

Lafayette Engineering Diversity and Inclusion Initiative

Preamble

Engineering is empowering society in unprecedented ways. It is at the core of innovation, resulting in tremendous societal and economic benefits; it is an important discipline to address current and emerging challenges in the US and on a global scale; and it provides new, imaginative ways to enrich people's lives. A fundamental requirement for growth of this enabling power, however, is for the engineering community to attract, engage, and provide ongoing support for people from all segments of society. The evolving demographic landscape of the US, the need for constant economic competitiveness, and the upholding of our core values to ensure equal opportunity and access to all who seek it, all point to the importance of actively embracing diversity and inclusiveness in our endeavors.

The goal of this document is to outline ongoing efforts and suggest additional strategies aimed at ensuring a sustainable climate of inclusion. A critical element of this effort is a holistic approach to attract, engage, support, and promote diversity in such a way that an inclusive climate prevails. This includes offering role models and incorporating appropriate messages at every stage of an individual's educational and career path, so that inclusion moves beyond programming to become the very nature of the College.

The premise of this initiative is that no single approach or program will create the desired result of a more diverse engineering ecosystem, and moreover, although progress can be made in the short-term, the goal of fully engaging all population segments will take years to achieve. This lag-time necessitates urgency, with efforts to fully engage all peoples starting immediately and sustained indefinitely.

Commitment

Lafayette's engineering programs are dedicated to providing a welcoming and inclusive climate for all to learn, develop, and apply engineering methodologies. The engineering programs empower students to be positive change agents, enabling them to develop sustainable solutions to socio-technical problems.

To realize this vision the Engineering Division has committed to:

1. Inspire diverse students at the K-12 level about STEM
2. Recruit and retain diverse students in Lafayette's engineering programs
3. Connect Lafayette engineering graduates with opportunities for employment and graduate school opportunities
4. Recruit and retain a diverse faculty through supportive best practices

This diversity initiative draws on the collaboration of many sources and individuals throughout the Lafayette community in an effort to achieve the potential of the institution and engineering community at large. This document will serve as a foundation on which further initiatives may be developed, and will continually be improved and modified.

1. Inspire diverse students at the K-12 level about STEM. Lafayette Engineering is committed to at least one K-12 pipeline activity. This programming will be geared towards peaking young students' interest in STEM and inspiring them to pursue post-secondary education and consider a career in a STEM field. This element is not intended to recruit or attract students to Lafayette's programs, and activities designed to meet this goal must also align with Lafayette' Engineering's mission. Programs aimed at students in grades K-12 include:

- a. Lafayette's SWE chapter hosts Girl Scouts events with Lafayette women leading girl scouts in hands-on STEM projects to provide outreach and inspiration to younger female students. Most recently Lafayette's SWE chapter assisted three local Girl Scout troops in completing the mechanical crane badge.
 - b. Lafayette's Society of Environmental Engineers and Scientists hosts elementary and middle school students several times each year for enrichment activities. Lafayette students lead the younger students in interactive projects that are faculty supervised. Topics have included studying (safe) chemical reactions, renewable energy, food choice, and landfill waste reduction.
 - c. Lafayette Engineering partners with Bethlehem Area Vocational Technical School (BAVTS) in a year-long introduction to engineering course for high school students. Approximately 25 high school students participate in the program each year.
 - d. Lafayette's Landis Center for Community Engagement partners with the Easton Area School District and extension programs to provide STEAM learning in a variety of contexts with programs through Third Street Alliance, Phillipsburg High School, the Easton Library, and the YMCA. Examples of programs and initiatives include Girls Who Code at Paxinosa Elementary, STEM Initiative at Third Street Alliance, and DNA Day with March Elementary School. Connected Classrooms is an initiative within the center's Aspirations program that promotes college and career awareness, exploration, and readiness among students in the Easton Area School District. In 2020 the Landis Center earned the Community Engagement Classification from the Carnegie Foundation, higher education's most prestigious acknowledgement of an institution's commitment to community engagement.
2. Recruit and retain diverse students in Lafayette's engineering programs. Lafayette Engineering is committed to attracting, recruiting, and retaining a diverse student body. The division strives to ensure that educational experiences are inclusive and prevent marginalization of any people because of visible or invisible differences. Over any five-year period from the 1990s to 2011, 25% of engineering students were women compared to the national average of 18% (according to ASEE). From 2011 to 2016, the number of women in Lafayette Engineering's entering class increased over 64% while maintaining a strong persistence rate of 75%. Applicants from domestic students of color doubled, leading to an increase in enrollment to 25% while maintaining this group's persistence rate. The 2017 ASEE "Engineering By the Numbers" reported Lafayette among the top 20 schools in percentage of bachelor degrees awarded to women.

