



## Community Spotlight

Each [Community Spotlight](#) features an outstanding group, partner, resource, or member of our community.



# CourseSource

### **CourseSource, Evidence-based teaching resources for undergraduate biology and physics**

One of our newest [BioQUEST/QUBES](#) partners, [CourseSource](#) is an outstanding open-access journal and repository of peer-reviewed teaching resources for undergraduate biological sciences and (more recently) physics. With the overall goal of helping educators make STEM learning environments more student-centered, active, and effective, *CourseSource* publishes open-access articles organized around courses in biological and physics disciplines that align with learning goals established by professional societies representing those disciplines.

The journal provides authors the opportunity to publish their teaching materials in a high-quality format that documents their scholarly teaching efforts, provides peer review and feedback, and shares their work with a large audience. *CourseSource* may be the only online journal that exclusively publishes teaching materials that:

- Incorporate student-centered, evidence-based, and inclusive pedagogies.
- Focus on professional society-developed learning goals and objectives.
- Are organized and formatted to enable replicability and adaptation for other classrooms.
- Do not require data supporting the efficacy of the specific materials themselves, since they are based on evidence-based practices that are fully supported by research.

In August of 2021, *CourseSource* is moving all of its resources to the QUBES platform, a move that reinforces the journal's commitments to Open Educational Practices, evidence-based teaching practices, and serving the community of biology and physics education faculty.

The QUBES platform will also introduce an improved user experience, the ability to comment on and discuss resources with their authors, and the option to create and share adaptations of openly licensed *CourseSource* resources.

Read below for more about *CourseSource*—its origins, how to connect and get involved, and its future with BioQUEST and QUBES!

For QUBES users, [join the CourseSource group here](#).

For those new to QUBES (including members of the *CourseSource* community!), [you can register here](#). Once logged in, [visit the CourseSource group to join](#).

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## How and why did *CourseSource* get started?

*CourseSource* emerged from the Vision & Change (V&C) report based on the expressed need for organizational infrastructure to support the sharing of high-quality curricular materials. As an online journal of peer-reviewed, evidence-based teaching resources that align with Learning Goals established by scientific societies in biology (e.g., Genetics Society of America, American Society for Cell Biology), *CourseSource* publishes teaching materials as Open Educational Resources (OER) that implement approaches already shown to be effective.

It is not an attempt to reinvent or compete with existing repositories or publication routes. Rather, *CourseSource* fills the previously unmet need for a peer-reviewed journal that captures and shares high quality, evidence-based teaching methods, strategies, and tools for undergraduate biology education.

*CourseSource* articles describe how instructors have developed and implemented evidence-based approaches to meet specific learning objectives linked to Learning Goals established by scientific societies. The opportunity to publish in *CourseSource* incentivizes instructors to share their materials publicly, thus promoting scholarly teaching. In addition, these peer-reviewed articles are in a format that intentionally supports use by others. Thus, it is appropriate to think of *CourseSource* as a methods journal for teaching undergraduate biology, with articles that provide specific, field-tested implementations of evidence-based practice in a variety of undergraduate classroom contexts.

## What is the process for submitting articles for publication?

We encourage all undergraduate biology and physics instructors (including faculty, postdocs, graduate and undergraduate students) to consider submitting their teaching activities and lessons for publication! We require lessons to be field-tested at least once in an undergraduate class.

We provide both instructions for authors as well as article templates on the [For Authors webpage](#) that help prospective authors organize their manuscripts. Authors of QUBES resources are welcome to refine and submit their resources to *CourseSource*. We will also be introducing new ways to share adaptations of *CourseSource* lessons as QUBES resources and/or *CourseSource* publications.

In addition, *CourseSource* hosts a variety of professional development writing opportunities - including workshops, three-day writing studios, and semester-long Faculty Mentoring Networks (hosted in collaboration with BioQUEST). [Learn more about CourseSource's Fall 2021 FMN!](#)

## What are you looking forward to in your new home on the QUBES platform?

We are most looking forward to the collaboration and partnership between *CourseSource* and [BioQUEST](#) and [the QUBES Platform](#). We have similar missions and beliefs around the importance of OERs and how critical they are in promoting key values of Social Justice, Equity, Diversity, and Inclusion (S-JEDI).

In addition to the incredible partnership, we are also thrilled about some of the new features that the BioQUEST team has been working on for the new *CourseSource* website. We are looking forward to increasing community engagement and dialogue among members and hope that the QUBES platform's current features of groups and forums will better facilitate doing so!

We are excited about the first semester-long [CourseSource Writing Faculty Mentoring Networks running this Fall 2021](#)! Another new feature is a space for authors to upload a short video walk-through of their lesson that will be published along with their resource.

## **What is on the horizon more generally for *CourseSource*?**

We will continue to promote the journal across our partner professional societies and hope to broaden participation by prospective authors, including authors from primarily undergraduate institutions and minority-serving institutions. There is tremendous value in diversifying instructor perspectives, ideas, and backgrounds to better serve the communities who use *CourseSource* and the OERs associated with the articles. We have seen both a greater need for and an increase in the submissions of articles that address S-JEDI topics.

*CourseSource* also recently received a generous donation from Carl Wieman to [expand to physics](#). Andy Rundquist, interim provost at Hamline University, is leading this expansion as the new *CourseSource* Physics Editor-in-Chief. We are looking forward to receiving Physics article submissions and to growing the resources available for undergraduate physics education!

In addition, we have recently been awarded two grants from the NSF: one from IUSE and one from the Vision and Change (V&C) program.

The IUSE collaborative research grant funds a project called “Online4Bio: Building adaptability for teaching online through peer-reviewed, active-learning resources and professional development.” The primary goal for Online4Bio is to help instructors teach online lessons using effective active-learning practices. PIs from Cornell University, the University of Maine, and BioQUEST will develop the Online4Bio project to help instructors navigate the OER lifecycle by providing support at all stages - finding, adapting, using, refining, and sharing lessons.

The V&C Collaborative Research grant, “From community to practice: Evaluating how open educational resources facilitate implementation of Vision and Change principles across diverse institutions,” includes PIs from the University of Nebraska-Lincoln, Cornell University, and the University of Maine. The project will enable us to determine how the V&C call to develop shared teaching materials has been realized in biology education, including across different institution types and with students from diverse demographic backgrounds.

Furthermore, we will leverage our research findings with groups of instructors who meet regularly in faculty mentoring networks (FMNs). The FMN fellows will identify and enact strategies for the OER-sharing process to increasingly promote V&C principles, including V&C recommendations for improving diversity, equity, and inclusion in biology education.

## **How can the community connect with *CourseSource*?**

If you’re already a member of QUBES, [you’ll be able to add the \*CourseSource\* group right away](#).

For our registered *CourseSource* users: If you are not yet a member of QUBES (a membership that carries with it a long list of benefits, as well!), then [you can sign up for a free QUBES account](#) and then [join the \*CourseSource\* group](#).

Once you are part of the *CourseSource* group, you can access [the \*CourseSource\* forum](#) to ask questions, post your feedback, and connect with others in the community!

While registration is not required to read the articles, you will need to join the *CourseSource* group in order to access the supporting materials.

We will also have a feature for "Instructor-Only Access" for certain supporting files, such as assessments, answer keys, etc. [You will need to request instructor-only access here.](#)



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BioQUEST is a transformative, collaborative community empowering educators to drive innovation in STEM education for all students.

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