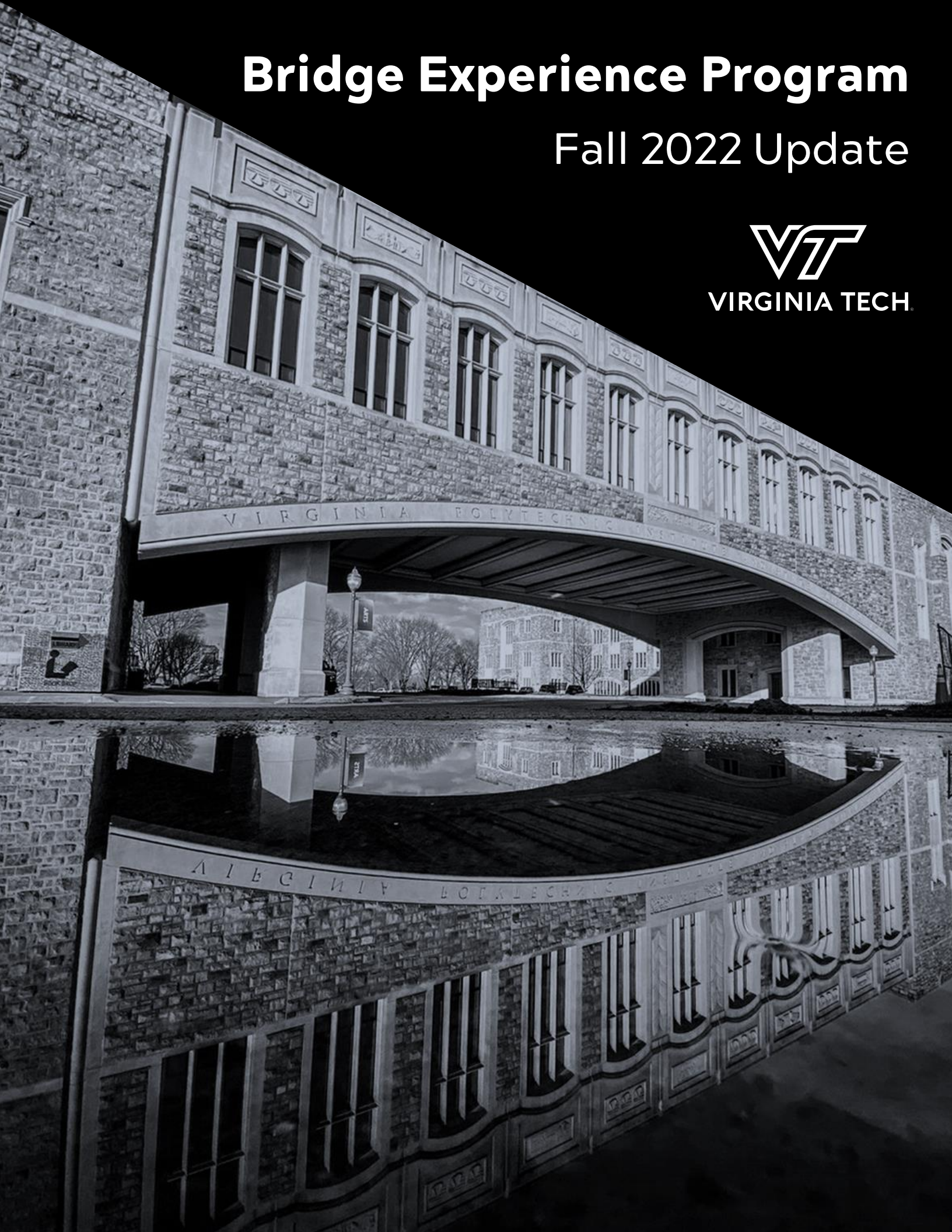


Bridge Experience Program

Fall 2022 Update



VIRGINIA TECH



Executive Summary

Overview

Virginia Tech is embarking on a bold, campus-wide [Quality Enhancement Plan](#) (QEP) to embed specific experiential learning, called bridge experiences, into the curricula of 50% of undergraduate academic degrees by 2026-2027. The QEP was approved by SACSCOC in 2021. Bridge experiences are envisioned to integrate academic knowledge with an environment that is related to a student’s intended career path and to bridge student development to the next step after graduation. Typical bridge experiences include internships, undergraduate research, and other site-based experiential learning.

