

# Call for applications: Innovation in virtual and augmented reality learning environments

## Purpose

As part of the [Transformative Education 2.0](#) Purdue Move, and with generous financial support from the [Lilly Endowment](#), the Office of the Provost invites applications for a new funding program related to the Provost's goal of making Purdue the most innovative residential learning program in the US among large research universities. The [Purdue Innovation Hub](#) supports innovative, transdisciplinary, and scalable initiatives and programs in teaching and learning. Proposals submitted for this competition should align with the Innovation Hub priorities of teaching and learning innovation at scale for residential students on the West Lafayette campus.

## Program Description

*Program priorities.* This funding opportunity supports faculty and staff in developing and deploying virtual reality (VR) and augmented reality (AR) tools and pedagogies to enhance learning environments across the university. When well executed, these types of environments have the power to enhance learning by “increasing engagement and motivation through greater learner empowerment and participation, embedding simulations and play to support deeper learning such as undertaking experiments that are difficult to replicate in the real world, and opening up new learning spaces for rehearsal and exploration, experimentation and design” (De Freitas & Veletsianos, 2010).

This funding program supports actual integration of VR/AR tools into the Purdue teaching and learning environment. While VR/AR applications in teaching and learning have been predominately deployed in STEM disciplines, applications across the liberal arts, education, social and human science and humanities are burgeoning. *This is not a research seed funding program, and proposals focused on basic research about virtual and augmented reality will be returned without review.* Projects can approach teaching and learning practices from instructor, student, and/or staff perspectives. Proposals are invited in any area of teaching and learning, from any discipline, and from any relevant VR/AR angle, including:

- Applying VR/AR technologies and tools to drive learning innovations at scale.
- Exploring policies and practices related to the intersection of VR/AR learning environments and serving our diverse student population, particularly students with disabilities.
- Designing innovative [Virtual Lab](#) experiences that enhance an existing course or laboratory experience with the goal of creating a blended learning environment or adapting a currently residential lab experience to an entirely virtual experience.
- Developing a VR/AR immersive simulation within a course environment; simulations might consist of graphics superimposed on top of real-world environments that learners view through a headset or other hardware that places learners into a fully immersive experience.
- Designing and implementing professional development and capacity-building opportunities for Purdue faculty and staff to deepen their knowledge of and ability to utilize VR/AR tools in support of clearly articulated learning and pedagogical frameworks.

All faculty and staff members engaged in undergraduate teaching and learning on the West Lafayette campus are eligible to apply for funding. Projects up to \$50,000 and up to 15 months in duration will be considered for this round of funding. Subsequent funding may be available, pending performance and promise for continued impact.

*Program parameters and expectations.* This program is entirely about the practice of deploying VR/AR tools within a teaching and learning environment. As such, these are *development grants*, not research grants. *This is not a research seed funding program*, and applications for research funding will be returned without review. Project teams are expected to deploy one or more experiments in teaching and learning with actual students and/or faculty, and each project needs an appropriate plan to collect feedback from all stakeholders involved in the project, especially students.

Awarded teams seeking to develop a new [Virtual Lab](#) offering should expect to participate in a summer workshop and accompanying brown bag sessions during the academic year. These offerings will support teams in their efforts to design and implement high-quality educational experiences and connect them with relevant campus experts, processes, and protocols outlined by the Innovative Learning team.

Proposers must demonstrate that their project team possesses the required experience and expertise to execute their project. *If necessary, Innovation Hub leadership will connect proposers to relevant expertise needed to achieve their goals*, for example: IT support, pedagogical expertise, assessment resources, and so forth as appropriate and required for the project. The draft Project Charter with expanded detail is attached to this RFP. Please pay special attention to the section on eligible expenses; *in general*, grants may not be used to support post-docs or PhD students, except in exceptionally narrow circumstances. We *urge proposers to discuss their ideas* with grant program leadership by submitting a one-page summary to [innovation-hub@purdue.edu](mailto:innovation-hub@purdue.edu).

