

DIVERSITY AND INCLUSION AT THAYER SCHOOL 2020-2021

Table of Contents

INTRODUCTION	3
EXECUTIVE SUMMARY	4
INFRASTRUCTURE	5
RECRUITMENT AND ACCESS	6
COMMUNITY ENGAGEMENT	9
RETENTION AND SUCCESS	12
ASSESSMENT	14
NEXT STEPS	15
APPENDIX	17

INTRODUCTION

Diversity, equity and inclusion (DEI) are central to Thayer School of Engineering at Dartmouth's capacity to advance its dual mission of education and research. Broadly, our goals are to build a teaching and learning community that reflects the diversity of the global workforce, and to create a culture in which difference is valued, where each individual's identity and contributions are treated with respect, and where differences lead to a strengthened identity and learning experience for all. Our aim is to make Thayer more diverse, equitable, welcoming, and inclusive such that all members of the community feel a sense of belonging and can realize their full potential.

Diversity is reflected in the number of people from varying backgrounds, experiences, identities and perspectives, and includes but is not limited to race, ethnicity, gender identity and expression, sexual orientation, socio-economic background, veteran status, ability, age, nationality, and religious views.

EXECUTIVE SUMMARY

The Diversity, Equity and Inclusion (DEI) Committee, formerly known as the Inclusive Excellence Committee, was established in 2018 at Thayer with a mission of creating a supportive community in which people of all backgrounds can thrive, are valued for their uniqueness, and recognized for their diverse identities and talents. In 2020-2021, we have felt the urgent need to engage with a renewed focus on community and our commitment to one another. The ongoing COVID-19 pandemic, amplified acts of racial violence, lives disrupted and lost by war and environmental disasters, the reality of global uncertainty—we live in a time that calls on us to rethink and rework our original goals, summarized below:

- I. Bolster the ways we hire, develop, promote and engage diverse faculty and staff.
- II. Transform and elevate how we attract, support, and empower students of diverse experiences within Thayer's various academic programs.
- III. Support and augment work that makes Thayer more diverse, equitable and inclusive so that people of a wide range of backgrounds can thrive, innovate, and drive positive change through engineering.
- IV. Ensure that we lead with and hold ourselves accountable to our mission and values.

Amongst our accomplishments this year was the piloting of a new model for our faculty recruitment process that is more sharply focused on inclusive hiring. Following an "open search-open rank" framework, we were able to grow our candidate pool with people who more closely reflect the diverse communities that surround us, resulting in one of the most successful hiring seasons in Thayer's history with regards to advancing diversity and inclusion. A significant portion of our efforts were also focused on financially supporting students during COVID-19, with the goal of ensuring equitable opportunities and experiences throughout their time at Thayer.

Thayer participated in Dartmouth's Climate Survey in Fall 2020. Initial analysis suggests a strong need for community-building activities. Since then, we have hosted various narrative speaker series, storytelling spaces, book discussions, and more, to elevate diverse voices and build social connection across Thayer. Inclusion education and training programs were also woven into faculty and staff meetings, augmented by a community-wide DEI learning series that built greater fluency around topics specific to inclusion, equity, and diversity.

The DEI Committee created six working groups focused on six approaches specific to fostering inclusion, equity, and diversity within Thayer and our community: graduate admissions, the accessibility of the BE program, student mentorship, events and programs, our digital interface, and partnerships that extend our reach to underserved communities. These working groups will continue to expand, develop, and lead efforts that ensure faculty, staff, and students all have the chance to thrive throughout their journey at Thayer and beyond.

In this report, we review how we leaned on our core values to help us make progress in 2020–21 along five key areas of impact:

- Infrastructure
- · Recruitment and access
- Community engagement
- Retention and success
- · Climate and ongoing assessment

INFRASTRUCTURE

New organizational structures were created in order to operationalize and sustain several ongoing and upcoming DEI initiatives. These include:

- Effective September 1, 2020, Professor Petra Bonfert-Taylor assumed the newly-created Associate Dean for Diversity and Inclusion role to oversee and advance the School's existing and envisioned diversity and inclusion efforts.
- Petra Bonfert-Taylor and Director of Career Services Amy Keeler, who completed the Campus Culture and Climate Initiative (C3I) Ambassador training program in 2019, continued to lead training modules at all faculty and staff meetings, details below.
- The Inclusive Excellence Committee was reformed to the Diversity, Equity and Inclusion (DEI) Committee and included 6 faculty members, 5 staff members and three graduate student representatives.

