Ohio Engages Underserved Students

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Ohio Space Grant Consortium

2014 Great Midwestern Regional Space Grant Consortia Meeting
September 19–20, 2014
Des Moines, Iowa
The Consortium Structure represents 27 diverse institutions of higher learning located throughout the State of Ohio and the Ohio Aerospace Institute (Lead Institution) in Cleveland, Ohio.

Diversity for the 27 Affiliates includes 7 underrepresented members (25.93%) and 6 female members (22.22%).

Throughout the State of Ohio [18 universities; 8 community colleges (added Cincinnati State Cincinnati State Technical and Community College in FY2014)]. Of the 18 universities, 11 are public (3 Urban Public), 6 are private, and 1 is Federal. There are 2 Historically Black Colleges and Universities (HBCUs) - 1 private*; 1 public. Other partners include NASA Glenn Research Center (GRC), the Air Force Research Laboratories (AFRL), industry, and various Education outreach partners. There is also a designated OSGC Representative on each campus.

*Ohio's Wilberforce University holds the honor of being the Nation's oldest HBCU!
The Ohio Aerospace Institute (OAI is the Lead Institution)

1 - The University of Toledo
2 - Owens Community College
3 - Terra State Community College
4 - Lorain County Community College
5 - Cuyahoga Community College
6 - Cleveland State University
7 - Case Western Reserve University
8 - Lakeland Community College
9 - Ohio Northern University
10 - The University of Akron
11 - Kent State University
12 - Youngstown State University
13 - Air Force Institute of Technology
14 - Sinclair Community College
15 - Wright State University
16 - Central State University (HBCU)
17 - Cedarville University
18 - The Ohio State University
19 - Columbus State Community College
20 - University of Dayton
21 - Wilberforce University (HBCU)
22 - Miami University
23 - Cincinnati State Technical and Community college
24 - University of Cincinnati
25 - Ohio University
26 - Marietta College
Student Opportunities

- Fellowships
  - Master’s Degree Fellowship (Oral Presentation)
  - Doctoral Degree Fellowship (Oral Presentation)
  - Special Fellowship (Combination of factors including need, diversity initiatives, leadership)

Desireé Cotto-Figueroa
(Ohio University) showcases her research on Asteroids
Scholarships

- Junior (Poster Presentation)
- Senior (Oral Presentation)

- OSGC works with campus reps to ensure that the pool of students is diverse
- Paul C. K. Lam Memorial Scholarship at The University of Akron
  The scholarship is awarded to a deserving underrepresented undergraduate student majoring in Mechanical Engineering at The University of Akron
- Participation of Central State and Wilberforce Universities, HBCUs in the consortium are critical to serving underrepresented students
Scholarships

- Community College Scholarships (Poster Presentation)
- Education Scholarships (Workshop and Poster Presentation)

- Majority of students participating in the education scholarship are women
OSGC Student–Innovative–Creative–Hands–on Project (SICHOP)

In the final report the PI must include demographics of students, including numbers of male and female students, numbers of students from underrepresented groups, again by numbers of male and female.

Project High Flight team members, Miami University of Ohio
Student Opportunities

- Internships
  - OHIO HBCU–University Research Internship Program
    - Students from Central State and Wilberforce Universities do summer research at other research institutions of higher education

Mahogany Williams (Wilberforce University) at The Supercomputer Lab at The Ohio State University
Faculty Opportunities

- Faculty Research Initiation Grant Proposal (FRIGP)
- Curriculum Innovation Proposal (CIP)
  - In the final report the PI must include demographics of students, including numbers of male and female students, numbers of students from underrepresented groups, again by numbers of male and female
Faculty Opportunities

- **Mini-Grant Program**
  The OSGC mini-grant program supports innovative projects and programs from disciplines demonstrating interests in STEM, and is available to Ohio K–12.
  - In the application the PI must provide demographics of students, including numbers of male and female students, numbers of students from underrepresented groups, again by numbers of male and female.

  **Rendezvous with a Comet Program,**
  Bishop Mussio Elementary,
  Steubenville, Ohio

  **University of Cincinnati Flight Camp**
  participants holding their foam glider component
The IEIP is designed to enhance informal education activities that support STEM education in areas supported by NASA.

- Women in Science Day of Meetings (WISDOM), The University of Toledo
- HBCU and University/MSI Symposium held at CSU
- Northeast Ohio Regional Science Olympiad, Case Western Reserve University
Women in Engineering Summer Camp @ the University of Dayton (UD)
https://www.udayton.edu/engineering/hs_programs/women_in_engineering_summer_camp/index.php

- Camp is a Sunday–through–Friday experience that gives high school female students the chance to dabble in engineering through hands–on, learn–by–doing activities
- Guided by University professors, experiments are conducted using your creativity to make cool stuff in our classrooms and laboratories
- Meet women engineers and visit a job site
- UD Undergraduate/Graduate students act as mentors/team leaders
- College Experiments in the following Engineering disciplines:
  - Aerospace
  - Chemical
  - Electrical
  - Civil
  - Mechanical
  - Innovation
  - Technology
Women in Engineering

Camp GEMS (Girls in Engineering, Math and Science) @ Ohio Northern University

http://www.onu.edu/academics/college_of_engineering/k12_outreach/camp_gems

- One-of-a-kind four-day experience specifically for girls who love math and science, and who will be entering seventh or eighth grade in the fall
- Students will explore a vast array of exciting worlds – from technology, math, chemistry and computers to civil, electrical and mechanical engineering
- Taught directly by University professors, receiving plenty of personal attention with only 12 students per teacher (engineering students act as mentors)
Annual Student Research Symposium

The Annual Symposium is an opportunity for all students to interact in a professional and diverse setting.

- Donielle Brooks/Clark Fuller (CSU)
- Chelsea Atkins (Kent)/Howard Thompson (OAI)
- Nathaniel Morris (OSU) MS Fellow
- Akron Lunabotics Team + CHRISTEE
- OSGC 2014 Symposium Group Picture

Students’ Poster Presentations