Lafayette Engineering will continue to make diversity and inclusion a priority in the areas of recruitment, mentoring, and retention in order to ensure long-term climate change, as reflected in our vision statement. The goal in this category is twofold: to diversify the applicant pool and to engage and support an increasingly diversified student body through multiple initiatives.

Lafayette Engineering Vision Statement:

Lafayette Engineering provides a welcoming and inclusive climate for all to learn, develop, and apply engineering methodologies. The division's programs empower students to be positive change agents, enabling them to develop sustainable solutions to socio-technical problems. The engineering curricula integrate a rigorous technical engineering education with immersion in the liberal arts to

cultivate students' critical thinking skills, creativity, curiosity, and entrepreneurial mindset. The institution's size, broad array of degree programs, and undergraduate-only student body create a distinctive connected community with vast opportunities for innovative interdisciplinary teaching, learning, and research.

Recruitment:

- a. The division works with the Admissions Office to prioritize access and inclusion for underrepresented populations through targeted recruitment outreach in urban and rural schools, establishment of partnerships with organizations that champion the needs of historically underrepresented students, and coordination of on-campus visits with high schools and community organizations to give students whose families do not have the means for traditional visits the exposure to the possibilities of college. These efforts encompass a broad definition of diversity – racial and ethnic, gender, religious, socioeconomic, geographic, etc., and do not necessarily focus on diversifying one academic department, but rather the entire campus community.
- b. Lafayette College has partnered with the Posse Foundation since 2002 to identify and support high school students with extraordinary academic and leadership potential who may be overlooked by traditional college selection processes. The College initially enrolled students from New York City, and became just the fifth institution to enroll possees from more than one city when it enrolled its first posse from Washington, D.C. in 2006.
- c. Lafayette is working with Sponsors for Educational Opportunity (SEO), a college access organization based in New York City and San Francisco. Since 1963, SEO has helped more than 11,000 young people from underserved and underrepresented communities gain access to higher education. SEO's mission is to provide an eight-year academic program that helps students from underserved public high schools get into and through college (with a 95% graduation rate).
- d. Lafayette Admissions works with Global Citizen Year (GCY), established in 2009, which organizes bridge (or gap) year programs through service learning opportunities in Senegal, Ecuador, Brazil and India. GCY is able to make the bridge year more accessible to a broader range of students. While a bridge year generally does not improve chances for admission to a selective university, program alumni are more often on track to graduate in four years. Partnerships with access organizations such as GCY facilitate diversity in recruitment.
- e. Several engineering-specific admissions programs match women students with prospective high-school girls, including an overnight program and an accepted-student event. These programs help to foster a supportive community of engineering women on campus and help prospective students form early connections.

Mentoring and retention

- a. Lafayette College's Summer Program to Advance Leadership (SPAL) provides academic support for incoming students from underrepresented groups in science and engineering including women, minorities, and students who are the first in their families to go to college.
- b. Lafayette introduced the bachelor of science in engineering degree program in 2019. Students choose a concentration from bioengineering, environmental engineering, energy, and robotics. The flexible framework draws on the division's proven structures, and connects to fields across the humanities, social sciences, and natural sciences. It increases communications and collaborations across disciplines, and enables more freedom to

students to personalize their degree, attracting a broader range of students. Notably, environmental engineering and bioengineering have the nation's highest percentages of women compared to any other engineering program with rates of 49.7% and 40.9%, respectively.

