**Education & Workforce Development (EWD) Call for Proposals**

**Proposal Template**

The requested format for Education & Workforce Development proposals submitted to RAPID is outlined here. There is a 12-page limit to each proposal, excluding the title page and Supplemental Information section. Proposals should retain formatting that exists in this template (12 point font, 1” margins on all sides)

**Title Page**

|  |  |
| --- | --- |
| Education & Workforce Development Proposal Submission to the RAPID Manufacturing Institute  on Modular Chemical Process Intensification  (*under DE-EE0007888 – U.S. DOE Advanced Manufacturing Office*) | |
| EWD Project Name: |  |
| Submitting RAPID Member Organization(s): |  |
| Supporting Organizations/ Companies: |  |
| Primary Cross-Cutting RAPID Focus Area EWD Content Addresses (MM, MS, or IPF\*): |  |
| Secondary Application RAPID Focus Area EWD Content Addresses (NG, CCP, or RBP\*): |  |
| Proposal Submission Date: |  |
| Proposed Start/Duration: |  |
| Total Proposed Funding (Federal + Cost Share): |  |
| Proposed Cost Share Ratio: | RAPID requires a minimum cost share ratio of 1:1. |
| Proposed Course Duration (in days): |  |
| Prior DOE/Fed Funding for this work? If yes, describe. |  |
| Do you agree to RAPID Future Course Offering Terms? (Y/N) |  |

\*Legend: MM = Module Manufacturing, MS = Modeling & Simulation, IPF = Intensified Process Fundamentals, NG = Natural Gas Upgrading, CCP = Chemical & Commodity Processing, RBP = Renewable Bioproducts

**Executive Summary (1 page)**

The executive summary should give a complete overview of the proposal.

**Section 1: Project Description (4-5 pages)**

The Project Description must describe the topic areas that the course will address, state anticipated learning objectives from the content developed, outline the approach to developing content which works to fill those knowledge gaps, includes SMART milestones, and describe a sustainability plan which addresses how RAPID can provide continued offerings.

**1.1 Educational Content (~1 page)**

Focus on the fundamental knowledge gaps and topic areas that the proposed content will address in order to further the study and deployment of Process Intensification as outlined in RAPID’s PI & MCPI Body of Knowledge (BOK). The BOK is a members-only document. To receive access to the BOK document, email [ashls@aiche.org](mailto:ashls@aiche.org) with the subject line “Body of Knowledge Request”. Please note that the Body of Knowledge was updated as of December 31, 2018.

NOTE: Priority will be given to proposals that:

* Priority A: Focus on providing a detailed understanding of a particular topic area within process intensification and/or modularization (e.g. flow chemistry, microreactors).
* Priority B: Teach how to apply design practices and tools across processes/industries that encompass many PI and/or modular technologies.
* Priority C: Focus on providing an understanding of the limiting chemical and physical factors in existing processes and ways to utilize PI or MCPI to overcome those limitations when appropriate.

**1.2 Educational Approach and Instructional Methods (~1 page)**

Focus on the approach, instructional methods, and design/simulation tools needed to develop and teach the content identified in Section 1.1. Include at least 5 clear learning objectives.

**1.3 Evaluation Methods (~1/2 page)**

Focus on the evaluation methods needed to measure comprehension, knowledge or skills gained through the educational content and how it aligns with the knowledge gaps identified in Section 1.1 and thereby learning objectives in Section 1.2.

Make sure to describe how the following would be measured:

* Participant success
* Instructor success
* Course success

**1.3 Potential Impact (~1/2 page)**

Identify the potential impact (e.g.: # of individuals reached) of the proposed approach and learning objectives if successful.

**1.4 Resources (~1/2 page)**

Outline key staff from partnering organizations that will be utilized on the proposed work, along with key facility and equipment capabilities that will be utilized.

**Section 2: Work Plan (4-5 pages)**

The Work Plan should include a detailed overview of:

* Course Outline
* Work Breakdown Structure, including detailed description of each major task and responsibility for each
* Schedule including start and end of each major task (Months from Project Start). Suggested high-level timeline:
  + August 2019: Awarded Project(s) under Agreement
  + August 2019 – June 2020: Course Development Phase
    1. Include formal review points by RAPID throughout the development phase such as course outline review, review of draft materials, etc.
  + August 2020: Pilot Course Offering
* Key S.M.A.R.T. Milestones, with metric of success, minimum of 1 milestone/quarter (See table below). Milestones should be concise, but as detailed as possible. For example, an overly general milestone of “Submit report” should instead be “Submit report covering X (e.g. specific experimental results) to Whom and When” so that completion of the milestone advances the project and can be easily verified.

S.M.A.R.T. Description

|  |  |
| --- | --- |
| Acronym | Further Clarification |
| S = Specific | Clear and focused to avoid misinterpretation. Should include measures, assumptions, and definitions and be easily interpreted. |
| M = Measurable | Can be quantified and compared to other data. It should allow for meaningful statistical analysis. Avoid "yes/no" measures except in limited cases, such as start-up or systems-in-place situations. |
| A = Achievable | Attainable, reasonable, and credible under conditions expected. |
| R = Relevant | Fits into the organization's constraints and is cost-effective. |
| T = Timely | Doable within the time frame given. |

**2.1 Task Descriptions (~2 pages)**

Include key milestones and corresponding timing.

**2.2 Potential Risks (~1 paragraph)**

Suggested table format below.

|  |  |
| --- | --- |
| **Risk** | **Mitigation** |
| XXXX | XXXX |
| XXXX | XXXX |

**2.3 Schedule (~1 page)**

Give Gantt chart/schedule of proposed project activities. Show each task in the schedule.

**2.4 Deliverables (~1 paragraph)**

Give the key deliverable for each of the identified tasks.

**Section 3: Budget Summary (limit 2 pages)**

The budget summary should identify amounts and the source(s) of non-federal cost share (cash and in-kind) and the uses of funds (i.e. approximate annual allocations to each RAPID resource and to each high-level task). Budget should identify any key major resources that the project team intends to acquire. If possible, the budget should break down cost into categories of personnel costs, fringe benefits, equipment, supplies, travel, contractual costs to subcontractors, and indirect costs.

Formal cost share commitment letters will not be required as part of this proposal submission but will be required as part of project negotiations with RAPID and concurrence by the DOE. Inability to promptly provide letters of support could lead to project selection being rescinded.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **BP3 (4Q19)** | | **BP4 (2020)** | | **Total** | |
| **Institution** | **Federal** | **Cost Share** | **Federal** | **Cost Share** | **Federal** | **Cost Share** |
| Prime |  |  |  |  |  |  |
| Partner 1 |  |  |  |  |  |  |
| … |  |  |  |  |  |  |
| Partner n |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **BP3** | **BP4** | **Total** |
| Task 1 |  |  |  |
| … |  |  |  |
| Task n |  |  |  |
| **Total** |  |  |  |

**Section 4: Supplemental Information**

RAPID encourages Applicants to include supporting literature references and supporting data.