

QUICK FACTS

Year founded: **2013**

Project source: **Faculty**

Duration: **Year-long**

Students per year: **800-1,000**

Interdisciplinary: **Yes**

Vertical integration: **Yes**

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PROGRAM SUMMARY

Bass Connections is a university-wide program that supports interdisciplinary, applied research teams involving more than 1,200 individuals each year (a mix of faculty, staff, postdocs, graduate/professional students and undergraduate students). At the core of the program are approximately 70 [year-long project teams](#) that run each year, but the program also supports collaborative, applied [summer research experiences](#) and a growing number of [semester-long courses](#) designed around team-based research.

Bass Connections seeks to create a distinctive educational model that is predicated on collaborative, interdisciplinary inquiry and that actively engages students in the exploration of big, unanswered questions about major societal challenges.

Bass Connections teams establish three core connections:

1. Across areas of disciplinary expertise
2. Across learner levels (undergraduate students, graduate/professional students, faculty)
3. Between the academy and the broader world

THREE CORE CONNECTIONS



Our year-long project teams address applied research questions proposed by faculty leaders (typically two to four scholars from different disciplines). Proposals are vetted and selected through a faculty peer review process, and once project teams are awarded funding, we work with faculty leaders to recruit graduate and undergraduate students. Teams typically include one to four graduate students and two to ten undergraduate students, resulting in an average team size of 10 students. In many cases, teams also include external partners, such as cultural institutions, government agencies, community organizations, nonprofits or businesses. Students typically receive academic credit for participating in the program, with

some advanced students and/or students in leadership roles receiving compensation. While faculty receive project funding and research support, they generally do not receive teaching credit.

Project teams tackle a diverse set of issues, anchored by [six interdisciplinary themes](#) focused on societal problems. Teams use a wide range of research methods and approaches, and generate an array of outputs, including both traditional academic products (e.g., grant proposals, data sets, peer-reviewed scholarship) and creative public-facing work (e.g., new service delivery models and processes, policy briefs, op-eds, prototypes, algorithms and software, exhibits, websites, oral history archives, works of art). The research undertaken by project teams has also underpinned successful grant proposals leading to an estimated \$125 million in external funding.

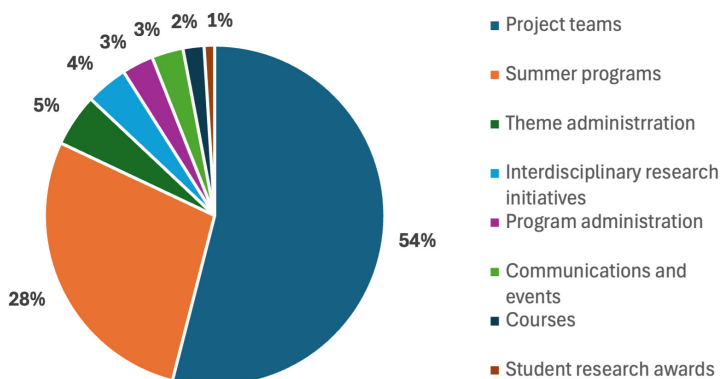
To offer just a few examples:

Team name	Team description and outputs	Disciplines involved	Activities and methods
<u>Help Desk: Scaling Volunteer Models That Address Patients' Social Needs</u>	This team partnered with a local, federally qualified community health center to pilot a new, student-driven volunteer model to connect patients to social services. The model has now been expanded to three clinics. The team also produced a comprehensive training curriculum and numerous research papers and presentations.	<ul style="list-style-type: none"> • Biology • Business • Global health • Medicine • Nursing • Policy • Sociology 	<ul style="list-style-type: none"> • Feasibility assessment • Program design of a new service delivery model • Program evaluation
<u>Gerrymandering and the Extent of Democracy in America</u>	This team built, evaluated and refined diagnostic tools to quantify the effect of gerrymandering on congressional elections across a handful of states. Their district modeling algorithms have informed several federal and state judicial opinions related to gerrymandering, including the first federal court ruling to strike down electoral districting on the grounds that it unconstitutionally favored one political party over another.	<ul style="list-style-type: none"> • Computer science • Political science • Law • Math • Public policy 	<ul style="list-style-type: none"> • Data collection and cleaning • Algorithm development and modeling • Policy and legal briefs
<u>Arts and the Anthropocene</u>	To educate the public and inspire action on climate change, this team developed two StoryMaps on the Science of Sea Level Rise and Local Impacts of Sea Level Rise in NC and created " Spectral Seas ," a tapestry woven out of 400 plastic bags collected from the community, depicting the scale of future sea level rise.	<ul style="list-style-type: none"> • Arts, including sonic and visual media • Environmental science • Public policy 	<ul style="list-style-type: none"> • Data collection and analysis • Literature reviews • Digital mapping • Exhibition design (including tapestry design and weaving) • Arts outreach

RESOURCES AND ADMINISTRATIVE MODEL

The program is overseen by Duke's Vice Provost for Interdisciplinary Studies and managed by three to four full-time staff members. Themes are administered by associated interdisciplinary units and supported part-time by one or two faculty "theme leaders" and a staff "theme administrator."

Core Program Expenses



Given the distributed model of the program, it is difficult to assess exact program expenses, but core funding totaled approximately \$2.5 million in 2024-2025. The program is funded primarily by endowed gifts, complemented by a smaller number of expendable funds. Thus, no tuition dollars or other internal strategic funds currently support the program.

