

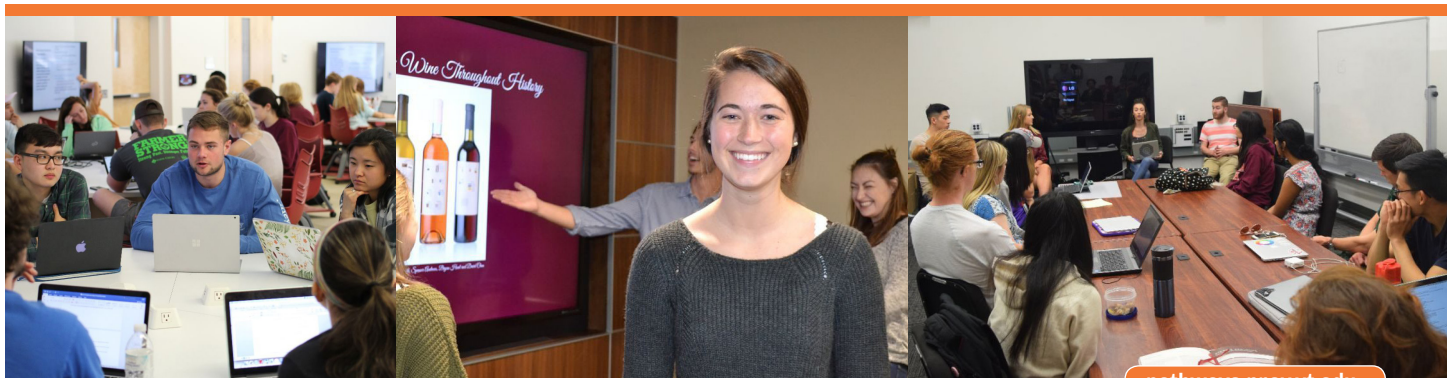


# PATHWAYS

## TO GENERAL EDUCATION



Spring 2018 | Volume II | Number 2



## Hard Work Pays Off as Pathways Set to Roll Out

*"Hard work spotlights the character of people: some turn up their sleeves, some turn up their noses, and some don't turn up at all."*

Sam Ewing

Fortunately, there is no shortage of people willing to roll up their sleeves and do the work necessary to implement the Pathways General Education program.

**The work is shared by the entire Pathways community.** Faculty draft and revise (and revise again!) course and minor proposals, while members of every departmental, college, and university curriculum committee help shepherd the proposals through each stage of governance. The Registrar's Office staff and college curriculum coordinators are updating and coding in the magical lands of JIRA and DARS to support a smooth transition. Advisors are learning and preparing to guide our students through this multifaceted curriculum. Instructors are gearing up to offer engaging learning opportunities both in and out of the classroom.

**The work is innovative.** As evidenced by our new Pathways Grant recipients (p. 2), faculty continue to bring interesting topics, interdisciplinary offerings, and innovative pedagogical practices to the curriculum. Think students will be interested in completing minors in creative technologies and the blue planet or taking courses on community analytics and rock n' roll? They are in the works!

**The work is professional growth.** This year, the Summer Institute (p. 4) will be held June 12-13. By bringing together Camp FYE, the Pathways Summer Institute, and the HHMI Inclusive Excellence Working Session under one roof, attendees can share in the ongoing work of professional development and community building.

**The work continues.** There will no doubt be kinks and rethinks. There will be more work to do. But I am confident that with the continued engagement of all involved, we are on the right... um... what's the word I'm looking for... like a trail... not a road... but a... you know..., well... it will come to me...

Thank you all for your continued engagement in general education at Virginia Tech. See you in June!

**Stephen Biscotte**

Director of General Education

In this edition:

- **2018 Pathways Grantees Announced** | p.2
- **Pathways Course in the Spotlight - Startup: Commercialization of Innovation** | p.3
- **Feedback Needed** | p.4-5
- **The Summer Institute: Professional Development for Undergraduate Education** | p.6



# PATHWAYS

## TO GENERAL EDUCATION

Text: Stephen Biscotte and Rachel Corell  
Design: Najla Mouchrek | Images: VT Archive  
[www.pathways.prov.vt.edu](http://www.pathways.prov.vt.edu)

# 2018 Pathways Grant Recipients Announced

Each year, Pathways Grants are awarded to individuals or teams of faculty members to design or redesign courses, minors, or alternative pathways. The recipients then work throughout the year as a transdisciplinary collaborative cohort group to accomplish their goals, share best practices, discuss common challenges, and even contribute to the university and national dialogue on teaching and learning in general education.