- c. Lafayette has received First-gen Forward Designation from Center for first-generation Student Success, an initiative of NASPA–Student Affairs Administrators in Higher Education and the Suder Foundation, that recognizes institutions that demonstrate a commitment to improving experiences and advancing outcomes of first-generation college students.
- d. Lafayette Engineering regularly evaluates introductory ES classes to support inclusive practices. ES101 was redesigned to demonstrate the relevance of engineering and its impact on society, which has been shown to be effective in improving the persistence of underrepresented students in STEM fields. ES102: Introduction to Spatial Visualization Skills is offered and has been shown to be effective in improving the persistence of underrepresented students in STEM fields.
- e. The Clare Boothe Luce Research Scholars program was introduced in 2016 to provide summer research opportunities for women engineering students. The program strives to equip women with the best possible preparation to pursue graduate education and careers in STEM research. More than 50 women have participated to date.
- f. The division actively supports the College's Society of Women Engineers (SWE) chapter, including the identification of external funds to support SWE's programming, networking for women students and alumni, and support for national conference attendance.
- g. The division provides support for Minority Scientists and Engineers (MSE), an on-campus support group for students in STEM that serves as an umbrella organization for the National Society of Black Engineers and the Society of Hispanic Professional Engineers.
- h. Chemical Engineering Associate Professor Lindsay Soh was named to the Kate and Walter Scott Endowed Faculty Chair, responsible for mentoring diverse students, including Minority Scientists and Engineers.
- i. The division supported the establishment of the National Society of Black Engineers chapter and actively supports programming, networking, and national conference attendance.
- j. The division supported the establishment of the Society of Hispanic Professional Engineers chapter, and actively supports programming, networking, and national conference attendance.
- k. The division has invested \$1M to ensure that the Acopian Engineering Center facility reflects a diverse and inclusive community. Renovations include more open, welcoming collaboration spaces, improved gender neutral restroom facilities, departmental wall hangings, and more.
- l. The division supports programming such as the November 2018 Hidden Figures Week, which featured a keynote address by Margot Lee Shetterly, author of Hidden Figures, and the inaugural April 2019 Women in STEM Week. These programs featured panel discussions, lectures, and lunch talks exploring issues related to underrepresented groups in science, technology, engineering, and math.
- m. The division offered Safe Zone training, a workshop designed to educate participants to be allies to members of the LGBTQ+ community, and will continue to strengthen support for these members of the community.

- n. The College launched PALM in 2019, Lafayette's Pride Association for Leadership & Mentoring, a LGBTQIA+ mentor program.
- o. The College's student orientation includes a program called Our Connected Community in which Commons groups meet to discuss the "Big 8 identities" engaging in activities to understand their own and group identities, the power and privilege associated with group memberships, and how students can enact social change. The selection of a recent year's first-year reading, Ta-Nehisi Coates' *Between the World and Me*, signaled for incoming students that talking about difficult issues is an expected part of the college experience.
- p. Lafayette Engineering will monitor diversity in enrollments, retention and graduation rates.
- q. Both Lafayette College and the Engineering Division maintain diversity websites.
- r. Partial summary of resources and groups on campus include:
 - i. Asian Cultural Association
 - ii. Association of Black Collegians
 - iii. Gender and Sexuality Programs
 - iv. Hispanic Society of Lafayette
 - v. Intercultural Development
 - vi. International Student Advising
 - vii. International Student Association
 - viii. Lafayette African and Caribbean Students Association
 - ix. Lafayette Hillel Society
 - x. Minority Scientists and Engineers
 - xi. Muslim Students Association
 - xii. National Society of Black Engineers
 - xiii. NIA Women of Purpose
 - xiv. Religious and Spiritual Life
 - xv. Society of Hispanic Professional Engineers
 - xvi. Society of Women Engineers
 - xvii. Women in Computing

3. Connect Lafayette engineering graduates with opportunities for employment and graduate school opportunities.

Lafayette Engineering recognizes that diversity is not only an issue of access and on-campus support, but also one of successful outcomes beyond the student experience. Over the last 10 years, women engineering graduates from Lafayette have gone on to graduate school in greater numbers than their male counterparts – 25 percent of women versus 19 percent of men. Building on this success and striving for equity among all underrepresented groups, the goal is to support a diverse body of graduates in the pursuit of graduate education and meaningful careers, and encourage ongoing achievement to perpetuate lasting climate change.

- a. Each engineering department includes a graduate advisor who serves as a counselor for students considering graduate school, and meets with all interested students to discuss their future plans one-on-one.
- b. Lafayette Engineering maintains ongoing relationships resulting in regular recruitment visits from: Dartmouth College, Temple University, Worcester Polytechnic Institute (WPI), Lehigh University, Tufts University, University of Wisconsin, Duke University, University of Virginia, Cornell, Virginia Tech.

