



Request for Proposals 2022

Seeding Strategies (II) to Close the Calculus Equity Gap

Table of Contents

- I. [Funding Opportunity](#)
 - II. [Application Requirements](#)
 - III. [Selection Process and Scoring Rubric](#)
 - IV. [Post Award Agreements and Deliverables](#)
 - V. [Terms and Definitions](#)
-



I. Funding Opportunity

The California Education Learning Lab (“Learning Lab”) is a grantmaking organization that was established by [Assembly Bill 1809 \(Chapter 33, Statutes of 2018\)](#) to improve learning outcomes and close [equity gaps](#) in public higher education. Grants are awarded through a competitive process to California’s public colleges and universities for innovative projects in science, technology, engineering, and mathematics (STEM) and other disciplines. Learning Lab’s unique focus is to promote a positive feedback loop between learning theory/research and educational practice, enabled by technology-rich environments, which can then be shared and scaled for the benefit of students.

Through this RFP (Seeding Strategies II), Learning Lab intends to award 15 additional grants of up to \$100,000 per awardee for up to two years. California Community Colleges, and California State University and University of California campuses may apply. Awards will be made on a rolling basis between August and December 2022. Grant projects may commence upon execution of the grant agreement.

Learning Lab’s 2022 “Seeding Strategies II” funding opportunity is designed to further the intent of the [Grand Challenge: Overcoming the Calculus Barrier to STEM Success](#).

In June 2021, Learning Lab awarded nine “Grand Challenge” grants to faculty teams from California’s public higher education institutions to reconceptualize the role of and approach to calculus.

In May 2022, Learning Lab awarded 15 projects under Seeding Calculus Strategies for campuses to plan and implement aligned strategies to overcome calculus as a barrier to STEM success.



Background

Closing the equity gap in calculus is critical because calculus functions as a gatekeeper for students interested in pursuing STEM majors and careers. Women and students from historically underrepresented groups are disproportionately impacted by the calculus barrier. Researchers have found that of women and historically underrepresented students who entered postsecondary institutions with an interest in STEM, 20 percent successfully completed STEM degrees, compared with a 40 percent completion rate among all students who entered with interest in STEM¹. This pattern is further evidenced in the report recently published by Learning Lab in partnership with Just Equations, “[Charting a New Course: Investigating Barriers on the Calculus Pathway to STEM](#)”, which demonstrates that the introductory calculus sequence continues to be a significant barrier to persistence in STEM pathways.

Theories explaining such disparities range from differential access to K-12 preparation to challenges related to postsecondary math placement, curriculum, and grading practices. Meanwhile, a growing body of research identifies the ways in which calculus is not working for many students, and, increasingly, identifies promising strategies for improving student learning and faculty instruction in **calculus course sequences**.

Based upon this research and guided by Learning Lab’s approach to systemic change, this RFP, “Seeding Strategies II to Close the Calculus Equity Gap”, is designed as a **department-level funding opportunity** to encourage the implementation of select promising curricular and pedagogical strategies to close equity gaps in calculus course sequences.

¹ Gates, S. J., Jr., Handelsman, J., Lepage, G. P., & Mirkin, C., PCAST STEM Undergraduate Education Working Group, (Eds.). (2012). Engage to excel: Producing one million additional college graduates with degrees in science, technology, engineering, and mathematics. Executive Office of the President and President’s Council of Advisors on Science and Technology, Washington, DC.
<https://www.energy.gov/sites/prod/files/Engage%20to%20Excel%20Producing%20One%20Million%20Additional%20College%20Graduates%20With%20Degrees%20in%20STEM%20February%202012.pdf>



Funding Priorities

This opportunity prioritizes funding colleges and universities that experience equity gaps in calculus access and success. Applicants must provide data regarding existing [equity gaps](#) on their campuses. Moreover, proposed projects must have potential to improve learning outcomes and close equity gaps for STEM students. **Applicants are requested to read “[Charting a New Course](#)” and required to propose implementation of one or more of the following curricular**

Learning Lab will award \$100,000 planning and implementation grants to CCCs, CSUs, and UCs.

or pedagogical strategies within the calculus course sequence at their respective institutions. Each set of strategies below is cross-referenced to the corresponding relevant sections of the report.