As shown, funding for year-long project teams comprises more than 60% of the budget. Teams receive an average budget of \$25,000 to support research expenses such as graduate student funding, travel for fieldwork and conference presentations, supplies and materials, and payments to study participants. Maximum project funding is \$40,000. Funding for summer programs only represents contributions through Bass Connections, which provides partial support for those programs.

BEST PRACTICES AND LESSONS LEARNED

Since the program's founding, we have invested in a regular process of evaluation, with a continual eye towards identifying best practices and challenges confronting teams. We have drawn on these lessons to develop tools, resources, requirements and guidance to reinforce the following elements, which we have found to be critical to the impact of the program and the success of our teams:

TEAM ORGANIZATION, LOGISTICS AND CULTURE: Fostering productive collaborative, interdisciplinary research requires an intentional focus on team development. The success of our teams is highly reliant on the degree to which leaders foster strong team culture and clear structure for engagement. Our end-of-year evaluation surveys consistently underscore the importance of clear project goals, defined (albeit adaptable) timelines and specified roles. To support teams in these endeavors we have developed a [team resource center](#) that includes suggestions for [team-building](#) activities, guidance on setting [team ground rules](#), and a [team charter](#) template. We also encourage faculty leads to appoint a graduate/professional student to partner with them as a project manager, and share [trainings and resources](#) directly with this group.

OPEN-ENDED, BUT WELL-SUPPORTED, INQUIRY: Students benefit greatly from engaging in applied research experiences that lack predetermined answers and provide them with a significant voice in shaping research objectives and design. This combination compels students to navigate ambiguity, take an inquiry-based approach, participate in collective

decision-making and engage in teamwork. These interrelated elements represent a shift from more didactic learning environments and thus require distinctive supports. We often counsel our teams on how to scaffold the experience for students, starting with a more structured approach that provides grounding in intellectual context and research methods, and then gradually empowering students to take greater ownership and initiative.

VERTICAL INTEGRATION: We expect teams to grapple with research questions collectively, drawing on the expertise of all team members. Because of the interdisciplinary nature of teams, students of all levels can bring significant expertise and valuable perspectives to their teams. It is not uncommon for faculty to remark on skills and insights they have gained from undergraduate team members.

Graduate/professional students frequently serve as critical interlocutors on teams, mentoring undergraduate students and providing [project management](#) support. These opportunities allow advanced students to practice leadership and communication across disciplines and levels, while also providing undergraduate students with an accessible near-peer mentor, thereby reducing the load on faculty leaders.

APPLIED ENGAGEMENT: All projects are applied in nature and about two-thirds of teams have an external client or partner. These external relationships enable our teams to learn from community organizations, professionals, public officials and/or entrepreneurs, and provide authentic audiences for their research and analysis. Our program evaluations consistently show that such interactions help students connect their academic experiences to broader social issues, provide practical skill development — including the capacity to grapple with ambiguity, work within teams and communicate with non-academic audiences — and help students develop new networks.

CHALLENGES AND PRIORITIES FOR THE FUTURE

The program has faced several persistent challenges:

FACULTY EFFORT AND ENGAGEMENT: While faculty who lead projects benefit from research funding and the capacity to engage teams of talented students in new research areas, they usually do not receive teaching credit and have consistently noted that their participation requires a great deal of time and energy, especially if it is their first time leading a team. Despite these concerns, the program has had strong engagement — with faculty participation over the first 10 years including more than 700 unique individuals representing all of the university's schools and cross-school interdisciplinary units. At the same time, there have been pockets of minimal engagement, including some humanities and natural science departments and the business school. On the basis of faculty focus groups, we have the sense that in some cases non-participation reflects misaligned incentives, while in others it is related to the nature of research and scholarship in those units.

STUDENT PREPARATION: One cause of the time burdens that faculty confront is that many undergraduate students are new to research, and while they are eager and bright, they may not always have the requisite intellectual or methodological grounding. Given the diverse nature of research taking place across our teams, we struggle to provide a centralized mode of preparation that will work for a significant portion of teams. Several years ago we ran a [Foundational Research Modules Series](#) — while these recordings remain available to teams, we have not repeated the live sessions due to relatively low turnout despite large numbers of students who registered. We have since broadened our efforts to connect teams to [existing campus resources](#), but matching teams to these resources at the right time in their research trajectory remains a challenge.

UNEVEN TEAM EXPERIENCES: Although a large majority of the students on our year-long teams report good or excellent experiences, many faculty members lack experience in organizing collaborative, interdisciplinary projects. The learning curve for these team leaders sometimes results in poorly organized teams that flounder and cause frustration for students and faculty alike.

Looking ahead, we aspire to partner with Duke's schools to integrate the program further into curricular structures and provide a mechanism for participating faculty to receive fractional teaching credit. One promising avenue is to partner with more units that deliver a major, minor or certificate to embed team experiences in program requirements (e.g., to count as a capstone experience). We also hope to expand to meet student demand, with a focus on developing more semester-long courses built around collaborative, applied projects and more summer research experiences. Finally, to ensure more equitable community partnerships, we hope to create more avenues for community partners to bring project ideas to us. This last possibility depends on our ability to match faculty leaders to community interests, something that would be more feasible if coupled with the provision of teaching credit.

Duke University is a private research university located in Durham, North Carolina with 6,500 undergraduate students and 10,600 graduate and professional students across 10 schools.