# ACS PrepareCTP Seed Grant

## Request for Proposals

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# I.     Program Synopsis

The ACS PrepareCTP program supports the preparation and recruitment of skilled technical workers within the chemical enterprise - referenced below as chemical technical professionals. Skilled technical professionals are defined by the National Science Board as individuals who use science & engineering skills in their jobs but do not have a bachelor's degree.[1] The PrepareCTP Seed Grant (PrepareCTP SG) program will support student stipends/scholarships, faculty workload release, instrumentation purchases, and other activities suitable for preparing and recruiting chemical technical professionals and establishing partnerships with chemistry-related employers in the awarded institution's community.

The PrepareCTP Seed Grant program is part of the ACS Strategic Initiative "Fostering a Skilled Technical Workforce".

### A.     Points of Contact

    1.   General Program Website – www.acs.org/prepareCTP

    2.   General Program Email – PrepareCTP@acs.org

# II.     Program Description

The American Chemical Society is committed to cultivating a diverse, equitable, inclusive, and respectful community of chemistry professionals. In 2021, ACS launched four Strategic Initiatives, including the Strategic Initiative "Fostering a Skilled Technical Workforce."

Within the Strategic Initiative for Fostering a Skilled Technical Workforce (F-STW), our focus is on recruiting and engaging a diverse group of students and potential employees to fulfill workforce needs in the chemical industry. Following recommendations outlined by the NSB,[1] this initiative aims to

- *"change the message"* by increasing awareness and ensuring accurate information about the range of careers within the skilled technical workforce, and
- *build partnerships* through the coordinated collaboration of the diverse network of stakeholders critical to the recruitment and preparation of the future chemical sciences skilled technical workforce.

The PrepareCTP Seed Grant program is part of the ACS F-STW Initiative. ACS desires to engage key stakeholders in addressing the need for skilled technical workers (STW) – those using science,

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[1] "The Skilled Technical Workforce: Crafting America's Science & Engineering Enterprise," National Science Board, Report # NSB-2019-23, 2019.

technology, engineering, and mathematical (STEM) skills in their jobs, but not requiring a bachelor's degree for entry – with a focus on the chemical enterprise, generally termed – chemical technical professionals (CTPs). The National Academies of Science estimated a shortfall of nearly 3.4 million STW prior to 2022.[2] The PrepareCTP Seed Grant program will support student stipends/scholarships, faculty workload release, instrumentation purchases, and other activities suitable for preparing and recruiting chemical technical professionals and establishing partnerships with chemistry-related employers in the awarded institution's community.

### A.     Eligibility

#### 1.     Eligible Institutions/Departments

The institution must be a community college that offers associate degree programs, certificate programs, and/or skills training programs that prepare students to pursue chemistry-related careers not requiring a bachelor's degree. Institutions must be located and accredited within the United States.

#### 2.     Site Leader Eligibility

While we understand that many two-year / community college systems may not have a dedicated chemistry department, it is *expected* that the Leader be a faculty member that is actively engaged in the teaching/administrative duties of the Chemical-science courses offered at the site where funds will be awarded. Similarly, it is *not expected* that the Leader possesses a degree in Chemistry, but it is expected that they have the requisite knowledge and skills (as determined by their institution) to teach their curriculum/courses.

### B.     Awards

It is anticipated that for the fiscal year 2024 (FY24) the program will be able to provide several awards with maximum budgets *not exceeding* $20,000 for an initial one-year pilot program.

### C.     Examples of Fundable Activities

We encourage eligible programs to submit proposal applications with unique strategies to foster the development of STW through their institutional frameworks. From our discussions with stakeholders and given the unique challenges for community college STEM programs, a few examples of activities or efforts that would be considered for funding via the PrepareCTP SG program are -

#### 1.     Stipends/Scholarships

Project geared to provide financial support to students moving through institutional certificate or associate's (AA / AS) degree programs.

#### 2.     Internship Support

Projects offering support to students that participate in internship/co-op programs with partnered employers.

#### 3.     Support for Instrumentation

Funds may be targeted towards the purchase of new or upgrades to existing laboratory equipment.

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[2] National Academies of Sciences, Engineering, and Medicine (NASEM), "Building America's Skilled Technical Workforce," (Washington, D.C.: The National Academies Press, 2017), 26.

4. Faculty workload release

Funding requests to support faculty that are working to develop partnerships with local businesses during their standard academic year.

These are examples of activities that we anticipate being requested/proposed. Applicants should not feel limited to this list, and they are not intended to be considered specific project categories. It is important to recognize the emphasis of the PrepareCTP SG on student to workforce needs, thus proposals should be focused on these priorities, not to assist transfer student populations.

