SHASTA-TEHAMA-TRINITY JOINT COMMUNITY COLLEGE DISTRICT
11555 Old Oregon Trail, Redding, CA 96003
P.O. Box 496006, Redding, CA 96049-6006
Telephone (530) 242-7500

2025 Innovation Mini-Grant Agreement

This 2025 Innovation Mini-Grant Agreement (hereinafter referred to as "AGREEMENT") is entered into by and between the **Shasta-Tehama-Trinity Joint Community College District** (hereinafter referred to as "DISTRICT") on behalf of the sponsored grant program Innovation Mini-Grants, and the **Shasta College Division of Science, Language Arts, and Math** (hereinafter referred to as "GRANTEE"), to perform the work which is more particularly set forth in this AGREEMENT and in the Attachments attached hereto and incorporated into this AGREEMENT by this reference.

RECITALS

WHEREAS, the District has awarded a grant for the purpose of implementing the project, **AI Science and Math**, (hereinafter referred to as "Project");

WHEREAS, the DISTRICT and the GRANTEE desire to enter into an agreement calling for management of this innovative Project;

NOW, THEREFORE, the parties mutually agree as follows:

1. STATEMENT OF WORK. The GRANTEE shall perform the work stated in Attachment A, 2020 Innovation Mini-Grant Application (hereinafter referred to as "Work").

2. TERM. The term of this AGREEMENT shall commence on **July 1, 2025,** and shall expire **December 31, 2026.**

3. ALLOWABLE COSTS. The total amount of funds made available to GRANTEE under this AGREEMENT shall not exceed **$16,319,** as specified in Attachment B, 2025 Approved Budget Worksheet. The DISTRICT shall establish budget codes on behalf of the GRANTEE. In no event shall funding be made available prior to the TERM of this AGREEMENT. Allowable costs under this AGREEMENT shall be determined in accordance with the DISTRICTS established policies and procedures and in conjunction with Attachment B, 2025 Approved Budget Worksheet.

4. SEPARATE ACCOUNTING. The DISTRICT will establish separate accounts for all funds specified in this AGREEMENT. The GRANTEE will use the funds to perform the Work specified in Attachment A, Mini Grant Proposal. As applicable, the GRANTEE and/or their Department authorized representative shall complete District required forms including, but not limited to, Authorizations for Hire, Purchase Requisitions, and Travel Requests. Authorizations required to process forms or transactions shall be obtained through the GRANTEES department. In addition, the GRANTEE agrees to establish and maintain such accounting and documentation of expenditures to satisfy the requirements of the DISTRICT.

5. BUDGET. The Budget, Attachment B, lists costs and categories of costs approved to fund the GRANTEES performance of the Work. In no event shall the GRANTEE expend a single line item by 15% or more of the approved budget without prior written approval from the DISTRICT. In no event shall the GRANTEE exceed the approved budget. In the event the approved budget is exceeded the GRANTEES division/department will be responsible to pay those costs. Any budgeted funds not expended by the end of the grant will be returned to the DISTRICT.

6. REPORTING. GRANTEE agrees to provide written and/or verbal reports during and after the term of this AGREEMENT. Reports shall be submitted to the Office of Grant Development, with a Mid-Cycle report due March 30, 2026, and a Final Report due January 31, 2027. Mid-Cycle and Final Reporting shall be completed using Attachment B, 2025 Approved Budget Worksheet; Attachment C, Mid-Cycle Report; and Attachment D, Final Report.

7. AUTHORIZED REPRESENTATIVES. For the purpose of this AGREEMENT, the individuals signatures at the end of this document are hereby designated representatives of the respective parties.

8. ASSIGNMENT. The GRANTEE may not assign, transfer or sub-award any part of this AGREEMENT, any interest herein or claims hereunder, without the prior, written approval of the DISTRICT.

9. CHANGES. By mutual written consent, the GRANTEE and the DISTRICT may make changes to the Work and to the terms of this AGREEMENT. Any such changes shall be in the form of a written amendment signed by authorized representatives of the GRANTEE and the DISTRICT.

10. EQUIPMENT. Upon termination of this AGREEMENT, equipment furnished or purchased by the GRANTEE for the project shall be retained by the DISTRICT.

