

I³: Towards an Institute for STEM Education Year 1 Annual Report Summary and Updates

I³ is off to a powerful start in Year 1 and continues to grow and gain momentum. The following report summarizes our full annual report to NSF and gives details as to the momentum and success of this initiative.

Description of Activities:

The ***Discipline Based Education Research seminar*** is firmly established and meets weekly. DBER brings together faculty and graduate students from over 10 disciplinary departments and three Schools. Over 20 faculty are involved and represent 18 NSF grants. This DBER group provides a forum for faculty, grad students and staff to share ideas about their programs, learn about each other's efforts, provide constructive and critical feedback, and plan interdisciplinary research programs. These meetings have been effective at creating community among researchers on campus and have also served as an effective forum for working meetings. For example, the DBER group has advised the Colorado Department of Education on K12 science standards. DBER is also serving as a vehicle to make connections with STEM education experts from other institutions and has already hosted faculty from MIT, University of Maryland, University of Hawaii (I³), Open University, England, and the University of Pittsburg.

The first round of ***faculty funding and graduate funding*** has been awarded and will begin this summer. Faculty awards went to Clayton Lewis of Computer Science, Steven Pollock of Physics, Erin Furtak of the School of Education, and Eric Frew of Aerospace Engineering. These awards are up to \$10,000 each to provide course release, summer salary, or research funding to initiate a program in educational research or simply to engage in a discipline-based educational research project for the first time. Graduate awards were made to 8 students in Physics, Atmospheric and Oceanic Sciences, the School of Education, Astrophysical and Planetary Sciences, Math, Computer Science.

We have begun to conduct ***initial baseline evaluation*** of the project by identifying all programs on campus in STEM education, and assembling a survey (based on the Hawaii I³ program and the Association of Public and Land-grant University's effort on systemic change) to identify levels of engagement and integration of STEM educational programs on campus.

Our ***external evaluator***, Dr. Scherr, has already had one meeting with the Project Management Team and will spend a week housed at Colorado in Summer 2009. Dr. Scherr has advised on the mechanisms for collecting baseline data and the summer meeting will flesh out the details of our 5-year evaluation plan.

We have a ***new website*** devoted solely to STEM Education that will later be built into a portal for program participants to share information and research and serve

as a community portal for the proposed Center. This website currently serves to announce meetings, link communities at Colorado, advertise the graduate and faculty awards, and archive events supported by program. It can be found at www.Colorado.edu/ScienceEducation/.

On the ***policy and publicity*** sides of the Colorado I³ effort, members of I³ Project Management Team have given roughly a dozen talks about I³ in national venues (see below). Members of the PMT have met with members of the Colorado state legislature (Rep. Hullinghorst, Sen. Heath, Sen. Palmer and Rep. Levy), members of the Colorado Department of Education (Cartwright), University Regent (Neguse), and have secured invitations to speak to state-level policy makers about the I³ efforts at the University of Colorado.

In recognition of our efforts in STEM education, the Association of Public and Land Grant Universities (APLU, formerly NASULGC) hosted their ***first annual Science and Math Teacher Imperative*** on our campus May 17-20. This conference brought together leadership from 73 institutions that have committed to preparing more well trained science and math teachers. Colorado's participation was considered a highlight of the proceedings. This conference provided a valuable opportunity to engage legislative representatives in supporting the I³ efforts. More about the conference and CU's participation can be found at <http://www.teacher-imperative.org/>.

Plans for our Inaugural Annual ***Symposium on STEM Education*** are well underway. The symposium will begin with a reception from 5-7pm on Sunday August 30th. We are in the process of inviting state and national legislators as well as representatives from various state education agencies. Regent Neguse has already agreed to attend and give a short address. Monday the 31st will be more of a traditional symposium from 9am-12pm in the UMC, incorporating a poster session and award ceremony for the Chancellor's Faculty Award for Excellence in STEM Education. This Symposium will serve as a community-building forum as well as provide an opportunity to formally announce and publicize this effort.