- The DEI Committee established six working groups in Fall 2020 focused on financial aid for prospective BE students, community events, graduate admissions process, mentorship and support for Black, Indigenous and People of Color (BIPOC) students, partnership opportunities with minority serving institutions, and website redesign for transparency and accessibility. Members of the DEI Committee were joined by other Thayer students, faculty and staff in the working groups.
- Uyen Dang was welcomed as the inaugural Diversity Fellow supporting DEI working groups in their community building and engagement efforts, which includes the creation of a Thayer DEI dashboard, bridging communication gaps between students and faculty, and the development of "Humans of Thayer" alongside other storytelling initiatives.
- Staff resources were identified to provide part-time administrative support to the student clubs serving women, international and BIPOC students. Program Coordinator Jessica Kinzie has been assisting with logistics for conferences and events and requests for funding support, in addition to K-12 outreach.
- Annual funding for student groups was formalized so that they may sponsor activities and participate in professional development opportunities. These funds will support student travel to conferences (SWE, SHPE, NSBE, AISES, Grace Cooper) and club discretionary expenses.

RECRUITMENT AND ACCESS

Thayer's faculty, student and staff recruitment standards and processes are being modified to help us build a school that celebrates and embraces the different experiences and perspectives of our community. We will follow the impact of these changes, and adjust our practices accordingly to ensure that diversity is reflected at every stage of the hiring process.

Faculty Recruitment

A faculty search was conducted this year following an "open rank, open area" format proposed during the 2019 faculty retreat. Our recruiting efforts are detailed below:

• Six faculty members volunteered to serve on the committee, each representing one area. Senior Associate

Dean for Faculty Development Laura Ray also served on the committee. Associate Dean for DEI Petra Bonfert-Taylor served as the bias officer. Every member participated in IDE bias training to help create an equitable hiring experience for all.

- The search attracted over 1,000 applicants, and three subcommittees of 2-3 faculty members each reviewed applications in two areas of the six areas represented in the search.
- Candidates were placed on a long list and invited to give a "minitalk" of 15-20 minutes introducing themselves and providing an overview of their research and teaching interests.
- Each subcommittee reviewed minitalks in their respective areas. Faculty outside of the committee, whose expertise aligned with candidates, were also invited to review minitalks.
- Of the 22 candidates interviewed, offers were made to ten candidates, including five Underrepresented Minorities (URM) and four women.
- The pool of candidates and hires is arguably the most diverse in Thayer's history. Efforts to build the pool included outreach to postdoctoral fellows, approximately 75 total, from universities who maintain a public database of candidates and publish profiles online.
- Direct invitations resulted in applications from at least seven of the fellows who were contacted, four of which made the short or long lists.
- Our total number of confirmed tenure track hires from the 2020-21 search is eight new faculty (four women and four men). Of the eight new faculty, three are URMs. There are possibly two additional candidates (one woman, one man) with offers pending to join the faculty in July 2022.

The search procedures this year provide evidence that the open-rank, open area search contributes to increased diversity in faculty candidate pools.

According to the <u>latest ASEE report</u>, 19.9% of tenure-track faculty in engineering are women. With hires from 2020-22, the percentage of Thayer tenure-track faculty who are women will be more than 23%.

Student Recruitment and Access

- In recent years, graduate student or staff representatives have attended national engineering graduate conferences, including National Society of Black Engineers (NSBE), Society of Hispanic Professional Engineers (SHPE), and Society of Women Engineers (SWE). In 2020-21, we staffed virtual recruiting booths at SWE, SHPE and NSBE conferences in addition to sponsoring 53 undergraduate and 5 graduate students to attend these sessions virtually. We focused our efforts towards creating an email campaign to engage prospective students who visited the Dartmouth booth. As part of our commitment to accessibility, we provided admissions application fee waivers in fall 2020 to prospective students at these conferences.
- Additional scholarship funds and meal plans for BE students with the highest need were added in the fall of 2019 with modest expansion through 2021. We are continuing to work with Thayer's Office of Advancement to determine the feasibility of significantly expanding our financial aid offerings for the BE program. We also reviewed Dartmouth and Geisel processes for determining financial aid and plan to incorporate those processes to ensure equity across Dartmouth programs.
- We continued to provide international student BE loans of up to \$2,500 per term to students with high need to match federal loans available for domestic students.
- U.S. CARES Act funds were distributed among BE students with high financial need during the summer of 2020.
- Beginning in 2020, we offered an extra term of Thayer Fellowship funding (including tuition, stipend and fees) for admitted PhD students from underrepresented groups.
- Thayer's recent partnership with Guarini School allowed us to further leverage the <u>ASURE program</u>. Thayer committed funding to host six ASURE students and several of Thayer's faculty members reviewed and accepted ASURE students for Summer 2021. With the challenges imposed by COVID-19, and competition with universities offering in-person programs, one student accepted the offer. We will continue with the program in 2022.
- Throughout 2020-21, we offered several virtual recruitment events, which included our first virtual information session day attended by 70+ prospective graduate students, a PhD Innovation session, and a M.Eng virtual information session in an effort to expand our reach to prospective students from a diverse set of backgrounds.

