

NDSF DIVERSITY, EQUITY AND INCLUSION INITIATIVE

Developing opportunities to expand diversity,
equity, and inclusion In Ocean Robotics
Engineering

NDSF NATIONAL
DEEP SUBMERGENCE
FACILITY



NDSF DEI Statement

NDSF is committed to diversity, equity, and inclusion. As a leader in building and operating deep submergence assets that benefit the entire oceanographic community, we recognize the opportunity to make a difference by intentionally building a more diverse generation of engineers and technicians at the facility. In response to goals set within the DeSSC community last fall, NDSF is working to make internal processes more equitable in hiring and recruitment, and providing training in every one of our groups. We are also developing outreach efforts to engage historically marginalized student populations. In cooperation with host institution WHOI, funding partners NSF, ONR, and NOAA, and partners such as the Ocean Exploration Cooperative Institute, NDSF is working towards structural changes across the facility to build a culture that invites and nurtures the potential of all the engineers and technicians who do this vital work.

Best Practices

- DEI **Training** available for supervisors and employees
- Increased **outreach** results in larger candidate pool
- **Mentorship** programs help diverse staff connect with people outside of their line of supervision
- **Recruitment** practices are re-assessed to ensure more candidates are reached
- **Internships** expose more candidates to Ocean Engineering, leading to a more diversified workforce

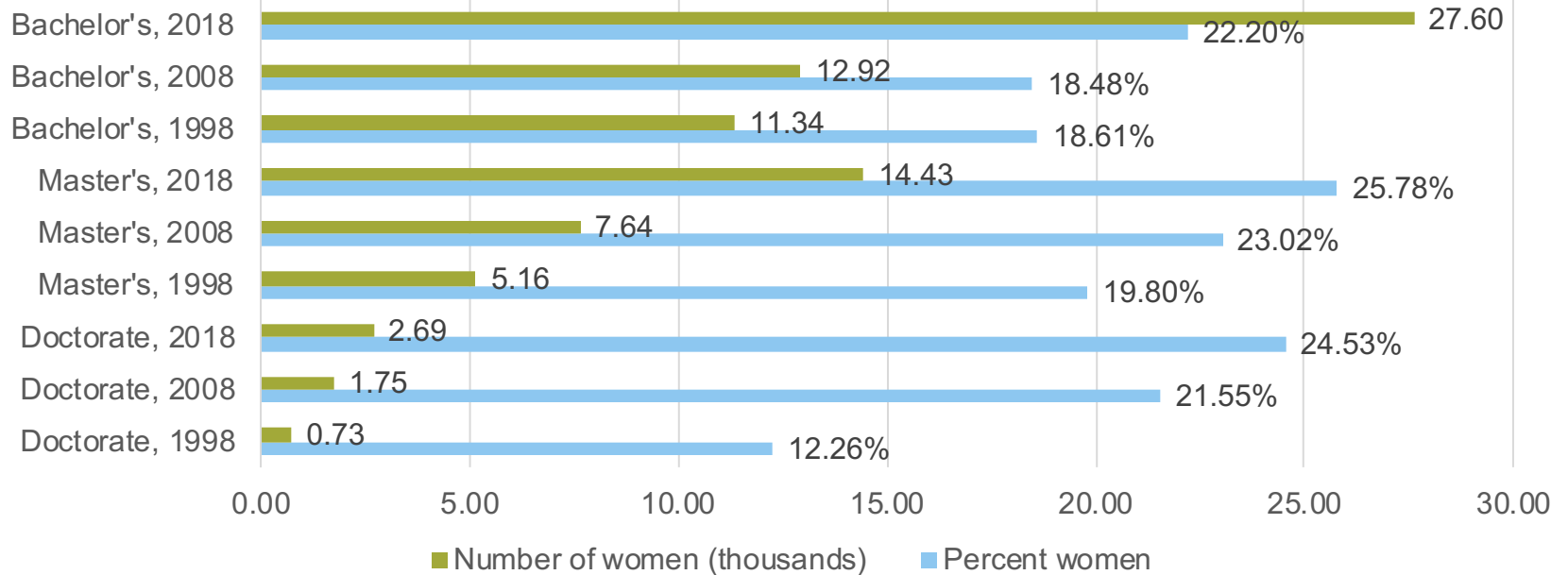
Current Practices

- Training:
 - There is currently limited training in DEI at NDSF
- Outreach/Engagement:
 - Currently limited participation in outreach programs outside of our regular recruitment practices
- Mentorship
 - Current program is open to Technical Staff, Engineering/Research Assistants, & Operations Exempt staff
- Recruitment/Internships:
 - We use HR for most of our recruitment of new talent
 - MATE/MTS program used to recruit summer hires
 - Collaboration with OET
 - Most permanent recruitment is targeted toward upper level undergrad and graduate students with diverse backgrounds

