WHO ARE WE?

- Two of the oldest, most established diversity programs housed in the College of Engineering, Computing and Applied Sciences are:
  - WISE: Women in Science and Engineering
  - PEER: Programs for Educational Enrichment and Retention
WHERE ARE WE?

- Clemson is currently ranked:
  - 23rd Top Public University according to 
    - U.S News & World Report
  - 3rd Students who love their college 
    - Princeton Review
  - 91% Freshman Retention Rate
CECAS General Engineering

- Majority Retention = 81.2%
  - Graduation rate = 78.3%

- A.A. + His/Lat Retention = 76.3%
  - A.A.+His/Lat Graduation rate = 57.9%

- Women Retention = 74.6%
WHAT WE DO?

OUTREACH

RECRUITMENT

RETENTION
OUTREACH & RECRUITMENT

- Girl Scouts Day
- Project: WISE
- It’s a Girl Thing
- K-12 School Presentation
- WISE Choice
- PEER Snapshot
- SEE Clemson
- Summer Camps
**PEER SnapShot**

*Outreach program for juniors and seniors in high school*

Serita Acker, Director, Programs for Educational Enrichment & Retention (PEER); Lisa Jackson, Associate Director, PEER

### Program Overview

**Desired Program Outcomes**
- Offer top performing underrepresented prospective students the chance to experience life as a Clemson University engineering or science major

**Program Measures**
- Number of students enrolling in STEM majors
- Number of students enrolling in Clemson University

**Key Program Components**
- One-day on-campus opportunity
- Attend mock class with STEM Activities
- Tour Clemson University’s campus
- Major Networking session with current CECAS students
- Eat lunch in CORE dining hall
- Information session with Admissions, Financial Aid, and General Engineering

**Program Participants**
- Underrepresented males and females
- African American, Hispanic/Latino & American Indian
- South Carolina high school juniors and seniors

### Guiding Theory/Practice

**Participants became more confident in their STEM major choice after attending PEER SnapShot.**

**Participants’ excitement level about attending Clemson increased.**

"This was an awesome experience and made me love Clemson even more!"
— PEER SnapShot Participant

Participants engaging in a STEM activity lead by Clemson University’s EMAGINE Network.[Left]

Participants touring Clemson University’s campus during PEER SnapShot. [Above]

---

**About PEER**

Programs for Educational Enrichment and Retention (PEER) supports African American and Hispanic/Latino American students in the College of Engineering and Science at Clemson University. Clemson is a land grant research institution located in upstate South Carolina, with approximately 21,000 students. African American students make up approximately six percent of the total, while Hispanic/Latino American students account for 2.4 percent (University Factbook). PEER has been welcoming underrepresented students into the College of Engineering and Science for 29 years. Since it was established, the PEER mentoring program for incoming undergraduates has been the cornerstone of a network of programs designed to support minority STEM students and their plans for academic and career achievement. Additional PEER retention activities include tutoring, counseling, and personal goal support, recruiting, K-12 outreach, and (informally) alumni service.

Staff Members: Serita Acker (Director); Lisa Jackson, Nancy Pare; Francene Thomas; Sue Lasser; VeeAnder Mealing

---

**Best Practices & Lessons Learned**

- Early exposure to STEM and PEER
- Providing a true view of campus and the college of engineering, computing, and applied sciences

---

With special thanks to:

PEER & WISE • Clemson University College of Engineering Computing and Applied Sciences • General Engineering Department • Admissions office • Financial Aid office
PEER & WISE SUMMER EXPERIENCES

- FIRE: Foundations in Research Experiences
- MEW: Math Excellence Workshop
- New PEER & WISE summer experience
PEER F.I.R.E.
Foundations in Research Experience

Serita Acker, Director, Programs for Educational Enrichment & Retention (PEER); Lisa Jackson, Associate Director, PEER; Frederick Paige, PhD, Program Creator

Program Overview

Desired Program Outcomes
• Provide students collegiate math skills, hands-on STEM learning, research opportunities, and industry exposure

Program Measures
• Number of FIRE students Retained in STEM majors
• Number of FIRE students participating in undergraduate research

Key Program Components
• Math focus
• Hands-on introduction to the excitement of research
• Industry information sessions and tours
• Experience in effective online learning
• Create a strong community of mutual support and encouragement among students which would continue throughout their undergraduate careers
• Introduce participants to caring faculty and staff willing to provide future assistance
• Introduce FIRE students to minority STEM graduate student role models

Program Participants
• Underrepresented males and females
• African American, Hispanic/Latino
• Incoming Freshmen