11. CONTACTS. For all matters concerning the terms or changes to this Agreement, the GRANTEE shall contact:

Amy Schutter
Director of Grant Development
aschutter@shastacollege.edu
530-242-7613

12. ENTIRE AGREEMENT. This AGREEMENT is the complete agreement of the GRANTEE and the DISTRICT and supersedes all prior understandings regarding the Work.

IN WITNESS WHEREOF, the respective parties have executed this AGREEMENT on the dates indicated below.

By: Amy Schutter
Amy Schutter, Director of Grant Development Date

By: Kate Mahar (06/10/2025 08:37 PDT)
Dr. Kate Mahar, Assoc. Vice President, Strategic Initiatives/SCAILE Date

By:
Andrew Vines, Dean of Science, Language Arts, and Math Date

By: Divan Fard (07/08/2025 11:20 PDT)
Divan Fard, Faculty Date

By: Timothy Shelton (07/14/2025 21:54 PDT)
Tim Shelton, Faculty Date

By: Randy Bush (07/15/2025 07:51 PDT)
Randy Bush, Faculty Date

2025 Approved Innovation Mini-Grant Budget Worksheet -Adjusted 11.18.25

Project Name:	MG12 Investigation of current applications of AI in teaching Science & Math	**Department**	SLAM

BUDGET ITEM	QUANTITY & DESCRIPTION	BUDGET	Costs 7/1/25-6/30/26		Costs 7/1/27-12/31/27	TOTALS
EMPLOYEE COSTS						
Faculty Stipend $50/per hour [redacted]	Stipends to complete 1 to 2 hours of work per wk per sem. (66 hrs at $50/hr & 134hrs @ $60.53/hr)	$ 11,411.00	$ 0.00		$ 0.00	$ 11,411.00
Student Worker [redacted]		$ 908.00	$ 0.00		$ 0.00	$ 908.00
ESTIMATED BENEFIT COSTS, *automatically calculated using the percentages listed*						
Faculty Stipend Total multiplied by	22.40% Estimated Benefits Total Cost	$ 2,568.00	$ 0.00		$ 0.00	$ 2,568.00
Student Worker Total multiplied by	1.75% Estimated Benefits Total Cost	$ 159.00	$ 0.00		$ 0.00	$ 159.00
SUPPLIES Event refreshments, testing materials, SWAG etc. Object Codes: I-430000/ NI-439900		$ 0.00	$ 0.00		$ 0.00	$ 0.00
STUDENT AID: **Must be reported to Financial Aid** Educational fees, meals, transportation /bookstore vouchers. Object Code: 761xxx		$ 0.00	$ 0.00		$ 0.00	$ 0.00
EQUIPMENT/FACILITIES RENTALS Object Codes: 520000/ 521100		$ 0.00	$ 0.00		$ 0.00	$ 0.00
EQUIPMENT **($0-$4,999.99 Not Tagged)** (Refer to the Business Office "Fixed Asset (Equipment) Purchases") Object Code: 640000		$ 0.00	$ 0.00		$ 0.00	$ 0.00
EQUIPMENT **($5,000 or greater Tagged)** (Refer to the Business Office "Fixed Asset (Equipment) Purchases") Object Code: 649000		$ 0.00	$ 0.00		$ 0.00	$ 0.00
POSTAGE/ADVERTISING Postage costs or to place a newspaper, radio or web-based ad.Object codes: 508000/590400		$ 0.00	$ 0.00		$ 0.00	$ 0.00
PRINTING Purchases including posters, flyers, brochures & classroom materials. Object Code: 590500		$ 0.00	$ 0.00		$ 0.00	$ 0.00
SERVICE FEES/OTHER CHARGES Contracted work including speakers, trainers & other professional srvs. Object Codes: 530000/573000		$ 0.00	$ 0.00		$ 0.00	$ 0.00
SOFTWARE Software-related licenses and purchases. Object [redacted]		$ 3,000.00	$ 0.00		$ 0.00	$ 3,000.00
TRAVEL/OTHER TRAVEL Staff/Other & Student Field Trip costs. Object Codes: Staff: 511000/ Other Travel:511100/ Field Trips:591100		$ 0.00	$ 0.00		$ 0.00	$ 0.00
TOTALS	**Note: The "Balance" and "Totals" columns auto-calculate**	$ 18,046.00	$ 0.00		$ 0.00	$ 18,046.00

