

Diversity, Equity, and Inclusion

Annual Report 2023-2024

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Letter from the Associate Dean

I am delighted to present Thayer School of Engineering at Dartmouth's 2023-2024 Diversity, Equity, and Inclusion (DEI) annual report, which showcases the efforts of our DEI committee and members of our wider community to foster a more inclusive and equitable environment for students, faculty, and staff at Thayer.

Diversity, equity, and inclusion are central to our mission and are critical to expanding our capacity for truly human-centered innovation. During 2023-2024, we launched the first year of DEI Strategic Plan with nearly 40 faculty, staff, and student volunteers working across four different areas, including leadership and accountability, our climate and culture, the student experience, and our faculty and staff recruitment and rentention practices. In addition, we created additional task forces that focused on improving how we communicate and share information with the community and in creating a more transparent tenure process for faculty.

In this report, you will find details on the progress we have made throughout the past year.

We continue to strive to create a school that encompasses a diverse range of lived experiences, backgrounds, abilities, cultures, and perspectives. We aim to ensure that every individual feels welcome, respected, and valued at Thayer, with opportunities to thrive to their fullest potential. This work would not be possible without the dedication, time, and contributions from our DEI committee, as well as the many students, faculty, and staff across Thayer who volunteer, attend learning sessions, organize events, and engage in various efforts towards our shared goals.

Thank you for your unwavering support for diversity, equity, and inclusion at Thayer.

Petra Bonfert-Taylor,

Associate Dean for Diversity and Inclusion

DEI Committee

The DEI Committee at Thayer consists of faculty, staff, and students dedicated to fostering a learning and working environment that is more equitable, diverse, and inclusive. The 2023-2024 DEI Committee was comprised of the following members:

Faculty and Staff

Alexis Abramson, Dean

Petra Bonfert-Taylor, Associate Dean for Diversity and Inclusion Linda Braden, Associate Director of Web and Digital Strategy

Jentry Campbell, Research and Learning Librarian

Peter Chin, Professor of Engineering

Benoit Cushman-Roisin, Professor of Engineering

Sol Diamond, Associate Professor of Engineering

Simge Engelkiran, DEI Coordinator

Mattias Fitzpatrick, Assistant Professor of Engineering

Britt Goods, Assistant Professor of Engineering

Katie Hixon, Assistant Professor of Engineering

Kelli Kehoe, M-Shop Office Manager

Jess Kinzie, Student Success and Outreach Manager

Eun Lee Koh, Sr. Director of Communications and Creative Services

Eugene Korsunskiy, Associate Professor of Engineering

Bruce Laferriere, Administrative Manager

Mark Laser, Associate Professor of Engineering

Isabelle LaBombard, Technical Instructor

Wesley Marrero, Assistant Professor of Engineering

Vicki May, Professor of Engineering

Erin Mayfield, Assistant Professor of Engineering

Colin Meyer, Assistant Professor of Engineering

Ashley Parke, Faculty Affairs Manager

Candace Potter, Graduate Admissions and Financial Aid Administrator

Laura Ray, Sr. Associate Dean for Faculty Development

Jen Seiler, Chief of Staff, Thayer Advancement

Helene Seroussi, Associate Professor of Engineering

Tricia Spellman, Chief Financial and Administrative Officer

Rafe Steinhauer, Assistant Professor of Engineering

Tad Truex, Lecturer and Lab Instructor

Haley Tucker, Social Media and Communications Manager

Holly Wilkinson, Associate Dean for Academic and Student Affairs



DEI Fellows

Zhanelle Nugmanova, Adrianne Gowie, and Chase Yakaboski (pictured left to right) served as DEI Fellows during the 2023-2024 academic year.

Students

Adrianne Gowie

PhD student

Zhanel Nugmanova

M.S. student

Chase Yakaboski

PhD candidate

Mission

We strive to build a Thayer that embodies openness, accessibility, collaboration, and human-centered innovation, elevates the voices of those from historically marginalized backgrounds, and continually works toward becoming a community that comes together across differences as we respond to challenges in our world.

Values

As part of Dartmouth's "<u>Toward Equity</u>: <u>Aligning Action and Accountability</u>," a three-year institutional strategic plan for the university, the Dartmouth Engineering aims to:

- Invest in the initiatives that prioritize equity and access by giving deliberate
 attention to the recruitment, retention, or training hurdles that limit the participation of
 individuals from historically marginalized groups.
- **Improve the health and well-being of our community** through organizing resources and programming that meet the specific needs of diverse groups and create a culture where skill-sharing, storytelling, and acts of caretaking and wellness are uplifted.
- **Imagine and create a more equitable future** in which we listen to and learn from the stories, struggles, and successes of those most impacted by a history of inequities, using them as roadmarkers towards the solutions we practice as a community.

