

El Paso Computes Update

By



UTEP EDUCATION



Scope of Work

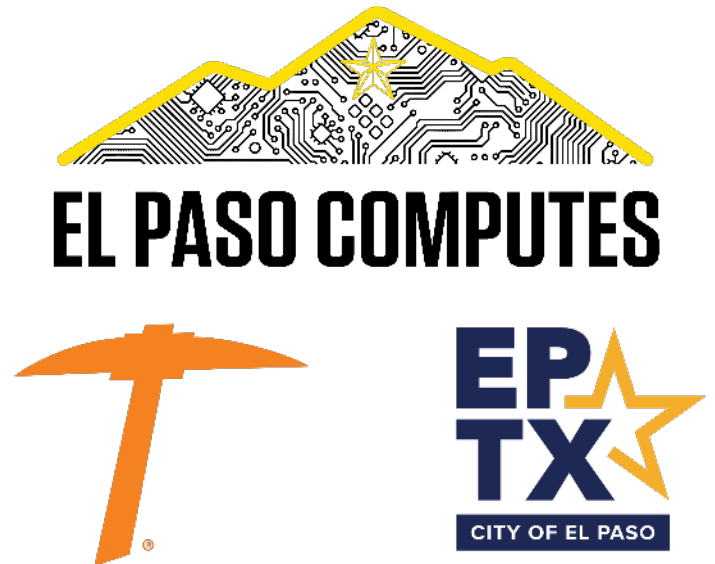
"The focus of the El Paso Computes: K-12 Impact initiative is to increase the computing competencies of El Paso students by building capacity in foundational computing among teachers in El Paso's K-12 public schools, especially schools in underserved areas."

Core activities include:

- Integrating computational thinking into the teacher preparation curriculum at UTEP**
- Designing and offering professional development workshops for PK-12 teachers in computational thinking and computer science**
- Increasing the certification of teachers in 8-12 Computer Science**
- Providing cybersecurity, AI, and other computing training to secondary students**

Our Big Crazy Goal!

"Impacting 20,000 underserved K-12 students in El Paso over 3 years by preparing 750 K-12 teachers (250/year) with foundational skills in computing through coursework and professional development"





HOW?

"It's all about leveraging current strengths to build new strengths as El Pasoans continue to thrive in the Age of AI"

- Existing Robust Partnership Networks and Structure
- Expertise in Course Design and Instructional Delivery
- Pathways to Teacher Training and Certification



Project Launch

UTEP's College of Education Project Team



Dean Clifton Tanabe
Principal Investigator



Dr. Erika Mein
Co-Principal Investigator



Dr. Salamah Salamah
Co-Principal Investigator



Dr. Ann Gates
Co-Principal Investigator



Elizabeth Flores
Project Manager



Krista Apodaca
K-12 Project Coordinator



Project Goals

Key Operating Value: Hands-On Training Delivered by Experts





Computational Thinking and AI for K-12 Educators Workshop

- 3-day workshops at UTEP facilitated by faculty in Education and Computer Science
- Participants: K-12 teachers across contents
 - **March 5-7, 2025 (21 hours)**
 - 85 workshop participants
 - **June 9-11, 2025 (21 hours)**
 - 45 workshop participants
 - **July 16-17 + asynchronous (21 hours)**
 - 65 workshop participants
 - **October 8-10, 2025 (21 hours)**
 - 41 workshop participants
- Activities include:
 - CS education and AI literacy
 - GenAI tools for teaching and coding
 - Computational problem-solving
 - Prompt engineering

EP TX **EL PASO COMPUTES** **UTEP**

Computational Thinking & AI for K-12 Educators

Connecting knowledge to practice in computing and AI

Benefits:

- ✓ Participate in a 3-day workshop at UTEP facilitated by faculty in Education and Computer Science
- ✓ Earn a \$1,000 stipend upon completion of the 3-day workshop
- ✓ Light breakfast and lunch will be provided each day

Workshop is open to:

- First-time participants who are full-time K-12 public school teachers in all subject areas across El Paso
- UTEP Miner Teacher Residency Mentor Teachers and Residents

Details:

📅 October 8-10, 2025
8:30 AM - 4:00 PM

📍 UTEP Union
Templeton Suite 313

📍 500 W. University Ave,
El Paso, TX 79968

APPLY NOW
Space is limited. First come, first served. To fill out an application, scan the QR code or click [here](#).