1. Course coordination among faculty within a department around learning objectives, use of class time, assessment, and/or grading such as standards-based grading approaches; [See ***Deepening Professional Learning***, p.18, paragraphs 3-5; ***Classroom Instruction***, p.10-11, paragraph 4; ***Assessment and Grading***, p.11, entire section; ***Rethinking Grading and Assessment Practices***, p.17, entire section]
2. Redesign placement practices and/or course(s) in the prerequisite pathway or streamline the prerequisite pathway itself leading up to calculus to better align with calculus success; [***Placement, Articulation, and the Pathway to Calculus***, p.8-9, entire section; ***Revising Placement Practices***, p.12-13, entire section;]
3. Redesign calculus for disciplines such as life sciences or computer science, using modeling and/or contextualized examples, or utilizing other prerequisites in place of calculus, such as focusing on discrete math; [***Curriculum***, p.9-10, entire section; ***Redesigning Calculus Curriculum***, p.13-14, paragraphs 1-3 and Macalaster box; ***Redesigning On-ramps to STEM***, p.14, entire section.]
4. Re-sequence course content, such as the order that integration, differentiation, series, and limits is covered for Calculus I; [***Redesigning Calculus Curriculum***, p.13-14, paragraphs 4-5; see review of [Bressoud's Calculus Reordered](#)²]
5. Integrate active learning and enhance the learning environment to support authentic student engagement and participation, including blended strategies that positively impact math attitudes and identity; and [***Part One introduction***, p.4, paragraph 6; ***Classroom Instruction***, p.10-11, paragraph 3-4; ***Redesigning Calculus Curriculum***, p.13-14, paragraphs 1-2; ***Improving Classroom Instruction and Support***, p.15-17, entire

² Steve Deckelman, Review of *Calculus Reordered*, Mathematical Association of America, 8/24/2019, <https://www.maa.org/press/maa-reviews/calculus-reordered>.



section; **Prioritizing Other Student Supports**, p.17, paragraph 1; **Deepening Professional Learning**, p.18, paragraphs 6-7]

6. Institutionalize professional development and/or community of practice for department or inter-department faculty and/or graduate student instructors on inclusive and student-centered approaches to teaching courses in the calculus sequence.³ [**Classroom Instruction**, p.10-11, paragraphs 1 and 5; **Improving Classroom and Instruction Support**, p.15-17, entire section; **Deepening Professional Learning**, p.18, entire section]

“Course” in the above strategies refers to any of the *college-level* courses within the calculus sequence at the respective institution, and does not include remedial courses.

Learning Lab has geared this funding opportunity toward STEM departments, with the recognition that systemic change and scaling of successful approaches require departmental commitment and leadership.

While this RFP requires that the PI be a department dean or chair, we also hope that this opportunity will spur collaboration among faculty and embed an inclusive approach throughout the project. Applicants are encouraged to implement strategies as widely as possible within a department and the calculus sequence in ways deemed realistic and achievable by the applicant team. Additionally, when a selected strategy impacts multiple disciplines, collaboration across departments within a single institution (e.g., a math department and a biology department) is also encouraged.

Finally, unlike most Learning Lab RFPs, this funding opportunity *does not require* projects to be intersegmental per se as part of direct project activities. However, Learning Lab encourages applicants to consider whether partnering with institutions from other segments (i.e., CCCs, CSUs, UCs) would significantly contribute to project success. Partnership options include a consultation model or parallel implementation model, where each institution may independently apply for and potentially receive a \$100,000 grant award. For community colleges seeking to boost transfer rates to UC or CSU, intersegmental collaboration would be particularly beneficial.

³ This could include, but not be limited to, methods for incorporating diverse social and cultural contexts into instruction, strategies to build rapport between instructors and students, and strategies to address the affective domain (e.g., sense of belonging, sense of identity, social and emotional contexts, or growth mindsets).

Applicants are encouraged to consider incorporation of other student-centered approaches that support students' math identity and sense of belonging, such as intentionally engaging with student networks, leveraging summer bridge programs, and coordinating efforts with student affairs staff. While the provision of ancillary student supports falls outside the scope of the six strategies noted above, proposed projects may include them in the project design with nominal faculty/staff time to coordinate efforts. [See "[Charting a New Course](#)", *Prioritizing Other Student Supports*, p.17, entire section.]