Pathways Grant proposals are a showcase of great ideas for reinventing and reimagining our general education curriculum, and this year is no different. The following individuals and teams received funding to support their proposals, with proposer names and their project titles listed below:

The goals for this year's program were as follows:

1. To scale up best practices in general education to reach a greater number of students.
2. To support the incorporation of engaging pedagogies and informative assessment strategies across the Pathways curriculum.
3. To increase the incorporation of high-impact practices such as undergraduate research, project-based learning, education abroad, and service learning in Pathways courses and minors.
4. To support the development and delivery of courses in areas of need: advanced/applied quantitative and computational thinking, arts, design thinking, advanced/applied discourse, and identity/equity in the United States.
5. To support the development and delivery of Pathways Minors and Alternative Pathways, particularly those that span multiple colleges.

- Ozzie Abaye, Kang Xia, Mark Reiter, Robin Scully Boucher, and Eliza Wetheyeucher: **Agriculture, Global Food Security and Health**
- Cynthia Wood and Peter Ziegler: **Agriculture and Society**
- Donna Westfall-Rudd and Kayla Harris: **Identity and Inclusion in Agricultural and Life Sciences**
- Ann-Marie Knoblauch and Michelle Moseley-Christian: **Visual Arts and Culture**
- Zach Duer, Liesl Baum, Katie MacDonald, Tacie Jones: **Pathways Minor in Creative Technologies + Experiences**
- Sullivan, Martha: **Design Thinking and Product Development**
- Marian Mollin: **America in the 1960's**
- Robert Stephens: **History of Rock n' Roll**
- James Klagge: **Ethical Perspectives on Intelligent Infrastructure**
- Douglas Lind and Hannah Wildman Short: **Developing Ethical Integration Support for the Pathways Community**
- Isabel Bradburn, Andrea Ogier, and Shelby Borowski: **Community Analytics**
- Matthew Komelski: **Integrative Practices for Health, Wellbeing, and Resilience**
- Stephen Schoenholtz, Kevin McGuire, Luke Juran, and Elizabeth Sharp: **Blue Planet Pathways Minor**
- David Earl Kline: **Materials, Energy, and Sustainable Systems**
- Laszlo Horvath, Robert Bush, Young Teck Kim, and Eduardo Molina: **Pathways Minor in Packaging Design for a Globalized World**
- Dean Stauffer, Sarah Karpanty, and Chouly Ou: **Pathways Minor in Biological Conservation**
- Luca Fedele: **Earth, Resources, Society and the Environment**
- Kendra Sewall: **How Animals Think**
- John Chermak: **Earth Science: Our Past, Present, and Future Laboratory**
- Lisa Belden: **Plants and Civilization**
- Richard E Wokutch: **Ethical Leadership and Corporate Social Responsibility**
- Candace Fitch: **Events and Experience Management**

We are excited to support these innovative ideas through to fruition. Congratulations to all recipients! Miss this year's deadline? In December, look for announcements for next year's grant cycle.

> In the Spotlight

## Startup: Commercialization of Innovation

One of the many Pathways courses being piloted this spring is **Startup: Commercialization of Innovation**. In an experiential learning environment, students work in interdisciplinary teams to engage in real world innovation commercialization opportunities. This includes working with inventors, scientists, entrepreneurs, and other potential collaborators to integrate design thinking, lean startup methods, ethical reasoning, and business model development.

Dr. Diana Bairaktarova, Assistant Professor of Engineering Education and professor of the course, notes that the appeal of the Startup class is not limited to her students. "I enjoyed teaching the Startup class because it aligns well with my multidisciplinary background. I was particularly excited teaching the course because I could use my business degree but also apply my industry experience and particularly my expertise in engineering design. What was also appealing to me is that the course is part of the innovation minor and to me that creates an opportunity to offer a learning environment that supports developing and enhancing students' creativity."

With individual experiences and projects involving actual inventions, innovations, technologies, intellectual property, and market opportunities, the course provides students with the

skills they need to succeed in a job market that is increasingly interdisciplinary. Students in the class describe it as "unique" and "interactive" and "collaborative" when asked to reflect on their experiences for course evaluations. Some even note their changing perspectives over the course of the semester. "The length of class can seem daunting at first. Then as we develop our startup throughout the semester we begin wishing that we had more time."

Open to students from all majors, the course explores how innovation and development of new technologies require collaboration across different fields. Dr. Bairaktarova highlights this as one of the strengths of the course. "I loved the diversity of the students in the Startup class. My class represented a beautiful tapestry not only because students were from three different colleges at VT, but because they were mixed from around the globe. It makes it easier to discuss and work on global issues and learn about commercialization of new technologies."

It seems the students agree. One student comment reads, "Having a class that brings together students from across the University to build an idea from the ground up has been a rewarding experience."



