



GRAND CHALLENGE: BUILDING CRITICAL MASS FOR DATA SCIENCE

A GRANT OPPORTUNITY OF THE CALIFORNIA EDUCATION LEARNING LAB

SCORING RUBRIC FOR INITIAL PROPOSALS

A. BACKGROUND & INSTRUCTIONS

“Building Critical Mass for Data Science” will provide funding for awarded teams in four categories. This rubric is intended to be used for Initial Proposals submitted for the Pathways Development, Faculty Development, and Interdisciplinary Collaboration categories. A separate rubric will be provided for the Cohort Coordination Award. Based on the Selection Committee’s recommendations, a limited number of applicants will be invited to submit Final Proposals, which will include an updated rubric.

For the Initial Proposal, applicants were asked to write an 8-10 page Project Narrative, in addition to a 1-page Executive Summary. For the Project Narrative, on which this scoring rubric is based, applicants were asked to retain the following section headings: 1) Project Summary, Approach, and Rationale; 2) Outreach, Recruitment, and Leadership; 3) Project implementation, Assessment, and Sustainability; 4) Ethics, Open Educational Resources, and Accessibility; and 5) Budget. Within each section, applicants were advised to respond to the prompts with flexibility to allow for a natural writing flow, being as concise and specific as possible in their responses to the prompts. (Page length recommendations were made for each of the sections below.) Applicants were advised to consider including a logic model to explain the project, outside page maximum specified. For the initial proposal, a reference section following the narrative was recommended but optional.

Selection Committee members should evaluate Initial Proposals using the weighted scoring system below. The maximum score is 30 points. There is no minimum or “cut off” score required for proposals to advance to the next round. Scores will be used to inform a deliberative process among Selection Committee members.

B. GENERAL GUIDANCE FOR APPLICANTS

1. Demonstrate knowledge about the students and/or faculty groups your project intends to impact, including *historically underrepresented student groups*.
2. Include any relevant data and disaggregated data that will help us understand the student and/or faculty groups you intend to impact.
3. Be specific about your goals and the impact or outcomes you are hoping to achieve with the project, and thread the needle about how or why your approach may lead to fulfilling the goals and outcomes of your project. Your *theory of change* will be important in threading the needle.
4. Highlight the research base that supports your theory of change.
5. Use *asset-based language* to describe your student/faculty populations.
6. Be ambitious but realistic.
7. Be specific about the how the project will apply practices that have demonstrated positive impacts on how students learn (e.g., active learning, *adaptive learning*, applied learning, culturally relevant/responsive pedagogy, project-based learning, etc.) and include interventions in the affective domain (e.g., sense of belonging/identity; social/emotional/cultural contexts; growth mindsets, including faculty growth mindset, etc.). Understand how practices impact specific populations, specifically *historically underrepresented students*.
8. Demonstrate *authentic well-balanced collaboration* among partner institutions and/or departments, and identify structures and/or processes to help sustain collaborative efforts.
9. Think through and spend time on your evaluation/assessment plan now (see Learning Lab's sample *Final Project Evaluation* template for reference).
10. Given the difficulties of faculty recruitment and collaboration, include the project's proven strategies for recruitment and specify your approach to fostering inclusion and resolving conflict and disagreement.
11. Think about sustainability from the beginning.

* Please consult Terms and Definitions in the RFP for text highlighted in blue.



C. RUBRIC

1. Project Summary, Approach, and Rationale (~ 2 pages)

Application Prompts	Reminders for Applicants	Points
<ul style="list-style-type: none"> Describe your project, including its goals and intended outcomes. (See RFP FAQs, Project Outcomes and Impact section for guidance on developing outcomes.) What are you trying to solve for? 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) you selected best suited to achieve your goals and intended outcomes? What's your theory of change that ties your approach with your goals and intended outcomes? What barriers exist for your project (policy or otherwise), and how does your approach overcome them? Provide an example of how the project will work in practice. 	<p>Please consult Terms and Definitions in the RFP for asset-based framework and theory of change.</p> <p><u>Pathways Development Grants:</u> In thinking about the target populations, please consider how the project will attract students from varied backgrounds (especially students historically underrepresented in STEM) and levels of preparation. Be explicit about whether the project will result in data science majors, minors and/or certificates, and how these align with data science roles in the workplace.</p> <p><u>Faculty Development Grants:</u> In thinking about the target populations, please consider how the project will attract a cadre of faculty equipped to teach in this new field.</p> <p><u>Interdisciplinary Collaboration Grants:</u> In thinking about the target populations, please consider how the project will attract students from varied backgrounds (especially students historically underrepresented in STEM) and levels of preparation, and how the project will promote data and computational proficiency across non-STEM majors, as applicable.</p>	8