Proposal may be submitted through Learning Lab's [online application portal](#) between August 1, 2022 (12:01am PT) and December 16, 2022 (5:00pm PT). Awards will be made on a rolling basis, until all award funding is committed.

Portal link goes live on August 1.



Eligibility

To apply for a “Seeding Strategies II to Close the Calculus Equity Gap” grant, applicants must:

- Be a public, postsecondary institution in California⁴;
- Propose to implement one or more promising strategies from the calculus report; (summarized in this RFP beginning on [page 4](#)) to improve the calculus course sequence;
- Identify a department chair or dean as the project PI; and
- Include an [institutional cover letter](#) signed by the PIs/Co-PIs and the institution’s president/chancellor, vice chancellor/vice president of instruction, or provost or equivalent.

Timeline

Application Stage	Date
Release of Seeding Strategies II	Wednesday, July 6, 2022
Calculus Report Webinar	Recording Available
Submit Questions to Learning Lab: info@calearninglab.org	Anytime
Technical assistance	Email us @ info@calearninglab.org to schedule.
Proposal submitted via Online Portal Portal link goes live on August 1.	Beginning August 1, 2022 (12:01am PT), through December 16, 2022 (5:00pm PT), or until all available awards are exhausted. Website will indicate whether awards are still available.
Notification of Award	No later than 30 days after submission.
Deadline to execute Grant Agreement Projects and activities commence	No later than 30 days after notification of award.

⁴ Other institutions, their employees, or private consultants may be contracted as sub-grantees on the project if their expertise would support implementing a change effort at a single institution.



II. Application Requirements

Summary of funding parameters:

- Grants. Up to \$100,000 per institution
- Project Duration. Up to two years, beginning no later than 60 days after award notification, for planning and implementation (Note: a planning phase is not required if the applicant proposes a project that is ready for implementation.)
- Number of Awards. Learning Lab intends to award 15 grants under Seeding Strategies II.
- Proposed projects should:
 - Provide needs statement with existing data on student enrollment and outcomes in calculus course sequences disaggregated by race/ethnicity and gender (e.g., course placement data, DFW rates, correlation between grades received and success in subsequent courses in the calculus sequence);
 - Plan and implement one or more promising strategies to improve the calculus course sequence (summarized in this RFP beginning on [page 4](#));
 - Be designed to result in positive outcomes for *students*, particularly for women and historically underrepresented student groups and, if relevant, changes in *faculty* mindset or practices, including the adoption of more inclusive and effective teaching practices.

Applicants may use this [Word document](#) to prepare Proposal responses offline before entering them into the portal. This document, if uploaded to a shared drive, may help applicants to facilitate collaborative development of the submission.

Proposal: Applicants may submit all required materials through Learning Lab's [Online Application Portal](#), beginning on **August 1, 2022 at 12:01am PT**. Applications will be reviewed and awards to projects made on a rolling basis, **until all award funding has been committed or December 16, 2022 at 5:00pm PT**, whichever occurs earlier. Notice shall be provided on Learning Lab's [website](#) when Seeding Strategies II is closed.

Portal link goes live on August 1.

Within the application portal, applicants will be required to confirm the institution (and any partnering institutions through a consultation model or parallel implementation model, if applicable), STEM courses impacted, and the names of PIs/Co-PIs.



Applicants will also be required to upload two documents. The first upload will be a single PDF document that will include the Institutional Cover Letter and Project Narrative. The second upload will include the Detailed Budget in Excel. These elements are described below.

Institutional Cover Letter

Each applicant [institution](#) must respond to the following bullets in a cover letter on institutional letterhead (**maximum 2 pages**):

- **Institutional alignment and readiness:** Describe why the institution is applying for the grant, how it aligns with its overarching goals or related priority initiatives, and, if funded, any commitment the institution will make to sustaining changes that are found to positively impact students.
- **Principal investigators:** Identify the department dean(s) or chair(s) who will serve as PI(s) and co-PI(s) and address each person's capacity to execute this project.
- **Required signatures:** The institutional cover letter must be signed by both:
 1. the dean(s) and/or chair(s) serving as PI(s)/Co-PI(s) responsible for administering the project; and
 2. the institution's president, chancellor, vice chancellor/vice president of instruction, provost, or equivalent.

