Materials & Workshops for Cyberinfrastructure Education in Biology

Award Year:
2013

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Associated Program:
Workshop Program [1]

As part of a cross-center collaboration led by BEACON, SESYNC is hosting two meetings aimed at improving the capacity of researchers to leverage a host of cyberinfrastructure capabilities. The goals of the project broadly are as follows:

1. extend existing online computational science training material to facilitate self-learning by biologists across a wide range of expertise;
2. run a number of focused workshops to teach the materials and train others in delivery;
3. develop reusable assessment strategies to study the effect of these materials on learning and help identify unmet learning needs; and
4. host several meetings across a number of centers to develop a list of shared educational needs.

At an NSF-sponsored BIO meeting on cyberinfrastructure (CI) in summer of 2012 attended by a number of BIO centers, the need for improved educational materials and practices was highlighted as one of the central challenges in making use of advanced cyberinfrastructure within the biological sciences. Three basic educational topic areas emerged: first, basic computational practice, ranging from effective computer use to advanced topics such as reusing code and highly concurrent programming; second, data use, archiving and reuse, together with effective metadata generation, storage, and analysis; and third, strategies for understanding how biologists can best learn and be taught computation, including development, delivery, and assessment of training materials. Several centers indicated that this kind of education was their second biggest challenge, after their primary mission.

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https://www.sesync.org/project/workshops/materials-workshops-for-cyberinfrastructure-education-in-biology

Links
[1] https://www.sesync.org/opportunities/research-workshops/workshop-program