

The Effect of a Deliberately Merged Program for Women and Minorities in Engineering

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Dr. Laura Bottomley, Teaching Associate Professor of Electrical Engineering and Elementary Education, is also the Director of Women in Engineering and The Engineering Place at NC State University. She has been working in the field of engineering education for over 30 years. She is dedicated to conveying the joint messages that engineering is a set of fields that can use all types of minds and every person needs to be literate in engineering and technology. She is an ASEE and IEEE Fellow and PAESMEM awardee.

Ms. Angelitha Daniel, North Carolina State University at Raleigh
Kimberly Pender, NC State University



Effects of a Deliberately Merged WMEP Program

NC State University



Why Merge?

- Historically, both a Women In Engineering Program and a Minority Engineering Program operated.
- Many programs were similar: bridge programs, mentoring, evening programs.
- Conflicts existed for women of color.
- Industry sponsors were conflicted.

Preparations

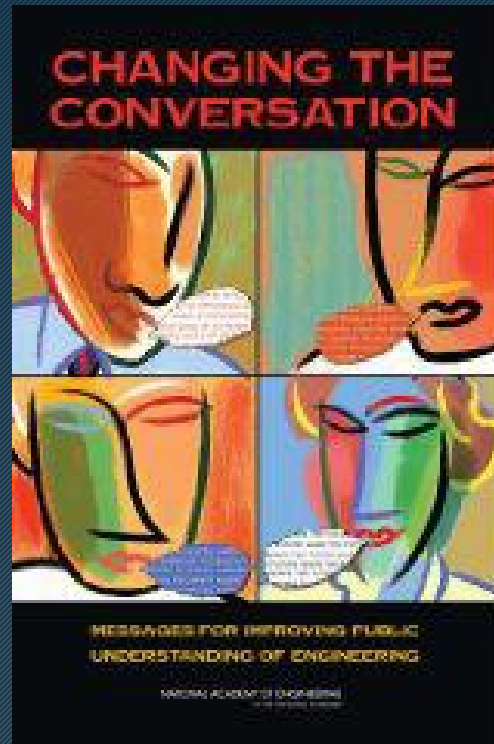
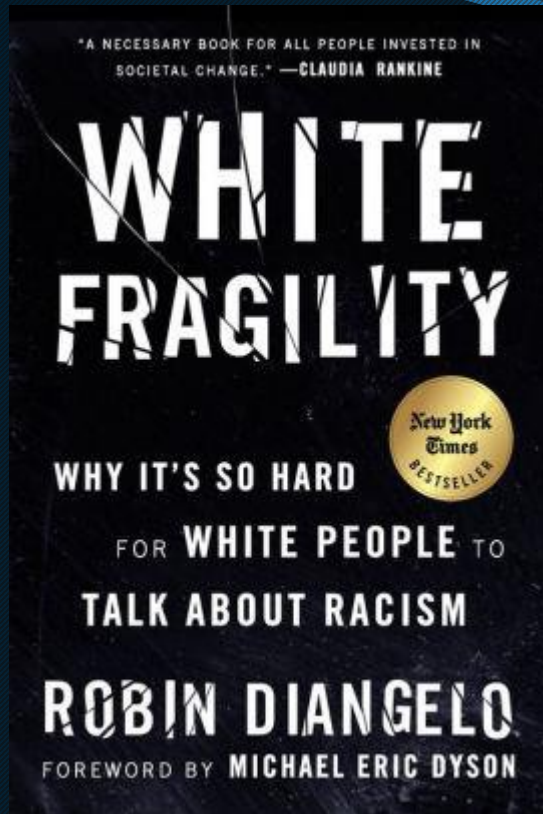
- Student focus groups
- Industry advisory board
- Joint programming