# III. Proposal Preparation and Submission Process

Most portions of the application can be prepared using any standard word processing software, however full proposals will be completed using an online website submission process following the details outlined below.

## A. Proposal Narrative

Full applications should include all sections as described below. It is expected that *complete applications will not exceed a total of ten (10) pages in length*, however if noted page limits are followed, all information provided will be considered. Required sections of a complete application include the following with the page limitations noted:

### 1. Project summary/abstract (~600 words)

Provide a leading summary/abstract, suitable to share on the web, giving an overview of the project goals and a summary of methods for implementation.

### 2. Project description (~3.5 pages or 15MB maximum file size)

The description should be a clear and concise statement of the project goals and the methods expected to be used to meet them. Informational questions provided below may be helpful to determine project description contents.

The project description should include the following elements:

*a)* *Project Overview*

Describe in detail how the funding will be utilized to support the recruitment and preparation of skilled technical workers for jobs at local chemistry-based companies or to promote partnerships with local chemical companies that lead to hiring.

*b)* *Project Goals*

Outline your project goals and relevant rationale for achieving them. More detail should be provided under Key Elements in part d) below.

*c)* *Infrastructure elements*

(1) Institutional profile

Briefly describe the size, type of institution, student demographics, and the overall institutional setting.

(2) Current STEM programming (degrees, certificate programs, etc.)

Outline the structure of your institution's science curriculum and the faculty involved with teaching / training students in the relevant programs. Provide a description of the science-based degrees, certificates, and/or training

credentials offered to matriculated students. Within these programs/degrees, discuss offerings that currently lead to chemical science-related jobs.

(3)        Relevant community partnerships

As appropriate, discuss your relevant and current collaboration(s) with external partners in the institutional community.

*d)        Key Elements*

Describe in detail a plan of action to achieve your stated goals, addressing components as appropriate:

(1)        Partnership development and/or support (if relevant)

Describe how the project intends to create a new or promote an existing partnership. Outline the needs to be met using the awarded funding.

(2)        Employment opportunities

Has an assessment of workforce needs for technicians been conducted? How does your proposal support the employment needs of your program partners and/or local employers? How does your proposal help sure graduates are ready for employment?

(3)        Student impacts/benefits

Describe some of the anticipated student outcomes from the use of new technology/instrumentation. Detail the trainable and chemical industry marketable skills that will be enabled by new equipment. Does the project provide for effective assessment of student learning? Is the evaluation likely to provide useful information to the project and others? Does the project promote diversity in the technical workforce?

(4)        Metrics for evaluation

Provide baseline information regarding the current state of student outcomes most related to the project. If discussed, is the evaluation plan clearly tied to the project outcomes? Based on the overall project goals, what intermediate milestones might be set to guide the project direction? Is there evidence of institutional support and if so, is it clear and compelling? Have plans for long term institutionalization been addressed? Are their demonstrated partnerships that have been developed through the project? Will current or future business liaisons be consulted to consider syllabi / program requirements? Describe active employment opportunities and/or future opportunities enabled by the project award funds.

3.        Detailed budget with justification (~2 pages)

The project budget should include a budget highlighting the proposed spending over the one-year award period, while the justification should be a brief narrative describing each line item of the budget.

*a)        Salaries/Stipends/Scholarships*

Funds are intended to directly benefit students and/or institutional faculty. Thus, budgets should not include monies allotted for non-teaching staff/personnel as this is expected to be a part of institutional investment/support toward the success of the proposed work (see Cost Sharing below).

*b)   Fringe*

The fringe rate on salaries is limited to the institutional fringe rate or 33%, whichever is smaller.

*c)   Indirect Costs*

No indirect costs are allowed on the student or faculty participant support. Indirect costs, if included, should reflect the institution's negotiated rate.

*d)   Cost Sharing*

Cost sharing is <u>not required</u>; however, proposals may indicate matching funds or in-kind contributions. Reviewers typically interpret these resources as demonstrating commitment by the institution to a sustainable program. Estimate and summarize the value of these funds in a paragraph, but it is not required in the budget calculations.

4.   Biographical sketch(es) for project personnel (~2 pages each, 10MB max file size)

This section should provide background information on the Project Leader and each secondary supporting faculty/staff person (if any) that will contribute to the success of the project operations and to meeting the goals outlined in the project description.