Project Narrative (maximum 7 pages)

The project narrative document should be a maximum of 7 pages, with Arial 11 font, single spaced, and no less than 0.5" margins. Applicants **must** retain the section headings underlined below; however, within each section, applicants may respond to the prompts with flexibility to allow for a natural writing flow. (A reference section may follow the application and does not count toward the narrative page count.) We strongly recommend that applicants be as concise and specific as possible in their responses to the prompts. We also encourage project teams to consider including a [logic model](#) to explain the project, to count toward the maximum of 7 pages. The project narrative should answer the following questions (see [Scoring Rubric's](#) Guidance for Applicants):

A. Data and Needs Statement (estimated ¾ page)

Please state the problem that this project aims to solve; that is, what are the specific barriers to student success posed by calculus or the course sequence at your institution(s)? Provide relevant data about student enrollment and outcomes in calculus course sequences related to your proposal, disaggregated by race/ethnicity and gender (e.g., course placement data, DFW rates, correlation between grades received and success in subsequent courses in the calculus sequence).



B. Project Approach and Rationale (estimated 1 ½ pages)

- What promising strategies to improve the calculus course sequence (identified in the report "[Charting a New Course](#)") does the project propose to plan for and implement? (Please identify which of the six options from the RFP section beginning on [page 4](#) are selected and provide references to page numbers and/or citations from the report.)
- What are the goals and intended outcomes of the project? (See [RFP FAQs](#), Project Outcomes and Impact section for guidance on developing outcomes.)
- Who is/are the target population(s) of the proposed project? Please include the size or scope of each, using an [asset-based framework](#) and language.
- Why are the approach(es) selected best suited to improve or change existing circumstances? In addition to the promising strategies identified above, are there any other practices from [page 6](#) that the proposed project plans to deploy? (See [RFP FAQs](#), Project Approach section for example.)
- Please also identify any resources that your project can leverage (e.g., existing materials or Open Educational Resources, existing partnerships, or matching/braided funding)

C. Project and Institutional Readiness (estimated ½ page)

Applicants are encouraged to include a planning phase in their project plan if they deem it beneficial for project success. Teams that have projects ready for implementation may skip or have an abbreviated planning stage. All applicants should provide responses to the questions below that are relevant to the proposed project:

- If the proposed project includes a planning phase, how will the project bring together faculty and/or graduate instructors to plan the project?
- How will the project bring together faculty and/or graduate instructors to coordinate implementation efforts and reflect/evaluate on the project?
- If outreach or recruitment is needed for planning and/or implementation, how will the project team approach soliciting buy-in? Is professional development needed?
- What is your assessment of your department(s)' capacity for successfully implementing the change you propose (i.e., pedagogical change, curricular change, professional development)? Include any related efforts currently underway at your institution or relevant efforts your institution has executed or attempted in the past.
- If the project includes intersegmental partnership, what value will this bring to the project? Does the partnership build upon existing relationships or past/current collaborative efforts?

D. Project Implementation, Assessment, and Sustainability (estimated 3 pages)

This section is intended to capture how applicants may be envisioning project implementation, assessment, and sustainability, understanding that many prospective applicants may want to use the planning phase to more fully develop, refine, or test these plans for practicality. Regardless of whether you are in the early planning stages or ready to implement stage, please respond to the questions below to the best of your ability. An early deliverable for awarded projects will be to submit a project plan for implementation and assessment.

1. Project Implementation
 - a. Describe narratively your approach to project implementation.
 - b. Outline your team's implementation plan. Include a timeline and any expected milestones or deliverables. You may include a [table or chart](#).
 - c. Describe each team member's specific role(s) in project implementation and/or assessment. (This can include named participants, or participants by role.)
 - i. Provide very brief descriptions of key members of the project team highlighting their relevant skills or capabilities.
 - ii. If external contractors are being used, describe the expertise they bring to the project.
 - d. Describe any departments, such as Institutional Research and Grants/Finance offices, that you will be relying on to assist with implementation, and any dedicated staff time for project management and/or administrative coordination that will be necessary. What is the role and/or commitment of these other departments to support the project?
2. Project Assessment
 - a. Describe your team's assessment plan that will be used to evaluate the effectiveness of the selected strategy or strategies. You may include a [table or chart](#) for this section. Include the type of data your project team intends to collect and data collection methods.
 - b. Include intended impacts on students and faculty, as appropriate for the scope of work. Consider whether student feedback will be incorporated.
3. Sustainability
 - a. Describe how the proposed project may have lasting impact at your institution.
 - b. Describe how your project may have potential for others to utilize your work.

