



# QUBES

The Power of **Biology** × **Math** × **Community**

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## Upcoming Summer Institute



**2016 National Academies  
Special Topics Summer Institute on  
Quantitative Biology  
*"Lowering the Activation Energy:  
Making Quantitative Biology More Accessible"***

June 19-24, 2016

North Carolina State University, Raleigh

Biology requires a rapidly expanding set of quantitative skills including data analysis, statistics, modeling, computational reasoning, and visualization. If you are interested in developing your biology students' quantitative skills, this is the summer workshop for you!

Modeled on the National Academies Summer Institutes, the Quantitative Biology Summer Institute (QB SI) is presented by BioQUEST, Science Case Net and QUBES.

This will be a working meeting during which participants will learn about and use evidence-based teaching strategies such as backward design, active learning, and assessment, as well as methods such as cases and modeling. Hands on sessions at the institute will focus on resources and methods to address the special challenges associated with teaching quantitative biology. The workshop is developed by BioQUEST, which celebrates 30 years of leadership in biology education reform in 2016, and Science Case Network, which brings expertise on using case based pedagogies. The QUBES project will support ongoing collaborations among participants.

**We invite applications from individuals and teams from two and four year**

**institutions.** Participants from all STEM fields are welcome. As indicated on the application, participants are expected to work collaboratively after the meeting and implement a module or method in their classes during the 2016-2017 academic year. More information and the application for the Quantitative Biology Summer Institute are available at: <https://qubeshub.org/groups/summer2016>

**Review of applications will begin March 28 and applicants will be notified regarding their status of their application by April 4.**

Organizing Committee:

[Kristin Jenkins](#), BioQUEST

[Pat Marsteller](#), Science Case Net

[Sam Donovan](#), QUBES

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## Upcoming Conference



One of the goals of the Life Discovery - Doing Science Education Conference is to facilitate networking during and beyond the conference. Join us for these five timely topics, or suggest your own:

- Career development in Biology
- How to make connections with professional societies
- Inquiry - Directed/guided or open?
- Engaging Minority Students in Biology Courses
- Current events - strategies to rapidly turn around news items into genuine learning experience

<http://www.esa.org/ldc/2016-program/2016networking/>

REGISTER BY MARCH 4, 2016

FOR ADVANCED RATES

Make Hotel Reservations by March 1 for Conference Rates

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# Upcoming Faculty Mentoring Networks



HHMI's BioInteractive (<http://www.hhmi.org/biointeractive>) and the Quantitative Undergraduate Biology Education and Synthesis (QUBES) project invite applications for a Faculty Mentoring Network (FMN) focused on adapting quantitative BioInteractive modules for undergraduate introductory biology courses. BioInteractive has a growing collection of quantitative and data based modules on statistics, graphing, and data manipulation, however these were initially designed for high school and AP biology. Participants in this FMN will work together and with the HHMI BioInteractive staff to adapt and implement these modules in their own introductory biology courses.

The Faculty Mentoring Network combines a face to face workshop experience with a mentored, long term community interaction on the QUBES site. The group will begin working at the National Academies Special Topics Summer Institute on Quantitative Biology (<http://qubeshub.org/groups/summer2016>), June 19-24 2016. After the meeting participants will continue to work online with a group of peers and mentors to adapt and implement quantitative modules in their courses during the Fall 2016 semester. This work will take advantage of the QUBESHub infrastructure and include short online meetings every other week. Upon completion of the Faculty Mentoring Network participants will post their materials and teaching guidelines on the BioInteractive partner page on QUBES.

Applicants must be teaching introductory biology or an equivalent course in Fall 2016, and be able to attend the Quantitative Biology Summer Institute June 19-24. For more information, visit: <https://qubeshub.org/groups/hhmibiointeractivefmn>



We are pleased to announce that QUBES is partnering with the American Society for Microbiology (ASM) Biology Scholars to offer a new hybrid program called **Biology Scholars - Teaching with Data**.

Over the last 10 years more than 270 faculty have participated in the highly effective ASM Biology Scholars programs. The scholars work in cohorts as part of a year long residency focusing on different aspects of their teaching scholarship including: assessment, research, and publishing. The goal of the Biology Scholars program is to foster leadership and create communities of practice around effective educational practices. You can learn more about the [ASM Biology Scholars here](#).

You might be thinking, that sounds a lot like what QUBES has set out to do with [Faculty Mentoring Networks \(FMN\)](#). In fact, the FMN emphasis on cohorts of faculty working on shared scholarly projects over relatively long periods of time borrows heavily from the ASM Biology Scholars model.


So naturally we have decided to team up and offer a new hybrid program Biology Scholars - Teaching with Data (BSTD). To kick off the collaboration we are now accepting applications for participation in two new BSTD Faculty Mentoring Networks focusing on:

- [Course Based Undergraduate Research](#)  
kick off meeting in Boston on June 15-16, applications due April 11, 2016.
- [Quantitative Skills for Microbiology Students](#)  
kick off meeting in Bethesda on July 20-21, applications due May 16, 2016.

Each of these programs requires participation in the face to face kick off meeting and a long term commitment to work as part of a team. Please see the [Course Based Undergraduate Research](#) and [Quantitative Skills for Microbiology Students](#) pages for additional information, applications, and contact information for questions.

 Facebook

 Twitter

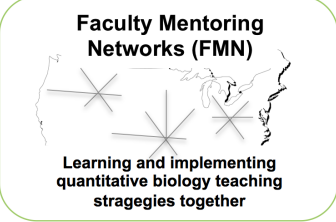
 QUBES Blog

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[Visit QUBES Hub](#)

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## Featured Blog Post

The logo for Faculty Mentoring Networks (FMN) features a map of the United States with several 'X' marks indicating network locations. Below the map, the text reads: "Faculty Mentoring Networks (FMN)" and "Learning and implementing quantitative biology teaching strategies together".

**Faculty Mentoring Networks (FMN)**  
Learning and implementing quantitative biology teaching strategies together

An Introduction to Faculty Mentoring Networks

A Faculty Mentoring Network (FMN) is a group of faculty who work together to learn about and implement some quantitative biology teaching materials or approach.

[Learn more...](#)

[QUBES Blog](#)

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## Partner Activity



### NIMBioS Tutorial: Evolutionary Quantitative Genetics

For evolutionary biologists interested in how quantitative genetics theory can be tested with data, this successful five-day tutorial, offered in 2014 and 2015, will be offered again in 2016, from August 8-12. The tutorial will review the basics of theory in the field of evolutionary quantitative genetics and its connections to evolution observed at various time scales. For more information and the online application (coming soon!), [click here](#).

[Learn more...](#)

[NIMBioS Partner Page](#)

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## Current Faculty Mentoring Network

## Grounding your Biology: InTeGrating Geology and Biology

Participants in this faculty mentoring network will adopt data-driven interdisciplinary modules that address sustainability and climate change for their courses.

[Learn more...](#)

[Faculty Mentoring Networks](#)

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## Featured Resource



50 YEARS OF DATA  
SCIENCE

From the abstract: "This paper reviews some ingredients of the current 'Data Science moment', including recent commentary about data science in the popular media, and about how/whether Data Science is really different from Statistics."

[Read now...](#)

[Resource Page](#)



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