Questions? Contact Krista Apodaca via email at kmapodaca3@utep.edu



Workshop Photos





Advanced Computing for 6-12 Computer Science Educators

- 3-day workshop at UTEP facilitated by faculty in Computer Science and Computer Science Education
- Participants: Secondary Computer Science educators
 - **March 5-7, 2025 (21 hours)**
 - 11 workshop participants
 - **June 9-11, 2025 (21 hours)**
 - 31 workshop participants
 - **October 8-10, 2025**
 - 9 workshop participants
- Activities include:
 - CS basic concepts
 - AI literacy
 - Prompt engineering
 - Advanced coding
 - AI Ethics

EP TX **EL PASO COMPUTES** **UTEP**

Advanced Computing for 6-12 Computer Science Educators

Increase your knowledge of computer programming languages & AI

Benefits:

- ✓ Participate in a 3-day workshop at UTEP facilitated by faculty in Computer Science
- ✓ Earn a \$1,000 stipend upon completion of the 3-day workshop
- ✓ Light breakfast and lunch will be provided each day

Workshop is open to:

- First-time participants who are full-time Computer Science teachers in grades 6-12 public schools in El Paso
- UTEP Minor Teacher Residency CS Mentor Teachers & CS Residents

Details:

- 📅 October 8-10, 2025
8:30 AM - 4:00 PM
- 📍 UTEP Union University Suite 312
- 📍 500 W. University Ave, El Paso, TX 79968

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Workshop Photos





Building Capacity among Teacher Educators at UTEP & EPCC

- **Workshop series facilitated by The Borderplex Alliance, Binational Tech Council**
- **Participants: 37 UTEP/EPCC Teacher Ed Faculty @ 6 workshops**
 - **November 22, 2024**
 - **February 28, 2025**
 - **March 21, 2025**
 - **May 16, 2025**
 - **September 26, 2025**
 - **November 14, 2025**
- **Activities include:**
 - Generating effective prompts
 - Practical AI classroom applications
 - Techniques for validating AI accuracy
 - AI for research and decision-making
 - Fun and Creative AI use cases

 THE BORDERPLEX ALLIANCE



AI for Teacher Educators

Binational Technology Council

Friday, February 28, 2025
9am - 12pm
UTEP Education Building Rm 405

Light breakfast served at 8:30am in Room 411
Lunch served at 12pm in Room 411

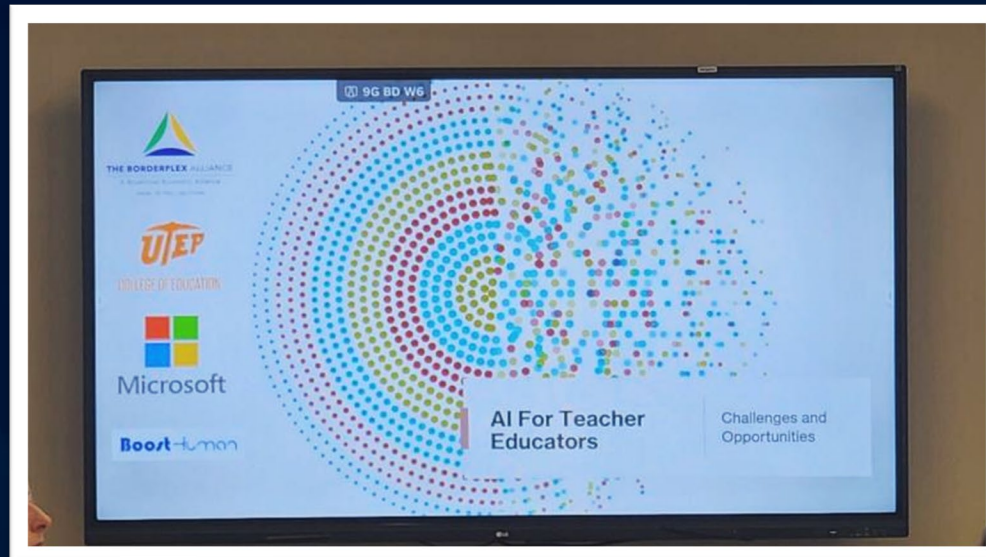
REGISTER [HERE](#) OR SCAN QR CODE
SPACE IS LIMITED



Sponsored by the City of El Paso and the Hopper-Dean Center of Excellence for K-12 CS Education
500 W UNIVERSITY AVE, EL PASO, TX 79968



Workshop Photos





This is a Big Deal!