DEI Strategic Plan: First-Year Milestones

Thayer's DEI Strategic Multi-Year Plan was developed in close collaboration with students, faculty, and staff during the 2022-2023, in alignment with Dartmouth's "Toward Equity: Aligning Action and Accountability" strategic plan. Thayer aims to cultivate a learning and research environment that prioritizes equity, health, and well-being. Through the plan's actions, desired outcomes, and metrics, we strive to forge a more inclusive future.

During the 2023-2024 academic year, the DEI Committee initiated work on the first-year goals of the DEI Strategic Plan, focused on four key areas:

- I. Leadership & Accountability
- II. Culture, Climate and Community Engagement
- III. The Student Experience
- IV. Recruitment and Retention

In addition, two task forces also focused on significant aspects selected from later year goals of the plan:

- · Communication & Information Sharing
- Tenure Transparency

Eight working groups tackled key area, and focused on achieving Year 1 goals.



DEI Strategic Plan Launch

Members of the Thayer community gathered for DEI Strategic Plan launch in September 2023.

I. Leadership & Accountability

Overall Goal

Ensure leaders are aligned and responsible for upholding a collective commitment to create a community where every individual feels empowered to achieve their maximum potential.

Year 1: Align Leaders to DEI

Leaders at all levels articulate, champion, and model diversity, inclusion, and equity throughout Thayer.

Milestones

- Finalized and formally adopted the Thayer Professionalism Document to foster professionalism within the community.
- Clearly defined categories of leaders.
- Assigned specific accountabilities to individuals within each leadership category.
- Identified the percentage of leaders with defined DEI responsibilities as a vital metric for integrating diversity, equity, and inclusion principles into Thayer's leadership framework.

Year 1: Communicate and Amplify Thayer's DEI Commitment and Efforts

Create communication strategies and platforms to facilitate awareness of plans, progress, gaps, and achievements, as well as opportunities for engagement.

Milestones

- Facilitated two Fireside Chats on "Working Parents" and "Women at Thayer."
- Developed a Progress Dashboard and initiated work on a Demographics Dashboard.

II. Culture, Climate & Community Engagement

Overall Goal

Foster an inclusive environment for work and learning, ensuring that all students, staff, and faculty experience a strong sense of connection and belonging.

Year 1: Inclusive & Accessible Spaces

Revise policies, practices, and protocols concerning both Thayer's physical and virtual spaces to include principles of inclusive design.

Milestones

- Adapted inclusivity signage, currently undergoing final edits for posting in key locations such as the Mshop and Couch labs.
- Compiled master lists of graduate student and postdoc office locations for future signage implementation.
- Planned to streamline the onboarding process to update office location information annually.
- Collaborated with Dartmouth to incorporate "Vector Solutions" for micro-credential course education, focusing on topics like LGBTQ+ allyship and mental health.



Fireside Chat

The first Fireside Chat—an informal chat about work and life at Thayer—kicked off in March 2024. The chat was moderated by Dean Alexis Abramson with Professor Katie Hixon, PhD Candidate Julia Huddy, and MShop Technical Instructor Izzy Labombard shared their experiences.

III. Recruitment & Retention

Overall Goal

Incorporate DEI principles into faculty and staff recruitment and retention procedures to promote an environment where every employee can flourish, experience a sense of belonging, and receive adequate support.

Year 1: Strengthen Orientation and Onboarding Programs for Faculty

Evaluate and improve faculty orientation and onboarding initiatives to cater to the diverse requirements of new faculty members upon their integration into the Thayer community.

Milestones

- Reviewed and assessed current onboarding and orientation processes and interviewed recently hired faculty.
- Proposed adding "peer" groups alongside existing "mentor-mentee" groups.
- Suggested cross-departmental lunches with the CS, Economics, and Physics departments, including one dinner per term.
- Recommended regular Thayer-wide faculty gatherings, such as lunches, to continue promoting DEI after onboarding.

Year 1: Strengthen Orientation & Onboarding Programs for Staff

Evaluate and improve programs for staff orientation and onboarding to ensure that the diverse needs of staff members are addressed upon their integration into the Thayer community.

Milestones

- Developed a comprehensive orientation program for new staff.
- Successfully piloted the program with 10-15 new staff members.
- Created an evaluation survey for program feedback.
- aAnalyzed the survey results and adapted the program based on that feedback.