Where we Fall Short

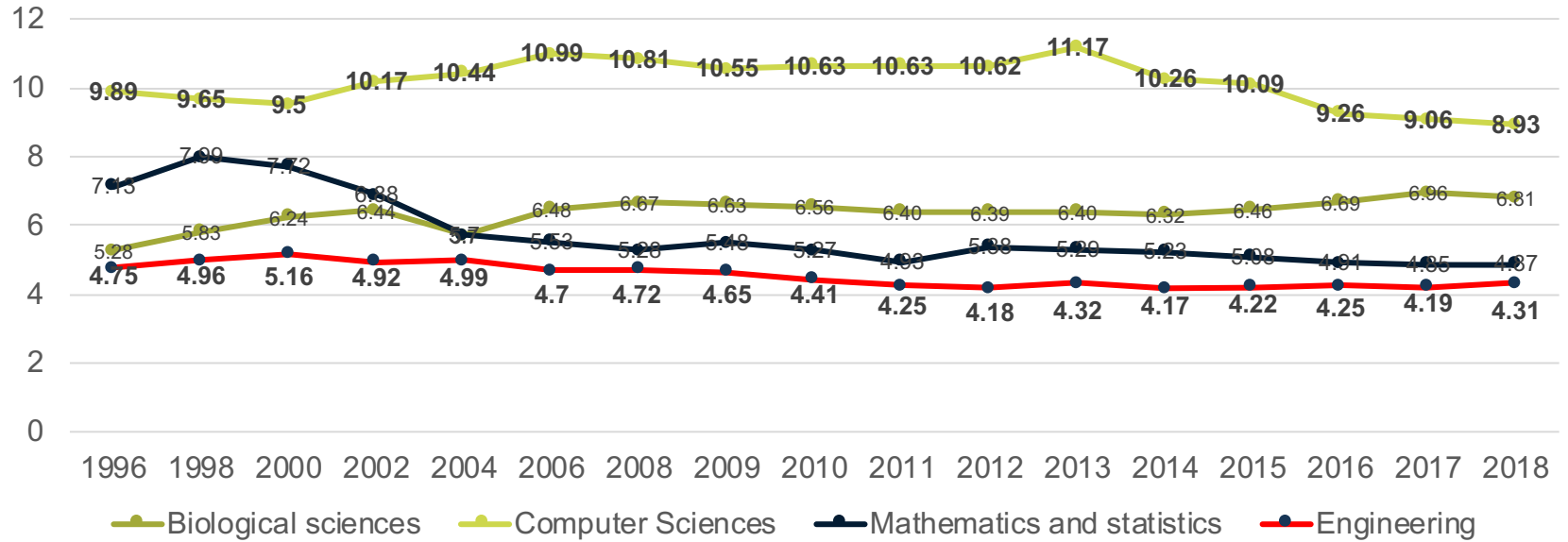
- We are not reaching all potential candidates due to our limited recruitment practices
- Retention of current staff needs to be addressed
- Minimal training about diversity, equity and inclusion is currently available for employees
- Outreach and engagement limited to our current partner schools, restricting our candidate pool
- Our summer fellowship solicitations are posted in February after many students have already made their decisions about summer work
- Housing for interns/fellows/summer hires is limited and costly on Cape Cod, especially during the summer months

Degrees awarded to women: Engineering 1998, 2008, 2018



Source(s): Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, Completions Survey, unrevised provisional release data, accessed 14 January 2020. Related detailed data: WMPD table 5-2, table 6-1, and table 7-1.

