

**Appendix 1 to Request for Proposals (RFP)**  
**SCOPE OF WORK AND PROPOSAL FORMAT**  
**ETIC/OPAS Computer Science**  
**Pre-College Curriculum and Professional Development**

**Funding Goals:**

The ETIC/OPAS Initiative has identified these strategic goals for high school In-Class Computer Science and Discrete Mathematics in Oregon:

- Implementation of state-of-the-art Computer Science Instruction in more high schools using Carnegie Mellon University's CS4HS curriculum materials<sup>1</sup>, CS Unplugged curriculum materials<sup>2</sup>, and Discrete Mathematics curriculum to be developed in compliance with the Oregon State Math Standards<sup>3</sup> approved in June, 2009.
- Appropriate professional development and ongoing support for teachers such that these curricular changes will be widely accepted and used past the life of this grant.

**Funding structure:**

- \$140,000<sup>4</sup> will be allocated from ETIC Funds to projects to be performed during 24-month period from October 2009 to September 2011.
- Projects will be eligible for funding up to \$140,000. The budget provided with the proposal should show no more than 50% of the expenditures being made during the 12 months ending September 30, 2010.

**Required Elements of the Proposal:**

**Project Elements**

- Development of a professional development project for Oregon high school and middle school teachers:
  - including these content elements
    - Carnegie Mellon University's Computer Science for High School (CS4HS)
    - CS Unplugged
    - Discrete Mathematics
  - Recruitment of Oregon mathematics and science teachers as well as existing computer science teachers through presentations at their professional meetings and/or email, mail, and phone campaigns.
  - Assistance and support to teachers who have participated in the professional development workshops featuring CS4HS or Discrete Mathematics.
- Development of a new Discrete Mathematics curriculum that will conform to the new Oregon Discrete Mathematics standard and introduce students to computer science fundamentals via hands-on activities

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<sup>1</sup> See <http://www.cs.cmu.edu/cs4hs/summer09/>

<sup>2</sup> See <http://csunplugged.org>

<sup>3</sup> The new Oregon Discrete Mathematics standard is given on pages 9 through 13 of <http://www.ode.state.or.us/teachlearn/subjects/mathematics/advancedmathknowledgeandskills.pdf>

<sup>4</sup> \$70,000 is subject to approval of the ETIC Budget for the fiscal year ending June 2010 by the Oregon State Board of Higher Education and \$70,000 is subject to approval of the ETIC Budget for the fiscal year ending June 2011 by the Oregon State Board of Higher Education.

that allow a deep understanding and appreciation of these principles and their relationship to computer science as a discipline.

- Training of existing computer science teachers and mathematics teachers to offer this new Discrete Mathematics curriculum as a high school mathematics course.
- Cost relief and potential incentives to attract motivated teachers to these projects.
- Plans for delivering CS4HS or Discrete Mathematics curricula to district schools.

### **Intended Results**

- **Outputs** anticipated for this segment include:
  - Professional development workshop(s) and cost relief/incentives schedule;
  - Teacher support structure;
  - Discrete mathematics curricular materials such as lesson plans, lecture materials, worksheets, exercises, and assessments;
  - Pilot implementation report for discrete mathematics curriculum; and
  - Wider implementation plan for discrete mathematics curriculum.
- **Outcomes** anticipated for this segment include:
  - More Oregon teachers capable and confident in teaching CS topics and classes;
  - Wider exposure of Oregon high school students to computer science;
  - More CS classes offered in more Oregon high schools.
- The main desired **Impact** for this segment is more high school graduates who are motivated and prepared to pursue college majors in computer science and information technology.

### **Evaluation Plans**

Formative and Summative Evaluation Plans with focus on proposed outputs and outcomes

### **Reporting Schedule**

Quarterly reports and a final report will be required of all organizations receiving funding via this RFP. Quarterly reports must include actual completion dates and goals achieved vs. the schedule included in the project proposal. Quarterly reports must include outputs and outcomes vs. the forecasted outputs and outcomes<sup>5</sup> vs. the forecasted outputs and outcomes for the period in question and the results of any formative evaluation<sup>6</sup> that occurred during the period. Final reports must also include the actual outputs and outcomes vs. the forecasted outputs and outcomes and the results of the summative evaluation<sup>7</sup> described in your proposal. A template for quarterly and final reports will be provided to those whose proposals are funded. The person responsible for implementing a project may also be asked to attend a quarterly meeting where project progress and plans will be discussed. ETIC has a web page outlining this RFP and details of the grant reporting schedule. See <http://www.oregonetic.org/xxx/yyy>

### **Proposal submission tips**

- Use plain, descriptive language. Avoid jargon. Define terms acronyms and abbreviations
- This RFP Appendix uses the W.K. Kellogg Foundation “Logic Model” format including: Assumptions, Planned Work, and Intended Results. An excellent reference on the development and use of Logic Models in Project Planning and Evaluation is the following document: “Logic Model Development Guide”

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<sup>5</sup> See definition of outputs and outcomes under Intended Results in Proposal Content below

<sup>6</sup> See definition of formative evaluation in Proposal Content below.