• As shown in the appendix, the Fall 2020 Thayer enrollment includes more women and international students than the average ASEE student population but there is less race/ethnicity diversity than the average ASEE student population.

Staff Recruitment

Thayer staff include senior leaders (5%), managers (9%), professional staff (59%), technicians (10%), craft workers (2%) and administrative support (15%). As of Fall 2021, Thayer's staff is 46% male and 54% female and the Race/ Ethnicity distribution is 8% Asian, 1% Black or African American, 1% Hispanic or Latino, 1% with two or more races, 31% unknown race/ethnicity, and 59% White.

We continue to look for opportunities to diversify the Thayer staff, including expanding advertising channels in order to build more diverse candidate pools.

- Thayer leadership meets annually with the Dartmouth Office of Institutional Diversity and Equity to review the Dartmouth Affirmative Action Plan, review Thayer statistics and discuss opportunities for improvement.
- Recent staff turnover and the expansion of staff positions provide an opportunity to further diversify the Thayer staff.

COMMUNITY ENGAGEMENT

Education, training and development for all members of the Thayer community were emphasized in 2020-21. While these efforts are only part of the many actions we must take, they were important steps towards building strong and meaningful connections within Thayer. From substantially expanding the circle of people engaged in these conversations, improving our ability to work with people of a wide array of backgrounds, experiences, and identities, and deepening our understanding and empathy, we are making continuous progress towards building a community that embraces and is informed by difference.

- Training modules on diversity, equity and inclusion were developed and incorporated into faculty and staff meetings on an ongoing basis. These programs were scheduled early in the agenda of the respective meetings in order to engage as many faculty and staff as possible, and frequently included break-out room discussions followed by a full group discussion in which findings were reported.
- A bi-monthly DEI Learning Series was launched in January; the first three topics covered under this series were sense of belonging, microaggressions, and the power of privilege. For each topic, resources were sent out weekly to faculty and staff over the period of 6-8 weeks, with a culminating community conversation wrapping up each module.
- Students and staff were invited to participate in two separate "Walk in My Shoes" experiences, presented by "Playground of Empathy", and 25 staff members and 12 students participated.
- 20 faculty members participated in a 10-hour "Virtual Courageous Leadership Summit", brought to us by "White Men as Full Diversity Partners".
- A DEI Community Conversation and Panel was held during which our ongoing Diversity, Equity and Inclusion work was discussed with the Thayer community.
- A "Building Community at Thayer Through Social Media" survey was sent out to the Thayer community for feedback on the new "Humans of Thayer" initiative with 72 respondents.
- Diversity Fellow Uyen Dang organized and launched "Humans of Thayer" in summer 2021, a photo-story project to uplift voices and experiences of marginalized communities at Thayer.
- A panel "Think Thayer! Why Diversity in Gender, Race, and Fresh Perspectives Are Critical to Engineering" was held, featuring four BIPOC women in engineering and technology (all of them Thayer aluma). The virtual event was attended by 95 participants.
- The film "Picture a Scientist" was screened with a follow-up panel discussion, attended by 50 people from Thayer and the wider Dartmouth community.
- Dean Abramson instituted weekly open office hours for graduate students, each staffed in addition with a senior leadership team member. She also held multiple student lunches.
- The Thayer School Dean's Council was engaged in a DEI discussion that focussed on participants' experiences of inclusion/exclusion during their time at Dartmouth.

