Community Spotlight

For this month's Community Spotlight, we're introducing our Spring 2022 Faculty Mentoring Networks (FMNs). These communities, which meet every other week over the course of a semester, support each other in all endeavors related to STEM education reform--and facilitate the development, implementation, revision, and publishing of new open educational teaching resources. Check out our spring offerings to-date and apply now!

Spring 2022 Faculty Mentoring Networks:

- Applying Universal Design for Learning Principles to Existing Cases
- Hosting a Project with BioQUEST / QUBES
- QB@CC: Conceptualizing Connections between Mathematics and Biology
- Project EDDIE: Teaching Scientific Concepts and Quantitative Reasoning with Large-Datasets and Inquiry-Driven Learning
- Life Discovery - Pushing Past Barriers: Ecological Science for All
- *CourseSource*: Online4Bio Writing
- ImmunoReach: Bridging Immunology with Other Disciplines
- Molecular CaseNet

Questions about our Spring FMNs can be directed to BioQUEST Deputy Director Deb Rook.

Applying Universal Design for Learning Principles to Existing Cases

Are you interested in applying Universal Design for Learning (UDL) principles to your existing case study? Apply now to join us for the Applying UDL to Existing Cases Faculty Mentoring Network (FMN).

We invite any case writers or users to apply for a Faculty Mentoring Network that will apply UDL principles to adapt existing cases. We will discuss UDL principles, consider applying inclusive mapping to the case and do a mapping activity and pinch point activity with the case you're revising. We hope to also have a Guide to identifying the nature of your students and what revisions might be first priority.

Applications are due **December 10, 2021**. Please visit the UDL FMN overview page for additional information and instructions on how to apply.

Hosting a Project with BioQUEST / QUBES

Are you part of a group that is using QUBES resources to support your project? Are you interested in partnering with BioQUEST to launch a new project? Well, this FMN was designed for you. Over the course of a semester you will be mentored through the design and development of a collaborative group space on QUBES that will help your project be successful.

Apply now to join us for the FMN "Hosting a Project with BioQUEST / QUBES" to learn the ins and outs of:

- Sharing information about your project
- Recruiting and engaging a community of collaborators
- Publishing and disseminating your education resources, and
- Coordinating your community to get project work done.

Participants in this FMN will work to design and refine their group space on the QUBES platform with the help of BioQUEST staff and other partner projects. Accepted applicants will customize and implement a set of project resources to build out their group site. We will hold biweekly online sessions that will take us through the complete process from clarifying the project goals to setting up the group working space to support the project.

DEADLINE EXTENDED to DECEMBER 31, 2021. ~~Applications are due December 10th, 2021~~. Please visit the [BioQUEST/QUBES FMN overview page](#) for additional information and instructions on how to apply.

QB@CC: Conceptualizing Connections between Mathematics and Biology

Are you interested in adopting modules that address mathematical skills using a topic in biology? Apply now to join us for the Spring 2022 Quantitative Biology at Community Colleges (QB@CC) and BioQUEST/QUBES Faculty Mentoring Network (FMN).

Participants in this FMN will focus on how to use data-driven modules in undergraduate mathematics courses. Accepted applicants will customize and implement newly designed biology educational modules from a wide range of topics. While doing this, they will participate in biweekly virtual sessions to

collaborate with and support others in the network and receive mentoring.

DEADLINE EXTENDED TO JANUARY 5, 2022. ~~Applications are due December 12, 2021~~. Please visit the QB@CC FMN overview page for additional information and instructions on how to apply.

Project EDDIE: Teaching Scientific Concepts and Quantitative Reasoning with Large-Datasets and Inquiry-Driven Learning

Are you looking to teach scientific concepts using data exploration and open inquiry? Are you interested in teaching quantitative reasoning in your classroom? Project EDDIE is excited to offer a suite of teaching Modules to use in your biology, geology, climatology, oceanography, and sustainability courses.

This spring we will be supporting faculty who would like to teach with modules featuring climate change and sustainability topics. We encourage you to apply individually or with colleagues that you know share your interests, so please spread the word!

Applications are due **December 16, 2021** – Apply Now
Learn more about applying to the Project EDDIE FMN

This FMN will bring together instructors interested in implementing Project EDDIE teaching modules that address scientific concepts and quantitative reasoning using publicly available large datasets and inquiry-driven learning.

Participants will focus on learning to adapt and implement one of the EDDIE modules in their undergraduate courses by participating in ~1 hour biweekly virtual sessions throughout the semester to collaborate with and support others in the network and receive mentoring.

Participants will leave the FMN with more experience with strategies to teach inquiry and quantitative reasoning, access to a network of peers, and they will contribute to EDDIE materials by generating an instructor story that highlights how they adapted an EDDIE module in their classroom.

The Following Modules will be available as part of this FMN:

- Sustainability Metrics
- Hypoxia in Coastal Marine Ecosystems
- Climate Change
- Green Roofs
- Prairie Ecoservices

Contact: If you have questions, please contact FMN mentors Elizabeth Farrell and Sarah Cadieux.