*Poster session for StartUp: Commercialization of Innovation, with the presence of company partners*



>Feedback Needed

## Developing Pathways Student Advising Materials

As we move closer to the first official semester of Pathways, the Office of General Education is hard at work developing student-friendly advising materials. Whether it's a flyer advertising an interdisciplinary minor or a webpage showcasing a new Pathways course, these materials will guide students through the process of navigating their general education requirements. With that in mind, we have been developing student scenarios to demonstrate to students the different ways that Pathways general education requirements can be met.

These scenarios are not meant to show how all students will complete general education requirements at Virginia Tech. Instead, these scenarios are merely examples of individual student pathways that might work... and we want your feedback!

Do you have comments or ideas? Are there specific student populations we should consider? Send suggestions and feedback to Stephen Biscotte ([biscotsm@vt.edu](mailto:biscotsm@vt.edu)) and Rachel Corell ([corell@vt.edu](mailto:corell@vt.edu)).

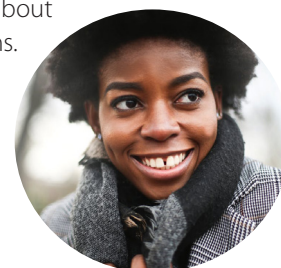
### Scenario 1

Peggy is a sophomore Civil Engineering major interested in working with sustainable materials. In her freshman year, she takes the Seeking Sustainability courses GEOG 1115 and GEOG 1116 to fulfill her 6-credit requirement for *Reasoning in the Social Sciences*. While meeting with her advisor, Peggy learns that the classes she took also count toward the **Pathways to Sustainability minor**. Curious to know what other courses would count toward this minor, Peggy gets on the Pathways website to view the list of approved Pathways courses. She learns that 2 of the 4 remaining courses she needs to earn the Pathways to Sustainability minor could also count as general education credits in concept areas such as *Critical Thinking in the Humanities* or *Critique and Practice in Design and the Arts*. Ultimately, Peggy decides to complete the minor. Because Peggy follows her interests, she not only graduates with a minor showcasing her interests in engineering and sustainable materials, but she also makes herself more competitive in the job market.



### Scenario 2

Tia is a History major completing the social/cultural/economic history option. As a sophomore, she is already thinking about going to graduate school, and she's looking for paths that would set her apart from others applying to graduate programs. Her advisor suggests that Tia consider completing a minor that would not only complement her degree, but also help her complete some general education requirements. She goes to the Pathways site to learn more about minors and encounters a showcase of different Pathways Minor options. There Tia discovers the **Global Food Security and Health minor**, which lines up nicely with her interests in social, cultural, and economic history. Upon looking at the minor's required courses, she sees that she could fulfill general education requirements in a couple of areas – including *Reasoning in the Social Sciences* and *Reasoning in the Natural Sciences* – while taking the courses she is interested in to complete the minor.



## Scenario 3



Davos is a freshman Business major focusing on entrepreneurship and innovation, and he knows he wants to pick a minor that will complement his degree. His advisor gives him a list of Pathways general education courses that also count as introductory courses for various minors, and Davos discovers that one of the classes he's taking for his major, COMM 2004: Public Speaking, is also part of the **Strategic Communication minor**. Interested, Davos looks into the requirements for the minor, and he realizes that completing it would also help him to complete Pathways requirements in *Reasoning in the Social Sciences* as well as *Critique and Practice in Design and the Arts*. He sets up a meeting with his advisor to find out what paperwork he needs to submit to declare a minor.



## Scenario 4



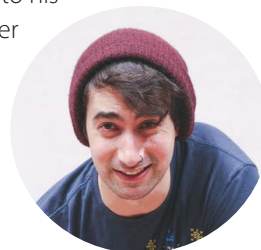
Arnold is a junior engineering major who has completed most of his general education requirements on the **distributive pathway**. He considers completing a minor since he knows that he could also complete some of his remaining general education credits that way. However, completing this minor would also require that Arnold take a few elective courses, which would result in an extra semester of college for him; he can't fit any additional classes into his schedule during his remaining semesters at Virginia Tech if he wants to graduate in four years. Arnold decides not to complete the minor, and instead obtains a summer internship at a local engineering firm. He knows that an internship will provide invaluable experience and make him more competitive in his future career, allowing him to build on his academic experiences at Virginia Tech.



