

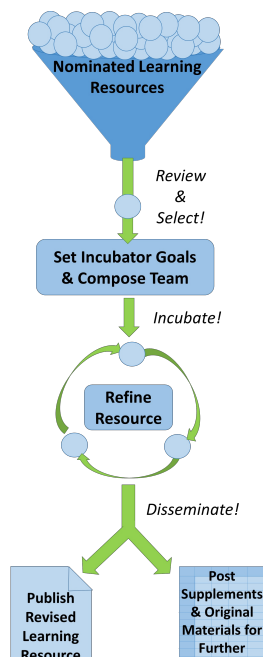


Community Spotlight

Each Community Spotlight features an outstanding group, partner, resource, or member of our community.

NIBLSE Incubators: A community-based model for the development of bioinformatics learning resources

By Michael Sierk, Sam S Donovan, Bill Morgan, Hayley Orndorf, Mark A. Pauley, Sabrina Robertson, Elizabeth F Ryder, William Tapprich



Module Description:

This week's featured resource is a presentation from a [Special Session on Bioinformatics Education](#) at the [2019 Great Lakes Bioinformatics Conference](#). Here is the abstract for "NIBLSE Incubators: A community-based model for the development of bioinformatics learning resources":

The Network for Integrating Bioinformatics into Life Sciences Education (NIBLSE) is an NSF funded Research Coordination Network that aims to establish bioinformatics as an essential component of undergraduate life sciences education. As part of that effort, the project is working to make existing bioinformatics learning resources more accessible to non-specialists and increase their use across undergraduate biology courses. To this end, NIBLSE has partnered with the Quantitative Undergraduate Biology Education and Synthesis (QUBES) project to develop and implement a novel model, called incubators, for supporting the refinement, publication, and dissemination of high-quality bioinformatics teaching resources such as a lab activity, worksheet, or classroom exercise. The incubators bring together the author of an existing resource with experienced users, novice users, and a managing editor from NIBLSE to discuss how to refine and improve the resource to make it more robust and more applicable in various undergraduate settings. The talk will

outline the challenges faced in developing high-quality learning resources and describe how the incubator model addresses several of those challenges. Examples of previous incubators will be presented, and attendees will be shown how to volunteer to participate in an incubator.

Teaching Setting:

NIBLSE incubators result in teaching materials that are specifically designed to engage undergraduate biology students in a variety of teaching settings.

Citation:

Sierk, M., Donovan, S. S., Morgan, B., Orndorf, H., Pauley, M. A., Robertson, S., Ryder, E. F., Tapprich, W. (2019). [NIBLSE Incubators: A community-based model for the development of bioinformatics learning resources](#). [GLBIO2019 Special Session on Bioinformatics Education](#), QUBES Educational Resources. [doi:10.25334/Q4QX7T](#)

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Related Materials and Opportunities:

Over the last five years, the [QUBES-NIBLSE partnership](#) has developed and tested the incubator model. At this time, over 30 bioinformatics-centered teaching resources have been reviewed or are currently under incubation. In addition to general refinement and review, each resource is assigned one or more [NIBLSE core competencies](#) during the incubation period. These core competencies are intended to serve as a guide for institutions as they work to integrate bioinformatics into their life sciences curricula (read more about the development of the NIBLSE core competencies in their [PLoS One paper](#)). Finalized resources are ultimately published on QUBES as [Open Educational Resources](#), allowing others to freely adapt and re-use the materials. If you are looking to infuse your curriculum with bioinformatics, visit the [NIBLSE Learning Resource Collection](#) to view and download high quality lessons.

Other ways to get involved:

1) **Sign up for the NIBLSE newsletter** - [Subscribe to the newsletter](#) for updates on the NIBLSE Learning Resource Collection and NIBLSE meetings.

2) **Submit a product to a NIBLSE incubator** - There are many high quality learning resources that address bioinformatics learning outcomes but they are often difficult to find and use for non-specialists. If you have developed something that you would like to share or there is an exercise that you would like to recommend to others NIBLSE wants to know about it. [Learn more about submitting a resource for incubation](#).

3) **Participate in a NIBLSE incubator** - Each new incubator recruits participants who are interested in contributing to the development of a learning resource. Participants with diverse backgrounds are needed to help ensure that the revised materials are accessible to a broad educational audience. Are you looking for a education project to contribute to? [Volunteer to be an incubator participant](#).

The incubator model is flexible and can be utilized for refinement of teaching resources in any discipline. If your biology education project is looking for a mechanism to improve and publish existing materials, consider incubators. [Learn more about incubators](#).

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