2025 Approved Innovation Mini-Grant Budget Worksheet

Attachment B

Project Name:	MG12 Investigation of current applications of AI in teaching Science & Math	**Department**	SLAM

BUDGET ITEM	QUANTITY & DESCRIPTION	BUDGET	Costs 7/1/25-6/30/26		Costs 7/1/27-12/31/27	TOTALS
EMPLOYEE COSTS						
Faculty Stipend $50/per hour [redacted]	Stipends to complete 1 to 2 hours of work per wk per sem. (200 hrs at $50/hr)	10000	0		0	10000
Student Worker [redacted]	data entry, organization, beta testing. 55 total hours at $16.50/hr	908.00	0		0	908
ESTIMATED BENEFIT COSTS, *automatically calculated using the percentages listed*						
Faculty Stipend Total multiplied by	22.40% Estimated Benefits Total Cost	2252.	0		0	2252
Student Worker Total multiplied by	1.75% Estimated Benefits Total Cost	159.00	0		0	159
SUPPLIES Event refreshments, testing materials, SWAG etc. Object Codes: I-430000/ NI-439900		0.00	0		0	0
STUDENT AID: **Must be reported to Financial Aid** Educational fees, meals, transportation /bookstore vouchers. Object Code: 761xxx		0.00	0		0	0
EQUIPMENT/FACILITIES RENTALS Object Codes: 520000/ 521100		0.00	0		0	0
EQUIPMENT **($0-$4,999.99 Not Tagged)** (Refer to the Business Office "Fixed Asset (Equipment) Purchases") Object Code: 640000		0.00	0		0	0
EQUIPMENT **($5,000 or greater Tagged)** (Refer to the Business Office "Fixed Asset (Equipment) Purchases") Object Code: 649000		0.00	0		0	0
POSTAGE/ADVERTISING Postage costs or to place a newspaper, radio or web-based ad.Object codes: 508000/590400		0.00	0		0	0
PRINTING Purchases including posters, flyers, brochures & classroom materials. Object Code: 590500		0.00	0		0	0
SERVICE FEES/OTHER CHARGES Contracted work including speakers, trainers & other professional srvs. Object Codes: 530000/573000		0.00	0.00		0	0
SOFTWARE Software-related licenses and purchases. Object [redacted]	Premium subscriptions to a variety of AI platforms for testing (Gemini Ed, Packback, NectirAI, Canva, etc)	3000.00	0.00		0	3000
TRAVEL/OTHER TRAVEL Staff/Other & Student Field Trip costs. Object Codes: Staff: 511000/ Other Travel:511100/ Field Trips:591100		0.00	0.00		0	0
TOTALS	**Note: The "Balance" and "Totals" columns auto-calculate**	16319	0		0	16319

2025 Innovation Mini-Grant Application

Shasta College

Applicant:	Divan Fard, Tim Shelton, Randy Bush
Division/Dept. Name:	SLAM
Project Title:	Investigation of current applications of AI in teaching Science & Math
Focus Area:	☑ Pedagogy ☑ Closing Achievement Gaps ☐ Other
Project Overview	Describe how the proposed project aligns with one or more of the following themes. Explain how the project is innovative and addresses challenges or opportunities in these areas. • Evidence-based teaching and learning strategies • Meeting course learning outcomes in the age of AI • Increasing non-credit course offerings • Increasing certificate and degree completion • Improving online learning • Increasing success, retention, and persistence • Reducing achievement gaps • Other (please provide rationale if not applicable to above)

Generative AI is an enormously useful tool that has seen tremendous growth in availability, in variety of functions, and in applicability in educational spheres. Our group aims to investigate some of the many available AI platforms and access levels (free vs. premium), test a variety of ways to implement them in our courses, and measure differences in outcomes for our courses or programs.
Here are few ways AI can be leveraged:
1) Evidence-based teaching and learning strategies
demonstrate statistically significant effects on improving student learning and performance outcomes.
We are going to search and review all current usage of AI in teaching Chemistry, Math and Biology. We will try to apply the AI in our classes.
We will Collect data by using SLO's to study and demonstrate their effectiveness in improving student learning outcomes. Our strategies focus on student-centered learning environments and aim to provide high-quality instruction.