E. Budget Narrative (estimated ½ page)

Provide a budget narrative summarizing the project budget categories and high-level descriptions of how funds will be used. The narrative should align with the uploaded budget in Excel format.

Detailed Budget in Excel

Upload a budget in Excel format through the application portal using the [template](#) provided. To help you prepare the budget, see the Budget section of the [RFP FAQs](#), and the [sample budget](#) provided. All of these materials are available through Learning Lab's [Seeding Strategies II RFP website page](#).

Learning Lab requests that applicants reserve a total of \$4,000 in the project budget for travel over the course of the maximum grant period (two years) to attend two intersegmental grantee convenings. This amount is based upon two team member attendance, with an estimated individual travel cost of \$1,000 per person.

Note: Learning Lab funds are intended to be used in California. If the project necessitates the use of Learning Lab funds outside of California, provide a brief justification and estimate of the funding that will leave the state. The amount of funds that can leave the state will be subject to the final award agreement.

III. Selection Process and Scoring Rubric

All proposals will be reviewed and evaluated by experts, who will make recommendations to the Governor’s Office of Planning and Research (OPR). All awards must be approved by the Director of OPR. Awards are contingent on successful negotiation of a grant agreement between the Learning Lab staff, the Foundation for California Community Colleges (administrator of the grant for OPR), and the awarded project team and host institution.

Scoring Rubric

Submitted proposals will be assessed for eligibility and evaluated using a scoring system across seven evaluation areas; the maximum score will be 30 points. There will be no minimum or “cut off” score required for funded proposals.

1. Eligibility

Proposals will be assessed for meeting eligibility requirements. Proposals that do not meet eligibility requirements will not be considered for funding.

Question	
1. Is the applicant a public, postsecondary institution in California?	oYes oNo
2. Does the project propose to implement one or more promising strategies to improve the calculus course sequence? See RFP section beginning on page 4 for list of strategies.	oYes oNo
3. Did the applicant: a. identify a department chair or dean as the project PI; and, b. include an institutional cover letter signed by both the PI(s)/CoPI(s) and the institution’s president, chancellor, vice chancellor/vice president of instruction, provost or equivalent?	oYes oNo
Overall Eligibility Comments:	

2. Scoring Rubric

Proposals will be scored using a point system. Maximum scores for each category are listed below with a total maximum score of 30 for proposals. Based on the application prompts for each category, responses will be assessed for their strengths and assigned points, with a brief justification for the points assigned.

Category	Max. Points and Brief Justification
<p>A. Data and Needs Statement:</p> <p><u>Application Prompts:</u> Please state the problem that this project aims to solve; that is, what are the specific barriers to student success posed by calculus or the course sequence at your institution(s)? Provide relevant data about student enrollment and outcomes in calculus course sequences related to your proposal, disaggregated by race/ethnicity and gender (e.g., course placement data, DFW rates, correlation between grades received and success in subsequent courses in the calculus sequence).</p> <p><u>Guidance for Applicants:</u> In discussing specific barriers, do you have evidence or data that support your claim or identification of barriers? How well do your data demonstrate calculus sequence outcomes among different student groups (disaggregated by race/ethnicity and gender)?</p>	4
<p>B. Project Approach and Rationale:</p> <p><u>Application Prompts:</u></p> <ul style="list-style-type: none"> • What promising strategies to improve the calculus course sequence (identified in the report “Charting a New Course”) does the project propose to plan for and implement? (Please identify which of the six options from the RFP section beginning on page 4 are selected and provide references to page numbers and/or citations from the report.) • What are the goals and intended outcomes of the project? • Who is/are the target population(s) of the proposed project? Please include the size or scope of each, using an asset-based framework and language. 	5