Effects on Programming

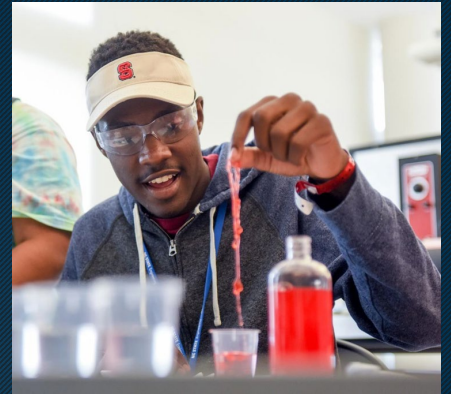
- Intersectionality is naturally a part of the design consideration for programming
- Side by side bridge programs
- Many joint programs
 - Tools Workshop
 - Taste of Engineering
- Alternative spring break in Rwanda
- Wednesdays with WMEP

Work with Professional and Student Staff

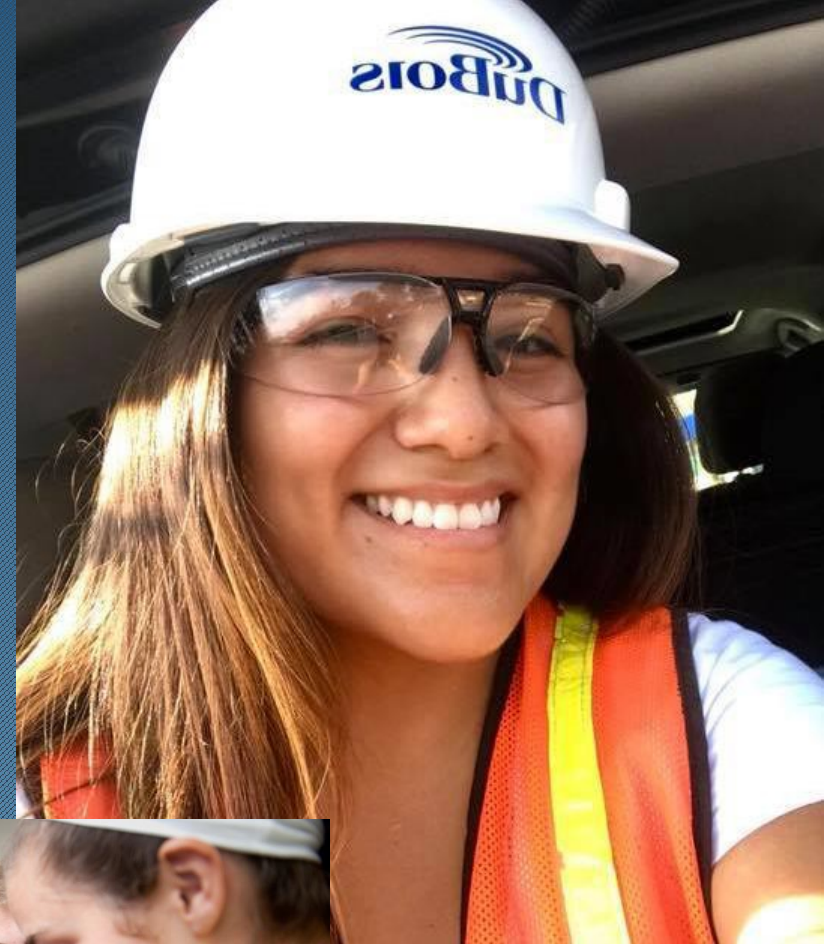


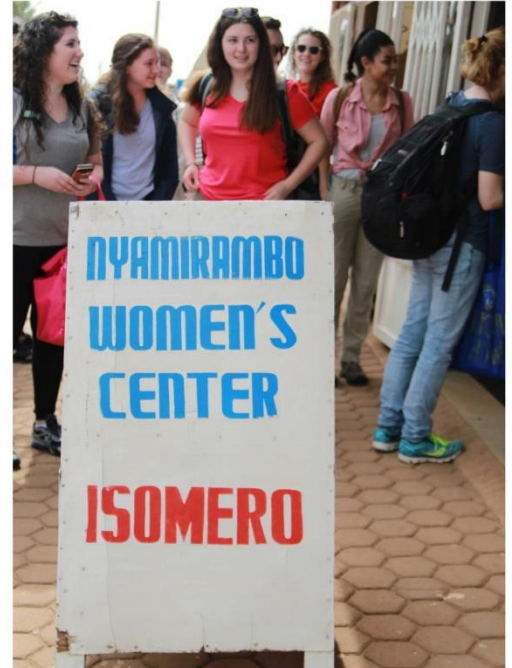
- Book Study
- Departmental meetings
- Changes in departmental practices
- Changes in recruitment approaches

Collaborative K-12 Outreach



Working together, we place role models in the forefront who represent the population of children participating.



