

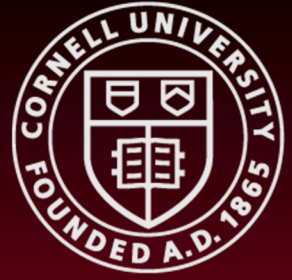
FACULTY PARTNERSHIPS

The office of Diversity Programs in Engineering (DPE) plays a leadership role in carrying out the College of Engineering's formal initiatives targeting students from backgrounds traditionally underrepresented in Engineering and related disciplines. These initiatives include outreach, recruiting, mentoring, professional development, and community building programs, which are designed to serve high school, undergraduate, and graduate student populations.

This document describes how faculty — who are commonly faced with outreach, recruiting, and mentoring requirements in connection with large funded research projects — can leverage the programs that DPE already has in place:

- Summer academies for promising high school students
- Recruitment programs for prospective high school students
- Professional recruiting at AISES, NSBE, SHPE, SWE annual meetings and other annual conferences such as the AAAS Emerging Researchers National Conference in STEM
- Summer research opportunities for underrepresented minority (URM) undergraduate students
- Academic Excellence through undergraduate scholars programs—Cornell LSAMP Scholars & Ryan Scholars Programs
- Graduate fellowship programs
- Mentoring initiatives for women, first generation college (FGC), URM undergraduate and graduate students
- On campus professional development seminars & conferences
- Key foundation and non-profit partnerships—Sloan Foundation, National GEM Consortium, Institute for Broadening Participation, National Action Council for Minorities in Engineering, Women in Engineering Proactive Network, etc.

Alternatively, faculty can design their own outreach programs with DPE's expert guidance.



BROADER IMPACTS

“...how the project will integrate research and education by advancing discovery and understanding while at the same time promoting teaching, training, and learning; ways in which the proposed activity will broaden the participation of underrepresented groups...”

— NSF Grant Proposal Guide

INSTITUTIONAL COMMITMENT

“Indicate how student and faculty diversity will be promoted as an integral part of the project. Describe any plans for collaborating with recruitment, retention, and professional development programs available at the institution...”

—NSF NRT program solicitation

“The various programs put on (by DPE) encourage minority students to actively participate in their own education and that of high school students.”

— Al Jean-Francois
Cornell Engineering
B.S. & M.Eng

AISES

American Indian Science & Engineering Society

www.aises.org

NSBE

National Society of Black Engineers

<https://nsbe.cornell.edu>

QGrads- oSTEM Affiliate

Cornell's LGBTQ+ Graduate Student
Association and Out in STEM affiliate

<https://qgradscornell.weebly.com>

SACNAS

Society for the Advancement of Chicanos/
Hispanics and native Americans in Science

<https://sacnas.cornell.edu>

SASE

Society of Asian Scientists & Engineers

<https://cornellu.wixsite.com/sase>

The Challenge

Faculty have many demands on their time and need to develop strategies to leverage existing resources, rather than reinventing the wheel each time a new opportunity arises. Increasingly, sponsoring agencies require an outreach component which often involves training, recruiting, and mentoring students who are traditionally underrepresented in engineering and science disciplines. This is particularly true for CAREER, IGERT, Science and Technology Center proposals and other prestigious, large scale funding opportunities. Funding agencies and corporate employers have fully recognized the importance of tapping the talent pool of women and underrepresented minorities as the proportion of “traditional” students is projected to drop precipitously over the next few decades. **How do you fulfill these requirements of your sponsoring agencies while maintaining your other programs and responsibilities?**

The Solution: Partner with DPE

The College of Engineering has a built-in solution just waiting to help you achieve these goals: Diversity Programs in Engineering. DPE has a staff of three professionals, overseen by the Associate Dean for Diversity and Academic Affairs. We have extensive experience interacting with, advising, mentoring, and organizing programs for underrepresented minorities and women at many different levels. There are multiple opportunities for faculty involvement in our programs, described in more detail later in this document.

Planning for Outreach in Your Proposals

Consult with us early about your outreach, recruiting, and/or mentoring plans. Reviewers and panels easily recognize “broader impacts” which are thrown together as an afterthought at the last minute. DPE can help focus your plan and give it substance. We can provide boiler plate descriptions of the programs that we offer and show how the money that you budget to support your participation in our programs is more cost effective than providing the outreach on your own. We will work with you to fine tune your description of your outreach component. If you choose to **design your own outreach program**, we can give you realistic cost estimates for inclusion in your budget. We will also provide supporting documentation including a letter of support/ collaboration. **To begin this process, please contact either:**

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Existing Programs

HIGH SCHOOL STUDENTS

CATALYST & CURIE Academies

CATALYST and CURIE are week-long summer programs for high school underrepresented minorities and women students, respectively. The programs introduce 40-44 promising students in each group to science and engineering.



Faculty can participate in two ways: (1) by presenting hour-long field sessions which describe their discipline, often accompanied by short demonstrations; and (2) by designing a week long project that the students carry out in groups of 6-10 each. The project is capped by public presentations from each group, often with appreciative family members in the audience.

Hosting Weekends

The College of Engineering brings to campus, in both Fall and Spring, promising women and underrepresented minority high school students to encourage them to apply to, and attend, Cornell. Faculty are involved in panel sessions, lab tours, and lunches or dinners with the prospective candidates.