2) Meeting course learning outcomes in the age of AI
We will measure learning outcomes, clearly define measurable objectives, use appropriate assessment methods (formative and summative), analyze the data, and utilize feedback to improve teaching and learning.

3) Increasing non-credit course offerings
AI implementation in the public sector can significantly impact the public by enhancing service delivery, improving efficiency, enabling data-driven decision-making, and fostering innovation. Our studies could help to initiate personalized AI-based courses that would provide a general understanding of Chemistry, Math and Biology in a short non-credit course.

4) Increasing certificate and degree completion
AI in teaching can potentially boost certificate and degree completion by offering personalized learning experiences, early intervention for struggling students, and increased efficiency in tasks like grading and administration, ultimately leading to improved engagement and increasing certificate and degree completion.

5) Improving online learning
AI has the potential to significantly improve online learning by offering personalized experiences utilizing custom chat bot tutors for online courses, automating tasks, and simplifying time-consuming formating and design, and enhancing student engagement and accessibility. Please see the link below for more proof of these claims:
https://www.faulkner.edu/news/the-role-of-artificial-intelligence-in-online-learning/

6) Increasing success, retention, and persistence
AI-driven analytics can detect at-risk students early by analyzing academic performance allowing for proactive support.

Personalized learning experiences are enhanced by AI, which customizes coursework and study plans to meet individual student needs and boost success rates.

AI technologies like chat bots and predictive analytics improve student engagement through timely interventions, ensuring students remain connected and supported throughout their academic journey.

https://www.liaisonedu.com/resources/blog/leveraging-ai-for-student-retention-strategies-for-undergraduate-success/

7) Reducing achievement gaps
By combining the proven benefits of high-dose tutoring with the scalability and adaptability of AI, we can bridge long-standing achievement gaps and provide all students with the support they need to succeed.

https://www.sir.advancedleadership.harvard.edu/articles/harnessing-power-generative-ai-close-achievement-gap

8) Other (please provide rationale if not applicable to above)
We are trying to use this mini grant to come up with evidence-based enhancements to learning by researching current usage trends and implementing AI in our courses at Shasta College. We hope to open new avenues to find sources of major grants to start developing and implementing the use of AI for our courses. The goal would be to publish the data found so that other community colleges can utilize those results.

Student Impact	The primary focus of the Innovation mini-grant program is to positively impact student learning and success. Please describe the following: • Which course or program learning outcomes (PLOs/SLOs) does your project aim to improve? • How will your project enhance equity, engagement, or access for students? • How will it improve student outcomes (e.g., success, retention, persistence)? • Does your project address achievement gaps? If so, how? • How will you measure the results of the project? How will results be documented? (Consult with Institutional Research as needed.)

Because there are multiple instructors teaching different courses the SLOs will be different, but the PLOs for a University Studies degree are similar and we are confident that effective utilization of AI in our courses will impact multiple PLOs.
1. Critical Thinking: by effectively implementing AI in our courses we are in a position to teach our students HOW to use available tools ethically and analyze AI generated information.
2. Information Competency: Using AI tools will enable students to stay current on the dominant information trend of our time.
5. Self-Efficacy: By using AI tools and showing students how to use them effectively in the course we can help them gain confidence in necessary skills for their academic and professional goals.
6. Workplace Skills: See #5

How will your project enhance equity, engagement, or access for students?
Personalized Learning: AI can assist with tailored educational content and support, ensuring all students receive the necessary assistance.
Addressing Learning Gaps: AI can identify students who may be at risk of falling behind, enabling timely interventions and personalized learning pathways to help bridge educational gaps caused by varying levels of prior educational access.

AI-powered tools can help ensure fairness in content recommendations and avoid reinforcing existing biases.
AI can assist with handwriting difficulties using predictive text and grammar correction, making it easier for students to communicate ideas.

