

Departmental Diversity and Inclusion Action Plan (Phase II)

Division of Applied Mathematics

February 29, 2024

Introduction

The Division of Applied Mathematics is committed to fostering a diverse, equitable, and inclusive community in our department. We affirm that each person is valued, respected, and supported. Our goal is to focus on the needs of each individual, and to ensure that the right conditions are in place for each person to achieve their full potential. Inclusion should be reflected in our department's culture, practices, and relationships, so that a diverse community can flourish.

In 2016, as part of the launch of Brown University's institutional Diversity and Inclusion Action Plan ([DIAP](#)), we wrote a Departmental Diversity and Inclusion Action Plan (DDIAP) that laid out extensive plans for fostering a more diverse and inclusive community in the Division of Applied Mathematics. Our [2016 DDIAP](#) provided a detailed and comprehensive list of specific activities arranged across nine categories, but the plan did not provide a practical long-term framework for implementation and accountability, and so, although several initiatives were undertaken, it was felt that there was a need to improve coordination and organization and make a more concerted effort to achieve our goals. With the revitalization of our DEI Committee and DEI-focused efforts since the summer of 2020, it became evident over time that we needed an action plan that was more functional and could better focus and guide our efforts.

With this in mind, we have undertaken revisions of the DDIAP to better serve our department's DEI goals. This document will serve as an operational plan that provides guiding principles and structure to help focus the department's direction and activities for the near future, rather than an exhaustive list of concrete activities. This document is intended to be flexible, adaptable to the department's needs, and consistent throughout changes in departmental leadership. It will align our departmental goals with the University's DIAP priorities, identify key focus areas within each priority for the near and medium-term future, and outline who is responsible for supporting and tracking progress.

Our Progress So Far

Over the last several years, the department has made steady progress on our aims of increasing diversity, fostering an inclusive community, making our processes more equitable and transparent, improving our communications and assessing our progress, and raising awareness. Linked [here](#) is a list of the ongoing and completed initiatives, activities, processes, and policies that we have recently implemented or updated to advance our DEI goals, reported

under the University Priority Areas that they address. These items have been institutionalized and will be maintained for as long as they continue to serve our goals.

Priority Areas

The University DIAP lays out 6 priority areas through which the University’s DEI efforts are focused: Accountability, Community, People, Academic Excellence, Curriculum, and Knowledge. Moving forward, we will report the department’s DEI work under these six areas.

In each of the DIAP priority areas below, we list departmental *Focus Areas* - specific tasks within each priority area where the department has identified a need for further attention and plans to focus its efforts over the next 3-6 years. Items that have been institutionalized and are currently ongoing in the department already may be viewed [here](#)—**we will continue to implement these items and support the goals that they work towards, while directing our available bandwidth to advancing the focus areas identified below.**

Summary

This chart summarizes the Priority Areas and our identified focus areas. Further details on each area may be found below.

Accountability	Community	People	Academic Excellence	Curriculum	Knowledge
Communication	Undergrad Community	Mentorship of Faculty and Postdocs	Collaborative Research	DEI in the Curriculum	Raising Awareness
Data Sharing	Postdoc Community	Grad Student Retention	Undergrad and Grad Research Projects	Inclusive Teaching	Tracking and Assessment
DDIAP Implementation	Outreach	Undergrad Student Recruitment		Undergrad Gateway Course	
				Teaching Assistant Support	

Accountability

University Objective	Improve processes to assess DIAP implementation and the impact at the University and departmental levels.
Department Objective	Ensure departmental accountability for advancing DDIAP priorities by developing and maintaining processes that track, assess, and communicate progress on the implementation and impact of DDIAP priorities.

Developing accountability mechanisms for our work is key to understanding where we are and how we can improve our department in all areas, from culture to academics to programming.

Since the 2016 DIAP, we have changed and institutionalized numerous departmental processes to systematically collect and analyze quantitative and qualitative information to track departmental progress and recognize trends that will inform overall departmental decisions and direction. We have also revised and updated many of our policies and processes to ensure clarity and transparency: these are shared with the community on shared Google Drives and on our departmental website.

Looking ahead, we will continue these existing successful efforts and, in addition, develop the following new areas:

Focus Areas/Priorities

- **Communication:** review existing mechanisms for identifying and addressing concerns in the community, and revise or build new avenues as needed to improve communication and accountability throughout the Division.
- **Data Sharing:** establish processes to disseminate the quantitative and qualitative data we collect in anonymized form to the department community to ensure transparency and support accountability.
- **DDIAP Implementation:** Manage implementation of the DDIAP using tools such as an online dashboard (visible to the APMA community) that tracks the Division’s projects, tasks, and overall progress in each of the DDIAP’s focus areas.

Community

University Objective	Improve the climate and culture within and across departments and increase relational and transformational forms of engagement with the Rhode Island community.
Department Objective	Foster an inclusive community within the department and increase outreach to and engagement with broader communities at Brown, in Rhode Island, and beyond.