The Bridge Experience Program outcomes were informed by exemplary degree programs, institutional data, and educational literature. Successful program implementation will address increasing participation and learning quality for bridge experiences. Participation gaps will be addressed through curricular requirements creating **inescapable opportunities**. Students completing a bridge experience will be able to

- apply and connect their learning across academic and professional settings;
- demonstrate professional self-awareness by articulating their personal and professional development; and
- demonstrate a dedication to using their knowledge, skills, and talents in service to others, communities, and their field.

QEP Timeline

2020-2021 Pilot	2021-2022 Year 1	2022-2023 Year 2	2023-2024 Year 3	2024-2025 Year 4	2025-2026 Year 5
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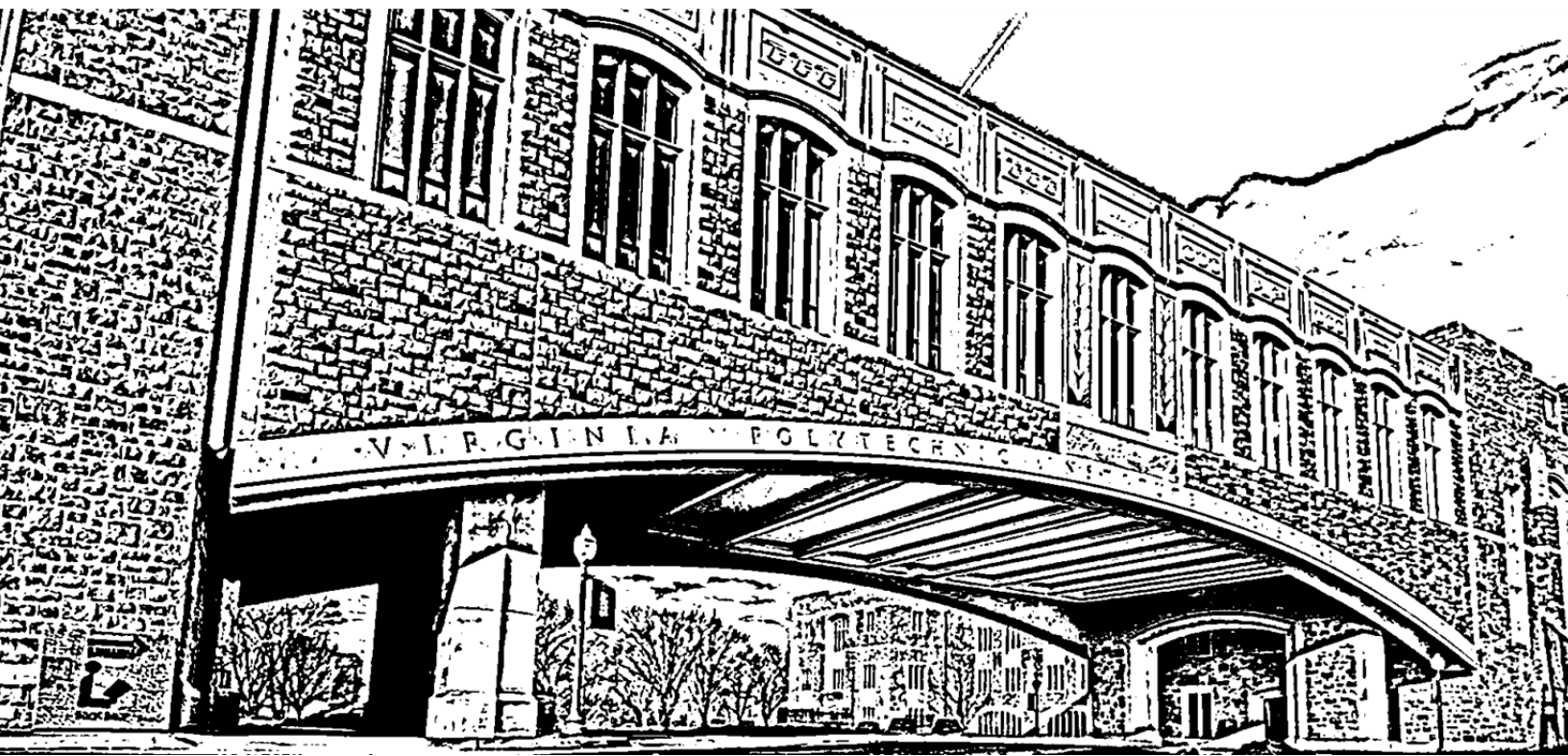
Key impacts

The Bridge Experience Program is midway through the second year of implementation. The first academic programs are nearing full implementation for students entering in fall 2023. The following summarizes key highlights from fall 2022:

- ✓ Faculty from 15 undergraduate degree programs are revising curriculum with bridge experiences.
- ✓ The 3900 Management System, which captures bridge experience completion, was piloted with 4 academic programs and 12 students completing all requirements. The system simplifies administrative tracking and assessing student learning.
- ✓ The Student Opportunity Center pilot began with 8 academic programs and will be expanding in the spring. The purpose is to centralize experiential learning opportunities and to increase participation.
- ✓ Student outcome data were analyzed by college. Paid internships were positively associated with work and continuing education outcomes across all colleges.

