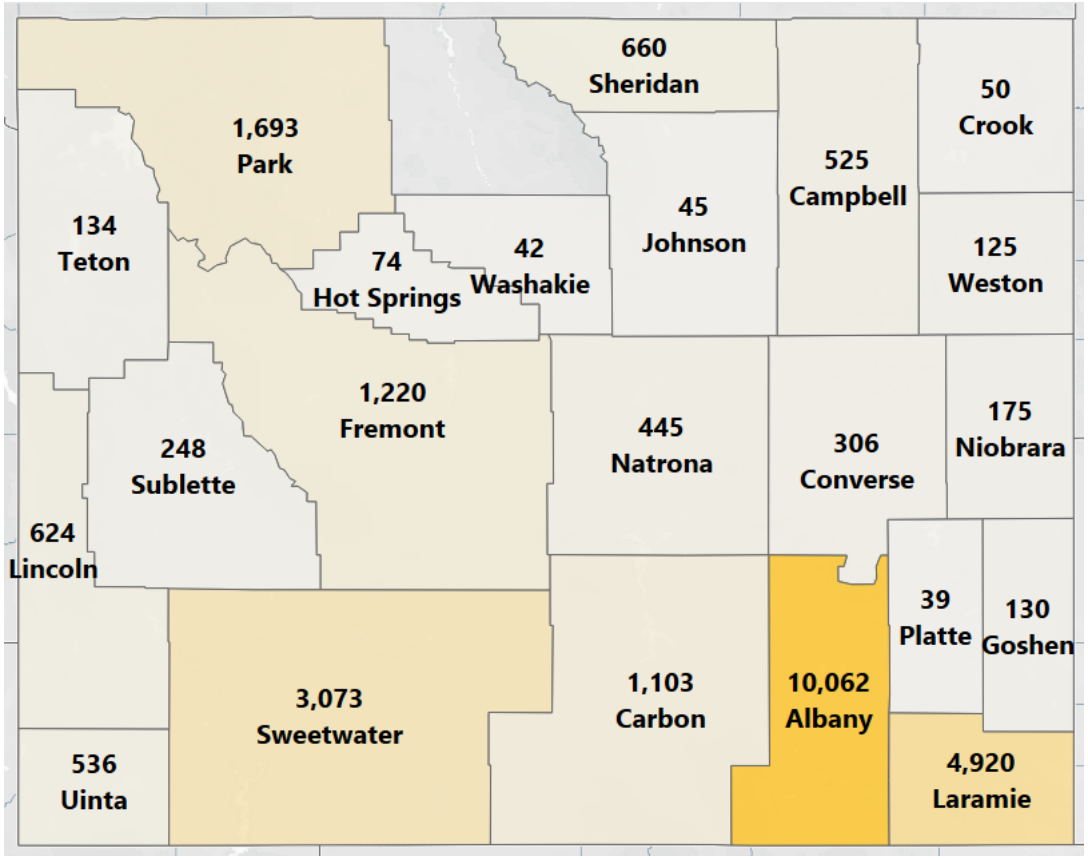
Roadshow Impacts on Wyoming K-12 Teachers & Students

SCIENCE INITIATIVE ROADSHOW

HAS REACHED

26,229 K-12 STUDENTS IN

22 COUNTIES



4,275 PreK-12 students to be added from Fall 2025 in 12 different counties

Cory Scimeca

Laramie High School – Psychology
Roadshow Collaborator since 2017

- **Excitement and Engagement**
- **Current Research in many fields**
- **Brains**
- **Community Engagement**
- **Recruitment for UW**
- **Neuroscience and the Law**
- **Kinesthetic learning opportunities**
- **My own learning!!**

Kaitlyn Larson

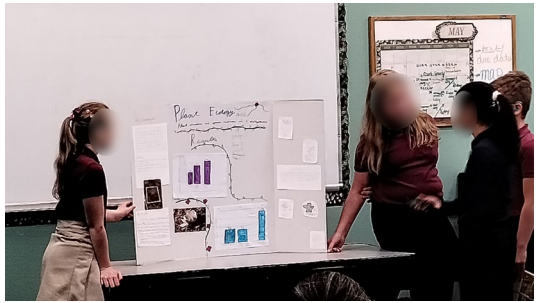
HEM Jr. Sr. High – Science Teacher
Roadshow Collaborator since 2021