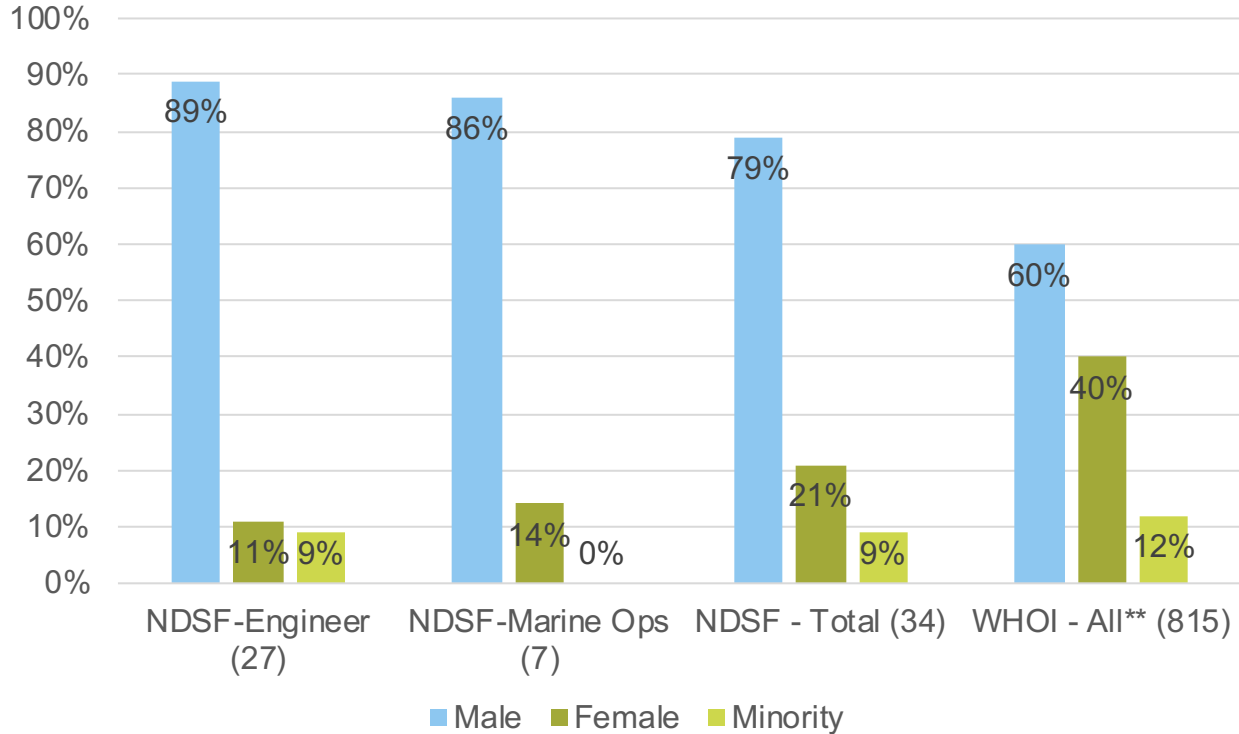
Science and Engineering bachelor's degrees earned by blacks or African Americans, as a percentage of degree field, by field: 1996-2016



Note(s):
Race and ethnicity breakouts and percentage calculations are for U.S. citizens and permanent residents only.

Source(s):
Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, Completions Survey, unrevised provisional release data, accessed 14 January 2020. Related detailed data: WMPD table 5-3

NDSF Staff Demographics



	Total
NDSF-Engineer	27
NDSF-Marine Ops	7
NDSF - Total	34

Data is as of 12/31/2020 and does not include Casual or Temporary employees.

**WHOI - ALL consists of all full time, 3/4 time, and 1/2 time regular employees in all employment categories such as Scientific, Research, Engineer, Technical, Administrative, Marine, Facilities and Trades.

NDSF Goals

- Three paid internships available by summer of 2022
- Partnerships with universities and organizations that have a highly diverse demographic enrollment (Georgia Tech, Howard University, Black in Engineering, IEEE Women in Engineering, Entry Point!, etc.)
- Recruit internships at an earlier stage of a student's academic career to build interest in ocean engineering by the end of 2021
- Increase Mentorship opportunities in NDSF by the end of 2021

How We Get There

- Provide training for NDSF teams in DEI and Implicit Bias
- Amplify outreach and recruitment efforts with multiple universities and organizations:
 - Work with other OECl members to participate in The Ocean Explorers Club at Tuskegee University's School of Engineering
 - Provide support during the annual MATE ROV competition
- Ensure a strong mentorship program is available within the NDSF community
- Explore new recruitment practices to reach a more diversified group of engineers
- Survey our staff and empower to find ways for NDSF improve diversity
- Offer housing in addition to salary for summer interns/fellows/hires who otherwise could not afford to participate in the program and do not usually qualify for this benefit
- Work with various groups to increase outreach to K-12 schools in at-risk areas
- Set goals for change and define accountability