

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

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

<p align="center"><b>Education &amp; Workforce Development Proposal Submission to the RAPID Manufacturing Institute</b> <b>on Modular Chemical Process Intensification</b> <i>(under DE-EE0007888 – U.S. DOE Advanced Manufacturing Office)</i></p>	
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.	

\*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 knowledge gaps in the PI & MCPI Body of Knowledge that will be addressed by the proposed work, 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 Challenge (~1 page)**

Focus on the fundamental knowledge gaps 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".

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

Focus on the approach, instructional methods, design/simulation tools needed to address the challenges 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.

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

Identify the potential impact of the proposed approach and learning objectives if successful.

### **1.4 Sustainability Approach (~1/2 page)**

Identify the proposed sustainability approach whereby RAPID can provide continued offerings after the initial pilot offering included in the award. Note: please review the RAPID copyright/ownership language document prior to generating this sustainability plan to ensure these terms can be met by the proposing institution.

### **1.5 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 2018: Awarded Project(s) under Agreement
  - August 2018 – June 2019: Course Development Phase
    - i. Include formal review points by RAPID throughout the development phase such as course outline review, review of draft materials, etc.
  - August 2019: 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
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### 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.

	BP2 (4Q18)		BP3 (2019)		Total	
Institution	Federal	Cost Share	Federal	Cost Share	Federal	Cost Share
Prime						
Partner 1						
...						
Partner n						
<b>Total</b>						

Task	BP2	BP3	Total
Task 1			
...			
Task n			
<b>Total</b>			

## Section 4: Supplemental Information

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