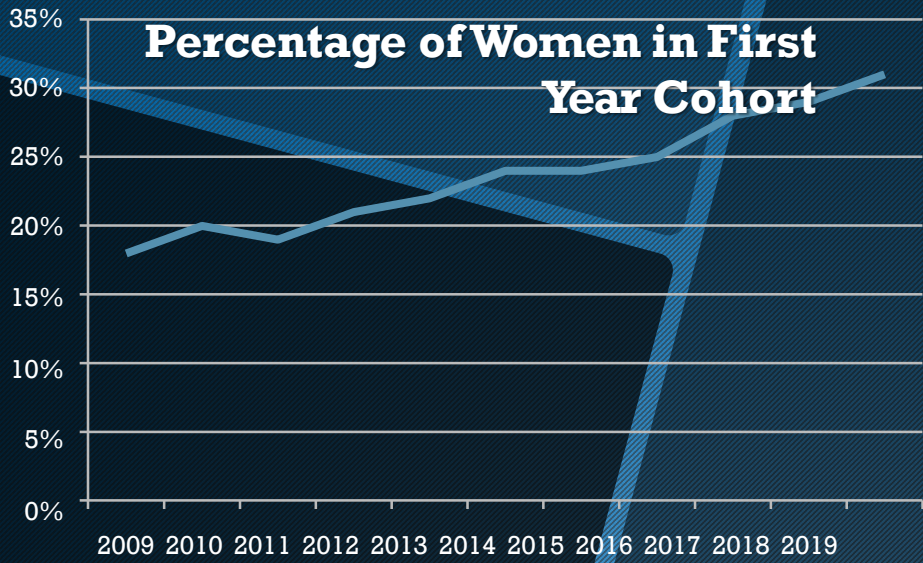


Effects on us

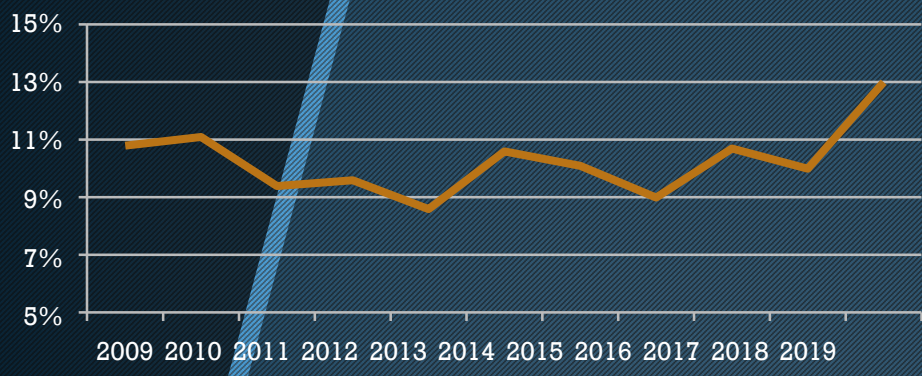
- Responsibility is shared across more of us.
- We work together to devise and implement programs.
- Students have a range of staff to consult
- ~~Picture of space, which would prevent blind review~~



