STEM Pathways Minors Grant Proposal TEMPLATE

In April 2015, Virginia Tech approved Pathways to General Education, a new general education curriculum that guides students in integrating ways of knowing across disciplinary traditions and articulates learning outcomes relevant for the 21st century. As part of this curriculum, students can complete a portion of their general education requirements through a transdisciplinary Pathways Minor.

Currently, there are ten approved Pathways Minors, each of which are centered around the Humanities, Social Sciences, and Design/Arts, a great complement for the STEM major. However, only three of those include any Natural Sciences credit. Quantitative and Computational Thinking is not included on any minors. At present, if all minors were fully enrolled, an estimated 500-1000 students could complete Pathways Minors and these would primarily serve the general education needs of STEM students.

Students with majors in the humanities, social sciences, and arts need minor offerings that complement their course work while also helping them meet the STEM portions of their general education requirements in thematic, interesting, and transdisciplinary ways. And with our entering classes exceeding 6000 students, more minors are needed to accommodate demand.

Therefore, although Pathways Minors must include any three core outcomes, this particular call for proposals is meant to support the development of Pathways Minors that specifically include the Pathways concepts of Reasoning in the Natural Sciences and Quantitative and Computational Thinking.

We will announce the typical annual Pathways Grants in December to support all types of course, minors, and alternative pathways.

**Goals of the STEM Pathways Minors Grant Program:**

1. To develop and deliver STEM-based Pathways Minors for non-STEM students.
2. To support the incorporation of engaging pedagogies and informative assessment strategies across the Pathways Minors.
3. To increase the incorporation of high-impact practices such as undergraduate research, project-based learning, education abroad, and service learning (Kuh, 2008) in Pathways STEM Minors.
4. To support STEM Pathways Minors structured around required courses that cross multiple departments and colleges.

These particular Pathways Grants will support the work of a transdisciplinary team in designing STEM-based Pathways Minors to primarily serve students with non-STEM majors. These Pathways Grants will be awarded a maximum of $50,000 to be used either during this fiscal year (FY 2018-19) or over this year and next fiscal year (ending June 15 2020).

At the start, memorandums of understanding (MOU) will be created to move base funding to the requesting units. The MOU will detail expectations of the Minor development, course offerings, and commitments of the grantees. It will need to be clear in the proposal how the funded departments plan to continue the work beyond this seed grant funding.

Please email Stephen Biscotte at biscotsm@vt.edu with any questions.

Developer Information

In this section, you will provide developer contact and grant information.

Primary Applicant Full Name \*

Primary Applicant Title \*

Primary Applicant College \*

Primary Applicant Department \*

Primary Applicant Phone Number \*

Primary Applicant Email \*

Full names of all others involved in work \*

Email addresses of all others involved in work \*

Working name of (or just idea for) the STEM Minor \*

Is this work to develop a new minor or revise an existing one? \*

New

Revised

Pathways Outcomes Section

In this section, mark each Pathways Core and Integrative Concepts with which your proposed minor aligns. Reminder: a course can meet a maximum of two core concepts and must include at least one integrative concept.

A Pathways Minor must meet a minimum of three core concepts and both integrative concepts. For this request, the minor must AT LEAST include Reasoning in the Natural Sciences AND Quantitative and Computational Thinking.

These could change in the progress of your work, but mark as best you can at this point in time.

Will your work align with the Discourse Core Outcome? \*

Will your work align with the Critical Thinking in the Humanities Core Outcome? \*

Will your work align with the Reasoning in the Social Sciences Core Outcome? \*

Will your work align with the Reasoning in the Natural Sciences Core Outcome? \*

Will your work align with the Quantitative and Computational Thinking Core Outcome? \*

Will your work align with the Critique and Practice in Design and the Arts Core Outcome? \*

Will your work align with the Critical Analysis of Identity and Equity in the United States Core Outcome? \*

Will your work align with the Intercultural and Global Awareness Integrative Outcome? \*

Will your work align with the Ethical Reasoning Integrative Outcome? \*

Grant Proposal Description Section

In this section you will walk through the details of the proposed work.

Goals of the STEM Pathways Minors Grant Program:

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2. To support the incorporation of engaging pedagogies and informative assessment strategies across the Pathways Minors.
3. To increase the incorporation of high-impact practices such as undergraduate research, project-based learning, education abroad, and service learning (Kuh, 2008) in Pathways STEM Minors.
4. To support STEM Pathways Minors structured around required courses that cross multiple departments and colleges.

Please provide a short overview of this proposed work (2-3 sentences). \*

* Your answer

How does your proposed work align with the goals of the STEM Pathways Minor grant program? Include as many as applicable. \*

* Your answer

What is the timeline for developing the Minor and what is the desired enrollment? \*

* Your answer

Why are new resources needed to support the development or delivery of this minor and what existing resources are being leveraged? \*

* Your answer

What particular students do you anticipate completing this minor and why? \*

* Your answer

Budget Section

In this section, you will upload your Excel budget form. The template can be found on our grant website. Check out the SAMPLE on Sheet 2 of the template for further guidance.

Google Forms allows you to submit this form and edit it up until the DECEMBER 1 deadline. HOWEVER, you can only upload this on your FINAL submission. A proposal missing this budget document will be deemed incomplete.

Excel Grant Proposal Budget

ADD FILE

What is the name of the primary financial manager responsible for handling the transfer/spending of these funds? \*

Your answer

What is the email address of the financial manager responsible for handling these funds? \*

Your answer

To what org # will this funding be transferred? \*

Your answer

To what fund # will this funding be transferred? \*

Your answer

Commitment Section

In this section, you will first commit to the expectations of grant awardees.

Next, you will upload letters of support signed by the Department Head and College Dean of each participating dept/college. These letters of supports should include the following: a commitment to supporting the applicants' time and efforts to complete this work, a commitment to offer the minor developed upon completion of the work, and a commitment that the minor will serve Pathways General Education.

Awardees must commit to attending the Pathways Summer Institute, completing a brief end-of-year report, and participating in the Pathways Grantees Cohort group where we will bring your fellow Minor developers together.

Note: If the applicant is completely unavailable for the Pathways Summer Institute, they will work with Stephen to develop an alternative professional development plan to be completed over the course of the year.

Awardees must commit to all of the following to receive funding: \*

* Participation in the Pathways Summer Institute, June 12-13 OR alternative (see above note)
* Participation in Pathways Grantees Cohort (ten 1-hr meetings each year)
* Submission of a brief report by May 1 following each year of funding

Letters of Support Upload

Upload letters of support signed by each participating Department Head and College Dean.

This letters of support should include the following:
- a commitment to supporting the applicants' time and efforts to complete this work
- a commitment to offer the minor upon completion of the work
- a commitment that the minor will serve Pathways General Education

Google Forms allows you to submit this form and edit it up until the December 1 deadline. HOWEVER, you can only upload this on your FINAL submission. A proposal missing this letter will be deemed incomplete.

Signed Support Letters Upload (signed by Dept Head and College Dean of each dept) \*

ADD FILE

A copy of your responses will be emailed to biscotsm@vt.edu.

**Submit**