UNDERGRADUATE STUDENTS

CU LSAMP-REU

DPE is a proud partner of the Upstate Louis Stokes Alliance for Minority Participation (ULSAMP) in science and engineering. Through this NSF-funded program, we offer a summer research program (CU LSAMP-REU) for underrepresented undergraduate students from inside and outside of Cornell. Faculty can incorporate and mentor these talented students into their summer research projects with an overall goal of encouraging these students to go on to Graduate School. Additionally, faculty with REU supplements have the opportunity to integrate their REU students into CU LSAMP-REU so these students become part of a structured living and learning community of engineering scholars.

Cornell University Engineering Success Program (CUES) & Engineering Summer Math Institute (ESMI)

Through this NSF-STEP funded the program, CUES provides tutoring for sophomores, juniors and seniors in courses needed to affiliate with a major and in those courses that form the foundation of particular majors. Faculty are asked to refer students for tutoring. Further, ESMI as a part of the CUES initiative provides rising sophomores and juniors the opportunity to take a math course and work on an applied math research project or to conduct research with faculty in their intended major. Faculty can volunteer to serve as research mentors for ESMI.

Undergraduate Student Organizations

Cornell hosts vibrant student chapters of the American Indian Science and Engineering Society (AISES), National Society of Black Engineers (NSBE), Society of Asian Scientists & Engineers, Society of Hispanic Professional Engineers (SHPE), Society of Women Engineers (SWE), and Women in Computing at Cornell (WICC). These autonomous organizations rely on DPE for help and advice but are self governed. For faculty who wish to get involved in a mentoring role but don't know who to contact, DPE can help make the connections. DPE also recruits actively at the annual meetings for these societies.

Recruiting for Graduate Student Prospects at HBCUs, HSIs, & Tribal Colleges

DPE is committed to helping the CoE recruit talented students and Faculty from Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs), and Tribal Colleges. CoE Faculty can assist with this effort by giving scientific talks and presentations to prospective students at select campuses as well as creating interdisciplinary research opportunities in collaboration with HBCU, HSI, and Tribal College Faculty. DPE will often help support CoE Faculty in these efforts by providing supplemental funding to offset the expenses of these activities.

Informal Activities

Faculty can also participate in a variety of more informal ways that benefit our students while minimizing faculty time commitment. Such interactions include participating on faculty discussion panels during the Engineering Summer Scholars Program (ESSP), Orientation, or Mastering Your Future (MYF) professional development sessions. Additionally, we encourage faculty to attend our annual awards banquet.



GRAD SWE

Graduate Society of Women Engineers
www.facebook.com/CornellGradSWE/

SHPE

Society of Hispanic Professional Engineers

<http://shpe.cornell.edu>

SWE

Society of Women Engineers

www.swe.cornell.edu

URMC

Under-Represented Minority in Computing

<https://urmc.cs.cornell.edu>

WICC

Women in Computing at Cornell

<https://wicc.cornell.edu>

INTEGRATING DIVERSITY

"Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- is essential to the health and vitality of science and engineering."

—Faculty Early Career Development (CAREER) Program solicitation



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GRADUATE STUDENTS

At the graduate student level, one of the most important things that Faculty members can do is to recruit and mentor excellent underrepresented minority and women students. In addition to making connections with potential students at annual meetings of AISES, NSBE, SHPE, and SWE, Cornell and the College of Engineering offer several types of fellowships. Nominations for all of the following should be submitted to the Associate Dean for Diversity and Academic Affairs.

Cornell Sloan Fellowships

These are prestigious three year awards sponsored by the Cornell Graduate School and the Alfred P. Sloan Foundation and administered by DPE's leadership, Associate Dean and Director, respectively the Sloan Program PI and Co-PI. The fellowship pays an academic year and summer stipend, as well as full tuition and health insurance, and is available to incoming African American, Hispanic, American Indian, Native Pacific Islanders, and Alaskan Native graduate Ph.D. students. Up to nine awards are made each academic year as recruitment fellowships.

Cornell Colman Fellowships

These are prestigious three year awards sponsored by the Cornell Graduate School and an endowed gift from alumnus John Colman and are administered by DPE. The fellowship focuses on underrepresented students, leadership, and/or first generation college student advancement. The fellowship pays an academic year and summer stipend, as well as full tuition and health insurance. Up to three awards are made each academic year as recruitment fellowships.

Cornell Collins Fellowships

These are prestigious two-year awards, administered by DPE, are sponsored by the Cornell Graduate School and an endowed gift from alumni to honor former Dean Lance Collins. The fellowship pays an academic year and summer stipend, as well as full tuition and health insurance. Up to two awards are made each academic year as recruitment fellowships.

Dean's Excellence Fellowships

The Dean's Excellence Fellowships are offered by the Graduate School to incoming graduate students who fit Cornell's expanded definition of diversity. The additional categories are: first generation college student, single parent household, or a record of overcoming adversity. The fellowships are for one academic year as recruitment fellowships.

Cornell GEM Fellowships—www.gemfellowship.org

Through a partnership with the National GEM Consortium and Cornell, DPE administers the GEM 1-year PhD and M.Eng Fellowships. These fellowships include full tuition and health insurance. M.Eng Fellowship recipients receive a modest stipend provided by their sponsoring GEM employer. PhD Fellowship recipients receive a stipend that is in part funded by their sponsoring GEM Employer and the Graduate School.

Design Your Own Program with Our Help

Our professional staff has extensive experience working with underrepresented minority and women students, and with faculty, delivering effective programs. If you have a great idea that doesn't fit into one of the above programs, but are unsure how to develop and deliver it, we can help! We are eager to assist and can advise regarding effective delivery, content, and cost, as well as help you to avoid common pitfalls that sometimes trip up well-meaning faculty.

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