IV. The Student Experience

Overall Goal

Embed DEI principles into policies, practices, curriculum, and programs affecting the student journey to guarantee each student's success, sense of belonging, and support.

Year 1: Onboarding

Evaluate and improve policies and programs for students to ensure that the varied needs of students are addressed upon their integration into the Thayer community.

Milestones

- Conducted a student survey to assess information reception during orientation.
- Hosted a Winter Wellness lunch in collaboration with Student Affairs.
- Initiated proposals for orientation "booster" activities.
- Centralized onboarding and orientation materials.
- Collaborated on drafting a new resource page for orientation and graduate student support.



Women of Thayer at Storrs Pond

Dean Alexis Abramson and Professor Laura Ray extended an invitation to faculty, staff, and graduate students who identify as women at Thayer to attend a reception at Storrs Pond. The event aimed to foster community by bringing attendees together to celebrate and support each other. It provided an opportunity for representation, mentorship, friendship, and strengthened bonds within the growing community of women at Thayer.

Task Force:

Communications & Info Sharing

The group explored ways to increase and improve communications and information sharing across Thayer. The group promoted community outreach efforts, shared personal stories, and emphasized work-life harmony awareness.

Milestones

- Drafted a webpage for the DEI Learning Series as part of the DEI toolkit.
- Updated the DEI landing page to better highlight the mission and values.
- Recommended adding the statement "This event is brought to you by the Diversity, Equity, and Inclusion Committee" in promotions for all Thayer DEI-related events.
- Collaborated with the Student Experience group to improve transparency and communication about mental health services, DEI toolkit and resources, and other orientation materials.
- Hired a DEI Communications and Digital Fellow to assist with project execution.

Task Force:

Tenure Transparency

The group addressed concerns raised by Tenure-line faculty regarding the tenure process, gathering feedback from three junior professors and indirectly from others in the tenure track with the aim to improve the experience of tenure-line faculty on the tenure track.

Milestones

- Addressed concerns of non-tenured tenure-line faculty regarding the tenure process, focusing on process understanding and expectations
- Reviewed and clarified relevant sections of the Thayer Faculty Handbook
- Evaluated and revised template letters sent to colleagues and students for candidate evaluations
- Gathered insights from recently tenured professors on their experiences with the tenure process

Ongoing DEI Initiatives

DEI Learning Series

During the 2023-2024 academic year, the DEI Learning Series continued with the following topics:

- Identity and Culture
- Allyship
- Mentorship
- Cultural Intelligence
- Neurodiversity

Each topic's diverse array of resources, including videos and reading materials, was distributed to faculty and staff via email and *InsideThayer* on a weekly basis throughout the term. At the end of the learning unit, faculty and staff were invited to take part in an interactive Thayer community conversation, which provided an opportunity for reflection on the respective topic. Over the course of these sessions, a total of approximately 41 participants (hybrid) were actively involved, with some individuals participating in more than one program.

In addition to the DEI Learning Series, the DEI committee organized three distinct programs tailored for Thayer faculty, staff, and PhD students, aligning with their interests as identified through a survey conducted by the DEI Education Learning Committee. These programs included:

- Experience of Hybrid Employees
- Work-life Harmony
- Handling Difficult Conversations (Collaborated with DCAL)

In total, 58 individuals participated across in-person and Zoom sessions, with many individuals attending multiple sessions.



Work-Life Harmony

Faculty, staff, and PhD students gathered to talk about issues related to work-life harmony.

Themes that emerged from this discussion were later shared with Thayer's managers.

Mini Panels for Faculty Meetings

The DEI Committee at Thayer has organized three 20-minute mini panels for faculty meeting aiming to raise awareness on various topics. These panels covered three key themes:

- Students' Lab Culture Experience
- International Students' Experiences
- Graduate Students' Experiences on Food Insecurity

DEI Fellows Program

During the 2023-2024 academic year, Adrianne Gowie, Zhanelle Nugmanova, and Chase Yakaboski served as Thayer DEI Fellows.

Together, the DEI Fellows led eight impactful programs listed below, fostering community engagement and dialogue. Attendance varied from intimate gatherings to inclusive events with broad stakeholder involvement. In total, 132 individuals participated, including many that attended multiple programs.