Percentage of Women in First Year Cohort

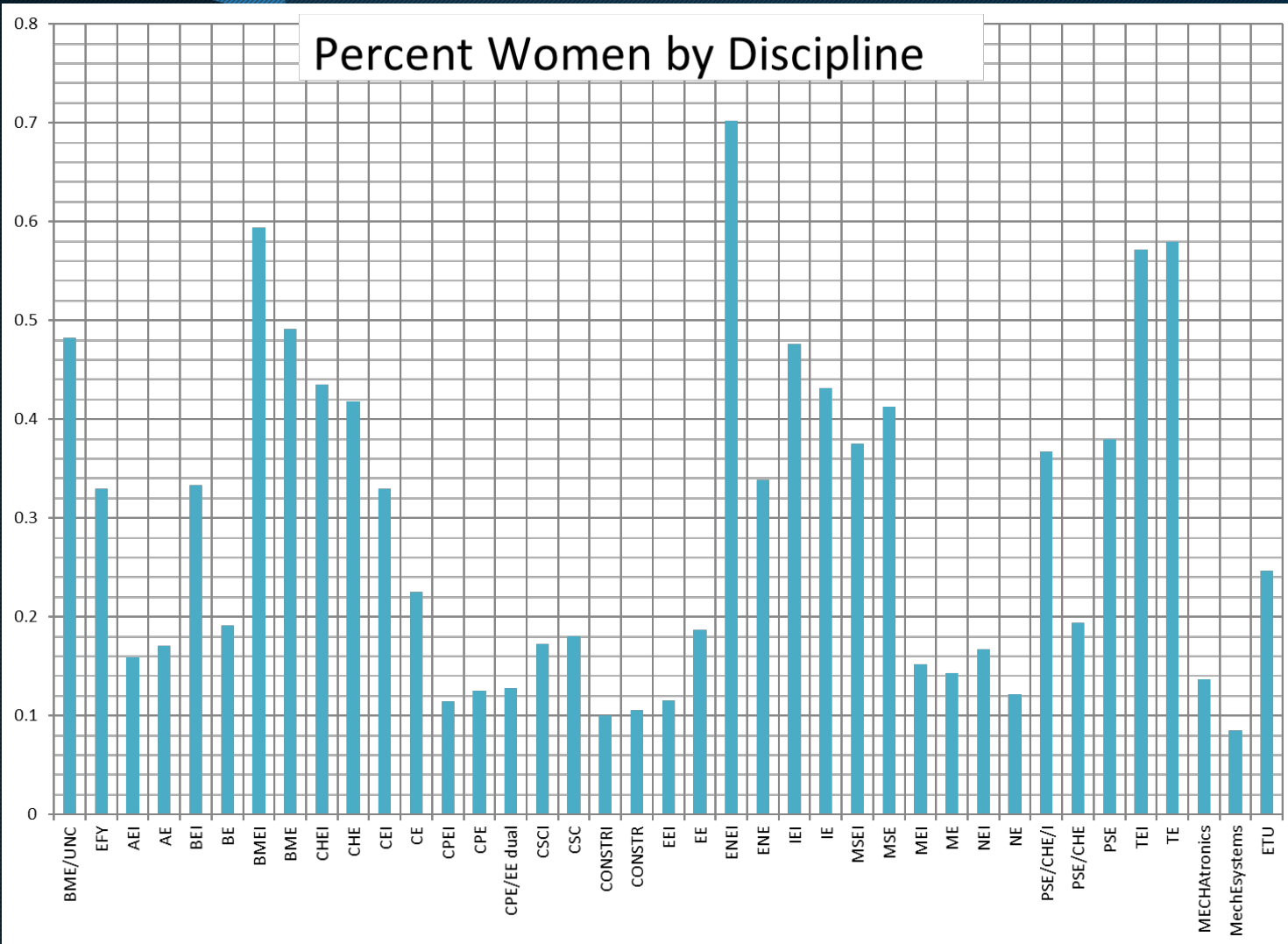


Percentage of Underrepresented Minorities in First Year Cohort



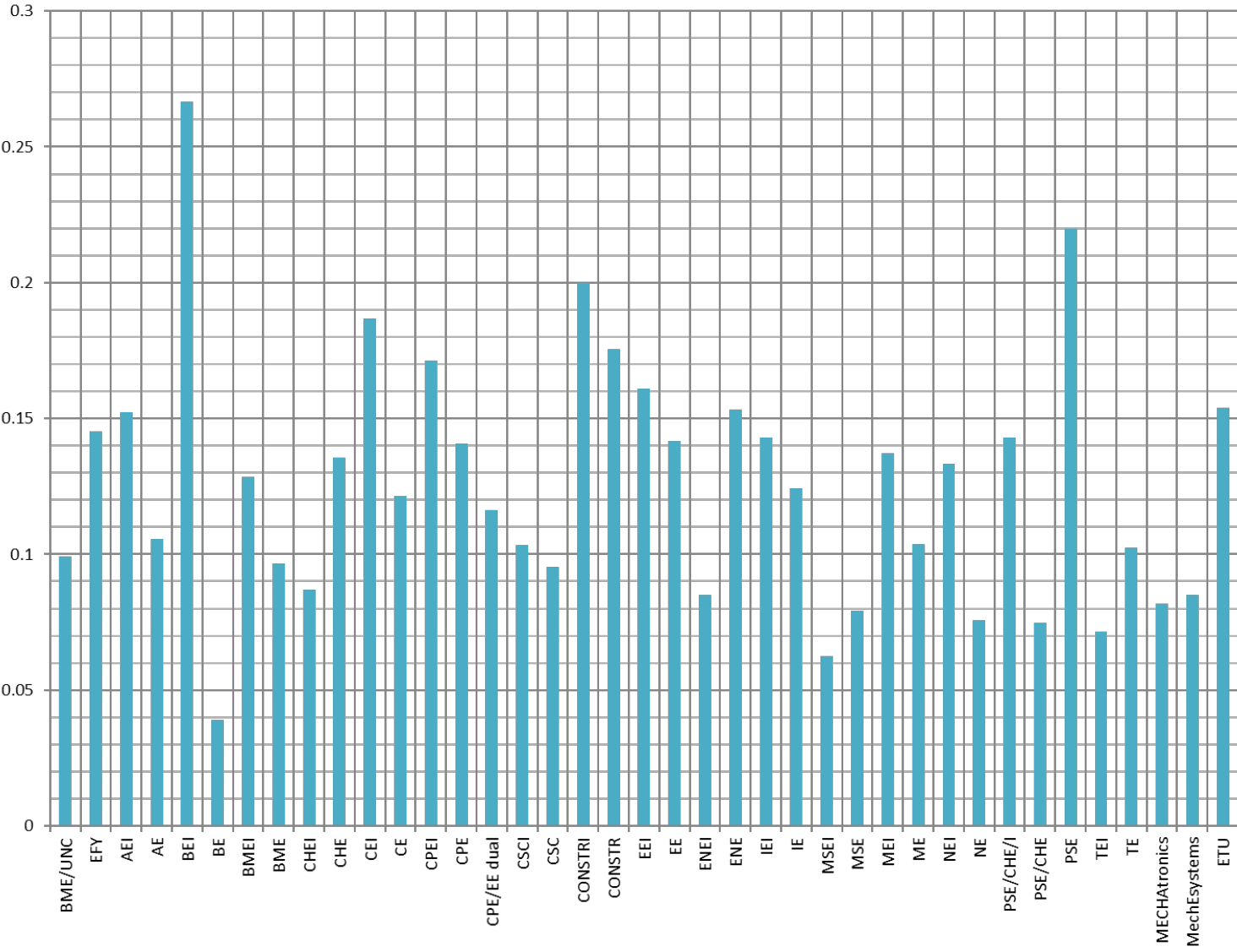