## Application Process

Applicants must submit a written application for their project composed of:

- A proposal for the project itself *written using the template available on the program website*, and including all the required elements defined in the template. These include: title, team, and budget information; a description of the teaching and learning context; a detailed project description; an expected budget and justification; references cited. The detailed project description must include a clear statement of the expertise, partnerships, or resources required to make the project successful.
- A brief (two-page) CV for each of the project team members.
- A statement of support from their department head or dean (a brief email is sufficient).

Successful applicants will demonstrate a clear and compelling need for the project (i.e., a clear benefit to stakeholders), ensure that the stakeholder voice is represented in their development, execution, and evaluation of the project, and propose a realistic project plan and budget. Submit applications as a **single PDF document** via the [online submission portal](#) by **deadline stated on the program website**.

## Notes for proposers

- Refer to the [Innovation Grants webpage](#) for important dates.
- All proposers are *strongly encouraged* to submit a one-page overview of their project to [innovation-hub@purdue.edu](mailto:innovation-hub@purdue.edu) as an attachment. Hub and Online leadership will gladly iterate with proposers in before the submission date so that their proposals can be as competitive as possible.
- If your proposal includes a budget request for hardware purchase, you must submit a one-page overview or reach out for a consultation at [innovation-hub@purdue.edu](mailto:innovation-hub@purdue.edu) in advance of submitting your proposal.
- The [Innovation Hub website](#) contains expanded detail about this and other Hub programs and funding opportunities.

## References

De Freitas, S. and Veletsianos, G. (2010), Editorial: Crossing boundaries: Learning and teaching in virtual worlds. *British Journal of Educational Technology*, 41: 39. <https://doi.org/10.1111/j.1467-8535.2009.01045.x>

## **Project Charter Template (to be completed when project awarded)**

*Project information.* (project team, title, funding request, start/end dates, etc.)

*Project description.* A 300-word summary of the project.

*Project deliverables.* An itemized statement of expected deliverables by the end of the project period.

*Assessment.* A statement of the assessment and/or evaluation goals and activities for the project, which will likely be developed in collaboration with Innovation Hub and/or the Innovative Learning team.

*Budget.* An itemized budget of project expenses that complies with the statement of eligible expenses below. No-cost extensions to the original project period are not guaranteed and are significantly dependent upon progress and specific circumstances that affected the project timeline or expenses. At the end of the project period, unexpended funds will be recovered by the sponsoring organization (Innovation Hub or Purdue Online).

*Eligible expenses.* The project team agrees that the following expenses are—in general—not allowed under the terms of this award: research assistants and post-docs (salary, fringe, tuition), travel, conference registration and related costs, entertainment, significant financial support directed to external entities, and commodity computing equipment like laptop computers. *Each of these ineligible categories is subject to negotiation depending upon the needs of the project, but in general these expenses will not be supported in this funding program.* Project budget is expected to support the project team (AY buyout, summer support, staff support) as well as the cost of partnerships related to the project (for instance, expertise accessed through the Envision Center, the Center for Instructional Excellence, or elsewhere). Participant support costs are allowed, such as funds for laboratory consumables.

*Partnerships.* The Innovation Hub will facilitate partnerships as necessary with on-campus entities, including cost estimates. Project teams will have access to the network of Innovation Fellows (teaching and learning leaders with passion and expertise in a specific area), whose roles as project consultants will be funded by Innovation Hub, as appropriate.

*Project team expectations.* Project teams will have access to substantial resources including professional project management. As such, project teams are expected to:

- Be good stewards of funds by aligning expenses with project goals and activities, and by collaborating with Innovation Hub and Purdue Online leadership if project goals need to change in response to new evidence or unforeseen circumstances.
- Prioritize the innovation project and in particular be responsive to the project manager assigned to the project, whose job it is to support and enable the success of the project.
- Collaborate with Innovation Hub and Purdue Online leadership on assessment and evaluation efforts, and prioritize communication and availability for discussions with leadership.
- Comply with reporting requirements (two-page interim report due 6 months after award and another at 12 months after award; six-page final report due 30 days after award end date).
- Participate in VR/AR showcase event sponsored by the Innovation Hub in Spring 2024.

*Signatures.* Co-signed signature page by the project team and Innovation Hub and/or Purdue Online leadership (DocuSign).