<ul style="list-style-type: none"> • Why are the approach(es) selected best suited to improve or change existing circumstances? In addition to the promising strategies identified above, are there any other practices from page 6 that the proposed project plans to deploy? • Please also identify any resources that your project can leverage (e.g., existing materials or Open Educational Resources, existing partnerships, or matching/braided funding) <p><u>Guidance for Applicants:</u></p> <ul style="list-style-type: none"> • How well does the proposal provide a solid rationale for the strategies selected and overall project design to achieve its goal with regard to improving student success within the calculus course sequence? (Do the project goals address the problems identified and are they achievable? Is the target population clearly identified?) • Does the proposal provide a strong case that the proposed project can lead to positive outcomes for faculty and historically underrepresented students? 	
<p>C. Project and Institutional Readiness:</p> <p><u>Application Prompts:</u></p> <p>Applicants are encouraged to include a planning phase in their project plan if they deem it beneficial for project success. Teams that have projects ready for implementation may skip or have an abbreviated planning stage. All applicants should provide responses to the questions below that are relevant to their proposed project:</p> <ul style="list-style-type: none"> • If the proposed project includes a planning phase, how will the project bring together faculty and/or graduate instructors to plan the project? • How will the project bring together faculty and/or graduate instructors to coordinate implementation efforts and reflect/evaluate on the project? • If outreach or recruitment is needed for planning and/or implementation, how will the project team approach soliciting buy-in? Is professional development needed? • What is your assessment of your department(s)' capacity for successfully implementing the change you propose (i.e., pedagogical change, curricular change, professional development)? Include any related efforts currently underway at 	4

<p>your institution or relevant efforts your institution has executed or attempted in the past.</p> <ul style="list-style-type: none"> • If the project includes intersegmental partnership, what value will this bring to the project? Does the partnership build upon existing relationships or past/current collaborative efforts? <p><u>Guidance for Applicants:</u></p> <ul style="list-style-type: none"> • If the project includes a planning phase, does the proposal present a clear and effective process for engaging faculty and/or graduate students in the planning process and soliciting project buy-in? • What kind of evidence demonstrates the department(s)' capacity to successfully implement the selected strategies? Are institutional commitments (i.e., faculty support, administrative support) demonstrated to sufficiently support the project? • Does the project identify how it will further institutional goals, strategic plans, or initiatives already underway? Does the project leverage any existing efforts or resources identified? • Are there intersegmental relationships or experience working with intersegmental partners that apply to the project? 	
<p>D. Project Implementation, Assessment, and Sustainability</p> <p>This section is intended to capture how prospective applicants may be envisioning project implementation, assessment, and sustainability, understanding that many prospective applicants may want to use the planning phase to more fully develop, refine, or test these plans for practicality. Regardless of whether you are in the early planning stages or ready to implement stage, please respond to the questions below to the best of your ability. An early deliverable for awarded projects will be to submit a project plan for implementation and assessment.</p>	
<p>i. Project Implementation</p> <p><u>Application Prompts:</u></p> <ul style="list-style-type: none"> • Describe narratively your approach to project implementation. • Outline your team's implementation plan. Include a timeline and any expected milestones or deliverables. You may include a table or chart. • Describe each team member's specific role(s) in project 	<p>8</p>

<p>implementation and/or assessment. (This can include named participants, or participants by role.)</p> <ul style="list-style-type: none"> ○ Provide very brief descriptions of key members of the project team highlighting their relevant skills or capabilities. ○ If external contractors are being used, describe the expertise they bring to the project. ● Please describe any departments, such as Institutional Research and Grants/Finance offices, that you will be relying on to assist with implementation, and any dedicated staff time for project management and/or administrative coordination that will be necessary. What is the role and/or commitment of these other departments to support the project? <p><u>Guidance for Applicants:</u></p> <ul style="list-style-type: none"> ● Does your implementation plan seem well-thought out, realistic, and achievable? (Are there reasonable planning, implementation, and evaluation phases? Are roles defined? Are milestones identified?) ● Do the members of the project team have the requisite experience to conduct the project plan? If external contractors or partners are being used, is it clear what expertise they bring? Does the project team represent a significant collaboration by calculus course instructors at the host institution? 	
<p>ii. Assessment:</p> <p><u>Application Prompts:</u></p> <ul style="list-style-type: none"> ● Describe your team’s assessment plan that will be used to evaluate the effectiveness of the innovation. You may include a table or chart for this section. ● Outline the type of data your project team intends to collect as well as planned assessment methods. ● Include intended impacts on students and faculty, as appropriate for the scope of work. Consider whether student feedback will be incorporated. <p><u>Guidance for Applicants:</u></p> <p>How well will the assessment evaluate the effectiveness of the project approach? Will the project collect data and practices to share with other practitioners and researchers? How will student perspectives be incorporated?</p>	2