2. Outreach, Recruitment, and Leadership (~ 1 page)		
Application Prompts	Reminders for Applicants	Points
<ul style="list-style-type: none"> • How will the project bring together relevant stakeholders (e.g., faculty and/or graduate instructors, institutional administrators, workforce/industry, high schools) 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 or solicit buy-in? Is professional development needed? • What is your assessment of your institution(s)' and/or department(s)' capacity for successfully implementing the change you propose (e.g., 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 and/or interdepartmental partnership, how will you manage this partnership and support authentic collaboration? Does the partnership build upon existing relationships or past/current collaborative efforts? 	<p><u>Pathways Development Grants:</u></p> <ul style="list-style-type: none"> • Intersegmental collaboration is required. Please include all partners, respective roles, and the justification for the partner structure. • Two-year pathways or certificates that are developed must segue to a four-year pathway. Collaboration with high schools is welcome! <p><u>Faculty Development Grants:</u></p> <ul style="list-style-type: none"> • Intersegmental collaboration is required. Please include all partners, respective roles, and the justification for the partner structure. • Please discuss prior success in developing and administering faculty development programs and ability to improve faculty development programs. These will be strongly considered. The ability to attract faculty from more than one segment will also be strongly considered. • Be specific about who will be engaged, whether existing STEM faculty, data-science adjacent faculty and/or graduate students, or otherwise. <p><u>Interdisciplinary Collaboration Grants:</u></p> <ul style="list-style-type: none"> • Commitment at the department level (minimum of two departments must be involved in these grants). • The scale and reach of courses will be a significant factor in making an award. 	5



3. Project Implementation, Assessment, and Sustainability (~ 2-3 pages)		
Application Prompts	Reminders for Applicants	Points
<p><u>Project Implementation:</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, which will count toward your page maximum length. Describe each team member’s specific role(s) in project implementation and/or assessment. (This can include named participants, or participants by role.) Provide very brief descriptions of key members of the project team highlighting their relevant skills or capabilities. If external contractors are included, describe their expertise for the project. Describe any departments, such as Institutional Research and Grants/Finance offices, at the host and/or partner institutions that the team 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? Please identify any resources that your project can leverage (e.g., existing materials or Open Educational Resources, existing partnerships, or matching/braided funding). Outline the technology tools your team will be using 	<ul style="list-style-type: none"> Does your implementation plan seem realistic and achievable? (Are there reasonable planning, implementation, and evaluation phases? Are roles defined? Are milestones identified?) For data collection, please consider potential difficulties in obtaining data and participant consent and how it may impact the evaluation/assessment plan. Is sustainability a consideration from the beginning of the project? <p><u>Pathways Development Grants:</u></p> <ul style="list-style-type: none"> The scale and reach of the pathways and the project’s potential to close STEM equity gaps will be a significant factor in making an award. Does your project incentivize or provide for acceleration of the pathway approval process? <p><u>Faculty Development Grants:</u></p> <ul style="list-style-type: none"> Does your project take into account local culture and systems in adopting new materials? Does it take into account incentive structures and time necessary for successful adoption? 	12



and/or developing, including the project's approach to [adaptive learning](#).

Project Assessment:

- 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, which will count toward your page maximum.
- Include the type of data your project team intends to collect and data collection methods.
- Include intended impacts on students and faculty, as appropriate for the scope of work. Consider whether student feedback will be incorporated.

Sustainability

- Describe how the proposed project may have lasting impact at your institution and on all participating campuses.
- Describe how your project may have potential for others to utilize your work.
- Describe how your project has the potential to be scaled and/or replicated at other institutions and how others will be able to utilize your work.
- Describe how your team plans to disseminate results.
- Include references to other successful models that may indicate your project has potential for success.

Interdisciplinary Collaboration Grants:

- Please think about the balance of the collaboration and the level of integration needed to implement an interdisciplinary project.



4. Ethics, Open Educational Resources, and Accessibility (~ 1 ½ pages)		
Application Prompts	Reminders for Applicants	Points
<ul style="list-style-type: none"> If not included in any of the above, please discuss: a) how your project will incorporate ethical considerations of data science; b) how your project will make materials developed with Learning Lab funds available as open educational resources, and c) how materials developed with Learning Lab funds will meet the diverse needs of learners (such as through a Universal Design for Learning framework) and be accessible for participants with disabilities. 	<p>Please consult the Resources section on the Grand Challenge webpage for more on ethics in data science, open educational resources, Universal Design for Learning, and accessibility for participants with disabilities. (After November 1.)</p>	2
5. Budget (~1/2 page)		
Application Prompts	Reminders for Applicants	Points
<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. 	<p>Does the budget align with and advance the project plan? Is there a clear rationale for expenditures, and have you accounted for all major expenses?</p> <p>Preview the budget template in Excel format, as well as the Budget section of the RFP FAQs, and the sample budget provided. All of these materials are available through Learning Lab’s Grand Challenge Data Science RFP website page.</p>	3
Total Possible Points		30



D. OVERALL IMPACT

The following evaluation should be based on your overall assessment of the proposal as a whole.

Please use the following key to evaluate this overall impact:

High (score 5 or 4)

- Project is likely to achieve its goals and have a significant impact. The proposed project is well-constructed and addresses all major components in the RFP.

Medium (score 3)

- Project may achieve its goals and may have a significant impact, but the proposed project has weaknesses and does not fully address all major components in the RFP.

Low (score 2 or 1)

- Project is unlikely to achieve its goals or have a significant impact. The proposed project has major weaknesses and does not fully address all major components in the RFP.

FINAL IMPACT SCORE:

Comments for Applicant:

