

# LAFAYETTE COLLEGE

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## *Lafayette Engineering Diversity 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 our 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 diversity initiative document is to outline current and ongoing efforts aimed at ensuring and expanding 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. In this way, the diversity initiative moves beyond programming and becomes the very fabric 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 and likely decades to achieve. This by no means implies that this endeavor is not worth trying. Quite the contrary, the lag-time needed to fully engage all peoples means there is no time to waste and efforts to foster a more inclusive environment needs to start now and be sustained indefinitely.

In 2015, over one hundred engineering deans in the American Society of Engineering Education (ASEE) signed the Diversity Initiative Letter committing them to create an inclusive environment within the engineering ecosystem. Lafayette College's Director of Engineering, Scott Hummel, played an integral part in the ad-hoc group that initiated the efforts. As a part of this national effort, Lafayette can play an important role in engaging underrepresented groups and individuals from an early age, e.g., grammar school, all the way through recruitment and retention as faculty. This engagement will not only create a welcoming environment for students, staff, and faculty at the College, but can also play an integral role in creating this welcoming culture within the STEM fields. With this in mind, initiatives will be developed,

maintained, and assessed to foster a more inclusive culture by focusing on underrepresented groups through the following:

- Inspiring diverse students at the K-12 level about STEM
- Recruiting and retaining diverse students in Lafayette's engineering programs
- Connecting Lafayette engineering graduates with opportunities for employment and graduate school opportunities
- Recruiting and retaining 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. In each of the sections that follow, general goals are articulated and ongoing efforts are stated. Suggestions are also made in several sections that may be pursued to advance the goals of this initiative.

### **K-12**

The programming for children in grades K-12 is geared towards peaking their interest and curiosity in STEM, and instilling in them the belief that they can have a fulfilling career in a STEM field. The goal of the K-12 element is to inspire and motivate students to pursue a STEM field in post secondary school. It is important to note that this element is not intended to recruit or attract students to Lafayette's programs, and that the activities designed to meet this goal must also align with Lafayette's Engineering's mission.

Below is a listing of current activities focused on STEM with K-12 students:

1. STEAM Camp: Science, Technology, Engineering, Arts and Mathematics, was introduced in 2012 for fourth through sixth graders from the Lehigh Valley. Campers are exposed to interactive, hands-on activities that require problem solving and critical thinking skills as a means of encouraging and preparing more youth to enter STEM fields.
2. A summer research shadowing program provides high-school girls with the opportunity to follow Lafayette research students as a means to inform and engage them.
3. Lafayette's SWE chapter organizes several events each year with local Girl Scouts. These events aim to provide outreach and inspiration to younger female students.
4. Lafayette's Center for Community Engagement coordinates STEM groups of students with the local Easton community through Third Street Alliance, Phillipsburg High School, the Easton Library and the YMCA. Lafayette students provide STEM-based activities for afterschool enrichment.
5. Lafayette's Engineers Without Borders chapter leads middle-school students in fun and interesting science experiments at the Easton Public Library every other week. Examples of activities include: making a volcano out of a garbage can and liquid nitrogen, and creating homemade lava lamps.

## College students

Lafayette Engineering is committed to attracting, recruiting, and retaining a diverse student body. Over the last few decades we have had success recruiting and retaining female students. In particular, for the past 20 years, Lafayette has exceeded the national average of women in its engineering programs, averaging approximately 25% over any five-year period compared to the national average of approximately 18%, according to ASEE. In the entering engineering class in the fall of 2015, 32% of the students were women. This figure increased to 41% in the fall of 2016. The highest percentage of women in engineering at Lafayette since women were admitted in the 1970's.

Our goal is to build on this momentum to recruit and retain students from various underrepresented groups beyond gender. We seek to ensure that Lafayette provides educational experiences that are inclusive and prevent marginalization of any group of people because of visible or invisible differences. Lafayette Engineering will continue to make diversity and inclusion a priority in the areas of both recruitment as well as mentoring and retention in order to ensure long-term climate change, as reflected in our vision statement.

### *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.*

1. Recruitment of students: The Engineering Division works with the Admissions Office, which prioritizes 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. Ongoing activities and programs include:
  - a. 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 poses from more than one city when it enrolled its first posse from Washington, D.C. in 2006.

- b. 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).
  - c. Lafayette Admissions is also working 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.
  - d. Several engineering-specific admissions programs match women students with prospective high-school girls, including an over-night 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.
2. Mentoring and retention activities/programs for underrepresented groups:
- a. Lafayette College's Summer Program to Advance Leadership (SPAL) is a six-week program that 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. (28 students, 16 females and 12 males, have completed the program since it began in 2009 including students from nine different states and from Puerto Rico.)
  - b. ES101 demonstrates the relevance of engineering and its impact on society, which has been shown to be effective in improving the persistence of under-represented students in STEM fields.
  - c. ES102: Introduction to Spatial Visualization Skills has been offered for four straight years and has been shown at the national level to be effective in improving the persistence of under-represented students in STEM fields. Lafayette does not yet have enough data to measure impact, but the purpose of this course is to improve persistence and student performance in STEM fields.
  - d. The Clare Boothe Luce Research Scholars Program was established in 2016 to provide a 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.
  - e. The division actively supports the College's Society of Women Engineers (SWE) chapter, including the identification of external funds to support SWE's programming and networking for women students and alumni.

- f. Minority Scientists and Engineers (MSE) is an on-campus support group for students interested in STEM. In addition to providing opportunities for students to engage in discussions about science and issues concerning minorities in STEM fields, MSE provides peer tutoring to encourage academic success as well as strengthen the minority scientists and engineering community.
- g. Lafayette Engineering is investigating establishing a chapter of the National Society of Black Engineers on campus.
- h. Lafayette Engineering strives to ensure an engineering facility that reflects a diverse and inclusive community. Recent improvements with inclusivity in mind include renovations to restroom facilities, departmental wall hangings, and signage in lobby.
- i. The division plans to develop strong partnerships between research-intensive engineering schools and non-PhD granting engineering schools serving populations underrepresented in engineering.
- j. Lafayette Engineering will monitor diversity in enrollments, retention and graduation rates.
- k. The College's student orientation includes a new 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 this 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. And those difficult conversations continued throughout and after an unusually divisive presidential campaign.
- l. The College has hired a Dean of Equity and Inclusion. Among other duties, the dean will work closely with the Student Support Task Force that consists of students, faculty, and staff who are examining ways in which Lafayette can better support new students, especially first-generation students or those from traditionally marginalized backgrounds. Topics of exploration include enhanced academic advising and mentoring, and help in making the adjustment to college.
- m. Partial summary of resources and groups on campus include:
  - i. Society of Women Engineers
  - ii. Minority Scientists and Engineers
  - iii. International Students Association
  - iv. International Student Advising
  - v. Intercultural Development
  - vi. Gender and Sexuality Programs
  - vii. Religious and Spiritual Life
  - viii. Asian Cultural Association
  - ix. Association of Black Collegians
  - x. Hispanic Society of Lafayette
  - xi. Lafayette African and Caribbean Students Association

- xii. Lafayette Hillel Society
- xiii. Muslim Students Association
- xiv. NIA Women of Purpose

### **College graduates**

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. Again building on this success and striving for equity among all underrepresented groups, we will continue to support a diverse body of graduates in the pursuit of graduate education and meaningful careers and to encouraging ongoing achievement to perpetuate lasting climate change.

1. Each program within engineering has a designated graduate school advising liaison to assist students who are interested in pursuing graduate school.
2. The College's Career Services works with students interested in applying to graduate school and makes numerous resources available on the website and through the lending library. Career Services has also hosted Donald Asher, a writer and speaker specializing in careers and higher education, to discuss admissions strategies and information regarding funding sources.
3. Alumni representing a variety of industries come together with students for an evening of conversation and connections in Networking Nights.
4. Alumni Career Services offers lunchtime webinars on career-related topics.
5. Lafayette offers free lifetime career services to alumni in person, by phone, or online.
6. Alumni Relations is working to ensure that its alumni volunteer leadership is reflective of an increasingly diverse alumni group.
7. 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.
8. 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.
9. 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.
10. The division will work to connect with engineering graduate schools in support of populations underrepresented in engineering.

### **Faculty**

Equally important to cultivating a diverse population within the student body, is diversity in the faculty. A diverse faculty offers numerous advantages to students, but also benefits the larger college community by representing different perspectives. In addition, faculty have the ability to impact the campus culture for the long-term.

Reaffirming this commitment to diversity, Lafayette Engineering will develop and implement proactive strategies to increase and provide ongoing support for the representation of women and underrepresented groups within faculty. The division will continue to seek out qualified candidates from underrepresented groups and make diversity and inclusion a priority in the areas of recruitment as well as mentoring and retention in order to ensure long-term climate change.

As of fall 2016, the percentage of full-time female faculty has risen to 22 percent, while the ASEE reports the national average at approximately 14 percent.

1. Recruitment practices
  - a. All members of faculty search committees should participate in workshops on unconscious bias and other factors that can affect hiring.
  - b. The College practices Target of Opportunity recruiting. The goal is to add faculty positions that have an impact on the strategic goals of the College, including recruiting more women in STEM fields and more members of underrepresented populations to positions in all disciplines. (<https://provost.lafayette.edu/faculty-recruitment-policies-and-procedures/#target-of-opportunity>)
  - c. Non-discrimination Notice and Equal Opportunity Statement: <https://hr.lafayette.edu/>
2. Mentoring and retention programs
  - a. Lafayette is a partner in MAPWISEly: an ADVANCE grant initiative. MAPWISEly is funded by Lehigh's second NSF ADVANCE grant, and includes partners Georgetown University, Bucknell University, Lafayette College and the United States Military Academy on the project, titled "Patriot League Institutions Mentor Associate Professors WISEly ." "The goal of the MAPWISEly project is 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. Partnering institutions learn how to wisely invest in future associate professor career development and focus on ways in which they might level the playing field for women faculty in STEM."
  - b. Groups such as the Council of Lafayette Women are available to faculty and staff.
  - c. The College has created a new diversity website, <https://diversity.lafayette.edu/> to allow for greater transparency and accountability as it continues to track progress in these areas.
  - d. 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.
  - e. Faculty wishing to revise courses in order that the College might achieve a more inclusive curriculum are eligible for a \$1,000 Diversity Initiative Grant.
  - f. 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.

- g. Family Medical Leave Act (FMLA): <https://hr.lafayette.edu/family-medical-leave-act-fmla/>
- h. The College plans to conduct climate surveys to acquire a better sense of the issues involved in diversity and inclusion and develop initiatives in response to survey results.

## **Conclusion**

This document is not meant to provide an exhaustive, definitive plan, but rather as a living-document to serve as a reflection of our steadfast commitment to our core values and a summary of efforts to uphold them. As an institution that appreciates and respects human dignity and differences, we seek to provide all individuals with the opportunity to explore their potential in a welcoming, inclusive environment characterized by an enduring mix of individuals with diverse backgrounds, life experiences, approaches, and perspectives. We believe that our commitment to inclusive practices is essential to the success of all within the campus community and beyond. Toward this end we will actively work to promote an environment of diversity and inclusion to fully engage the diverse generations to come and impact the broader engineering ecosystem.



## 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. Presidential oversight committee regarding sexual misconduct (POCSASH) was established in 2014 and has added new procedures over the last several years.
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. Save 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

## Appendix B: Strategies at other institutions

1. Several institutions have created an engineering diversity council.
2. Bucknell Engineering's Engineering Success Alliance provides targeted tutoring for engineering students who did not have access to a strong preparation in mathematics and science. The goal is to increase diversity in the engineering program and, in the long term, catalyze increased diversity in the engineering workforce.
3. Cornell goal: Involve alumni, employers, and other external partners in our college, campus, and community-based diversity efforts.
4. Penn State College of Engineering
  - a. Enhance orientation programs for faculty, staff, and students to emphasize the importance of diversity.
  - b. Develop a curriculum that fosters cultural competencies
    - i. Continue to stress the characteristics of the world-class engineer throughout the undergraduate experience.
    - ii. Increase educational experiences aimed at developing international and intercultural competencies.
    - iii. Increase curricular elements and extracurricular programs that engage students in solving complex socio-technical transnational problems.
5. Purdue: Diversity Workshops, Forums: open to both faculty and alumni; helps positively change the climate for everyone and offers an opportunity to learn the benefits provided by a diverse climate.
6. U Mass: Build in a structure for exit interviews for students. This would capture information about why the student left the University in order to work on retention and making the University more welcoming.