How will it improve student outcomes (e.g., success, retention, persistence)?
AI technologies are proving to be invaluable tools for enhancing student retention and success in higher education. By identifying at-risk students, personalizing learning supports, and enabling timely interventions, AI is driving measurable improvements in the student experience and persistence rates. As institutions continue to embrace these innovations, the future of student success looks increasingly promising, highlighting AI's critical role in shaping effective student retention strategies and the overall landscape of higher education.
Please see the following link:
https://www.liaisonedu.com/resources/blog/leveraging-ai-for-student-retention-strategies-for-undergraduate-success/

How will you measure the results of the project? How will results be documented?

Once specific AI tools have been identified and implemented, we can compare SLO data before and after implementation in our courses. PLO data would also be interesting but I suspect that measurable changes in that data might take longer than the scope of this grant to show up. I would be interested in a longer term analysis to see if a positive trend emerges. We will also measure student's opinions of the efficacy of the tools and their perceived self-efficacy through shared Canvas quizzes.

Collaboration	Collaboration is essential for scaling and sustaining innovative projects. Please: • List internal and/or external collaborative partners involved in the project (Across campus? Across academic segments? Community?) • Confirm that the partners are aware of the project and describe their roles and responsibilities in implementation

List internal and/or external collaborative partners involved in the project (Across campus? Across academic segments? Community?)

This project will involve collaboration between departments of Chemistry and Math involving three different faculty members.

Confirm that the partners are aware of the project and describe their roles and responsibilities in implementation.

Each faculty member is going to review a variety of AI tools and platforms in their individual courses. There would be at least six different courses to implement and gather evidence of learning improvements of the students. Once specific usages of AI have been decided upon we will collaborate with implementation and discuss trends in learning outcomes.

Future Possibilities	The Shasta College mini-grants initiative provides the testing ground for innovative ideas and pilot projects that may be used on a broader scale. Please address how your proposed project is: • Replicable (easily shared with other campus programs) • Scalable • Cost-Effective (e.g., through number of students served; through District efficiencies increasing service to students; or if scaling up will prove cost-effective) (Please consult with SCAILE/Innovation Office if needed kmahar@shastacollege.edu.)

Please address how your proposed project is:
Replicable (easily shared with other campus programs)
We will invite faculty member from other campus programs to professional development workshops/presentations to share results from our project.

Scalable?
This project is easily scalable once decisions about what tools to use and how to implement them have been made. Access to AI tools and training in how to best utilize them can be easily spread to interested faculty through webinars or other professional development sessions.

Cost-Effective (e.g., through number of students served; through District efficiencies increasing service to students; or if scaling up will prove cost-effective)
Most premium versions of AI tools have an institutional access option that would make widespread use of tools very cost-effective.

Logistics/ Timeline	The mini-grant cycle (planning, implementation, and evaluation) is a maximum of 18 months (Fall-Spring-Fall). Ensure that: • Your project can be completed within 18 months • If any portion of your project involves Physical Plant or I.T., you consult the identified personnel listed below • Other funds do not exist to implement your project Please create an estimated timeline for each of the major components of your proposal.

I.T. approval is required, if your project includes any technology-related needs.
Contact Michael Saechao at 530-242-7994 or msaechao@shastacollege.edu to discuss and receive approval.

Physical Plant approval is required, if your project includes changes to facilities.
Contact Isabella Greenleaf at 530-242-8617 or igreenleaf@shastacollege.edu to discuss and receive approval.

Fall 2026 will be spent examining different AI tools and platforms. Approximately 1-2 hours per week outside of contract hours.
Spring 2026 will be spent implementing the different AI tools and monitoring their impacts on SLOs and student's opinions of the efficacy of the tools through shared Canvas quizzes.
Fall 2027 will be consist of additional modifications to initial implementation of AI tools, analysis of the results of Spring '26 usage, and preparing presentations/workshops for Spring '28 FLEX day to show other faculty different ways to implement tools in their own courses.

Signatures are required prior to submitting the application to the Office of Grant Development. Electronic signatures are acceptable Due by April 1, 2025 at 5:00 p.m.	
Applicant(s) Signature	Divan Fard Digitally signed by Divan Fard Date: 2025.03.28 09:55:08 -07'00'
Dean or Supervisor's Signature (required)	Andrew K. Vines Digitally signed by Andrew K. Vines Date: 2025.03.31 19:44:25 -07'00'
I.T. Consulted (if needed) (Signature)	
Physical Plant Consulted (if needed) (Signature)	

Rev. 2.25.2025

2025 Innovation Mini-Grant Application Budget

Attachment A

This form is the proposed budget for your project. Please itemize all costs necessary to complete your project during the 18-month grant term.