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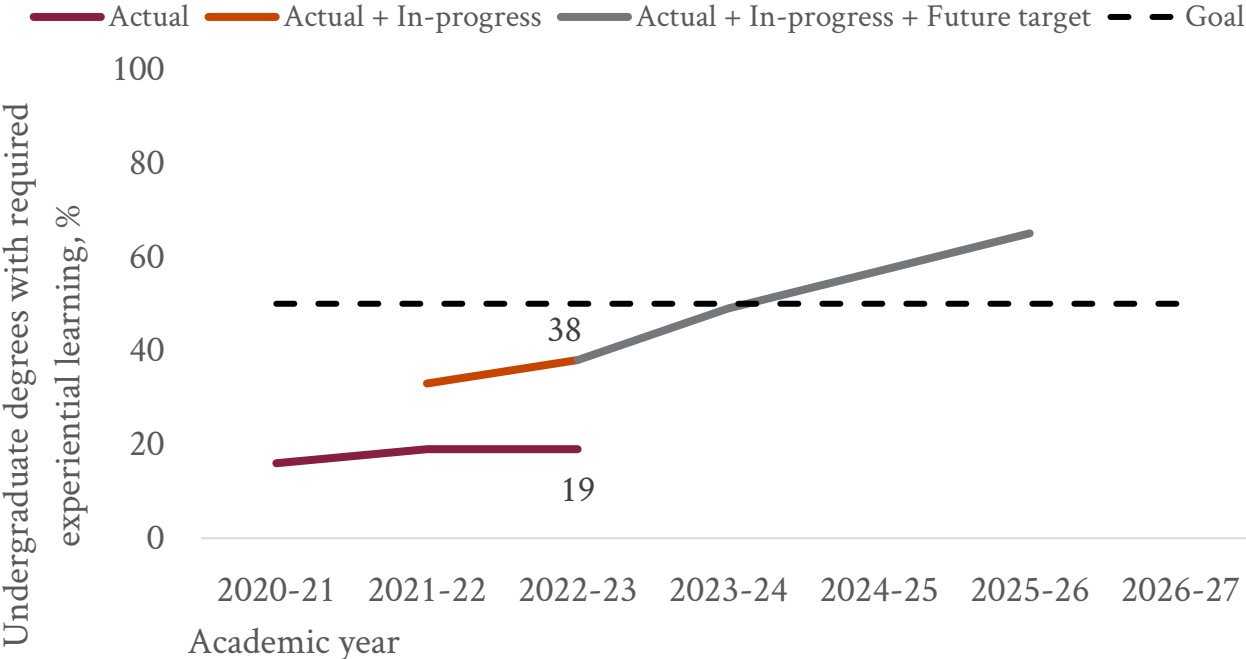
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Strategic Milestone

Virginia Tech’s strategic milestone is to have 50% of undergraduate degrees with a required experiential learning component by 2026-2027. Fourteen of 74 undergraduate degree programs have a requirement for students entering in 2022-2023. Twenty-two degree programs have a requirement for at least some students. Degrees with requirements include Agricultural Sciences; Apparel, Housing, and Resource Management; Elementary Education; Fish and Wildlife Conservation; Geography; Hospitality and Tourism Management; Human Development; Interior Design; Meteorology; Music; Nanoscience; Public Health; Secondary Education; and Sustainable Biomaterials. Actual and projected progress towards the strategic milestone is shown below.

Progress towards strategic milestone



Fifteen degree programs are participating in the Bridge Experience Program and are working to implement a bridge experience requirement. Agricultural Sciences already has a requirement and is making improvements.