- Professor Eugene Korsunsky offered several virtual summer sessions for high school students on "Introduction to Design Thinking".
- Thayer supported Dartmouth's "Black Hair Care" program, organized through the Dartmouth Office of Pluralism and Leadership (OPAL).
- A book discussion for *So You Want to Talk About Race?* by Ijeoma Oluo was organized by the DEI events workgroup and attended by 10 people from the Thayer community.
- Efforts to identify and engage an increasingly diverse group of external partners resulted in the following appointees to Thayer's Board of Advisors: Jian Lu, Vijay Kumar, Tracey Pettengill Turner, and Katherine Osborne Valdez.
- New board member onboarding included a discussion with the Associate Dean for Diversity and Inclusion on "The Effects of Implicit Bias".
- A database of STEM mentorship programs and resources at Dartmouth was created and incorporated into Thayer's new website.
- Through the Dartmouth Rural STEM Educator Partnership, a group of faculty are working with local middle school teachers and the Montshire Museum of Science to develop a STEM curriculum for low-income, rural middle schools. Professor Vicki May is a Co-PI on this five-year NIH grant https://sepa.host.dartmouth.edu/. This past year 5 middle school teachers, 3 educators from the Montshire Museum, and 10 graduate students from Dartmouth (including 3 Thayer graduate students) developed, along with Professors May, Tine, and Sloboda, a month-long curriculum focused on ticks and Lyme disease.
- Thayer's Communications team continues to partner with the Associate Dean for Diversity and Inclusion and DEI committee to implement an inclusive communications strategy for Thayer's website, social media, and publications. The feature story in the Spring 2021 issue of Dartmouth Engineer magazine focused on why diversity is necessary and a critical prerequisite to innovation. In addition, the team is updating Thayer's Editorial Style and Branding Guide to reflect inclusive language around race, ethnicity, sexuality, and gender identity as a guide and resource for both communications staff and Dartmouth faculty and staff.

RETENTION AND SUCCESS

Faculty

COVID-19 continued to challenge us as we reworked the new faculty onboarding program to help ensure faculty success.

- The July 2021 new faculty onboarding was attended by six new tenure track, one instructional, and one research faculty member. Feedback from the program resulted in the addition of summer workshops.
- An undergraduate advising workshop, held in August 2021, provided a detailed introduction to advising first and second-year students. New faculty are "shadowing" experienced faculty advisors during advising activities in September.
- Two new Summer 2021 workshops were added based on feedback from the prior year's new faculty: an
 introduction to computing workshop covering everything from Canvas to research computing and a summer
 teaching conversation to introduce new faculty to teaching at Thayer.
- Our 2020 fall term core offerings—introduction to sponsored research and graduate student mentoring—were offered online. A remote format was also provided for DCAL offerings and Dartmouth's programs, which include Pathways through the Academy.

Students

- First-Year Student Enrichment Program (FYSEP): Professors Vicki May and Petra Bonfert-Taylor created an
 engineering component as part of a four-week curriculum for 95 first-generation, low income Dartmouth
 students. This expanded program, to be offered annually, includes mentoring for FYSEP students throughout
 the year in addition to the four-week 'class' offered in the summer.
- <u>Dartmouth Emerging Engineers</u> (DEE): Prospective engineering students, while working through the prerequisite classes, receive tutoring and mentoring from upperclass students, and advising by faculty through DEE. DEE expanded offerings to 6 days a week and hired additional TA's each term throughout the year to support our undergraduate population. We also added a few computer science classes to our roster. DEE successfully ran remote offerings throughout COVID for our students.

- Other academic and community-building programs, including the Women in Science Project (WISP) and First-Year Research in Engineering Experience (FYREE), received funding and were adapted to the virtual environment in 2020-21.
- Through the Luce Scholars program, sophomore and junior women majoring in engineering sciences can apply for funding to carry out research assistantships under the direction of a Thayer faculty member. During the 2020-21 academic year, despite the challenges with COVID-19 constraints, four new and 10 continuing scholars participated in the program this year. Additional scholars will be recruited to start in the fall of 2021, once all campus operations are back to in-person.
- Career Services partnered with students, student groups and employers to offer programs supporting students' professional development. Programs during the 2020-21 school year included "Women in STEM & Graduate School;" "OVIS Q&A for Thayer Students;" "Perspectives from Thayer International Alumni;" "How to Prepare for a Conference" in collaboration with SHPE, as well as working closely with the new Diversity Fellow to consider new ways to engage with diverse students and groups. Last year, we partnered with Professor Scheideler, NSBE and SHPE to host two graduate school exploration workshops. We plan to cultivate and expand our relationships within and outside of Thayer to increase access to opportunities for students in the coming year.
- The Thayer International Student Organization increased its presence in 2021 holding social events, informational sessions with OVIS and new student orientation sessions.
- Thayer Academic and Student Affairs staff are continuing to adapt orientation programs to become more welcoming and inclusive, and to better meet the unique needs of international students and diverse students new to the Upper Valley.
- More staff support for the diverse student groups (SHPE, NSBE, SWE, AISES) began in 2020-2021 to assist students with connecting with campus resources and providing logistical support for national conferences.
- The student group GRiND (Graduates in Need of Decompression) sponsored multiple virtual events to support student mental health in 2020-21.
- Plans are underway to implement Thayer/Guarini <u>JED Foundation</u> partnership surveys and goal setting to assess and improve emotional health.