<sup>7</sup> See definition of summative evaluation in Proposal Content below.

W.K. Kellogg Foundation available on line at this URL:

[http://opas.ous.edu/Committees/Resources/Publications/WKKF\\_LogicModel.pdf](http://opas.ous.edu/Committees/Resources/Publications/WKKF_LogicModel.pdf)

- This Logic Model can be briefly summarized as
  - Identify project assumptions and external constraints
  - Identify project resources, human financial, organizational and community
  - Show how project planned activities take resources to create outputs, events, etc.
  - Show how project outputs effect participant outcomes: changes in behavior, knowledge, skills
  - Connect project outputs and outcomes to three- to five-year impact on organization and community

## Proposal Content

Please describe your proposed project using the following outline. Be concise, specific and give examples and references where appropriate. Conform to the format requirements given in the body of the RFP.

1. **Cover Page.** *Use the cover sheet template provided below.*
  - a. *Please provide a short meaningful title and an abstract for your proposal in the spaces provided.*
  - b. *The project contact should be person who should be contacted for the purpose of clarifying the information provided in the proposal.*
  - c. *The accounting contact should be the person who should be contacted if/when the proposal is approved and funded, regarding transmittal of funds and related matters.*
2. **Assumptions.** *Give a very brief summary of the problem and issues that your project addresses as well as any additional assumptions.*
3. **Project Plan**
  - a. **Resources** - *Include the human, organizational and community resources to be deployed to implement the proposed project. Include a description of the team that will implement the project and biographies of the team members. If other organizations are expected to collaborate, include a description of their capabilities.*
  - b. **Budget** – *Use the budget template given below to describe the financial resources to be deployed to implement the proposed project. Start your budget at the top of a new page. Follow it with a discussion of the thinking behind each section of the budget. Discuss the staffing, services, supplies, and equipment to be funded by the budget, referring, as appropriate, to the more general discussion of Resources that precedes the Budget. The budget discussion can refer to the description of collaborators and Project Activities that follow the Budget in your proposal. Likewise, your discussion of the cost of evaluations, whether they are budgeted as staff time (covered by Salary Expenses) or as Services, can refer to the description of evaluations that comes later in your proposal.*
  - c. **Other collaborators** – *Other collaborators are resources outside your organization that will contribute to the overall project. Examples might be community partners or subcontractors.*
  - d. **Project Activities** – *Describe what the project will do with resources to achieve the intended results. Draw the logical connection between project activities and outputs and outcomes.*
  - e. **Schedule.** *Use the schedule template in this appendix. Use a separate page or two for your schedule. For each quarter of the project indicate activities that will occur during the period and the measurable outputs of these activities. Indicate who will be responsible by title for*

each activity and output. Under Milestones indicate what will be completed during the quarter and the date you expect it to be completed.

4. **Intended Results.** This section should include forecasts for the following
  - a. **Outputs.** Outputs are the direct products of project activities. At a minimum you should forecast the number of teachers you should expect to participate in each of your proposed activities and the number of contact hours you expect. (In the case of professional development, contact hours are the sum of the classroom and equivalent hours of participation across all the teachers who participate.)
  - b. **Outcomes.** Outcomes are the specific changes in project participants' behavior, knowledge, skills, status, and level of functioning.
  - c. **Impact.** Impact is the fundamental intended or unintended change occurring in organizations, communities or systems as a result of project activities within three to five years.
5. **Evaluation Plans**
  - a. **Formative Evaluation.** Formative Evaluations help you fine-tune the delivery and quality of experience for participants and staff. This section should describe the resources including the expertise to be used for the formative evaluation as well as the data to be collected, how it will be collected and how it will be used to improve the outcomes of the project. At a minimum the formative evaluation should give the actual outputs and outcomes vs. the forecasted outputs and outcomes for the period in question. The formative evaluation could also include things like
    - i. Quality of experience and outcome metrics for professional development workshop that facilitate making improvements during the period of the project. Possibilities include
      1. Level of satisfaction
      2. Would they recommend this project to peers?
      3. What changes would they like to see in training format and content?
      4. Will this training help them offer new course content or new courses at their school in the coming year? In subsequent years?
      5. Additional content-specific questions
    - ii. Input on the curriculum materials that facilitate making improvements to these materials during the period of the project.
  - b. **Summative Evaluation.** A Summative Evaluation measures actual performance vs. planned performance, including quantitative and qualitative measures. It can also include recommendations for further work. This section should describe the resources including the expertise to be used as well as the data to be collected, how it will be collected and how it will be used to create a summative evaluation report. At a minimum the summative evaluation should give the actual outputs and outcomes vs. the forecasted outputs and outcomes for the project as a whole. The summative evaluation could also include things like
    - i. Summaries of pre- and post- surveys of those participating in professional development.
    - ii. A discussion of how the participants compare to the wider population – were the participating teachers hand-picked or exceptional in some way?
    - iii. Summaries of evaluations of new curriculum materials.
    - iv. Suggested improvements in recruitment, delivery, curriculum, and ongoing support content and mechanisms for teachers using CS4HS, CS Unplugged and Discrete Mathematics.