This diverse engagement underscores the inclusive nature of the initiatives, drawing participants from faculty, staff, students, families, and friends within both Thayer and the broader Dartmouth community. These events include:

- Cultural Chili Cook-Off
- Barbie Movie (in collaboration with the DEI Wellness Committee)
- Ethics in Engineering Challenge Kickoff
- Continuing the Ethics in Engineering Challenge Program
- Lunch & Learn: What Does DEI Mean to you?
- International Women's Day Panel (in collaboration with South House)
- Lunch & Learn: Identity
- Lunch & Learn: Exploring Ethical Dilemmas (in collaboration with Jones Seminar)



Lunch & Learn: At a Lunch and Learn about identity, students discuss the intersection of engineering research with their identities.



International Women's Day: Thayer faculty and staff shared their perspectives with students during a panel.



Cultural Chili Cook-Off: Members of the Thayer community brought their best chili recipes for a tasty community cook-off.

Additional DEI Initiatives

Thayer Community Health & Wellness Committee

Thayer's Community Health & Wellness Committee is dedicated to fostering diversity, equity, and inclusion (DEI). This year, we formalized our mission: "We create diverse gatherings and support collaborative spaces to foster and advocate for community health and wellness." We extend our gratitude to the 13 dedicated committee members who have made our initiatives possible. In the 2023-24 academic year, the committee successfully organized and delivered over 13 communityfocused events.

Committee Members

Alphabetical Order

Julia Abraham

7ack Bennis

Sol Diamond

Shudong Jiang

Amy Keeler

Mark Laser

Jess Moody

Danielle Pierce

Hunter Snyder

Petra Bonfert-Taylor

Haley Tucker

Holly Wilkinson

Elisabeth Waltz

2023-24 Events

- Administrative Professionals Day Event (in collaboration with Thayer Human Resources)
- Gingerbread Houses decoration
- Halloween Break & Costume Contest
- Happiness & Tea
- Mandala Coloring
- Mindful May (promoted)
- Movie Night (in collaboration with DEI Fellows)
- Orientation BBO
- Paint n' Sip with PhD Candidate Sreevali Sreenivasan
- Staff Lunches (multiple)
- Thanksgiving Potluck
- Threshold Throwdown
- Wags n' Waffles | Hosted by the Committee & Dean Abramson







Professional Development for Underrepresented Engineers

Thayer continues to provide financial support and resources to four active student organizations that support the academic and professional growth of students underrepresented in engineering:

- American Indian Science and Engineering Society (AISES)
- National Society of Black Engineers (NSBE)
- Society of Hispanic Professional Engineers (SHPE)
- Society of Women Engineers (SWE)

During the 2023-24 year, Thayer provided funding for a total of 40 students to attend national conferences in Georgia, California, Washington state, and Utah. **The following are highlights from the student groups:**

American Indian Science and Engineering Society (AISES)

- 30 active members, an increase from 20 in 2022-2023 and 5 in 2020-2021.
- 4 attended national conference in Spokane, WA
- 6 attended regional conference in Ithaca, NY
- Thayer provided funding for Ivy Native Council Conference, hosted for the first time at
 Dartmouth in April 2024. An annual conference for Indigenous students affiliated with
 the 8 Ivy League Schools, as well as accredited Colleges and Universities on the East
 Coast. The conference serves as an opportunity for knowledge sharing, and a space for
 Indigenous students whose homes spread across the globe to connect, reflect, and create
 community.

National Society of Black Engineers (NSBE)

- 40 active members (increase from 25 in 22-23)
- 16 attended national conference in Atlanta, including 3 graduate students
- On campus professional development, including 3 resume workshops, professional development session, and sanctioned mental health breaks
- Collaborated with Dartmouth Humanitarian Engineers (DHE) on a presentation: How to be a humanitarian engineer









Society of Hispanic Professional Engineers (SHPE)

- 40 active members
- 10 attended national conference in Salt Lake City, UT.
- 2 graduate students attended as Thayer representatives to support student recruitment.

Society of Women Engineers (SWE)

- 60 active members (increase from 30 in 22-23)
- 11 attended national conference in LA
- 2 Grad students attended as Thayer representatives for recruitment
- Weekly "Speaker Series" events, connecting Dartmouth professors, researchers, and leaders with undergraduate and graduate level students alike. Highlights included talks with Dean Alexis Abramson, in which she discussed her educational and professional paths that led her to her leadership position at Thayer.

SWE leaders and members also had the opportunity to meet Rose Mutiso '08, winner of the McGuire Family Prize for Societal Impact. Over lunch, we learned about her work to bring sustainable, affordable energy systems to sub-Saharan Africa while supporting other women scientists, currently leading research for the Energy for Growth Hub. We connected over our shared experiences, and how to make the most of the opportunities Dartmouth's engineering community continues to offer.