Staff

The COVID-19 situation also impacted the Thayer staff retention activities.

- Thayer staff meetings were held quarterly during 2020-21 with over 50 staff participating virtually in each session. As mentioned above, DEI activities were embedded in every staff meeting.
- Thayer administration surveyed staff in the summer of 2020 and spring of 2021 to better understand how they were coping during COVID-19. The feedback gained through survey responses was shared with Senior Leadership and managers and used to develop the Fall 2021 "return to campus" plans.
- Through the survey responses and other mechanisms, many staff expressed mental health challenges due to COVID-19 and restrictions imposed by it. Employee wellness activities were encouraged throughout the year; however, we recognize that there is more to be done in this area.

ASSESSMENT

- Baseline metrics and goals to help us track our progress in creating a diverse and inclusive community for all were established by Thayer's Strategic Planning Working Group, and affirmed by the School's Inclusive Excellence Working Group in 2019–20. We will track and compare the composition of Thayer's faculty, staff, and student body to external data in order to improve our performance against, and ultimately exceed, national and regional averages (see appendix).
- The American Society for Engineering Education (ASEE) honored Thayer with a Bronze Award in the organization's Diversity Recognition Program. In addition, Dartmouth was recognized as "exemplar," indicating exceptionalism in inclusive excellence and that "the institution can serve as a role model to others," according to ASEE. Dartmouth's Bronze Award status is valid for three years from 2020–2022.
- Five separate climate surveys (for faculty, staff, postdoctoral fellows, MS/PhD students, and BE/MEM students) were administered in the Thayer School of Engineering in the fall of 2020 as part of the Dartmouth Climate Initiative. The Dartmouth Climate Initiative is intended to provide meaningful climate data, promote

- awareness around climate issues, initiate productive discussions, foster local ownership of climate, and inform departmental change in policies, norms, and interactions.
- Overall, 277 individuals responded to the survey: 49 faculty members (82%), 80 staff members (80%), 16 postdocs (57%), 72 graduate students (50%), 30 BE students (42%), and 30 MEM students (45%).
- Climate survey responses have been distributed through four separate profiles to facilitate more focused discussions. Climate Profile 1 focused on Broad Experiences in the Department. Climate Profile 2 focused on more Specific Experiences in the Department, including transparency, influence, and voice. Climate Profile 3 focused on the Overall Quality, Conditions, and Concerns related to climate in the department. Climate Profile 4 focused on Bias, Exclusion, and Differences in Experiences. Thayer Climate Profiles are available to Thayer faculty, staff, postdocs, and graduate students.
- Thayer was invited to participate in a series of 6 workshops designed to help interpret the results and develop plans to improve the climate. These workshops were led by Diana Kardia, PhD, and 16 people from Thayer participated in the workshops: 6 faculty members, 7 staff members, 1 postdoctoral fellow, and 2 PhD students.

NEXT STEPS

The Thayer Community strongly believes that diversity in faculty, staff and students drives innovation and creativity. We challenge our members to engage with differences as strengths in an environment that ensures a learning and work space where everyone thrives and feels sense of belonging.

A central goal for the upcoming year is to understand and make plans on how to address the issues uncovered by the climate survey. As part of this goal we are going to engage in strategic planning to define and deploy a mission that signifies our belief in the power and necessity of diversity, equity and inclusion as a competitive advantage. We will be launching a multi-year DEI initiative to advance our collective goals. We will engage with all populations that make up our Thayer community, listen to all voices, and learn from each other. We will develop metrics that allow us to measure progress towards our goals.