Bridge Experience Program participants expect to implement requirements for students entering in

- + 2023-24 (n = 3)
- + 2024-25 (n = 6)
- + 2025-26 (n = 5)
- + 2026-27 (n = 1)

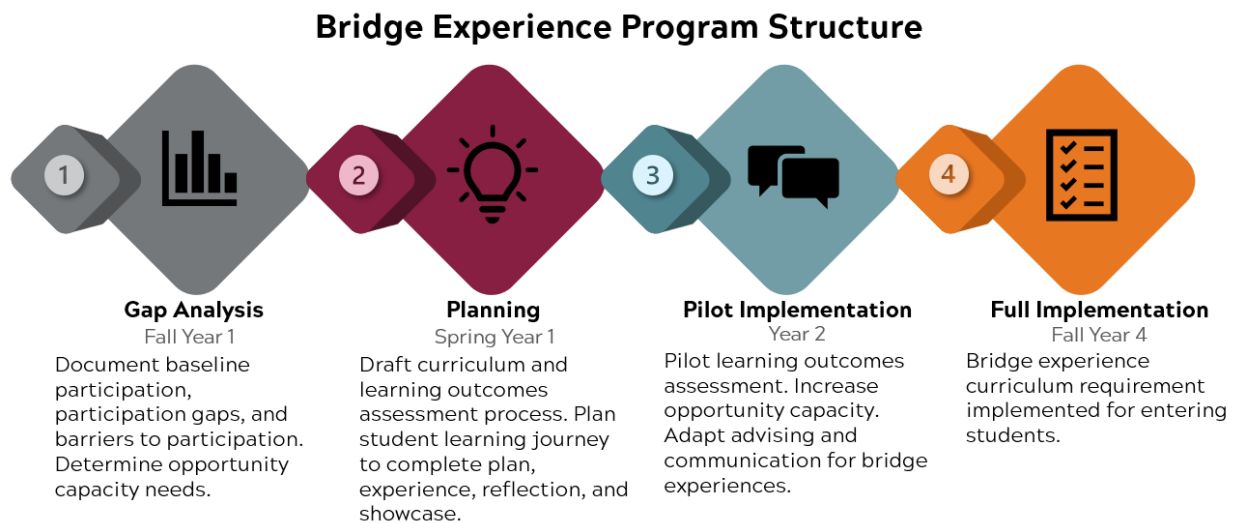
Academic Programs

Overview

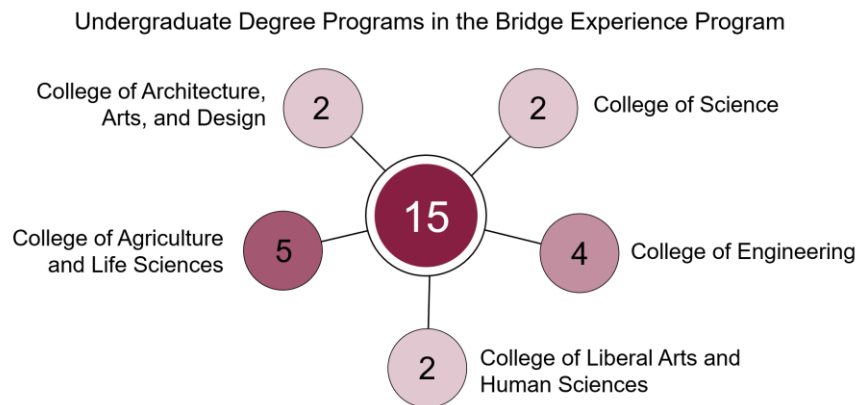
The Bridge Experience Program brings on cohorts of academic programs for a 2-year design process. In the end, academic programs will implement bridge experience curricular requirements for all students. New academic programs start each summer. Currently, cohorts 1 and 2 are engaged in the Bridge Experience Program, and cohort 3 will start in summer 2023. The diagram shows the overlapping nature of the cohorts, and the program will continue in the same structure beyond cohort 3.



During the 2-year design process, faculty spend the first year doing a gap analysis and developing draft plans. During the second year, they continue planning and begin piloting changes. The outcome is a curricular requirement for all students to complete a bridge experience. Academic programs implement curricular changes for students starting at the beginning of the fourth year.



The Bridge Experience Program encompasses 15 undergraduate degree programs and 65 faculty across 5 colleges. Some colleges have groups of academic programs that start together and collaborate across the college.



Progress of current academic programs

Cohort 1 beginning summer 2021 or earlier

Cohort 1 includes Agricultural, Leadership, and Community Education; Biochemistry; Biomedical Engineering and Mechanics; Chemistry; Civil and Environmental Engineering; Engineering Education; English; Food Science and Technology; Industrial and Systems Engineering; School of Architecture + Design; School of Neuroscience; and School of Visual Arts.

Semester planning and pilot tasks included

- refining curriculum plans based on feedback from colleagues;
- planning for advising and communication with students;
- scaling opportunities as relevant; and
- piloting the 3900 Management System and/or the Student Opportunity Center.

Cohort 2 beginning summer 2022

Cohort 2 includes Agricultural and Applied Economics, Computer Science, and School of Public and International Affairs. *Meteorology withdrew in September 2022.*

Semester gap analysis tasks included

- identifying baseline participation and what students learn during experiences;
- characterizing which students are not already participating and why;
- identifying existing career advising and communication practices; and
- identifying gaps in opportunities available for students.