By the numbers

Distribution of Women Across Departments

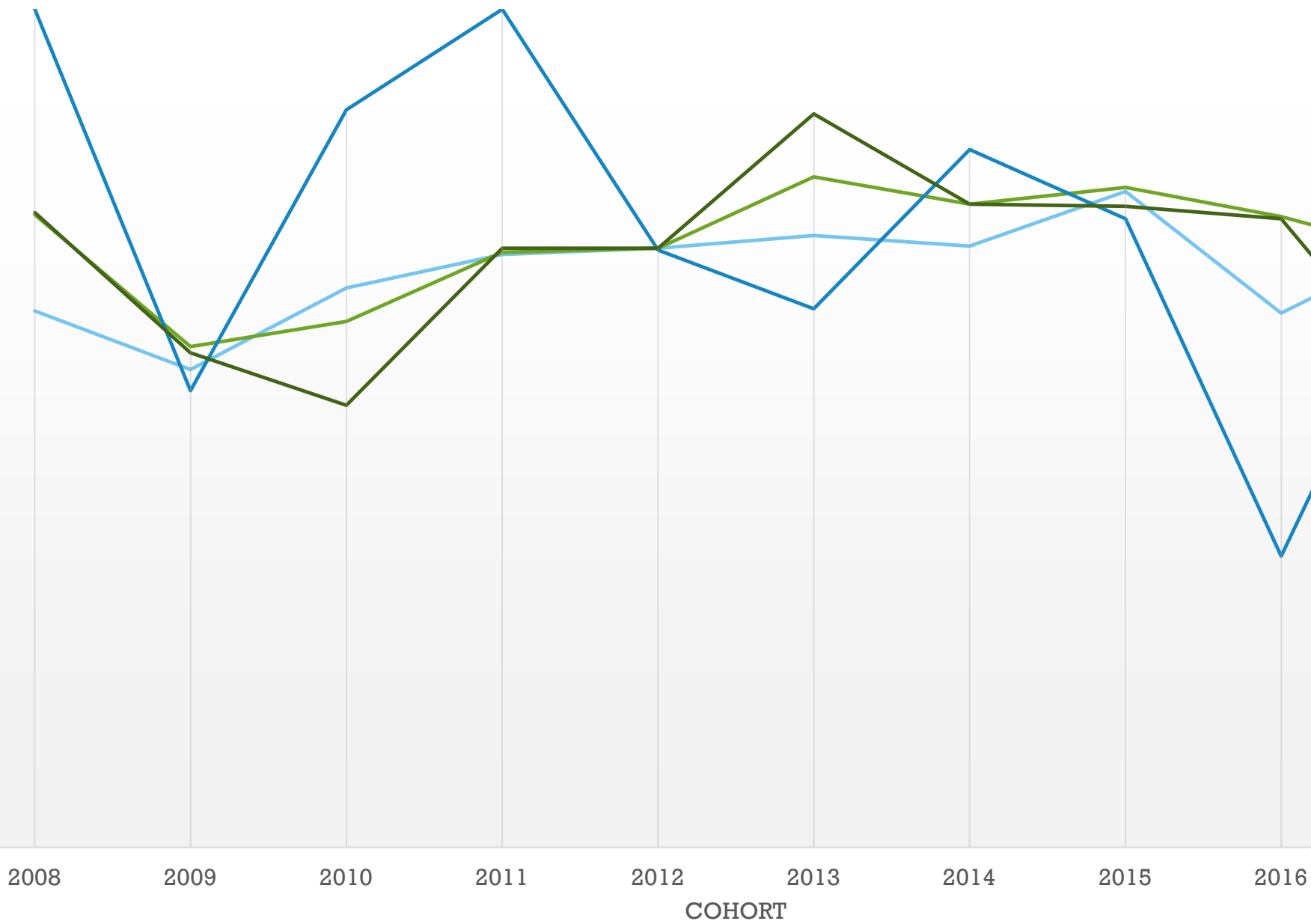




Distribution of URM Students Across Departments

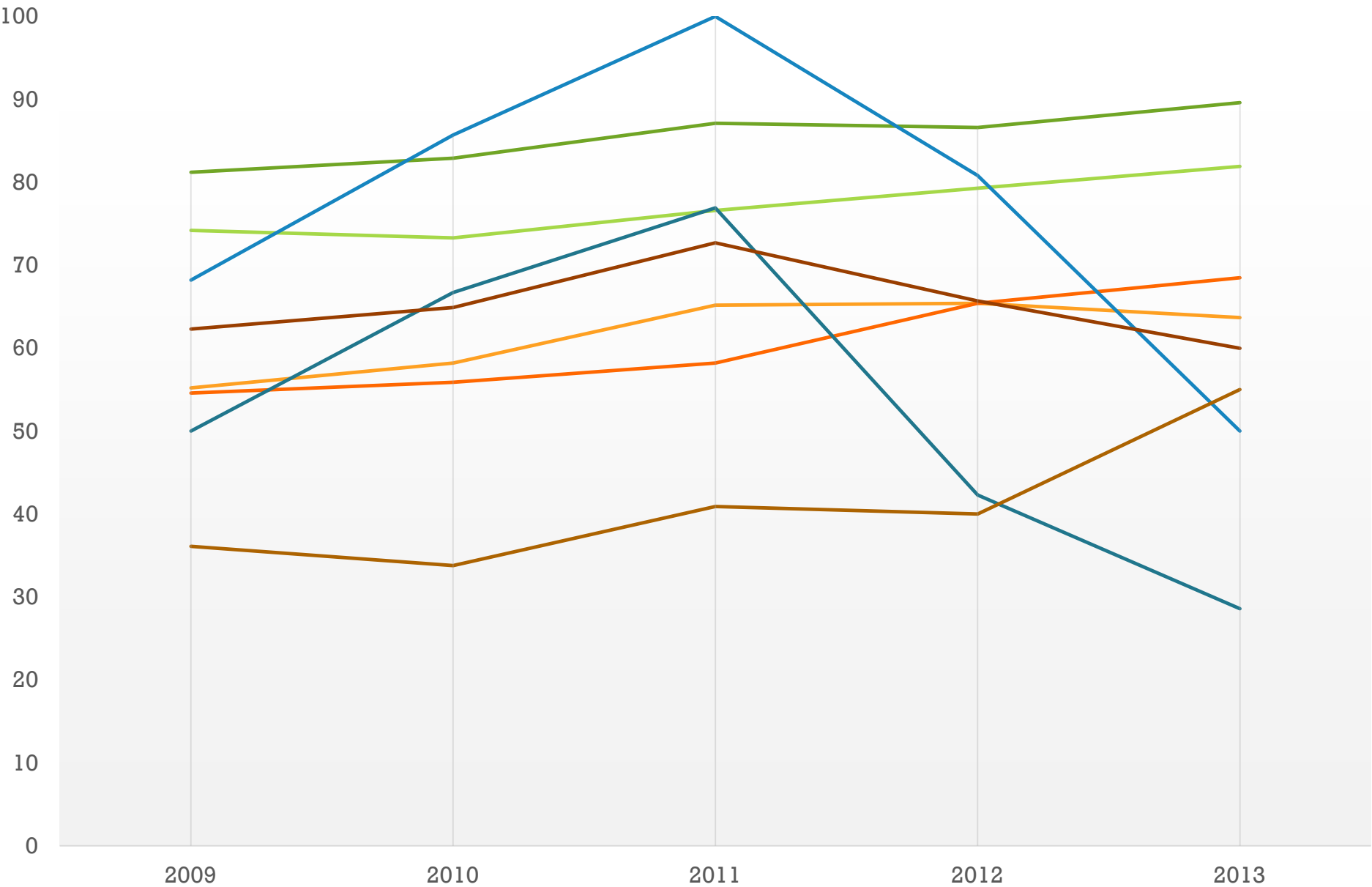


Percentage of Entering Class Retained to Second Year



— All Women — All Men — AA Women — AA Men

Six Year Graduation Rates



- Women in COE
- Men in COE
- Women at NC State
- Men at NC State
- AAF in COE
- AAF at NC State
- AAM in COE
- AAM at NC State

“ We live what we seek to become.

“ Intersectionality and inclusivity become habits, not special programs.

Conclusions