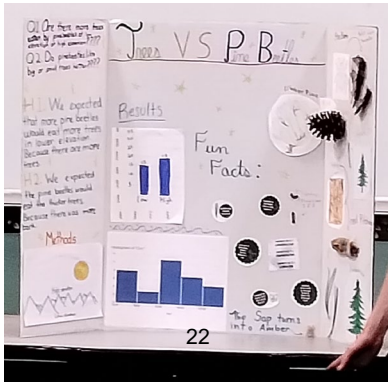
- **“Loved the animals. That we could hold them. I learned more about the animals than anything else.”-Junior**
- **“Circuits were fun and pretty neat”-Junior**
- **“It(K-12 STEM Days) helps me connect some classroom stuff to cooler and more interesting things” -Junior**
- **“I loved the animals, and learn about them with the actual animals here.”-Seniors**
- **“I really enjoy the water conservation and learning about water pathways and how small creeks add up to big rivers”-Senior**
- **“The brains a few years ago were Awesome! And made me think about how nerves and brain signals work”-Senior**

Diane Cook

Snowy Range Academy – 5th Grade Teacher
Roadshow Collaborator since 2022

- **Worked with Roadshow for four years**
- **Students were able to work in small groups**
- **Place based learning**
- **Scientific process and research**
- **Apply what was learned in the field for presentations**
- **Students picked group based on interest**
- **2 days in the field; half day creating posters and presenting the findings**





ESP4T & ML4HST

Adrienne Unertl
Uinta County School District #1

Summary

ESP4T - Summer program provides hands on projects using Arduinos and Raspberry Pis for me to build,troubleshoot and test before implementing in my classroom. I am also provided materials and support through the school year. Years attended all but 1.

ML4HST - Summer program that has evolved to showcase ways to implement machine learning with students by showing me how to use data sets to train and test models, making learning relevant. I am the Teacher Mentor and have attended every year.

ESP4T

Teacher Experience:

- It is updated annually
- Text/Block Coding Modules available
- Multiple projects across subjects
- Option to bring your own project idea
- Ability to build/test project before using with students
- Phenomenal support from Graduate students

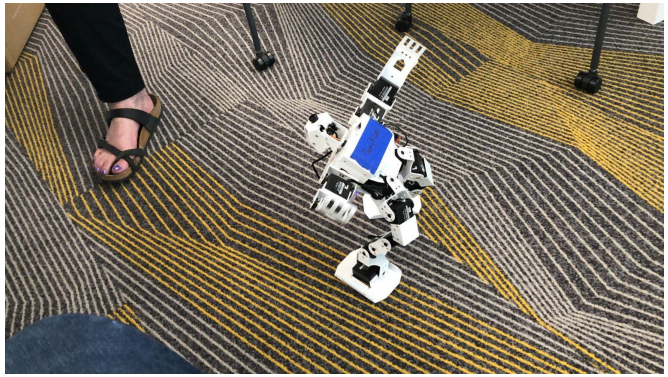
Usefulness:

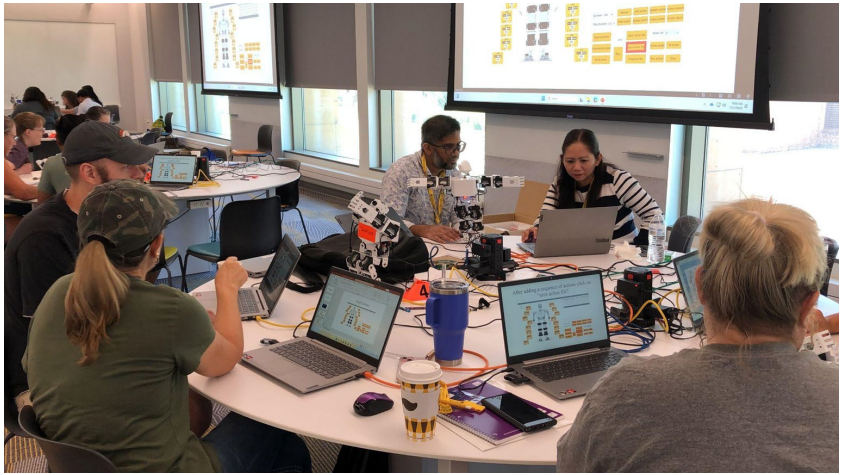
- Presentations provided
- Materials to complete the projects provided
- Ability to contact UW for support throughout the year.
- Ability to check out turnkey modules to provide experiences to younger students.
- I have lots of ideas to share with other teachers in my district.
- I go into classroom and work with classroom teachers to support teachers that are new to this type of engineering projects.