- c. The Lafayette-Tufts Bridge program was developed to facilitate Tufts's recruitment of Lafayette students. Students in the M.S. Bridge program receive guaranteed tuition scholarships, a streamlined application process, the ability to earn a master's degree in as little as one year, as well as additional benefits.
 - d. The division works with Lafayette's Gateway Career Center to assist students interested in applying to graduate school, seeking internships, and seeking employment. The division hosts numerous events in Acopian Engineering Center throughout the year, including professional development lunch talks, workshops, alumni career panels, corporate meet and greets, and more. One example is Gateway's Making the Most of Conference Attendance workshops held annually for students attending SWE, NSBE, SHPE, and other national conferences.
 - e. Lafayette offers free lifetime career services to alumni in person, by phone, or online.
 - f. Alumni representing a variety of industries come together with students for evenings of conversation and connections in Networking Nights.
 - g. Alumni Career Services offers lunchtime webinars on career-related topics.
 - h. Alumni Relations is working to ensure that its alumni volunteer leadership is reflective of an increasingly diverse alumni group.
 - i. Alumni Relations works to provide a wide variety of volunteer opportunities and events that are reflective of and of interest to an increasingly diversified alumni body.
 - j. Several alumni affinity groups are in place including the McDonogh Network for black alumni and the Council of Lafayette Women, which host their own programming and events.
 - k. Several LinkedIn groups are available to alumni, including ones for each Lafayette Engineering discipline as well as more specific groups such as Lafayette Women in Construction.
4. Recruit and retain a diverse faculty through supportive best practices. Lafayette Engineering is committed to cultivating a diverse population within its faculty. A diverse faculty offers numerous advantages to students and benefits the college community by representing different perspectives. In addition, faculty have the ability to impact the campus culture for the long-term and serve as role models for students. The 2017 ASEE "Engineering By the Numbers" reported Lafayette ninth among all engineering colleges and universities in percentage of women tenured/tenure-track faculty. The goal in this area is to ensure best practices in recruitment and retention, and continue to increase the diversity of the faculty.
- Recruitment
- a. The division works to ensure best practices in faculty search training and processes. All members of faculty search committees are required to participate in workshops on unconscious bias and other factors that can affect hiring. In addition, Lafayette's Strategic Hiring Initiative seeks to recruit more women in STEM fields and more members of underrepresented populations to positions in all disciplines.
 - b. The College practices Target of Opportunity recruiting, an aggressive recruitment program in support of the College's strategic initiatives which include the goal of attracting a diverse faculty, broadly defined. In exceptional cases, candidates whose potential interest in the College is identified outside a normal search process may be offered appointments to the faculty without conducting a national search.

(<https://provost.lafayette.edu/faculty-recruitment-policies-and-procedures/#target-of-opportunity>)

- c. Non-discrimination Notice and Equal Opportunity Statement: [https://hr.lafayette.edu/Mentoring and retention](https://hr.lafayette.edu/Mentoring%20and%20retention)
- d. Groups on campus such as the Council of Lafayette Women are available to faculty and staff. In 2018 the council presented the first annual conference in which alumnae and faculty speakers shared insight and expertise on a wide range of educational, personal, and professional development topics with conference participants.
- e. The College opened the new Hanson Center for Inclusive STEM Education in fall 2019, which will serve as a home for research, programming, and address the need to recruit more women and underrepresented minorities to the STEM fields
- f. The division benefits from the College's partnership in MAPWISEly: an ADVANCE grant initiative, to examine if emerging best practices for mentoring new women associate professors in STEM fields positively impacts measures of career satisfaction and serve as indicators of advancement across a diverse network of Patriot League institutions.
- g. The division encourages the College's initiative in which faculty wishing to revise courses to incorporate inclusion themes and practices are eligible for a \$1000 Diversity Initiative Grant.
- h. Lafayette College has a title IX coordinator and three deputy title XI coordinators.
- i. Programs educate the College community and raise awareness of issues regarding diversity, such as the recent addition of an online module designed to increase understanding within the community about issues of harassment, discrimination, and sexual violence.g. An anonymous tip hotline may be used for reporting ethical, compliance, or other concerns that the caller wishes to bring to the attention of the College.
- j. Family Medical Leave Act (FMLA): <https://hr.lafayette.edu/family-medical-leave-act-fmla/>
- k. The College conducted a climate survey in 2018 to acquire a better sense of the issues involved in diversity and inclusion and develop initiatives in response to survey results. The College held open meetings to discuss the findings, and a committee of faculty, students and staff are continuing discussions on top themes with plans to engage the campus community further going forward.

Conclusion

This document is not intended to provide a definitive plan, but to serve as a springboard from which to advance an authentic culture of inclusion. Aligned with the goals of the College, Lafayette Engineering will continue to make strides in diversity and inclusion in all areas of its community and all facets of its educational experience. The goal is not to achieve a particular percentage of underrepresented groups within the Lafayette Engineering community, but rather to advance the diversity of the community to the extent that its prevalence renders the distinction unnecessary.

Appendix A: Campus-wide diversity and inclusivity related statements, programs, and personnel

Lafayette College Mission Statement:

In an environment that fosters the free exchange of ideas, Lafayette College seeks to nurture the inquiring mind and to integrate intellectual, social, and personal growth. The College strives to develop students' skills of critical thinking, verbal communication, and quantitative reasoning and their capacity for creative endeavor; it encourages students to examine the traditions of their own culture and those of others; to develop systems of values that include an understanding of personal, social, and professional responsibility; and to regard education as an indispensable, lifelong process.