Further, SWE leaders arranged for an exciting trip to Hypertherm in Lebanon, NH. The goal of the trip was to introduce young engineering students in SWE to industry professionals, learn how employees employ classroom learning in the working world, and discuss opportunities for young engineers, such as co-ops and internships. Attendees went on a facility tour, watched a live fabrication of Hypertherm's consumables, and joined a valuable Q&A session with a panel of their employees from various disciplines and roles in the company.

Community Outreach

Rural STEM Educator Partnership

Dartmouth has partnered with middle schools in the region and with the Montshire Museum of Science in Norwich, VT. Professor of Engineering Vicki May is one of the Co-Principal Investigators. During the 2023-2024 academic year, eight graduate students in STEM departments across Dartmouth, including two students from Thayer, helped to implement STEM curricula in 12 low-income middle school classrooms in VT and NH. Graduate students helped the teachers tailor curricula that had been developed in previous years to their classrooms. Teachers could choose from a unit on Lyme disease/ticks, one on ecology and plant growth, and a CSI-related unit. All units were 4-weeks long and included videos, lesson plans, resources, and supplies.



GirlsWhoML

GirlsWhoML aims to encourage those who identify as female and non-binary into the fields of AI and ML through networking opportunities and volunteer-run workshops that are free and hands-on.





Humans of Thayer

Humans of Thayer, our photo-story project on Instagram, continues to showcase the stories of the individuals who make up the Dartmouth Engineering community. Each story has heped promote human connection, acceptance, and a sense of belonging.



@humans.of.thayer

EDGE Consortium

The EDGE Consortium is an initiative committed to creating inclusive pathways into STEM careers and training, ensuring no one is left behind. Launched this year, the EDGE Consortium engaged 250 students across 7 universities in the Edge Scholars Program, focusing on professional development, coaching and mentorship, internships, and job placement.





Introduction to Design Thinking

The "Introduction to Design Thinking" course is led by Professor Eugene Korsunskiy, who is known for his projects "Creative Confidence" and "Human Centered Design for Social Impact", offers a hands-on exploration of the design thinking methodology. High school students will develop skills in primary research, critical thinking, rapid prototyping, and effective communication. The course includes interactive activities like online idea boards, interviews, sketching, building prototypes, and presentations.

Open-source quantum education software

Professor Mattias Fitzpatrick and their team are developing an open-source quantum education platform called QuBlitz. This platform introduces students to the low-level operation of quantum computers by simulating the dynamics of quantum bits (qubits) subjected to different controls. The team plans to continue developing QuBlitz to include packaged virtual labs that anyone with access to the Internet can utilize.

Partnership with NH Laconia Homeschool Cooperative

From 2022 to 2024, Professor Will Scheideler collaborated with Mr. David Rogers, a teacher at the NH Laconia Homeschool Cooperative. Professor Scheideler served as NH's university liaison, primarily providing feedback and advice to the teachers on questions requiring engineering expertise for student design projects. In some cases, Professor Scheideler also worked with the teachers to design specific exercises and curricula. For example, Mr. Rogers implemented a flexible electronics exercise related to the research conducted by Scheideler's group at Dartmouth. The students built paper airplanes with electronic components such as LEDs.

Science Day at Dartmouth

Hixon Lab members (Amritha Anup, Adelaide Cagle, Calista Adler, Aksheta Kanuganti, and Lynne Li) participated in the 9th Annual Science Day at the Life Sciences Center and hosted a hands-on biomaterials activity for local kids and families. The activity consisted of creating hydrogel "string" by crosslinking colored alginate and braiding them into keychains and bracelets.

Open House

On April 2, 2024 the Thayer School of Engineering welcomed the Dartmouth and surrounding communities into its labs and workshops to showcase engineering education and innovation in the first Open House event since 2019. An estimated 400 people of all ages enjoyed tours and demos of all the engineering school has to offer, including its research labs, student projects, race cars, robots, and STEM demonstrations. All three buildings of the Thayer School were used and the format was adapted to be mostly on the ground floors, with the aim of making the Open House accessible to as many as possible. In the Class of 1982 Engineering and Computer Science Center, the Magnuson Center for Entrepreneurship and DALI Lab hosted tours and the Cable Makerspace provided attendees with opportunities to make a souvenir they could take home. Feedback on the event included the words "welcoming", "fabulous," "fun," and "eye-opening".