## Scenario 5



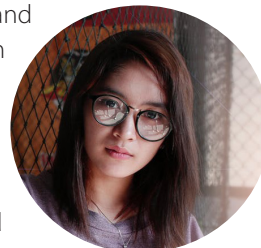
Abram is a sophomore Architecture major whose career goals include owning his own business and leading his own team on a major design project. In addition to his architecture studies, he wants to acquire skills that will make him a better entrepreneur and employer. Specifically, Abram thinks that leadership skills will come in handy since he will often be working with other people. He decides to earn an academic **minor in Organizational Leadership**. As a result, he begins to build knowledge that will prepare him to fulfill his career goals, and he also earns general education credit in *Reasoning in the Social Sciences* and *Critical Thinking in the Humanities*.



## Scenario 6



Marian is about to start her junior year as a Forestry major with a focus in forest operations and business. In high school, she took 13 credit hours of dual enrollment courses, including two semesters of first-year writing, biology, a biology lab, and calculus. As a result, she's ahead in her coursework. With a little extra room in her schedule for elective courses beyond the restricted electives required for her major, Marian decides to pursue **a minor in Science, Technology, and Law**. Some of the courses she takes toward the STL minor count as these electives, while others fulfill general education requirements in *Advanced Discourse*, *Critical Thinking in the Humanities*, and *Critical Analysis of Identity and Equity in the United States*.



> Event

## The Summer Institute: Professional Development for Undergraduate Education 2018

The Summer Institute: Professional Development for Undergraduate Education 2018 will be held June 12th-13th in the New Classroom Building. This year we are bringing together three events - the Pathways Summer Institute, Camp FYE, and the HHMI Inclusive Excellence Working Session - under one roof for shared support and programming.

There are ample sessions for first timers and long-time attendees alike! Topics include ethics integration, best practices in FYE, outcome assessment, the future of the Virginia Tech Common Book Project, inclusive pedagogy, service learning, and much more. See the **DRAFT** agenda below.

In addition to plenaries, workshops, and a poster session, there will also be classroom simulations and tours so you can explore the capabilities of the New Classroom Building. Have a great idea to share? This year, there will be opportunities to present posters, mini-presentations, or whole workshops, so be sure to indicate your interest during the registration process.

Faculty, staff, GA/GTAs, Instructors, advisors... anyone involved in the development, delivery, or support of the Pathways curriculum is welcome! Individuals who attend the entire program are eligible for 11 NLI credits and an **Undergraduate Education Mastery Certificate**.

At the time of printing, there are only 25 slots left, so **register soon!**



## Agenda (Tentative)

**Tuesday, June 12th from 8:30am-4:30pm**

**8:30am** - Coffee and refreshments available

**8:45-9am** - Welcome and Agenda Walkthrough

**9-9:50am - Opening Workshop** with Greg Justice (SOPA):  
The Art of Teaching: Using Acting Techniques in the Teaching and Learning Process

**10-11:15am - Group Meeting** (Camp FYE, Pathways, and HHMI Inclusive Excellence cohort in different rooms)

**11:30-12pm - Plenary** with Tom Brown (Dean of Students):  
Students in Distress and How to Help

**12-1:30pm** - Catered Lunch (New Classroom Building Tours Available)

**1:30-3pm - Session Block 1** (SUBJECT TO CHANGE)  
First-Year Experiences as Foundational Experiential Learning  
Pathways Assessment 101  
Hands Online, Minds Online: Active Learning Strategies for Digital Environments

**3:15-4:30 - Poster Session and Reception**

**Wednesday, June 13th from 8:30am-4:30pm**

**8:30am** - Coffee and refreshments available

**8:45-10:15am - Session Block 2** (SUBJECT TO CHANGE)  
Using Project-Based Learning to Improve Inclusivity and Student Engagement  
Assignment Design for Pathways Assessment  
Common Book Participatory Design Exercise  
Reacting to the Past Role-Playing Pedagogy

**10:30-12pm - Session Block 3** (SUBJECT TO CHANGE)  
Inclusive Pedagogy: Principles and Practices  
Using Canvas to Meet Pathways Assessment Needs  
Part I: Introduction to Pathways Ethical Reasoning  
Math EAGER Team: Building Problem Solving and Quantitative Reasoning Skills through Team-Based Active Learning

**12-1:30pm** - Catered Lunch

**1:30-3pm - Session Block 4** (SUBJECT TO CHANGE)  
Part II: Facilitated Discussion and Work Session in Integrating Ethical Reasoning into your Pathways Course  
Introduction to Service Learning  
Pathways Minor Capstone Design  
How to Incorporate Individual Goal Setting and Leadership Skills to the Undergraduate Classroom  
Consultation Room: 1-on-1 Assistance on All Things Pathways, FYE, and Inclusive Excellence

**3-4:30pm - Facilitated Working Session** (Camp FYE, Pathways, and HHMI Inclusive Excellence cohort in different rooms)