QUBES
The Power of Biology × Math × Community

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Faculty Mentoring Networks

QUBES offers professional development opportunities for educators called Faculty Mentoring Networks (FMNs). FMNs are a great way to receive support and guidance before, during, and after implementation of a new teaching module or technique. Learn more about FMNs.

Please subscribe to the QUBES Newsletter or check out the QUBES blog to receive updates about upcoming FMNs.

Apply now to the QUBES Fall 2019 Faculty Mentoring Networks!

QUBES (Quantitative Undergraduate Biology Education and Synthesis) is excited to offer these semester-long professional development opportunities designed to engage you with faculty from around the country (or world!) to enhance your teaching. If you have any questions, please contact Deb Rook (deb.rook@bioquest.org), or contact the FMN-specific mentors.

Genome Solver - Faculty Training in Basic Bioinformatics - Deadline extended!

Led by Anne Rosenwald, Vinayak Mathur, and Gaurav Arora

Are you feeling underprepared to deliver bioinformatics content to your students? Not sure how to develop lessons and implement them in the classroom? Are you looking for a Classroom-Based Undergraduate Research Project that you and your students can get involved in? Are you interested in microbial genomics? Then Genome Solver is the place for you!

We will teach you some basic tools and resources, all available for free, and most available on the web. We'll take a look "under the hood" to explain how the tools work, but no coding or scripting is required. This entry-level course can get you started in bioinformatics with a friendly community. Apply by August 10. Visit https://qubeshub.org/groups/gsfmn

## NEON Data Education Fellows Faculty Mentoring Network - Fall 2019

Led by Megan Jones and Kusum Nathani

Interested in adding quantitative reasoning and ecological data to your classroom? Join the NEON Data Education Fellows FMN to implement existing educational materials using data from the National Ecological Observatory Network (NEON). Topics range from plant phenology to earth-atmosphere gas exchange to ecological disturbance. Already teaching with NEON data? Join the FMN to share your education resource with others and prepare it for publication. Applications are viewed on a rolling basis. Visit https://qubeshub.org/community/groups/neon2018

Agent/Individual-Based Modeling Faculty Mentoring Network

Led by Steve Railsback and Volker Grimm
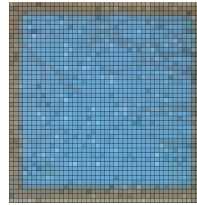
Do you teach a modeling course, and want to include agent-based models (traditionally called 'individual-based models' in ecology), but don't have a lot of experience with them yet? Would you like an approachable way to introduce math-phobic students to real modeling in your intro or ecology course? Join the Agent/Individual-Based Modeling Faculty Mentoring Network (FMN)! This professional development opportunity will include biweekly meetings this semester to learn core ABM concepts and how to implement them in Netlogo, and then collaboratively writing, revising, peer-reviewing, and sharing your own new course modules that expose students to those core concepts. Apply by August 16. Visit https://qubeshub.org/groups/abmfmn2019

Teaching with R in Undergraduate Biology

Led by Paige Parry

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> swirl()

| Welcome to swirl!
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This opportunity is intended for undergraduate biology instructors with prior R programming experience who are interested in learning ways to teach R effectively to students with little to no programming experience. Participants will focus on developing, implementing, and sharing modules for teaching statistical and biological concepts in R with Swirl. Swirl lessons simplify the R learning process by providing a guided, interactive experience through on-screen prompts and exercises which students answer directly in the RStudio console. Participants will learn the Swirl program, implement one existing Swirl lesson, contribute one new lesson and will leave the FMN with >10 ready-to-use Swirl lessons covering diverse biology and data analysis concepts. Apply by August 16. Visit https://qubeshub.org/groups/teaching_r_fmn_2019

Project EDDIE FMN: Teaching Quantitative Reasoning and Scientific Concepts with Data

Led by Andrew Haveles

Are you interested in teaching quantitative reasoning and looking to include data exploration in your classroom? Apply now to join the Project EDDIE FMN that will bring together faculty interested in implementing Project EDDIE (Environmental Data-Driven Inquiry and Exploration) teaching modules that address quantitative reasoning and scientific concepts using environmental data.

Project EDDIE modules address quantitative reasoning and scientific topics spanning environmental disciplines (e.g., ecology, limnology, geology, hydrology, climate change, and environmental sciences) with a flexible structure to fit all teaching situations. Participants in this FMN will focus on how to use EDDIE modules in their undergraduate courses by participating in biweekly virtual sessions to collaborate with and support others in the network and receive mentoring. Participants will leave the FMN with modules available for implementation in multiple classroom settings, access to a network of peers, and an instructor story to share their experience about adapting and implementing an EDDIE module in their classroom. Apply by August 16. Visit https://qubeshub.org/groups/eddiefmn

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