Research Experience for Undergraduates

This summer's Research Experience for Undergraduates (REU) Program in Materials Science with Professor Ian Baker welcome nine non-Dartmouth undergraduates to campus for eight weeks. These students work closely with a faculty member and their lab at Thayer or CRREL. The program aims to provide opportunities to students who are historically underserved in science and engineering, as well as those from non-research-oriented institutions. Alongside research experience, participants receive faculty mentorship, professional development opportunities, field trips to local research facilities, and enjoy social gatherings.





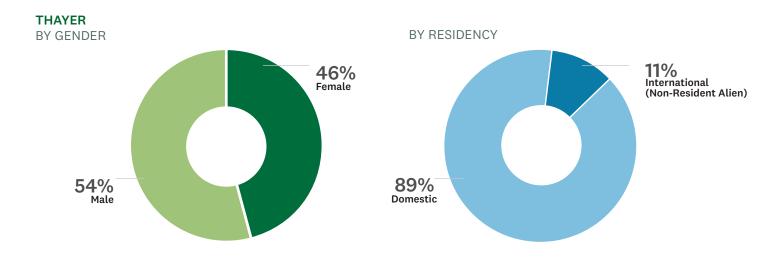


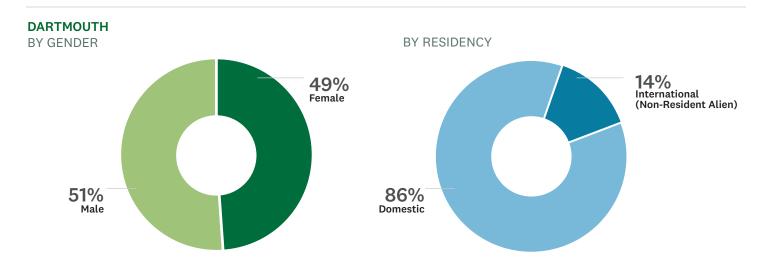
Appendix

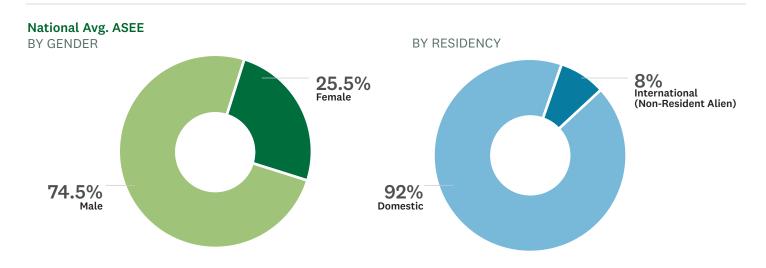
Thayer School of Engineering demographics, as compared to Dartmouth and to data provided by the American Society for Engineering Education:

- Academic Year 2023-2024 for Students Enrollments
- Fall 2023 for Faculty and Staff Demographics
- Faculty and Staff Pulse Check

ENROLLMENTS (Fall 2023) Undergraduate (AB)

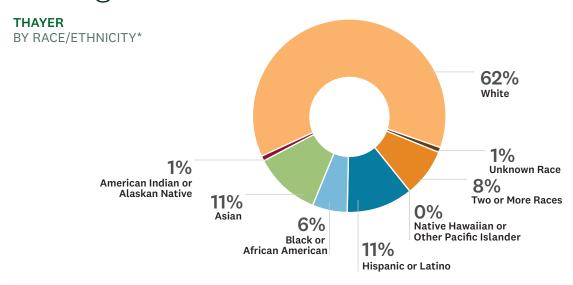


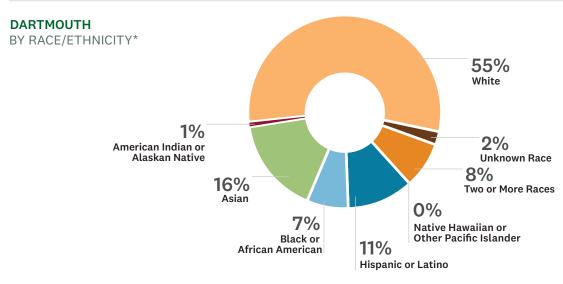


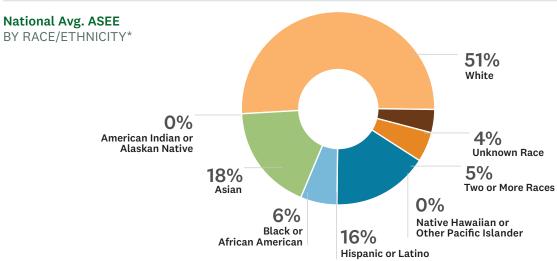


ENROLLMENTS (Fall 2023)

Undergraduate (AB)