Building a strong and inclusive community has been a top priority of the department and the DEI Committee over the last several years, and we have made great strides in fostering an inclusive community that is conducive to academic and professional excellence, receptive to open dialogue and honest feedback, and welcoming to people of all backgrounds (see our [list](#) of institutionalized items/processes). These efforts have been rendered even more critical by the isolating effects of the COVID-19 pandemic and the tremendous growth of our undergraduate student population.

Most of our recent efforts focused on bringing together graduate students, postdocs, staff, and faculty. We plan to continue these efforts in the future and, in addition, expand our activities as follows:

Focus Areas/Priorities

- **Undergraduate Community:** explore ways to better integrate undergraduates into the departmental community.
- **Postdoc Community:** identify and build opportunities to further develop and support the postdoc community in the Division.
- **Outreach** - examine ways to promote and encourage collaboration with outreach activities at Brown and beyond (both existing and new).

People

University Objective	Increase representation, retention, and success among HUG students and faculty and staff as well as women faculty in STEM.
Department Objective	Increase HUG, women, and LGBTQ representation and strengthen mentoring/retention efforts across our department (faculty, staff, postdocs, graduate students, and undergraduate students).

Increasing diversity in the department is key to the success of our academic mission and our community. Since 2016, the department has made significant progress in increasing the diversity of its population and addressing challenges related to student retention. We have changed the ways in which we run faculty and postdoc searches to increase applicant pools, and we have also focused more on recruiting high-quality diverse graduate student cohorts.

Looking ahead, we will continue these efforts and expand them to the following areas:

Focus Areas/Priorities

- **Mentorship of Faculty and Postdocs:** improve mentoring structure and opportunities for early and mid-career tenure-track faculty, lecturer-track faculty, and postdoctoral research associates.
- **Graduate Student Retention:** review our graduate program structure and policies for potential changes that would increase retention, make our program more transparent and predictable, and make it easier for students to progress through our program.

- **Undergraduate Student Recruitment:** devise strategies to introduce undergraduate students early on to applied mathematics through more diverse and accessible pathways.
- **Teaching Assistant Support and Recruitment:** provide structured training, support, and expectations for our UTAs and GTAs so they can be more confident and effective teaching assistants.

Academic Excellence

University Objective	Increase opportunities for—and production of— scholarship and research on issues of equity, justice, power and privilege, impacting historically underrepresented people and communities locally, nationally and globally.
Department Objective	Increase opportunities to learn about and conduct research on issues of equity, justice, power and privilege, and increase opportunities to engage in pedagogical methods that advance STEM participation

While some aspects of applied mathematics research lend themselves to exploring issues of equity, justice, power, and privilege, these are generally not areas that can be addressed naturally using mathematical approaches. We organize a Social Equity and Applied Mathematics (SEAM) seminar series that showcases research in these areas, and several past and ongoing projects in the department focus on these subjects. In the future, we plan to explore ways to do the following:

Focus Areas/Priorities

- **Collaborative Research:** encourage collaborations with other departments at Brown on research and scholarship related to equity, justice, and power.
- **Undergraduate and Graduate Research Projects:** identify opportunities for students to conduct research on DEI-related issues with APMA faculty, and examine methods of supporting faculty and students who are doing DEI-related research.

Curriculum

University Objective	Increase opportunities for members of the Brown community to engage with issues of diversity, equity and inclusion throughout the curriculum as appropriate.
Department Objective	Increase opportunities for our students to engage with issues of diversity, equity, and inclusion throughout the curriculum; and increase opportunities for faculty to engage with inclusive teaching and learning techniques.

What we teach and how we teach it lies at the core of our academic mission. While the applied mathematics curriculum may not lend itself to the direct study of DEI issues, there are ways to integrate the awareness and practice of diversity, equity, and inclusion into our classrooms. Since Spring 2017, APMA 1910 “Race and Gender in the Scientific Community” has been a regular course in our teaching schedule and a highly successful addition to our course offerings that showcases one way in which our discipline can address DEI issues in STEM. Additionally, we are committed to ensuring our curriculum and teaching methods best serve the needs of our diverse study body.

To further advance these goals, we plan to work on the following:

Focus Areas/Priorities

- **DEI in the Curriculum:** weave issues of diversity, equity, inclusion, social justice, public health, and other critical topics into our existing curriculum, especially in entry-level courses and courses with high enrollments (e.g., 0350, 0360, 0650, 1650, 1655).
- **Inclusive Teaching:** develop opportunities to discuss and integrate inclusive teaching techniques in our courses.
- **Undergraduate Gateway Course(s):** develop introductory gateway course(s) into applied mathematics to broaden participation.