- Designed and launched new CS Ed Course that EVERY teacher education student will take
 - TED 4550: Computational Thinking for Educators
 - Now fully integrated into our formal Educator Preparation Curriculum
 - Required for every teacher education student

COURSE INFORMATION

TED 4550 - 002: Computational Thinking for Educators

CRN: 17597

Term: Fall 2025

Delivery Method: 100% Online, asynchronous

INSTRUCTOR INFORMATION

Pilar Gonzalez, [PG] M.A. Ed, Adjunct Professor, **Gillian Bausch [GB]**, Post Doctoral Researcher

Written Communication: When emailing us, make sure you copy both of us.

Phone Number: N/A

Office Hours:

- **Virtual:** Monday and Wednesday, 1:00 PM – 2:00 PM, through Teams [PG]
- **Virtual:** Wednesday 2:00 – 4:00 PM [GB]

Course Information: What this class is about and what we will do

* RATIONALE FOR THE COURSE

This course focuses on developing computational thinking competencies for educators. It covers the use of computational methods in the teaching/learning process, including decomposition, pattern recognition, data structures, abstraction, and algorithmic thinking. In addition, the course covers the appropriate selection and use of computational tools designed to be cognitive partners of the humans operating them. It will inform educators who are concentrating on becoming teachers, instructional designers, and training facilitators about computational



Workshop Photos





Is the "El Paso Computes Approach" Working?

- The evaluation team conducted a retrospective pre-post evaluation design for both identified beginner and advanced participant teachers
- Participant Teachers included EPISD elementary/middle/high school teachers
- The evaluation focused on measuring:
 - basic computer science (CS) and artificial intelligence (AI) knowledge
 - computational thinking (CT) knowledge and skills
 - teachers' attitude to use and teach CS and AI
 - teachers' willingness to use and teach CS and AI



Evaluation

- Results show statistically significant increases in CS and AI content knowledge and computational thinking for both workshop strands.
- The inclusion of AI in the training was appreciated as teachers added AI as a tool which helps perfecting work from basic to advanced and helping students to think about precise prompts.
- Data collection with interviews in the advanced strand revealed several findings: Teachers appreciated the networking opportunity and community building particularly as it breaks the seeming isolation of being (often) the sole CS teacher in a school.
- The results indicate that there were increases in teachers' perceived confidence of CS and AI knowledge as well as increased attitudes and willingness to use and teach CS using AI.
- This Evaluation Report is available for review [here](#).



Over-arching Outcome Tracking to Date

Spoiler Alert: "Real Impact!"

- **Secondary Students**

- Cyber Patriot Camp Dates: 6/9/2025 - 6/20/2025 - 33 participants
- AI Camp Dates: 6/23/2025 - 6/27/2025 - 44 participants
- Cyber Patriot Camp Dates: 7/7/2025 - 7/18/2025 - 56 participants
- AI Camp Dates: 7/21/2025 - 7/25/2025 - 58 participants

- **Teachers in Training**

- 64 course completers

- **K-12 Teachers /Teacher Residents**

- 287 current teachers and residents in districts

- **Training the Trainers**

- 37 UTEP and EPCC faculty and site coordinators

- **CS-Certified Teachers**

- 10+ teachers certified in 8-12 Computer Science



105

SCHOOLS IMPACTED



287

TEACHERS TRAINED



10+

TEACHERS CERTIFIED IN
COMPUTER SCIENCE



RESOURCES

EP Computes Website

- [EP Computes Website](#)
- [EP Computes Video](#)





THANK YOU



UTEP

COLLEGE OF EDUCATION