Recruitment for cohort 3 starting in 2023

Recruitment for cohort 3 started in October, and the program flyer is included at the end of the [report](#). [Information sessions](#) are being held during fall and spring with information about the program and faculty sharing their experiences. The application deadline is March 15. So far, 4 faculty attended an information session, and 14 faculty have expressed interest. Recruitment and onboarding of new academic programs will be a priority in spring.



Professional development

A fall kick-off retreat was held on August 9 with 28 faculty representing 12 academic programs. Content included experiential learning theory, developmentally appropriate experiential learning across the curriculum, and alignment with work-based learning. As a result of the event, faculty identified learning outcomes related to experiential learning and mapped those onto existing courses in their curriculum. Participants reviewed the student learning process, saw examples from the 3900 Management System, and discussed different approaches for implementation.

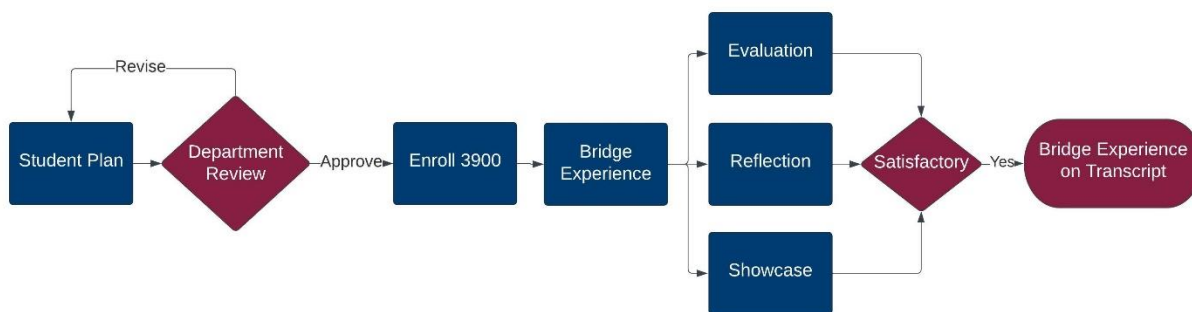
The Bridge Experience Program includes a monthly Community of Practice for faculty to share ideas and hear from campus partners. Fall 2022 events are shown below.



3900 Management System

Overview

Learning outcomes assessment for bridge experiences aligns with best practices for experiential learning. The process is diagrammed below, and students are responsible for items in blue. Students submit a plan to their academic program detailing why this experience is their bridge experience. Once approved by the academic program, the student enrolls in a section of 3900 upon beginning the experience. Near the end, the student completes an evaluation, reflection, and showcase of learning. Academic programs score their students' submissions. Students can retry each component until the academic program submits a Satisfactory score. Once all 3 components are Satisfactory, the bridge experience is complete, and the final grade is updated to Satisfactory.



Some programs with existing requirements struggle to tracking student progress and completion. The 3900 Management System was developed to simplify logistics and scoring. Everything after enrollment in 3900 happens in the 3900 Management System.

Curriculum

The Registrar heard feedback from faculty and developed the 3900 course to meet tracking needs while not requiring tuition for summer experiences. These courses exist within academic programs and are 0 credits. The course description and details are later in the [report](#). Programs are responsible for managing course sections and student enrollment. Course pilots follow based on the first semester of use. Programs continue to use the 3900 courses after the pilot semester.