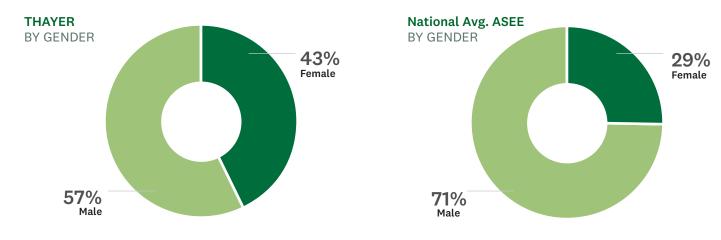


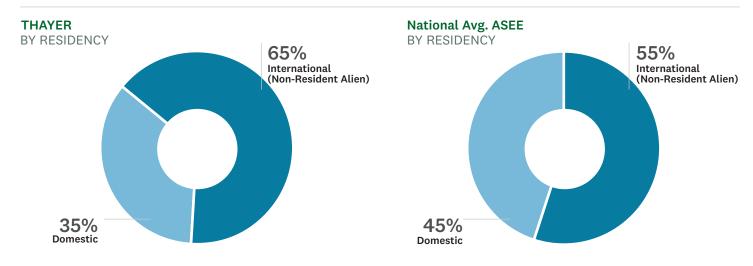


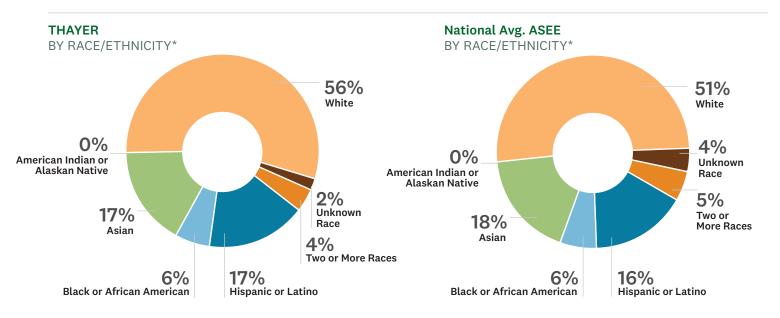


ENROLLMENTS (Fall 2023)

Masters

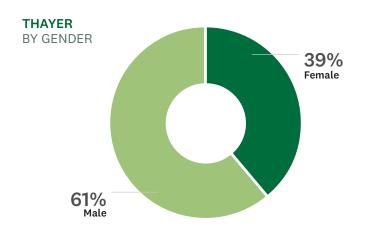


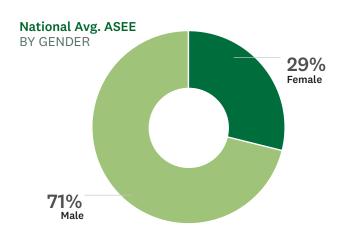


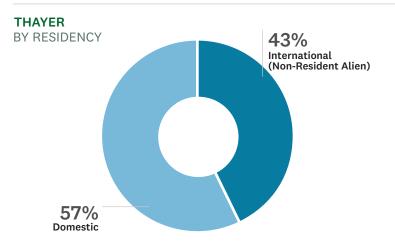


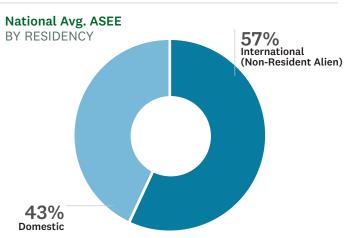
ENROLLMENTS (Fall 2023)