- v. *A discussion of issues affecting the growth in adoption of the curricula by Oregon schools.*
- 6. **Commitment form from proposing organization.** *Use the form provided below. This form should be signed by an authorized official of the proposing organization. This person should have authority to negotiate and contractually bind the proposing organization.*
- 7. **Commitment form from collaborating organizations, if any.** *(Use the form provided below.)*
- 8. **Optional letters of endorsement from knowledgeable stakeholders**

The templates and forms referenced above start on the next page. *Instructions for each section are given above and in the templates in italics. Remove the instructions before using the templates so your proposal does not include the instructions.*

*Use this template to create the cover page for your proposal.*

<b>Proposing Organization</b>	
<b>Proposal Title:</b>	
<b>Proposal Date:</b>	
<b>Project Abstract:</b> <i>(Provide a short description of project using no more than the space provided here.)</i>	
<b>Amount Requested:</b>	

<b>Project Contact:</b>	
<b>Title:</b>	
<b>Address:</b>	
<b>Phone and Email:</b>	

<b>Accounting Contact:</b>	
<b>Title:</b>	
<b>Address:</b>	
<b>Phone and Email:</b>	

**Schedule Template**

<b>Quarter Ending</b>	<b>Planned Activity and Measurable Outputs</b>	<b>Responsible persons by title</b>	<b>Milestones with target dates</b>
Oct. 2009			
Dec. 2009			
Mar. 2010			
Jun. 2010			
Sep. 2010			
Dec. 2010			
Mar. 2011			
Jun. 2010			
Sep. 2011			
Dec. 2011	Final report including evaluation & assessment		Final report submitted by October 31, 2011.

**Budget Template**

<b>Proposal Budget</b>			
Oct. 1, 2009 - Sep. 30, 2011			
	<b>10/1/09 - 9/30/10</b>	<b>10/1/10 - 9/30/11</b>	<b>10/1/09 - 9/30/11</b>
<b>Salary Expenses</b> (for those to be assigned to project)			
<i>[One line per role/title with FTE%]</i>			\$ -
			\$ -
Other Payroll Expenses for above			\$ -
Subtotal	\$ -	\$ -	\$ -
<b>Services</b> (to be subcontracted)			
e.g. Curriculum Development			\$ -
Instructor stipends			\$ -
Printing			\$ -
Evaluation			\$ -
Communications			\$ -
<i>(replace above with your list of services to be subcontracted)</i>			
Subtotal	\$ -	\$ -	\$ -
<b>Supplies</b> (to be consumed during project period)			
			\$ -
			\$ -
			\$ -
Subtotal	\$ -	\$ -	\$ -
<b>Equipment</b> (to be retained after project period)			
			\$ -
			\$ -
			\$ -
Subtotal	\$ -	\$ -	\$ -
<b>Grand Total</b>	\$ -	\$ -	\$ -

**Proposing Organization Commitment Form**

Legal Name of Organization: \_\_\_\_\_

Our organization will commit to implement the project as described in this proposal if it is accepted and funded.

Comments:

\_\_\_\_\_  
Signature of authorized official

\_\_\_\_\_  
Date

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_ Phone: \_\_\_\_\_

Email Address: \_\_\_\_\_

Mailing Address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Collaborating Organization Commitment Form**

Legal Name of Organization: \_\_\_\_\_

Our organization will commit to participating in the project described by this proposal if it is accepted and funded.

Comments:

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_ Phone: \_\_\_\_\_

Email Address: \_\_\_\_\_

Mailing Address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_