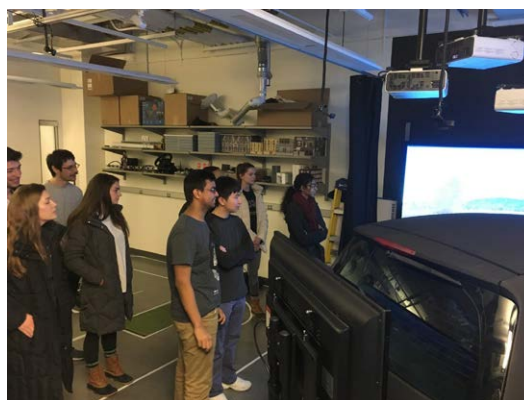


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News and Updates from the Destination Areas

January 2021



The Destination Areas continue to advance transdisciplinary learning opportunities for students that will help build complex problem solving skills among undergraduates and graduate students. Recent work has featured formal curriculum in the form of new graduate certificates, undergraduate research opportunities, and new connections with external partners for project based work.

The Policy DA's Science, Technology, Engineering in Policy (STEP) graduate certificate program's course proposals have successfully passed through Virginia Tech's governance and the certificate is now awaiting SCHEV acknowledgement. Any and all graduate students interested in gaining policy training are welcome to take a single course or the entire certificate. For more information, please visit <https://step.vt.edu> or contact Todd Schenk, STEP Director at tschenk@vt.edu.

The Science, Technology, Engineering in Policy (STEP) certificate **joins other existing transdisciplinary learning efforts that have emerged from the DAs** including the [Adaptive Brain and Behavior](#), [Data and Decisions](#), [Materials in Society](#), [Integrated Security](#), and [Innovation](#) Pathways Minors. Other educational efforts through the Creativity + Innovation Destination Area have led to the [Creativity + Innovation Diploma](#) through the Honors College.

A selection of transdisciplinary courses are also highlighted each semester on the [Destination Area course web page](#).

Undergraduate research opportunities were advanced through the collaboration between the Economical and Sustainable Materials DA and Oak Ridge National Lab (ORNL). Once COVID 19 hit, and labs shut down, ORNL cancelled their summer intern program. The DA faculty decided to offer remote or hybrid internships with VT faculty for two students. Julie Nguyen worked with Rana Ashkar in Physics and Mathew Drew worked with Alan Druschitz in Materials Science and Engineering. Both students were able to complete a summer internship either totally remotely or a combination of remote and on campus. They reported their research findings to the DA early in the fall.

Several recent awards were made to advance partnerships between faculty and local employers near the Blacksburg campus to provide students with opportunities for engagement with real world problems. The [Developing a Destination for Talent Program](#) in partnership with the Destination Areas awarded funds to projects that will explore challenges in industrial design with **Trova** and manufacturing processes with **Fontaine Modifications** and **Meld**. Students will be exploring sustainability and new conceptualizations of what constitutes critical urban infrastructures by developing connections between traditional water, sewer, energy, and transportation infrastructures, with ecological and social systems; and, how new technologies can help cities understand and manage the function of those systems better in **Roanoke City**.

Students are participating in **paid internships with Torc, Modea, Ozmo, ACIS, 1901 and Cardisle** applying problem solving skills from a variety of disciplinary perspectives. More information is available on the [Developing a Destination for Talent Program](#).



Faculty are encouraged to try out the new [COVID-19 Influences and Impacts: A Curated Database of Databases](#), a collaboration between the Policy DA and University Libraries aimed to facilitate policy, social, health

and environmental sciences research related to the COVID-19 pandemic.

ESM DA stakeholders are working on a **project using Academic Analytics and SciVal software to ‘data mine’ Virginia Tech faculty and their areas of expertise** as recognized by outside data such as publications, awards, etc. The end goal is to obtain data to help VT materials faculty be more successful in obtaining large national center awards.

Intelligent Infrastructure and Human Centered Communities (IIHCC) partnered with the Institute for Society, Culture and Environment to host an interest meeting discussing **The National Science Foundation - Strengthening American Infrastructure call for proposals and received an overwhelming response from over 55 faculty and staff members.** The list of supporters can be found [here](#). Reach out to [Aki Ishida](#) for further information.

Quantum Information Science and Technology continues to be a complex problem that the DAs are involved with. Support and engagement with the Economical and Sustainable Materials Destination Area has helped facilitate the university's recent participation in the [Quantum Economic Development Consortium \(QED-C\)](#). This will place Virginia Tech at the table with companies, universities and federal agencies to discuss the research priorities and workforce development needs in this area.

Over the Fall semester the DAs had different calls for proposals to advance transdisciplinary research.

The DAs partnered with the institutes to identify transdisciplinary grant teams that aligned with a number of research efforts that connect to the DA research themes. The teams will also engage in activities in conjunction with the Office of the Vice President for Research and Innovation to help build a university ecosystem that will help advance transdisciplinary research. Awardees are posted on the Destination Area website.

Maren Roman, a faculty stakeholder on the ESM DA, secured a \$23 million NSF Materials Innovation Platform award, in conjunction with four other universities to focus on “Automating the Synthesis of Rationally Designed Glyomaterials”. Read the full article [here](#).

The **+Policy Fellows research program** issued a call for proposals to support up to three Fellows for the remainder of the fiscal year. Announcements will be made in December 2020 and featured on the [+Policy website](#).

ABB awarded a \$15,000 research grant to Drs. Murkherjee and DeLuca team titled: **Role of Arachidonic acid in brain development**

In June 2020, the ESM DA awarded \$35K to the Materials Characterization Laboratory in Kelly Hall to fix a much used and needed piece of instrumentation in their new lab. The laboratory was opened Spring semester and is gives researchers access to sophisticated instrumentation that might not be practical for a single faculty member or department to purchase independently. More information can be found here: <https://vtnews.vt.edu/articles/2020/11/ictas-mcl.htm>



Upcoming seed grant opportunities:

- ABB will offer a small RFP (\$5k total) going out for submissions by December 31, 2020. For more information contact [Barry Miller](#).
- ICAT has a call for proposals out that relate to a number of transdisciplinary research areas. Awards range from \$25,000 for Major SEAD grants to \$1,500 for student grants. The submission deadline is 5pm on February 12, 2021. More information can be found on ICAT's website https://icat.vt.edu/content/icat_vt_edu/en/funding.html.

More news and information about events can be found on the [Destination Area](#) website.

Contact with questions:

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