Knowledge

University Objective	Increase the collection and reporting of data to inform progress on DIAP priority areas; and increase learning opportunities for faculty, staff, students and administration.
Department Objective	Increase the collection and reporting of relevant data to inform our progress on DIAP priority areas, and increase availability and awareness of learning opportunities for members of the APMA community (faculty, staff, postdocs, graduate students, undergraduate concentrators).

As was noted in the Accountability priority area, we have changed and institutionalized numerous departmental processes to better track and identify our progress across different departmental priorities—including the systematic collection and reporting of data relevant to our searches, admissions, events, and other departmental activities. In addition to data collection, we have focused on methods of raising our departmental community’s awareness of the importance of diversity, equity, and inclusion to departmental climate and culture. We have also developed a structure of internal programming (including community meetings, workshops, and social events) that provides a steady source of learning opportunities for our community.

Looking ahead, we will continue our successful existing efforts and build up the following areas:

Focus Areas/Priorities

- **Raising Awareness:** offer learning opportunities (programming, resources, and feedback channels) to raise awareness of diversity, equity, and inclusion topics in the department and to better inform the department leadership of potential concerns in the community.
- **Tracking and Assessment:** systematically collect and analyze quantitative and qualitative information related to departmental activities to track departmental progress and recognize trends that will inform our decisions and overall departmental direction.

Implementation

With our focus areas identified, we now turn to implementation—how to concretely advance these priorities over the next several years.

Who is doing the work: While the DEI Committee plays a significant role in the planning and execution of many DEI-related activities, and is responsible for general oversight and reporting, it is the collective responsibility of the departmental community to advance our diversity, equity, and inclusion goals through concrete actions and activities. The DEI Committee will assist the department in identifying individuals in the community who may take the lead on departmental DEI activities.

Programming Structure: The department and the DEI Committee have developed a structure of programming and events through which our goals can be addressed, discussed, and shared with the community. New activities and topics should be incorporated into the existing structure of the department’s programming and events whenever possible and logical.

- Community meetings - 1 per semester
- Topical Conversations series - at least 1 per year
- Department workshop on DEI-related and skill-building topics - at least 1 per year
- Department social events - at least 1 per semester
- Fellowship workshop (for graduate students) - 1 during fall semester
- Prelim prep event - 1 during spring semester
- Departmental seminars and colloquia - throughout the academic year
- Postdoc events - throughout the academic year
- Student group events - throughout the academic year
- Tea Time - throughout the academic year

DEI Committee: The DEI Committee plays a significant role in the planning and execution of many DEI-related activities and processes, and is responsible for general oversight and reporting (see the [appendix](#) below for the committee’s charge). The DEI Committee will be chaired by the Associate Chair and should contain members from all groups (faculty, postdocs, staff, and students) represented in the department. Each year, the Committee will determine which of the DDIAP’s focus areas to prioritize for the upcoming academic year and form subcommittees and/or working groups (composed of committee members and, if suitable, additional members of the APMA community) to work on specific plans for advancing the

identified priorities. The Committee is also responsible for identifying community members who take the lead on each of the activities listed in the preceding paragraph.

Reporting: Each year, the DEI Committee will prepare and submit an annual review for the Office of Institutional Equity and Diversity detailing our progress since the last annual review. This report will be shared with departmental leadership, and as appropriate with the departmental community, to assist the department in taking stock of our progress and to orient upcoming activities accordingly. The DEI Committee will also share anonymized data (as allowed per Brown University policies) and an overview of DEI activities with the departmental community via a DEI dashboard (to be created) and a DEI Newsletter once each semester.

Timeline: This DDIAP outlines the department's priorities for the medium-term future. The DEI Committee will review this document's priorities each academic year as part of their planning and reporting efforts and identify which areas to focus on each year, given available bandwidth. This document as a whole should be reviewed every 3 years by the DEI Committee and the broader APMA community to assess overall progress on the DDIAP's focus areas and updated to reflect any significant changes in the University's or department's priorities. By the end of the first 3-year period (2023-2026), the DEI Committee aims to demonstrate identifiable forward progress in each of the DDIAP's focus areas.

Appendix: DEI Committee Charge

The Division of Applied Mathematics is committed to fostering a diverse and inclusive community in the department. Our goal is to ensure that the right conditions are in place for each person to achieve their full potential. Inclusion should be reflected in our department's culture, practices, and relationships so that a diverse community can flourish.

The Diversity, Equity & Inclusion Committee of the Division of Applied Mathematics is charged with assisting with the implementation and monitoring of our diversity and inclusion programs. Specifically, the committee will meet regularly to:

1. assess progress towards the DDIAP plan and reviewing the climate in the Division;
2. address or alert the relevant departmental officers or OIED to DEI related concerns;
3. carry out tasks assigned to the committee in the DDIAP;
4. recommend best practices and policies regarding DEI to the chair;
5. plan and coordinate departmental DEI events; and
6. communicate best practices, findings, and recommendations to the APMA community.