ML4HST

Teacher Experience:

- Text/Block Coding Modules available (New this year)
- Ability to build/test project before using with students
- Access to equipment that I have never used
- Deeper understanding of things that can and cannot be known
- Phenomenal support from Graduate students
- Feedback from teachers is used to improve next year's program





Usefulness:

- Presentations provided.
- Materials to complete the projects provided.
- Ability to contact UW for support throughout the year.
- Ability to check out more expensive equipment.
- I use the projects with students that I teach online.
- My understanding allows the projects my student complete to be meaningful and use data they've created.
- I understanding what could go wrong and how to correct it for my students because I've already done the project!

NEW CURRICULUM

Machine Learning at Evanston HS

We developed a new course framework based on the **ML4HST** standards, designed to bridge the gap between classroom theory and industry application.

Skills & Competencies

- Core ML concepts & logic
- Python data science libraries
- Model training fundamentals

Teaching Activities

- Interactive coding labs
- Real-world problem solving
- Hands-on model deployment

Equipment Needed

- Hardware specifications
- GPU/TPU requirements
- Software environment setup

Additional Resources

- Current industry trends
- External datasets
- Career pathway info

TEACHER SUPPORT

ESP4T

Empowering educators with a comprehensive framework for teaching electronics and programming.

What ESP4T Provides

Programming Resources

Complete teaching outlines and finished code examples.

Electronics Knowledge

Foundational information with clear, practical examples.

Troubleshooting Skills

Most Valuable Skill: Methods to identify and fix issues efficiently.

Engineering & Design

Wiring, sensors, and control components like switches.

Real World Applications

Complete projects adaptable for various teaching levels to show practical usage.

IMPACT AT EHS

Computer Technologies Intro Class

The school's largest unit utilizes the full suite of ESP4T resources to drive student engagement.

Full Integration

JODI ADAMS – ATTENDED 2 YEARS

CANYON ELEMENTARY SCHOOL

LINCOLN COUNTY SCHOOL DIST. #1

HELEN VAN GRINSVEN – RETIRED TEACHER - ATTENDED 1 YEAR

Summary:

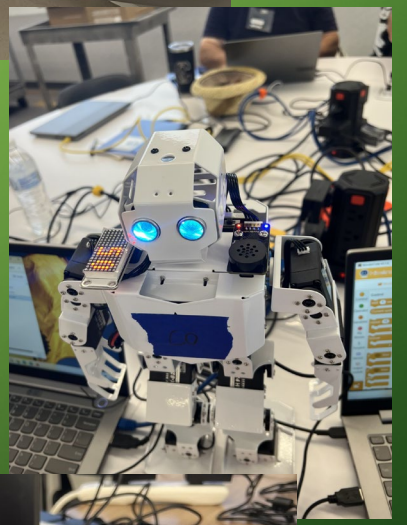
ESP4T has given teachers the ability to take the latest technology straight to the students we work with. This program enables us to learn the hardware and coding to be able to teach and inspire young students to explore the world of computer engineering.

The support from the University with the materials and guidance from Dr. Suresh and the grad. students lets us bring materials into the schools that our district would never be able to afford on our own. I will be starting a club for elementary students who are looking for an activity beyond sports.

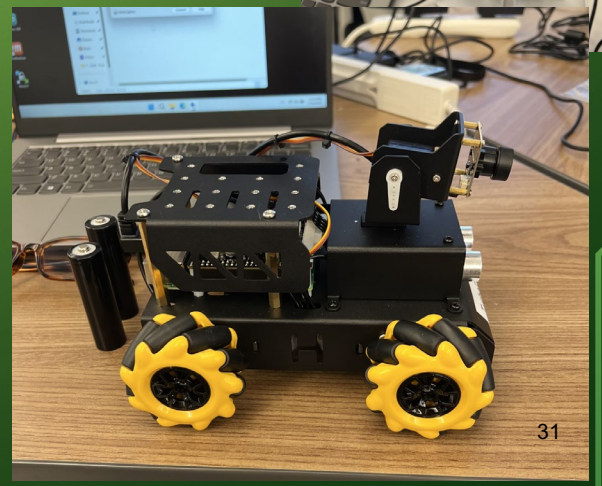
This program supports teachers with the opportunity for credits, new technology and experiences, amazing technical support, food and lodging and a stipend. I truly appreciate the experience and knowledge this program has given me and my students.