Lafayette College Diversity Statement:

Lafayette College is committed to creating a diverse community: one that is inclusive and responsive, and is supportive of each and all of its faculty, students, and staff. The College seeks to promote diversity in its many manifestations. These include but are not limited to race, ethnicity, socioeconomic status, gender, gender identity, sexual orientation, religion, disability, and place of origin.

The College recognizes that we live in an increasingly interconnected, globalized world, and that students benefit from learning in educational and social contexts in which there are participants from all manner of backgrounds. The goal is to encourage students to consider diverse experiences and perspectives throughout their lives. All members of the College community share a responsibility for creating, maintaining, and developing a learning environment in which difference is valued, equity is sought, and inclusiveness is practiced.

It is a mission of the College to advance diversity as defined above. The College will continue to assess its progress in a timely manner in order to ensure that its diversity initiatives are effective.

Personnel and programs related to diversity and inclusivity at the institutional level

1. Faculty Diversity Committee has the responsibility to:
 - a. identify and collect information on issues concerning minority and women faculty and students;
 - b. identify institutional policies and practices and aspects of the general campus climate that may impede or enhance Lafayette's efforts to recruit and retain women and minority faculty and students;
 - c. address issues concerning the general campus climate with respect to diversity and promote a greater understanding of the importance of diversity by recommending and/or sponsoring educational programs such as symposia, lectures, brown bags, panel discussions, and workshops; and
 - d. bring diversity issues to the agendas of relevant Faculty committees.
 - e. "Diversity" includes, without being exclusive, definitions relating to race, religion, sex, sexual orientation, national origin, age, socioeconomic status, gender identity
2. Dean of the Faculty and Chief Diversity Officer is responsible for all faculty hiring (tenure-track, visiting, and adjunct positions), faculty personnel issues including diversity and retention, orientation programs for new faculty and new department heads, faculty mentoring and

development programs, and coordination and support of interdisciplinary programs. The Dean of the Faculty assists the Provost on sabbatical and leave requests, faculty salaries, and department head and major program chair appointments

3. The Presidential Oversight Committee regarding sexual misconduct (POCSASH) was established in 2014.
4. A full-time Title IX and Equity Coordinator has the primary responsibility for leading the College's education initiatives and prevention programs regarding sexual assault, sexual misconduct, relationship violence, and sexual harassment. The Title IX and Equity Coordinator ensures that such programs are conducted in compliance with Title IX of the Education Amendments of the 1972 Civil Rights Act (Title IX), the Violence Against Women Act Reauthorization of 2012 (VAWA), other federal and state legislation and regulations, and reflect best practices in the higher education community. The Title IX and Equity Coordinator also has responsibility for ensuring the College's timely response to reports of sexual assault, sexual misconduct, relationship violence, and sexual harassment, monitoring investigations into such reports, and developing and implementing policies and procedures related to these matters.
5. The Office of Intercultural Development advances Lafayette's commitment to diversity and inclusion through educational outreach, cultural programming, support and advocacy of historically marginalized groups, and community building. The goal is to provide students and employees with numerous opportunities to develop their intercultural competence and to commit to lifelong learning about our world and its diverse citizens.
 - a. Educational outreach
 - i. Kaleidoscope: A social justice peer education group that encourages student leaders to take an active role in campus education on issues of multiculturalism, equity, and social justice.
 - ii. Multicultural competency training
 - iii. From Me to WE: an annual off-campus retreat designed especially for first and second year students and offers a safe space for authentic dialogue between emerging student leaders and encourages them to build a coalition toward social change on campus and in society at large.
 - iv. President's McDonogh Lecture Series: brings scholars to campus who have gained prominent attention for their work with multicultural education and diversity issues.
 - v. Faculty Fireside Chats: provide opportunities for conversations with professors outside of the classroom in up-close and personal settings.
 - vi. Safe zone training, through the Office of Gender and Sexuality programs, an affiliate of Intercultural Development, offers training to students, staff and faculty to develop better allies for the LGBTQ community
 - b. Cultural programming
 - i. Heritage awareness months
 - ii. Holidays and observances
 - iii. International Students Association
 - iv. Portlock Black Cultural Center
 - c. Support and advocacy for members of historically marginalized groups
 - i. Bias response and education
 - ii. Cultural and social justice student organizations

- iii. Identity development coaching
 - iv. Intercultural awards ceremony
- d. Community building
 - i. McDonogh Alumni Network
 - ii. Easton community