<p>iii. Sustainability:</p> <p><u>Application Prompts:</u></p> <ul style="list-style-type: none"> • Describe how the proposed project may have lasting impact at your institution. • Describe how your project may have potential for others to utilize your work. <p><u>Guidance for Applicants:</u></p> <ul style="list-style-type: none"> • Does the proposal provide a rationale for how the project can have a lasting impact at the institution? • Does the project demonstrate potential for others to utilize your work, whether within or external to your institution? 	3
<p>E. Budget and Budget Narrative:</p> <p><u>Application Prompts:</u></p> <ul style="list-style-type: none"> • Provide a budget narrative summarizing the project budget categories and high-level descriptions of how funds will be used. • Upload a budget in Excel format through the application portal using the required template. • To help you prepare the budget and budget narrative, see the Budget section of the RFP FAQs, and the sample budget and budget narrative provided on Learning Lab’s RFP page. <p><u>Guidance for Applicants:</u></p> <p>Does the budget narrative summarize how funds will be used? How well does the budget align with and advance the project plan? Is there a clear rationale for expenditures? Is anything missing?</p>	4
<p>Total Possible Points</p>	30
<p>Overall Comment (suggested 100 word response):</p>	

IV. Post Award Agreements and Deliverables

Applicants whose proposals are selected and approved for award will be asked to enter into an agreement with the Foundation for California Community Colleges, which is under contract with the Governor's Office of Planning and Research to administer the Learning Lab grant program. Learning Lab personnel will administer the agreement, which will address project implementation, including the following:

All post-award expectations will be specified in award agreements.

- **Indirect Costs (IDC):** Up to 8 percent in indirect costs are allowed; for the University of California, GAEL, UCRP, and TIF must be included in the 8 percent of indirect costs. Combined direct and indirect costs cannot exceed the award amount. Consequently, for a project awarded a \$100,000 grant, the total IDC cannot exceed \$7,407 (i.e., 8 percent of total direct costs of \$92,593, with indirect and direct costs totaling \$100,000).
- **Budget Rules and Flexibility:** Grant agreements will have some budget flexibility; however, prior approval will be required for budget changes between approved budget categories above negotiated thresholds, and for certain activities such as travel and hosted convenings. Please note: Learning Lab funds may be used to pay students (stipends or hourly rates), and related student fees; however, Learning Lab funds may NOT be used to cover student tuition (undergraduate or graduate), housing, or summer bridge attendance.
- **Open Educational Resources:** Institutions must agree to terms and conditions that require course and course series and technology/platforms enabled with Learning Lab funds to be available as open educational resources, as defined through the grant agreement.
- **Start Date:** Initiate work within 30 days of signing the agreement, and within 60 days of award notification.
- **Reporting and Deliverables:**
 - **Communication Materials:** In the first quarter of project, submit a project graphic, tag line, description, team member photos for posting on the Learning Lab web site. An optional ADA-compliant TED Talk style video is requested but not required in the

- final quarter of the project.
- **Implementation and Assessment Plan:** No later than the end of the second quarter of the project, develop and submit an implementation and assessment plan.
 - **Progress Reports:** Submit written progress reports every six months throughout the duration of the project, including tracking of milestones and expenditures, and data collection as indicated below. Check-in with Learning Lab staff and/or faculty advisors twice per year (variable schedule). A final report with an evaluation will be due at the end of the grant term.
 - **Data Collection:** For each written progress report noted above, projects should provide aggregate student and faculty participation data as requested. By the end of the grant period (and in the final project evaluation), awarded projects should present data relevant to the project. Examples may include changes in faculty mindset and practices, and/or including the adoption of more inclusive and effective teaching practices. Awarded projects should track outcomes and impact, particularly for women, Black/African American, Latinx, Pacific Islander, and/or Native American students, to the extent possible.
 - **Learning Lab Convenings:** Participating teams will be invited to at least two intersegmental grantee convenings and to participate in digital communities, e.g., a grantee Slack channel, over the course of the maximum project period (two years). Please reserve \$4,000 in your project travel budget to attend in-person Learning Lab hosted convenings, based upon two-member attendance at each convening.
 - **Technical Assistance and Collaboration:** Participate in conference calls and convening activities, and seek technical assistance from the Learning Lab Faculty Advisors or Learning Lab staff.
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- **Use of Data:** Investigators and demonstration teams are expected to share data and research findings consistent with academic standards.
 - **Protection of Privacy and Personal Information:** Investigators and project teams are expected to follow state and federal law to protect privacy and personal information.