Fall 2022 pilots

- ✓ ALCE 3900
- ✓ CHEM 3900
- ✓ CEE 3900
- ✓ ENGL 3900

Spring 2023 pilots

- ✓ AAD 3900
- ✓ BCHM 3900
- ✓ BMES 3900
- ✓ NEUR 3900

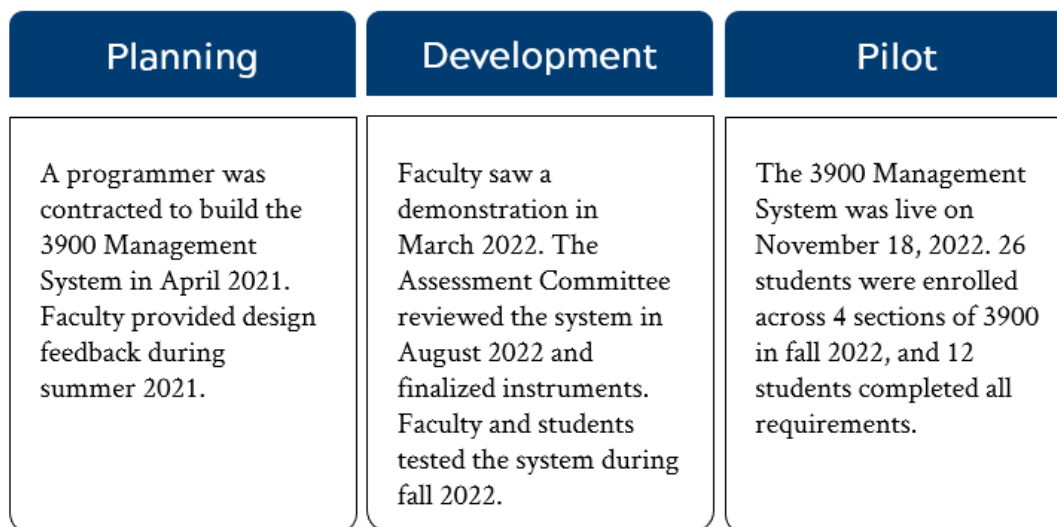
Sample student scenarios include:

- An Architecture student finds a paid summer internship. The student’s plan is approved. The student is enrolled in AAD 3900, does the internship, and completes the 3900 requirements.
- A Chemistry student does for-credit research with a faculty member. The student’s plan is approved. The student is enrolled in CHEM 4994 and CHEM 3900. The student completes 4994 for credit and completes the 3900 requirements.
- An international, Computer Science student has a summer internship. The student’s plan is approved. During summer, the student enrolls in CS 3900 and CEP 4084 through Career and Professional Development. The student completes CS 3900 and CEP 4084 requirements.

3900 Management System

The Assessment Committee, consisting of 9 faculty in 4 colleges, met in August to finalize the assessment instruments for the 2022-23 academic year. Primary changes included transforming the self-evaluation into an experience evaluation and revising the showcase instructions. Data will be collected during the year, and the committee will meet again next summer to establish university baselines, identify future targets, and update the instruments for the next academic year.

3900 Management System Development



The 3900 Management System launched in fall 2022. Feedback will be collected from faculty during the spring semester to inform ongoing changes and development. Implementing automated grade updates to Banner will be a priority in spring; so, faculty will not need to manually enter grades once a student completes 3900. Once a student is enrolled in a section of 3900, all submissions, scoring, and final grades will be completed through the 3900 Management System.

Data and Analytics

Overview

The Bridge Experience Program provides data about student placements and experiential learning participation to faculty and administrators. New academic programs received data reports in May, and continuing programs received data reports in August. College leadership have also received reports specific to their colleges. In total, 31 reports have been shared in the summer and fall of 2022. A report on university inequities in work-based learning and outcomes follows on the next page.

College-specific statistical analyses

To complement the university-level analysis, placement data were analyzed by college to determine which experiences were associated with work placements and with continuing education. Results were shared with Deans in November.

Work placements

Experiences associated with work placements

Experience	AAD	CALS	CLAHS	CNRE	COE	COS	PCOB
Co-op					+		
Field study					+		
Paid internship	+	+	+	+	+	+	+
Part-time job							
Research							
Summer job							
Unpaid internship							
Volunteering							

Paid internships are positively associated with work placements in all colleges. Co-ops and field studies are also positive in COE.

Continuing education

Experiences associated with continuing education

Experience	CALS	CLAHS	COE	COS	PCOB
Co-op					
Field study				+	
Paid internship	+	+	+	+	+
Part-time job					
Research	+	+	+	+	
Summer job					
Unpaid internship			+		
Volunteering	+				

For continuing education, not all colleges have sufficient data. Paid internships are positively associated with securing additional education in all colleges, and research is positive in all colleges except PCOB. Other experiences are college specific.

Inequities in work-based learning and career

Virginia Tech must close participation gaps for specific disciplines, transfer students, and first-generation students. These gaps present barriers to achieving the vision for ALL students to have bridge experiences. Based on internal data, co-ops, paid internships, and undergraduate research are positively associated with post-graduation outcomes. Increasing participation can improve job attainment, which aligns with state priorities.

Specific disciplines lack work-based learning participation.

Disciplines have extreme ranges in co-op and paid internship participation resulting in inequities. Twenty percent of graduates major in disciplines with only 25% participation. The high-participation disciplines have significant college- and department-level resources to support student participation.

- Family and consumer sciences and biological and biomedical sciences have 25% participation.
- Physical sciences, liberal arts, agriculture, and natural resources have 40 to 60% participation.
- Architecture, business, computer sciences, and engineering have at least 80% participation.

