



The Graduate Society of Black Engineers and Scientists

A Letter to the University of Michigan's Electrical Engineering and Computer Science Department

(This letter was prepared by a subset of the Graduate Society of Black Engineers and Scientists and reflects only those whose names are attached to this document.)

To the Department Chairs of the Electrical Engineering and Computer Science, Peter Chen and Mingyan Liu

Executive Summary

Recent events have highlighted the unjust treatment of black people and other persons of color when encountering police or engaging in other facets of our society. The existence of these occurrences has shown us that while we continually strive for an equitable society, there is still room for improvement. In academia, specifically in STEM there is traditionally a lack of representation for black undergraduate students, graduate students, and professors. As the Leaders and the Best we must take responsibility for how our implicit biases can overtime contribute to undesirable outcomes and how we can use our sphere of influence to positively affect them. The number of underrepresented minorities in the Electrical Engineering and Computer Science (EECS) department's population is highly disproportionate to the U.S population and the state of Michigan. Data provided by the Rackham Graduate school shows in the Fall 2018 out of 299 enrolled [PhD students](#), 4% are African American with a 5-year average of 4%. Similarly for [Masters students](#), from 418 enrolled students, 1% are African American with a 5-year average of 2%. This clearly shows that while there may be certain steps the department is taking to promote diversity within the graduate school, there still exists considerable deficiencies. We endorse the [Black In Computing](#) open letter and believe there are steps and actions that can be implemented to achieve systemic fairness in the EECS department. We see this letter as a beginning to better understand and redress these underlying issues. We hope that with our recommendations and the department's help, these interventions can have a measurable and positive impact.

Our letter is meant to propose the *beginning* of a joint exploration of this problem with the EECS department and the Graduate Society of Black Engineers (GSBES). In the following sections, we describe:

- Current initiatives and recruitment efforts undergone by GSBES.
- Areas for improvement from the department regarding those efforts.
- A proposal of actions which EECS can take to improve representation among underrepresented minorities.

Current Initiatives

This section describes the current initiatives that GSBES has joined to impact the current issues facing the black population in the EECS department. Many of these programs are run by the College of Engineering or the department. In the following section, the problematic areas in these initiatives are discussed.

GSBES has been contacted to help or participate in recruitment activities in programs such as UM-PUMP (a College of Engineering initiative run by the Office of Student Affairs), EMERGE Weekend, the National Society of Black Engineers' (NSBE) Annual Convention, and the Exploring Electrical and Computer Engineering Graduate School Workshop. In the UM-PUMP program, current EECS students are able to visit "peer institutions" of the University of Michigan (e.g. MIT, Stanford, Northwestern) to pitch the university to prospective graduate students at smaller, more personal gatherings such as meetings of local NSBE chapters. During EMERGE Weekend, a very diverse set of students is brought in and experiences a weekend filled with tours of campus, meeting with potential research advisors, and meals with current students. At NSBE's Annual Convention, GSBES is expected to attend and help collect the contact information of dozens of black students interested in joining the University of Michigan for graduate school. The convention is typically held in late March, a time that is unfortunate as it is (i) after EECS graduate school applications are due and (ii) after many summer research program applications are due as well. Thus, many connections at this event must persist for roughly a year to be given an opportunity with the department. Finally, the EECS Department's Exploring ECE Graduate School Workshop has recruited volunteers from GSBES for panel conversations and to supervise some social activities. The students at these activities were excited to be there and truly appreciated the EECS department's efforts with this program, but a handful of participants did complain of their treatment by professors when they engaged in one-on-one coaching with the faculty.

Areas for Improvement

The EECS Department recruits from a set of schools that implicitly ignores many talented black students.

Programs such as UM-PUMP (a College of Engineering initiative run by the Office of Student Affairs) and the EMERGE Weekend frequently target only the "peer institutions" of the University of Michigan. This fixation on "peer institutions" implicitly screens out many talented students that might be from HBCUs or smaller teaching-oriented colleges and universities.

During recruitment events, the College of Engineering prevents black students from seeing that there is a thriving community of black students that would embrace them on campus.