ATTENDING THE WORKSHOP

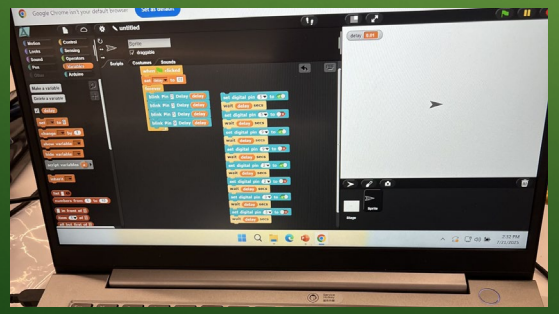
- This is an invite to a new experience – amazing staff, great grad. student support, room and board, credits and stipend



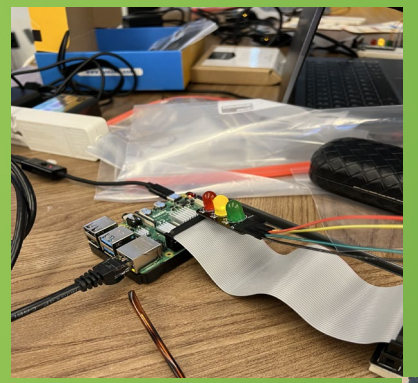
- New experiences with technology – rovers, drones, Tony-bots



- Learning about new and exiting technology and how to teach it to students



IMPLEMENTING ESP4T!



- Materials and knowledge to take back to the classroom
- Support – The University's ready-to-go totes and technical support
- Remote Maker Space locations – access to makers spaces in our area
- Set up to start an engineering club at the elementary school

Katie Mitchell

5th Grade Teacher | Coyote Ridge Elementary | Cheyenne-Laramie County School District #1

- Elementary Teaching License with a Computer Science Endorsement
- Experienced in teaching 2nd grade, 5th grade, 6th grade, and serving as an Academic Interventionist
- Former Computer Science Instructor for PreK–4th Grade
- Coach for the school's LEGO Robotics Program
- Computer Science Curriculum Developer: contributed to the design and development of district-wide curriculum

ESP4T Experience and Value

- **Attending as Participant (2017–2019)**
  - First joined ESP4T in 2017 as a 2nd grade teacher
  - Came back for three years, each time bringing along different coworkers
  - Loved how it helped my students stay engaged and build on what they were learning in their "Computers" special
  - It showed them how programming isn’t just code—it’s something they can bring to life
- **Teacher Mentor (2020–Now)**
  - Became a mentor teacher in 2020 to help other educators—especially in elementary—bring ESP4T ideas into their classrooms
  - After attending three times, I wanted to be more hands-on with how it was used in real classrooms
  - Helped roll out updates like block-based programming, new modules, and a stronger sense of community among teachers
  - Working on a shared lesson plan database so teachers don’t have to start from scratch every time
  - Supporting the use of Wyoming’s Computer Science Standards in everyday teaching
  - Enjoy seeing the Engineering Students work as leaders and grow in their confidence as teachers
  - Big focus: helping teachers find creative, cross-subject ways to use Arduino and Raspberry Pi with their students

Research and Economic Development
COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: REDD Update – Parag Chitnis

☒ OPEN SESSION
☐ CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:
- ☒ Yes
- ☒ No

FOR FULL BOARD CONSIDERATION:
- ☐ Yes *[Note: If yes, materials will also be included in the full UW Board of Trustee report.]*
- ☒ No

☒ *Attachments/materials are provided in advance of the meeting.*

EXECUTIVE SUMMARY:
Vice President Parag Chitnis will update the committee on current activities within the Research and Economic Development Division, to include updates on Federal Funding issues, Annual report to be presented to the Full Board on 1/22/25 and other items of interest in the Division.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS: **Information only**

WHY THIS ITEM IS BEFORE THE COMMITTEE: **Information only**

ACTION REQUIRED AT THIS COMMITTEE MEETING: **None**

PROPOSED MOTION: **N/A**