Allowable Costs:

- ✓ Faculty may receive a stipend for project-related work above and beyond their normal duties as a faculty member. Stipends are calculated at the professional expert rate and timecards must be kept and submitted for payment. Estimate the total hours you estimate it will take to complete the project. See "example calculation" to determine the total stipend for each person working on the project. *Example calculation: 50 hours of work multiplied by $50. /hour = $2,500 total stipend (enter this in the "TOTALS" line)*
- ✓ Classified employees & Administrators are not eligible for additional compensation. Any work performed must be included in the regular workday/schedule.
- ✓ Student Workers will be paid at the current minimum wage.
- ✓ You may hire temporary contractors if your project requires this type of work. List these services under "Service Fees/Other Charges."
- ✓ Student gift cards or incentives are allowable but must follow Business Office guidelines and be reported to Financial Aid.

Unallowable Costs:

- ❖ Hiring new staff.
- ❖ Release time will not be approved to complete the work related to this project.

Project Title:	Investigation of current applications of AI in teaching Science & Math

BUDGET ITEM	QUANTITY & DESCRIPTION	TOTALS
EMPLOYEE COSTS		
Faculty Stipend: STRS-applicable work. Estimate the number of hours needed x $50 per hour. Stipends are subject to taxes and benefit deductions.	300 hours of work (3 faculty, ~1-2 hrs per week per semester for 3 semesters)	$ 15,000.00
		$ 0.00
		$ 0.00
		$ 0.00
		$ 0.00
		$ 0.00
Student Worker:	A student worker would help with data entry, organization, and beta testing the student side of some of these tools.	$ 1,000.00
		$ 0.00
		$ 0.00
		$ 0.00
		$ 0.00
		$ 0.00

ESTIMATED BENEFIT COSTS - This section will **automatically calculate the total** based on the total listed in the Employee Costs section

Faculty Stipend Total multiplied by	22.40%	Totals Automatically Calculated	$ 3,360.00
Student Worker Total multiplied by	1.75%		$ 17.50

BUDGET ITEM	QUANTITY & DESCRIPTION Attachment A	TOTALS
SUPPLIES: Event refreshments, testing materials, promotional items, etc.		$ 0.00
		$ 0.00
		$ 0.00
		$ 0.00
STUDENT AID: Must be reported to Financial Aid. Educational fees, meals, transportation/bookstore vouchers, and other gift cards/incentives with a monetary value.		$ 0.00
		$ 0.00
		$ 0.00
		$ 0.00
FACILITY RENTALS:		$ 0.00
		$ 0.00
		$ 0.00
EQUIPMENT ($0-$4,999.99 Not Tagged): (Refer to the Business Office "Fixed Asset (Equipment) Purchases" for info.).		$ 0.00
		$ 0.00
		$ 0.00
		$ 0.00
EQUIPMENT ($5,000 or greater Tagged): (Refer to the Business Office "Fixed Asset (Equipment) Purchases" for info).		$ 0.00
		$ 0.00
		$ 0.00
		$ 0.00
POSTAGE/ADVERTISING: Postage, costs to place a printed, radio or web-based ad.		$ 0.00
		$ 0.00
		$ 0.00
PRINTING: Printing-related items, such as posters, flyers, brochures, and classroom materials/manuals.		$ 0.00
		$ 0.00
		$ 0.00
SERVICE FEES/OTHER CHARGES: Contracted work such as speakers, trainers, and other professional services.		$ 0.00
		$ 0.00
		$ 0.00
SOFTWARE: Software-related licenses and purchases.	Premium subscriptions to a variety of AI platforms for testing (Gemini Education, Packback, NectirAI, Canva, etc)	$ 3,000.00
		$ 0.00
		$ 0.00
TRAVEL/OTHER TRAVEL: Staff/Other & Student Field Trip costs.		$ 0.00
		$ 0.00
		$ 0.00
	BUDGET TOTAL	$ 22,377.50

If you have questions, please contact: Amy Schutter, Director of Grant Development at aschutter@shastacollege.edu or 530.242.7613.