V. Terms and Definitions

Achievement, Opportunity, and Equity Gaps: Achievement gap refers to “Any significant and persistent disparity in academic performance or educational attainment between different groups of students” ([The Glossary of Education Reform](#)) while opportunity gap refers to “The ways in which race, ethnicity, socioeconomic status, English proficiency, community wealth, familial situations, or other factors contribute to or perpetuate lower educational aspirations, achievement, and attainment for certain groups of students” ([The Glossary of Education Reform](#)).

Equity Gap refers to racial and gender disparities in educational access and attainment for historically underrepresented and underserved student populations that are the product of persistent social and institutional barriers to educational opportunities and educational success (Lumina Foundation and USC Center for Urban Education). From the perspective of the Learning Lab, we can understand equity gaps, in part, as the achievement gaps that opportunity gaps created. Our preferred term is to use equity gap, rather than achievement gap, in order to keep the focus on the multiple barriers to educational success, rather than on student performance alone.

Asset-based Language focuses on student strengths rather than their deficits. For example, an asset-based framework would acknowledge the ambition and persistence demonstrated by students from under-resourced communities who enroll in the course instead of focusing on students’ lack of preparation from previous educational experiences. When working from an asset-based perspective, proposal authors should consider the practices and assumptions that downplay the abilities, talents, and interests of students and instructors

Institution: The project’s institution is the college or university that will act as grantee and fiscal intermediary for purposes of grant administration. The institution will enter into a grant agreement with the Governor’s Office of Planning and Research for receipt and management of grant funds.

Online/Hybrid Learning Environments: Learning Lab also takes a broad view of what qualifies as an online or hybrid course. Online courses allow students to interact, either synchronously or asynchronously, with the course material/lecture/lab work, and other participants and/or instructors/TAs in a technology-mediated, remote environment. Hybrid courses or blended courses are those that use both “online” and in-person interactions as part of the formal course environment or requirements. Hybrid courses allow some

component of the course to be available or accessible in an online environment. For the purposes of this RFP, a course does not have to be officially designated by the institution or department as “hybrid” to be eligible for Learning Lab grant funding, so long as it conforms to the definition above.

Science of Human Learning: Learning science, or the science of human learning, is the study of how human learning takes place. Interdisciplinary in nature, drawing from fields such as cognitive science, neuroscience, computer science, education, psychology, sociology, design studies and more,⁵ the science of learning strives to understand how people learn, how to support learning, how to facilitate and enhance learning, discipline-based learning, and the role of technology in enhancing learning and collaboration⁶. The science of learning addresses how people process, gather, and interpret information; how they develop knowledge, skills, and expertise; and the extent to which social and physical context and design environments influence learning⁷. Scaffolding, inquiry or problem-based learning, collaborative learning, game and simulation-based learning, and metacognition are all examples of how teaching methods and approaches to curriculum can be influenced by what we understand about learning.

Additionally, strategies linked to social psychology and multicultural education emphasize the importance of attending to students’ identity and culture when addressing achievement gaps—we view such achievement gaps as invitations to apply the science of learning in new or improved ways.

One of the goals of the science of learning is to create a positive feedback/continuous improvement loop between theories of learning and practice, which would result in improved student learning and advance the field of learning science. For the purposes of Learning Lab, as public higher education strives to educate more students with diverse backgrounds in a rapidly changing world, leveraging, increasing and applying our knowledge of human learning is a challenge we must embrace.

Underrepresented Students: By underrepresented, we mean historically underrepresented in STEM higher education, including Black/African Americans, Latinx, Native American, some Asian American subgroups, Pacific Islanders, and women.

⁵ Sawyer, R.K. (2006). *The Cambridge Handbook of the Learning Sciences*. Cambridge, U.K.: Cambridge University Press.

⁶ Sommerhoff, D., Szameitat, A., Vogel, F., Chernikova, O., Loderer, K. & Fischer, F. (2018). What Do We Teach When We Teach the Learning Sciences? A Document Analysis of 75 Graduate Programs. *Journal of the Learning Sciences*, 27:2, 319-351. <https://doi.org/10.1080/10508406.2018.1440353>.

⁷ Ibid.