The DEI Committee for 2021-22 will be expanded to include 8 faculty members, 6 staff and 2-3 students. One of the main activities of the 2021-22 DEI Committee will be to engage in strategic planning with a focus on the experiences of undergraduate students, graduate students and postdoctoral fellows, staff, and faculty.

In addition, several new working groups will be established, chosen from the following:

- A mental health working group
- A working group charged with organizing panels and inviting speakers
- A working group charged with designing a dashboard
- · A working group on inclusive teaching

Further plans for the upcoming year include:

- Grow Humans of Thayer
- Finalize a Diversity Statement
- Launch a DEI dashboard on the Thayer website
- Begin discussions on inclusive teaching with the faculty
- Continue the bi-monthly learning series
- Continue DEI activities during faculty and staff meetings
- Launch a DEI speaker series
- Train a Thayer Change Agent Team (via White Men as Full Diversity Partners)

The year 2020 marked a new chapter in Thayer's commitment to diversity, equity, and inclusion. While Thayer has made significant progress, this is just the beginning and our work ahead demands careful attention. As we further embed DEI into the fabric of Thayer, we are greatly encouraged by the participation of everyone on our team in building a Thayer community that represents the diverse and constantly changing world we live in—for the coming year and far beyond.

APPENDIX

Enrollments by gender, race and ethnicity, residency - Fall 2020

Undergraduate (AB)

Masters

Doctoral

Faculty by gender, race and ethnicity - Fall 2021

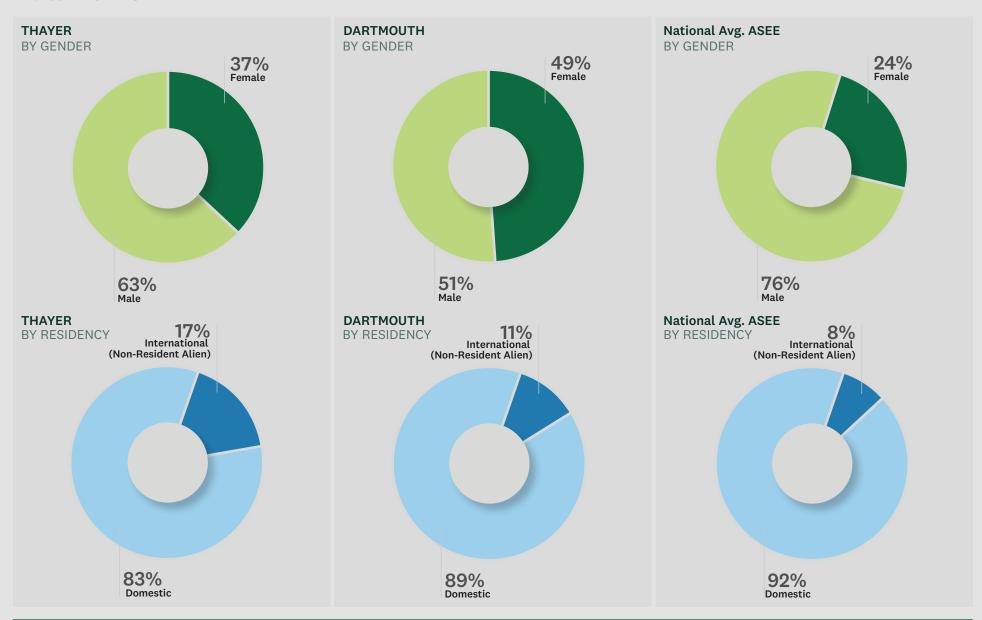
Core faculty

Tenured and Tenure-Track faculty

Thayer and Dartmouth data is compared to data from American Society for Engineering Education (ASEE)

Undergraduate (AB)

