Participants in the 2017 Summer Workshop “Making Meaning through Modeling: Problem solving in Biology”.

Making Meaning through Modeling: Problem solving in Biology.

At this summer's workshop, which ran from July 23-28, we delved into how to engage our students more productively with models and the process of modeling. We discussed how to enhance the skills students need to understand and build models, how to expand upon models already in our curriculum, and ultimately how to enhance student understanding of the nature and process of science with modeling. All of this discussion occurred in the context of effective pedagogical approaches, the sharing of excellent resources, and the building of community around effective use of models. Workshop participants will continue to work with colleagues on the QUBESHub through the fall semester to develop and implement new approaches or materials.

Learn More...

What's New with Faculty Mentoring Networks

QUBES Faculty Mentoring Fellows Program

During the Spring of 2017, QUBES launched a new initiative – the Faculty Mentoring Fellows Program. Individuals with interesting instructional ideas and cool materials to share with others were recruited to become fellows and to lead upcoming QUBES Faculty Mentoring
Fellows met online to learn how QUBES Faculty Mentoring Networks operate, how they could best reach out to share their educational know-how and materials with others via QUBES, and develop plans for Fall 2017 or Spring 2018 Faculty Mentoring Networks. Scroll down to see some of the upcoming Faculty Mentoring Networks led by our Fellows!

Read the following blog post by Jeremy Wojdak to meet the mentoring fellows and to learn more about the perks of participating in the Fellows Program.

Upcoming Faculty Mentoring Networks

**Beanbag Biology: Teaching Quantitative Biology through Hands-on Activities**

*Dates:* September 15, 2017 - April 27, 2018  
*Peer Mentor:* Holly Gaff - QUBES Fellow  
*Registration:* Open till September 15 - REGISTER NOW

**Approachable modeling for biologists, without calculus**

*Dates:* November 1, 2017 - May 31, 2018  
*Peer Mentor:* Erin Bodine - QUBES Fellow  
*Registration:* Open till September 30 - REGISTER NOW

**Developing video tutorials for computational genomics**

*Dates:* August 28 - November 3, 2017  
*Peer Mentor:* Hong Qin - QUBES Fellow  
*Registration:* Closed

**Math Modeling Faculty Mentoring Network**

*Dates:* September 11 - December 4, 2017  
*Peer Mentors:* Ben Galluzzo and María Hernandez - QUBES Fellows  
*Registration:* Closed

**Explore Authentic Data with Data Nuggets**

*Dates:* August 28 - December 08, 2017  
*Peer Mentors:* Melissa Kjelvik and Liz Schultheis  
*Registration:* Closed

Current Faculty Mentoring Networks

**Resources for Collections-Based Undergraduate Education**

*Dates:* April 1 - December 31, 2017  
*Peer Mentors:* Molly Phillips and Anna Monfils
The Network for Integrating Bioinformatics into Life Sciences Education (NIBLSE, “nibbles”) seeks to establish bioinformatics as an essential component of undergraduate life sciences education. NIBLSE has developed a set of bioinformatics core competencies that are available on its homepage (here) and that are described in a paper recently posted on bioRxiv (here). In addition, NIBLSE is developing the Learning Resource Collection (here), a collection of curated bioinformatics learning resources. To enrich the Collection, NIBLSE has partnered with QUBES on Development Incubators in which authors work collaboratively with NIBLSE members to refine a learning resource for submission to a peer-reviewed journal, such as CourseSource. In addition, previously-published learning resources can be added to the Collection.

If you would like to submit a resource, use this submission form. If you would be willing to participate in an Incubator, please fill out this form. You can learn more about NIBLSE, Incubators, and the Learning Resource Collection at niblse.org.
Using DataCamp to help teach data science in a biostatistics class

A large part of science can be described as the process, through observation and measurement, of extracting information from the world in the form of data. Even with in-silico models, we construct analytic information through mathematical analysis, or record “measurements” on resulting simulations. Statistics or machine learning can then be used on the results or data to extract relevant information.

Read more...