Overview of XSEDE Education Program

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Overview

• Goals of the XSEDE Education Program
• Review of education program services
  – Campus visits
  – Faculty professional development workshops
  – Promoting formal academic programs
  – Special workshops for faculty and students
  – Repository of shared materials
XSEDE Education Program Goals

• Prepare the current and next generation of researchers, educators and practitioners.
• Create a significantly larger and more diverse workforce in STEM.
• Inculcate the use of digital services as part of their routine practice for advancing scientific discovery.
Initiating Services to Facilitate Change

• Campus visits
  – First discussions about integrating computational science into the curriculum
  – Discussion of formal programs
  – Opportunities for faculty professional development
  – Overview of related XSEDE services
Developing Faculty Expertise

• Faculty professional development workshops
  – Two to six day workshops on a variety of topics
    • Computational thinking
    • Computational science education in science and engineering domains
  – Focus on local/regional audiences to reduce travel costs
  – Subsidies for faculty to travel to workshops at other sites
Promoting Formal Academic Programs

• XSEDE Education program is focused on assisting with the initiation and enhancement of formal computational science and engineering programs
  – Both undergraduate and graduate programs
  – Most sustainable way to help achieve the long-term project goals by producing a savvy workforce
  – Reduce the barriers to program adoption by
    • Providing program models and assistance with development
    • Solidifying a virtual community to share experiences
    • Providing faculty professional development
Special Workshops for Faculty and Students

• Development of synchronous and asynchronous education and training sessions
  – Multi-site broadcasts of workshops
  – Online training and education modules
  – Experimenting with full courses that can be widely shared for credit and non-credit inclusion in curricula
Repository of Shared Materials

• Developing a repository of computational science education materials
  – Reviewed by professional staff and faculty
  – Indexed by subject and a detailed competency-based ontology
  – Goal: trusted, comprehensive source of information for computational science educators
  – Expect “beta” version by beginning of 2013
Questions and Discussion