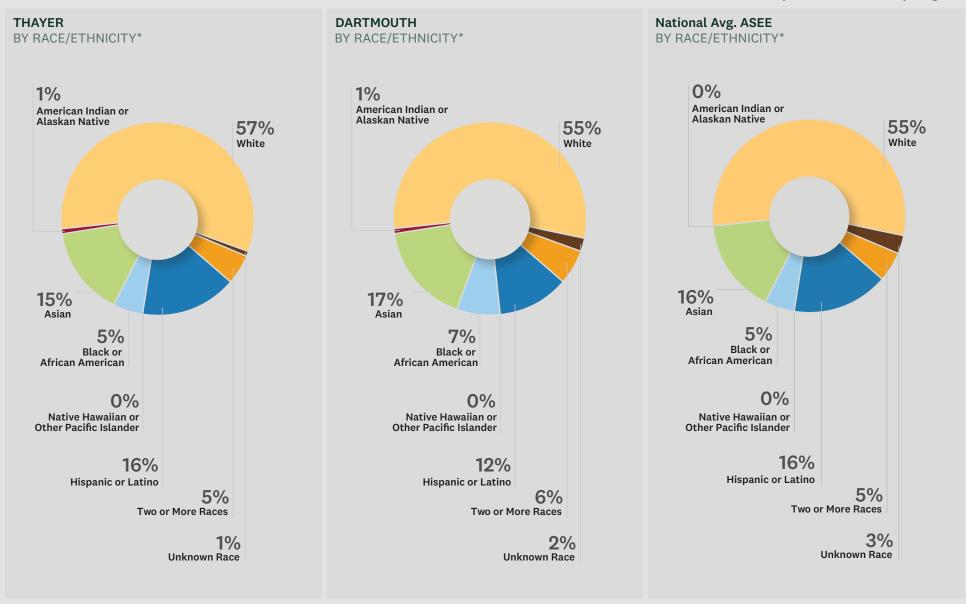
Fall 2020



Undergraduate (AB)

Fall 2020

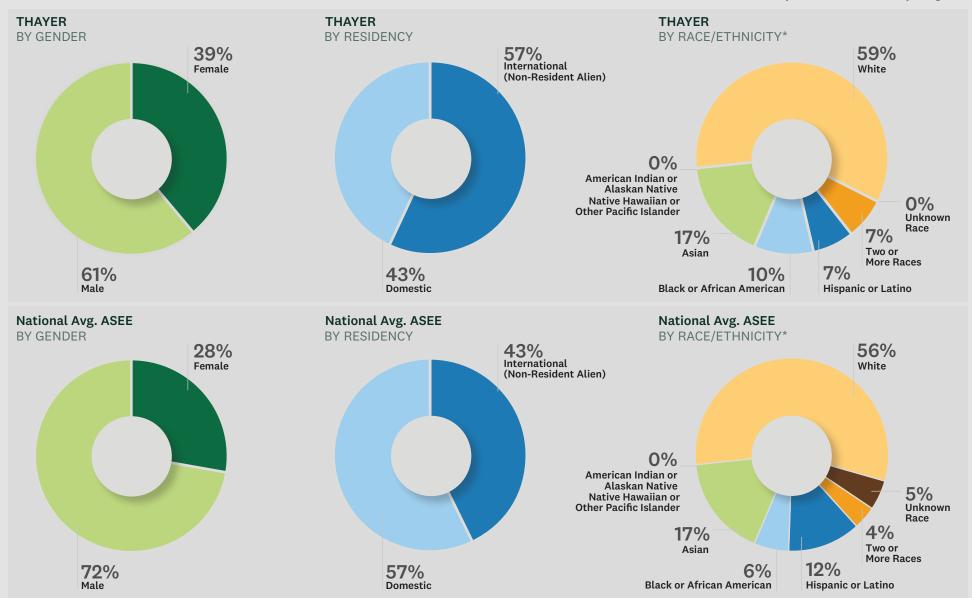
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Masters

Fall 2020

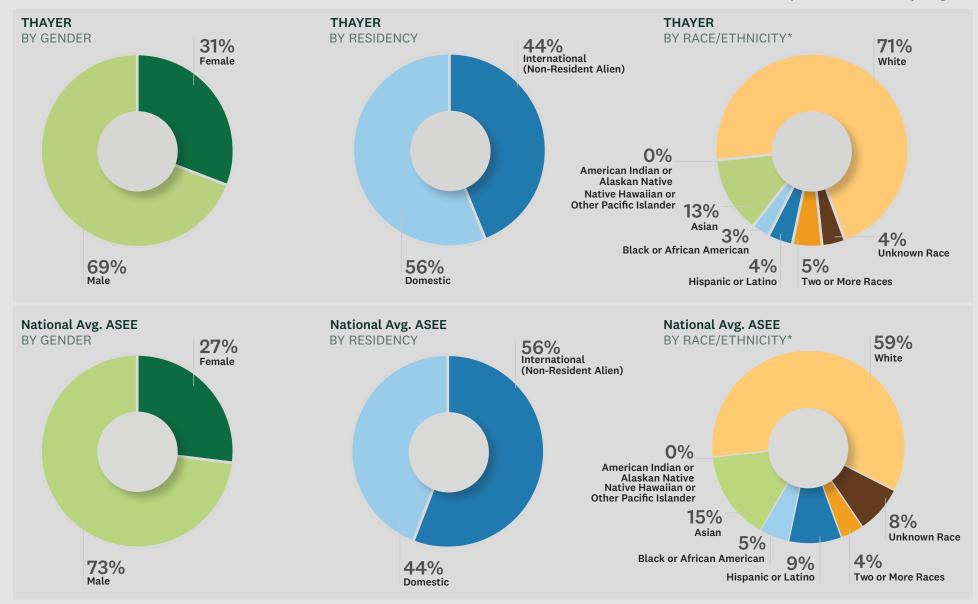
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Doctoral