For more information, please visit:

Project EDDIE FMN Spring 2022 Overview

Project EDDIE FMN Program page

Project EDDIE homepage

Life Discovery - Pushing Past Barriers: Ecological Science

for All

Applications Due: December 23, 2021

The Life Discovery Faculty Mentoring Network is an extension of the rich discussions held at the 7th Life Discovery - Doing Science Biology Education Conference (LDC) -- jointly organized by the Ecological Society of America (ESA), Botanical Society of America (BSA), Society for the Study of Evolution (SSE).

Work with your peers to incorporate one or more of the following LDC themes into teaching modules for undergraduate biology and life science courses:

- Engaging non-science majors
- Connecting current events to curriculum
- Integrating inclusive pedagogy

Accepted applicants will participate in biweekly virtual sessions to collaborate with and support others in the network and receive mentoring to customize, implement and publish educational modules over the Spring 2022 semester. Participants are welcome to select modules they are currently teaching or would like to adapt for their classrooms.

Please visit the ESA FMN overview page for additional information and instructions on how to apply.

CourseSource Online4Bio Writing

Have you developed new evidence-based teaching activities and/or lessons for online learning in biology undergraduate education? Are you interested in working with a group of peers to write and prepare your Lesson manuscript for submission to the journal *CourseSource*?

CourseSource is partnering with BioQUEST and QUBES to offer semester-long Faculty Mentoring Networks (FMN)! Apply now to join us for the Spring 2022 *CourseSource* Writing FMN.

Participants in this FMN will focus on publishing undergraduate life science lessons in teaching environments with online components (e.g., fully synchronous or asynchronous online courses, hybrid courses). Accepted applicants will write a lesson article manuscript, section by section, to prepare for submission to *CourseSource*. Topics may vary from a wide range of life science and educational disciplines (see current "Courses" available in *CourseSource*).

As a part of the Spring 2022 *CourseSource* Writing FMN, members will participate in biweekly virtual sessions to collaborate with and support others in the network and receive mentoring.

The FMN is open to all instructors (including faculty, graduate students, and postdocs) who teach biology to undergraduate students and are planning to publish an online activity in *CourseSource*. Participants must commit to attending the full FMN which meets biweekly throughout the term. Preference is
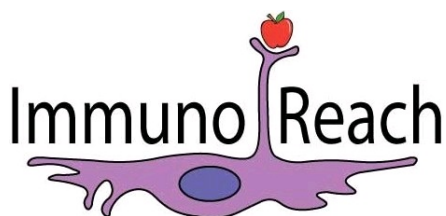
given to applicants who have taught the online activity that they will be working on at the FMN and who have not previously published in *CourseSource*. Faculty from community colleges and minority-serving institutions (colleges and universities) are encouraged to apply.

Applications are due **December 31, 2021**. Please visit the *[CourseSource](#)* FMN [overview page](#) for additional information and instructions on how to apply.

ImmunoReach: Bridging Immunology with Other Disciplines

Are you interested in creating and/or customizing evidence-based teaching resources, and meaningful assessments that address interdisciplinary immunology-focused learning outcomes?

Non-immunologists and immunologists, experts, and novices are encouraged to apply for the ImmunoReach Faculty Mentoring Network (FMN), run with BioQUEST/QUBES.

The participants will work with faculty who are interested in customizing and implementing selected modules from a wide range of learning outcomes aligned with the core concepts described in "[Vision and Change in Undergraduate Biology Education: A Call to Action](#)" (AAAS, 2011).

Our group led a community-wide project to identify key concepts in immunology. In the process of aligning them with the core concepts listed in the "Vision and Change" report, several interdisciplinary learning outcomes were identified. The learning outcomes included in these modules are at the intersection of immunology with other disciplines.

Participants will work to create or customize, and propose an assessment and an implementation plan for these teaching resources. While doing this, they will participate in biweekly virtual sessions to coordinate, collaborate with, support others in the network, and receive mentoring. The resulting modules will be published on the QUBEShub website and receive a DOI.

Applications are due by **January 3, 2022**. Please visit the [ImmunoReach FMN overview page](#) for additional information and instructions on how to apply.

Molecular CaseNet

If you teach about **biomolecular structure and function** and wished you had access to **ready-to-use, content specific, molecular structure-function case studies** for your class please read on.

Would like your students to

- visualize structures of proteins and nucleic acids in 3D

- independently navigate through these structures and analyze them to answer specific questions

- use data from public bioinformatics data resources to explore authentic case studies in biology/chemistry/ biochemistry/ other related fields?

Apply now to join the Spring 2022 Molecular Case Studies Faculty Mentoring Network.

As participants you will be introduced to the **Molecular Case Study Cycle** and will have access to several **molecular case studies** to try out in your classroom. You will have access to introductory materials and tutorials to teach your students about how to use some of the data resources needed for navigating through the cases. You will also have a network of other educators with whom you can share, discuss, and learn ways for effectively implementing these case studies.

You will then have a choice of either implementing one or more of the published cases from the CaseNet or the cases for field testing in your classroom. You can also engage your students in developing new cases!

Applications are due **January 3, 2022.** Please visit the Molecular CaseNet FMN overview page for instructions about how to apply.

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