Biological, biomedical, and physical sciences have more undergraduate research participation. Yet, total participation across co-ops, paid internships, and undergraduate research was average. In these disciplines, students want more industry-based experience, and closing disciplinary gaps ensures access for ALL students.

Low-participation disciplines have more female students, and high-participation disciplines have more male students. Addressing disciplinary gaps would close the 15% gender gap for co-ops and paid internships.

Transfer students have systemic outcome and participation gaps.

Transfer students have the most consistent and widespread gaps of all the typical subgroups used to disaggregate data. Gaps for transfer students exist in every college for both outcomes and participation. Post-graduation outcomes can be improved by increasing work-based learning for transfer students.

Outcomes. Transfer students are significantly more likely to be looking for opportunities after graduation. One-third of transfer students are still looking for work or education after graduation (12% gap).

Participation. Transfer students report less work-based learning (10% gap) with systemic gaps across experience types. Gaps exist in 80% of undergraduate degree programs.

First-generation students have less participation but increasing enrollments.

First-generation students had lesser gaps than transfer students, and gaps were inconsistent across colleges. These gaps should be monitored as Virginia Tech enrolls more first-generation students.

Outcomes. More first-generation than continuing-generation students were still looking after graduation (6% gap).

Participation. Fewer first-generation students reported work-based learning (9% gap) with more pronounced gaps for undergraduate research. Research gaps coincide with fewer first-generation students continuing education.

Student Opportunity Center

Overview



The Student Opportunity Center (SOC) provides technology solutions to help campuses centralize experiential learning opportunities. SOC provides a searchable database for students to find internships, research, and study abroad in one platform. Virginia Tech is piloting SOC to determine feasibility in disciplines with historically less participation. The goal is to increase participation through a university-level technology solution.

Technology

Because SOC is a technology solution, the fall semester was spent working through integrations and processes for managing the platform. Career and Professional Development, Global Education Office, and Office of Undergraduate Research have been involved to include internships, study abroad, and undergraduate research opportunities. An undergraduate intern has been assisting with quality management and day-to-day tasks.

Pilot

SOC takes feedback from faculty about what types of internships their students are looking for, searches websites and online databases, and posts related opportunities within the platform. The following academic programs started the pilot in fall 2022: **Agricultural, Leadership, and Community Education; Biochemistry; Chemistry; English; Food Science and Technology; Graphic Design; School of Neuroscience;** and **School of Public and International Affairs. Agricultural and Applied Economics** will be joining the pilot in spring 2023.

The target percentage of students using SOC is 10% at the end of the first semester. The pilot group had 7% use at the end of fall, but 2 programs chose to wait until spring to share with students. To increase use, SOC will begin emailing bimonthly newsletters with highlighted opportunities to students.

Summaries of student use (login, interests, and favorites) and opportunities (type, location, and timing) were shared with participating faculty. A more in-depth analysis of opportunity capacity by discipline is ongoing, and adjustments will continue through spring.

Ongoing Operational Support

Overview

The Bridge Experience Program will not be a University Mission Initiative based on work by the Experiential Learning Steering Committee. As such, development committees are beginning to be re-engaged, and this work will continue into spring. Ongoing communication efforts for fall included presentations to faculty and administrators and a series of VT News articles.

University communication

A series of VT News articles ran in December 2022. Stories included

- ✓ [an introduction to the program](#);
- ✓ [English](#);
- ✓ [Food Science and Technology](#); and
- ✓ [Agricultural, Leadership, and Community Education](#).



Presentations were given to the following groups

- Career and Professional Development on August 5;
- Provost Clarke on August 19 and November 2;
- Academic advising directors on September 1;
- Don Taylor on October 18;
- School of Public and International Affairs on November 9; and
- Academic Affairs Council on November 10



QEP committees

The Student Advisory Board was reestablished in fall 2022 with students from academic programs involved in the Bridge Experience Program. Considerations identified by students included

- needing more information about getting involved in undergraduate research and hearing that information multiple times during their studies;
- needing more information about graduate school, applications, and funding;
- wanting to see the variation in opportunities available to them and hear from peers about their experiences; and
- communicating intentionally with students who change majors.

Bridge Experience Curriculum

Bridge Experience

Key characteristics of bridge experiences include

- a clear purpose and intentional learning outcomes for the student;
- an immersive, transformational experience that will serve as a bridge between the student’s academic experience and future employment in the professional world;
- evidence that the experience type is predictive of a successful transition to a career or continuing education in the discipline based on student goals;
- student agency as opposed to an experience that is mainly orchestrated by a faculty or staff member through a course or other program;
- a supervisor and/or faculty member that the student is accountable to and who can serve as a resource and mentor for the student during the experience;
- a prolonged workplace experience of sufficient length to include preparation, orientation, ongoing support, reflection, and a showcase; and
- an opportunity for students to appropriately showcase their learning and transformation.