Fall 2020

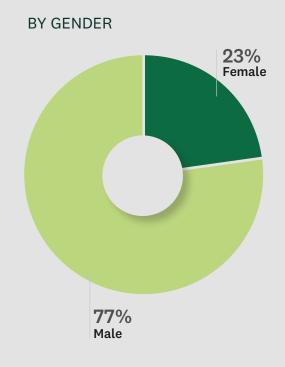
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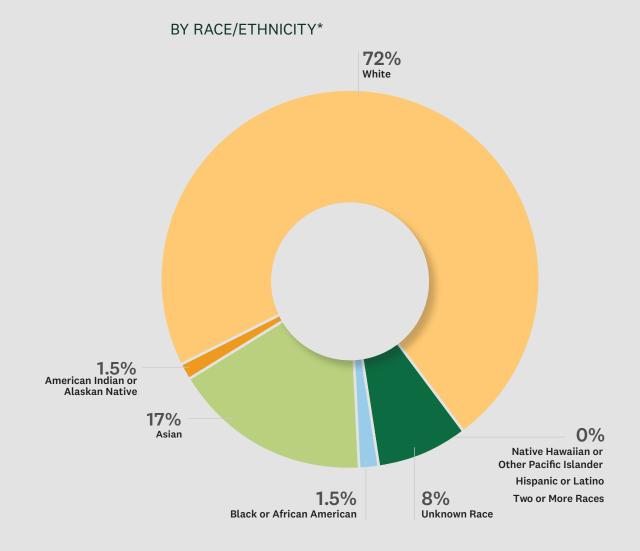


FACULTY

Core Faculty

Fall 2021



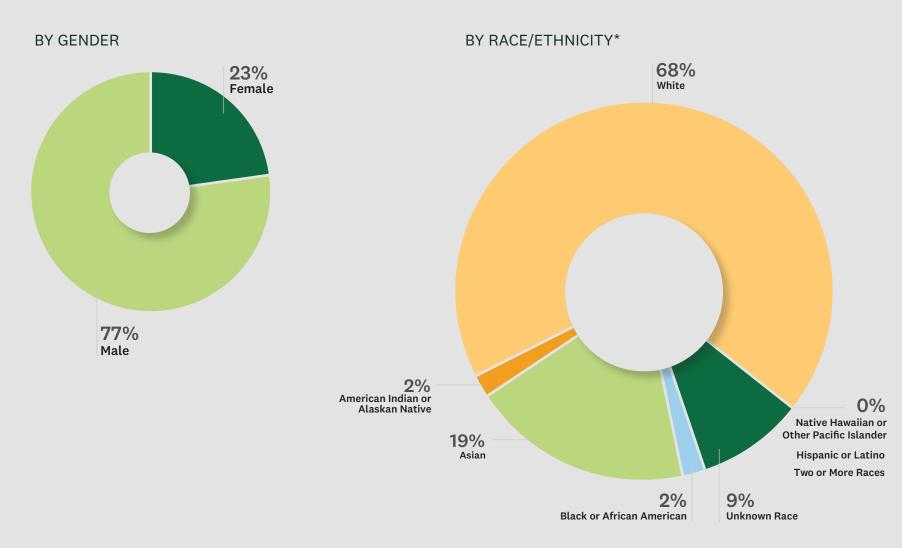


*Definitions align with U.S. Department of Education, ASEE and NSF.

FACULTY

Tenured/Tenure-Track Faculty

Fall 2021



*Definitions align with U.S. Department of Education, ASEE and NSF.

FACULTY

Fall 2021

PERCENT OF FEMALE TENURE/TENURE-TRACK FACULTY