At the most recent EMERGE Weekend, an outright invitation from GSBES to the black students in the program could not be made due to the recent Title IX threats of a UM-Flint Professor [1]. GSBES missing out on such meetings can lead visiting students to believe that there is not a thriving black community on campus. This absence of such a community may lead them to believe that they will find it harder to gain the social capital which will make them thrive in the College of Engineering and at Michigan [2].

The EECS Department is lacking in black faculty members

Improving representation in the department also includes the roles held by leaders in the department. One certain approach is providing support to faculty and staff that have shown to be effective in helping black undergraduate and graduate students. The second is adding talented black professors to the department who will also inspire black graduate students during visits to the university, and contribute to a welcoming environment for them. We believe there are certain initiatives that EECS can undergo to positively impact this point.

Proposed Actions

Black Graduate Students

There is a lack of data for EECS when identifying the pool of actively recruited students to the university. If all prospective students are recruited from the same select few institutions, it will hinder any efforts to improve diversity within the department. We believe that equivalently qualified prospective students may be overlooked because of their home institutions. Additionally, the number of black applicants who receive an offer from EECS and those who accept an offer is an additional unknown data point. To address this, we would like the EECS department to first provide a way for students to indicate their willingness to be identified by their ethnicity for targeted programming during recruitment/application processes and then collect data for the following:

- The number black students who have applied to the EECS Master's or PhD programs.
- The number of black students who have received an offer from EECS Master's or PhD programs.
- The home universities of all black applicants, those who received an offer, and those who were admitted.
- A list of universities that were visited for recruitment efforts.

Furthermore, we would like information about black matriculation, degree completion, and post-graduation outcomes. From the students who have been extended an offer, how many of them have decided to attend the University of Michigan? This can shine light on any changes in the recruitment and visiting student process that might need to be made. It also hints at the perceived environment the department and university may portray to underrepresented minorities. We would additionally request the EECS department to collect information on:

- The number of black students who matriculate into the EECS Master's or PhD programs.
- The completion rate of each cohort by year.
- The post-graduation outcomes from the black students who complete the program.

The task of analyzing and presenting this data to the department normally falls upon graduate students like the ones in GSBES, but we believe that this burden leads to inconsistent evaluation and improvement of the department. For this reason, our last recommendation for graduate students is to define a new role in the EECS administration whose purpose(s) are:

- To prepare the annual report using the data mentioned above.
- To prepare a set of interventions that the department plans to implement in order to positively impact the metrics.

We believe collecting these data points will improve the effectiveness of recruitment and retention efforts of underrepresented students in EECS. The acceptance of these proposals will allow the appropriate changes to be made, and eventually lead to the solution of a long standing problem in STEM.

Black Faculty Recruitment

One key factor in incorporating diversity in academia is in faculty recruitment. An immediate (positive) consequence is that visiting students are oftentimes more comfortable with faculty and staff of color present in the department. Similar to the National Football League's implementation of the "Rooney Rule", we believe the EECS department should implement a similar mandate. An additional condition for this mandate is that the interviewee must have relevant background and experience for the research area or position being considered. We would request EECS to do the following:

- For every open faculty member position that becomes available, a reasonable effort must be made to interview at least one minority or person of color.
- For each invited interviewee their qualifications and background as well as the criteria of the role must be documented, justifying their interview offer.

For the proposed actions we've stated above,

- We request a report be compiled and made publicly available **every June 1st** so these actions items can be revisited.
- We request the EECS chairs to meet with GSBES (and other faculty members) within **21 day(s)** to discuss these proposals. Following, we request a formal response addressing the entire EECS department regarding the stated issues.

Sincerely,
The Graduate Society of Black Engineers and Scientists

Drafted by: Nathan Louis, ECE and Kwesi Rutledge, ECE

References

[1] = U-M Flint professor lodges Title IX complaint against WSU, The South End [\[link\]](#)

[2] = Ovink, S.M., Veazey, B.D. More Than “Getting Us Through:” A Case Study in Cultural Capital Enrichment of Underrepresented Minority Undergraduates. *Res High Educ* 52, 370–394 (2011).

[3] = Schultz, P. Wesley, et al. “Patching the Pipeline: Reducing Educational Disparities in the Sciences Through Minority Training Programs.” *Educational Evaluation and Policy Analysis*, vol. 33, no. 1, Mar. 2011, pp. 95–114, doi:10.3102/0162373710392371.