## B.   Proposal Submission

Applications will be submitted using the ACS's Foundant-enabled web submission platform. Documents, such as the Project Narrative and Biographical Sketches, prepared for submission can be uploaded as PDF documents to maintain overall formatting; however, there are file size limitations during the submission process. Questions/issues can be sent to PrepareCTP@acs.org.

1.   Creating a Foundant account

The proposal submission process begins with the request for / creation of a 'Foundant' user account. The account allows you to update your application at any time prior to submission and to view your application status after submission. Your email address will serve as the username for the account, so provide your most preferred email.

*a)   Visit the PrepareCTP Seed Grant description page*

ACS centrally locates all funding & awards programs, so look for the PrepareCTP SG at acs.org/funding.html and selecting Grant as a filter. Or look here for the direct link www.acs.org/funding/grants/preparectp-seed-grant.html

*b)   Click the blue 'Apply Now' button*

This link takes you to the application instructions page, and then follow the directions provided.

*c)   Create an account in the online application system.*

2.   Using the Foundant portal website

The Foundant grant management system is accessible through an external web portal site at www.grantinterface.com. This website manages several different ACS grant programs.

*a)   Login to ACS' Foundant portal - www.grantinterface.com.*

*b)   Select 'Apply' under [Applicant Menu].*

*c)   Select '2023 ACS PrepareCTP Seed Grant' to begin an application.*

*d)   Enter required materials.*

Enter and/or upload the required materials via the application form. You may save and return to your application until the submission deadline.

e)   *Submit your application.*
Saved drafts are not considered submitted applications. You must select the *'Submit Application'* button.  A confirmation email will be sent to confirm your submission within one(1) business day.

## 3.   Document Formatting

With the use of the Foundant portal, a complete application can be submitted by direct input of text in the online form. Rich-text formatting is possible in the online forms.

However, applicants also have the option for uploads. Proposal documents uploaded as PDF document files should use the suggested formatting criteria:

a)   *File naming conventions*
Save final submission documents using the standard portable document format (PDF/.pdf) with a filename as *<LastnameFirstInitial-InstitutionName_PCTPSeedGrant-SectionName>.pdf*.

b)   *Page formatting*
   (1)   Size – Letter, 8.5 in. x 11 in.
   (2)   Margins – Minimum of 0.5 in. (top, bottom, left, right)

c)   *Font*
   (1)   Minimum – 10 pt
   (2)   Typeface – Standard serif or sans serif

d)   *Line spacing*
   (1)   Suitable for readability, but minimum single-spaced

e)   *Headers/Footers*
   (1)   Header
   Include **Last Name, First Initial** and **Institution** for Leader
   (2)   Footer
   Page numbers as '[Current page] of [Total pages]'

## 4.   File size issues

The total application submission file size limitation is ~25 MB. If the PDF document file(s) is/are too large to upload via the web application, instructions for a temporary cloud storage box may be requested using an email to PrepareCTP@acs.org with the SUBJECT line: 'CLOUD STORAGE REQUEST – PrepareCTP Seed Grant Application'.

NOTE: Requests for cloud storage submission **will not provide an extension** to the submission deadline details outlined here.

## 5.   Other issues

For other submission issues, send a thorough email describing the problem using the SUBJECT line: 'SUBMISSION ISSUE – PrepareCTP Seed Grant Application'.

## C.   Proposal Review

A panel with members both external and internal to the project will review full proposals shortly after they are submitted.

## IV.    Post-Award Process

Institutions that are selected to receive award funds will be asked to abide by the following policies and procedures:

### A.    Communication

The project Leader will be responsible for all communications between the project institution and ACS. If the Leader is unable to fulfill this requirement, written agreements of a new designee must be submitted and accepted by the PrepareCTP Program Manager. Leader Eligibility requirements as described previously will still apply to any new designee.

### B.    Leadership Group Meetings

PrepareCTP SG Leaders will be required to participate in a total of three (3) video conference meetings during the project year. The purpose of this group is to support operation of projects, share ideas, and help spread knowledge of activities that encourage preparation of new chemical technical professionals.

#### 1.    Kick-Off Meeting

Roughly coinciding with initial project awards (tentatively Feb 2024).

#### 2.    Mid-year Check-in

Meeting to be scheduled during the Summer 2024 period, either around the end of academic year (23/24) or prior to beginning of next academic year (24/25).

#### 3.    Project Year Closing

Roughly scheduled for mid-November 2024 to prepare awardees (Leaders) for end of project wrap-up activities.

### C.    Reporting

Each site will be required to complete a brief annual report that will be placed on the PrepareCTP SG website to inform the broader community of your progress and activities. We have constructed a template for this report and will assist each site in making their report web compatible.