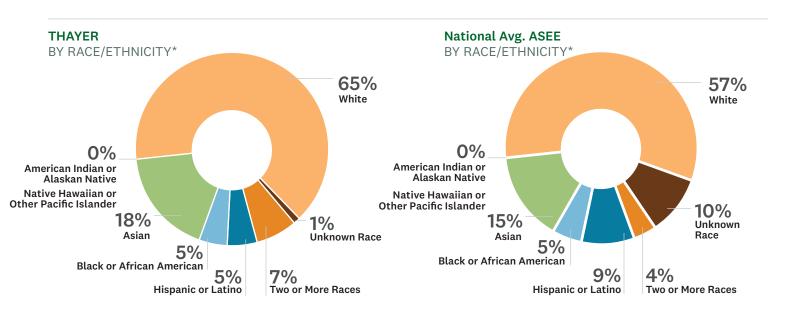
Doctoral



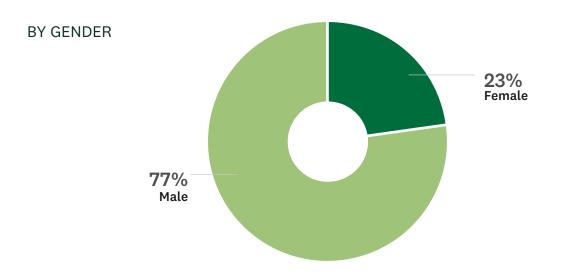


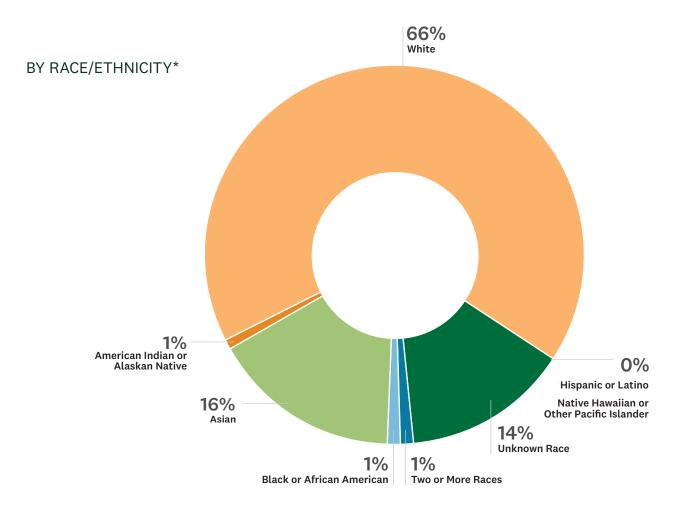






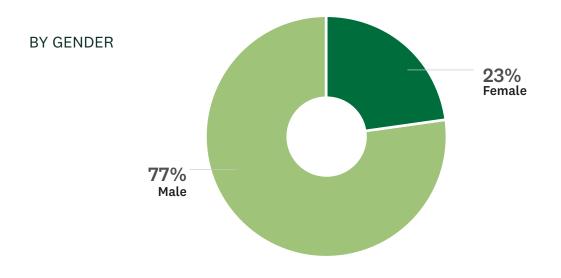
FACULTY (Fall 2023) Core Faculty

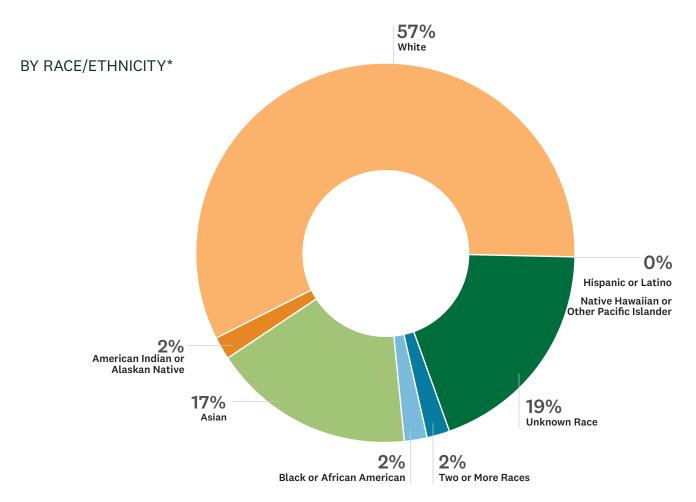




FACULTY (Fall 2023)

Tenured/Tenure Track Faculty





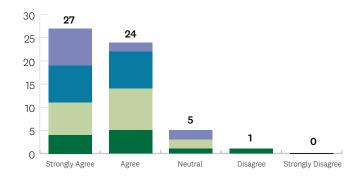
PULSE CHECK

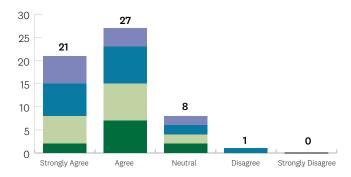
The working group developed and has been administering a pulse check survey at regular intervals for faculty and staff to help guage, track, and guide efforts to improve the climate and culture at Thayer. Administered every three months (per academic term) by the Dean's Office, the surveys have provided opportunities for faculty and staff to report their sense of belonging at the school and their current levels of comfort with various aspects of their learning or working environments. Below are snapshots of the sentiment among our faculty and staff for "I am able to be my true self" and "Overall, I am comfortable with the climate/culture."

Faculty:

I am able to be my true self

Overall, I am comfortable with the climate/culture.





Staff:

I am able to be my true self

Overall, I am comfortable with the climate/culture.