Completion of a bridge experience is tracked through enrollment in a section of 3900.

3900 Tracking Course Information

Course: XXXX 3900 Bridge Experience

Description: Application of academic knowledge and skills to a work-based experience aligned with post-graduation goals using research-based learning processes. Satisfactory completion of work-based experience often in the form of internship, undergraduate research, co-op, or study abroad; self-evaluation; reflection; and showcase of learning. Pre: Departmental approval of 3900 plan.

Course titles can be customized by CRN through the same process as similar courses. In this case, the course shows on a transcript as BEXP: *Custom title here*.

Checksheet Examples

Example A:

XXXX 3900 Bridge Experience (0) (requires departmental approval)

Example B:

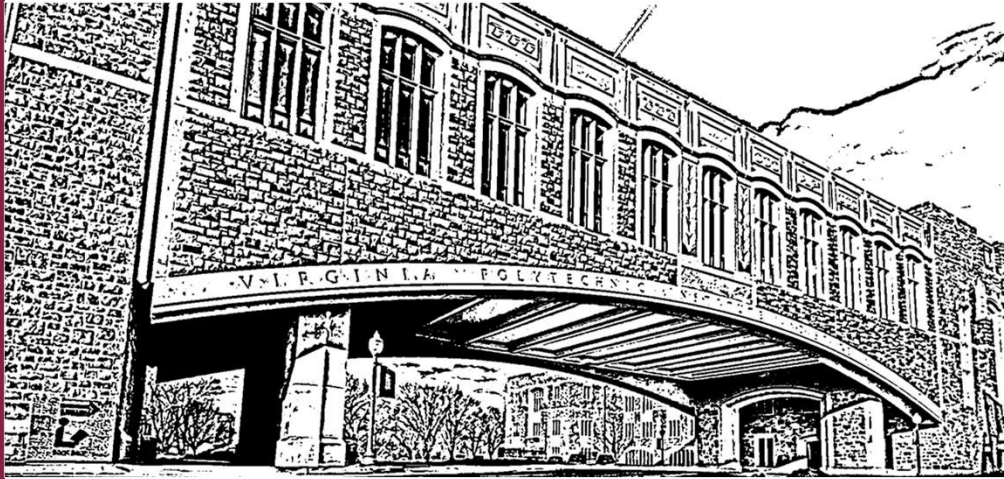
Semester	Credits
XXXX 3900 Bridge Experience <i>Pre: requires departmental approval</i>	0

Example C:

XXXX 3900 Bridge Experience *pre: requires departmental approval* 0 _____

Note: XXXX should be replaced by your program’s course subject

Bridge Experience Program



WHAT IS A BRIDGE EXPERIENCE?

Bridge experiences are authentic, work-based experiences that match a student's post-graduation goals and support the transition to life after VT.

- ✓ Internships
- ✓ Research
- ✓ Work experience
- ✓ And others...

WHAT DO STUDENTS SAY?

"This experience is the perfect bridge from college to world. Real job, real clients, real problems."

"If you can guarantee an opportunity for every student I think it's a great idea."

"Work experience distinguishes a student's resume. All the employers I've spoken with or even at career fairs say having an internship is preferable."

WHY BRIDGE EXPERIENCES?

- ✓ Degree requirements ensure equitable access for **ALL** students.
- ✓ Virginia Tech's strategic plan
- ✓ Co-ops, paid internships, and undergraduate research are positively related to post-graduation outcomes.

THE PROGRAM

Undergraduate academic programs are supported through a 2-year design process to implement a bridge experience requirement in their curricula. The program includes funding, planning resources, technology support, and a Community of Practice to share ideas and learn from other disciplines.

Gap analysis

Fall year 1

Programs will identify baseline participation, participation gaps, student barriers, and opportunity capacity needs.



Planning

Spring year 1

Programs will draft curriculum and the student learning journey to complete a plan, experience, reflection, and showcase.



Pilot implementation

Year 2

Programs will pilot learning outcomes assessment, adapt advising and communication strategies, and increase opportunity capacity.



Full implementation

Fall year 4

Programs will implement a bridge experience curricular requirement for entering students.



Applications open each spring for programs starting in May, and information sessions will be held before the deadline. For more information, see www.teaching.vt.edu or email teaching@vt.edu.

Come join the program!

Center for Excellence in
TEACHING AND LEARNING