Guiding Theory/Practice

FIRE participants toured the Duke Energy Nuclear simulation room. [Left]

FIRE participants engaged in a drug delivery in cancer research experience.[Left]

FIRE participants and staff group photo. [Left]

Best Practices & Lessons Learned
• Early exposure to collegiate math
• Exposure to resources available on campus
• Early transitional resources and skills
• Introduction to undergraduate research opportunities
• Exposure to graduate student role models

Program Results

If you were to major in a science or engineering field, how likely would you be to: Have access to a “Role Model” in this field (i.e., someone you can look up to and learn from by observing

Before FIRE
• 1 (Not At All Likely)
• 2
• 3
• 4
• 5 (Extremely Likely)

After FIRE
• 1 (Not At All Likely)
• 2
• 3
• 4
• 5 (Extremely Likely)

Please rate your level of agreement with the following statements: I am confident that... I will succeed (earn an A or B) in my math courses.

Before FIRE
• 1 (Strongly Disagree)
• 2
• 3
• 4
• 5 (Strongly Agree)
• Don’t Know

After FIRE
• 1 (Strongly Disagree)
• 2
• 3
• 4
• 5 (Strongly Agree)
• Don’t Know

About PEER

FIRE was created with the goal of increasing the number of minority students who pursue both graduate level studies and careers in STEM fields. The program builds on PEER’s award-winning Math Excellence Workshop, a summer bridge program based on mathematics education using collaborative learning. FIRE was launched in July 2015 as an innovative and cost-effective replacement. The program brought 24 minority students to campus for a one-week summer bridge program before their freshman year at Clemson. Featuring both online and in-person educational opportunities, the program focuses on providing students with hands-on STEM learning and research opportunities. Staff Members: Serita Acker (Director); Lisa Jackson, Nancy Parra, Francene Thomas; Sue Lasser; VeniAndre Martin.
RETENTION

- Mentoring Programs
- WISER
  - Living & Learning Community
- Professional Seminars
- Social events
- Scholarships
- Fluor Study Hall
- E-Newsletter
- Test Bank
PEER Mentoring
Proactive mentoring designed to help students transition into Clemson

Serita Acker, Director, Programs for Educational Enrichment & Retention (PEER); Lisa Jackson, Associate Director, PEER

Desired Program Outcomes
Once students are at Clemson, they find the support needed to help them thrive inside and outside of the classroom

Program Measures
• Number of underrepresented students retained in College of Engineering, Computing, and Applied Sciences (CECAS)
• Number of underrepresented students attaining degrees from CECAS

Key Program Components
• Mentoring
• Providing a friend who will offer advice and support
• Answering questions about life at Clemson
• Organizing study groups and social activities
• Making sure incoming freshmen are aware of what is happening on campus

Program Participants
• Underrepresented males and females
• African American, Hispanic/Latino & American Indian
• Incoming freshmen enrolled in CECAS

Best Practices & Lessons Learned
• PEER Mentors strive to practice “unconditional positive regard.”
• Persistence in contacting mentees in the face of initial disinclination is crucial
• Presenting information on the unspoken assumptions made by faculty and staff helps new students orient more quickly
• PEER mentoring should not be solely academic
• Sometimes all you can do is listen

Program Results
Clemson University ranks in Top 20 in graduating African-American engineers
Clemson’s ranking this year was up four spots from 2015 and 13 spots from 2014. When historically black universities are excluded, Clemson ranked 12th this year among predominantly white institutions.

PEER is central to Clemson’s effort to maintain forward momentum and is an acronym for Programs for Educational Enrichment and Retention.

The program offers several services, but juniors and seniors serving as mentors to freshmen and sophomores is at its heart.

Crystal Pee, a chemical engineering major from Conway, said her mentor introduced her to the Clemson chapter of the National Society of Black Engineers. She served as the chapter president, which led her to a conference in Minneapolis, where she landed an internship with a multinational food company.

Now in her fourth year at Clemson, Pee serves as a mentor to 13 other students, who sometimes tell her, “I don’t know if I can do it.” “It’s your job to step in and say, ‘You can do it,’” Pee said. “We have resources. You’re their parent when you need to be.”

Serita Acker, the director of PEER and the related program WISE, said the latest ranking highlights the effectiveness of the programs offered at Clemson.

“Clemson is making strides in diversity and inclusion,” she said. “Our office has an impact on that. It’s a welcoming place. Minorities and women know they can come here and transition and become a part of the overall Clemson family.”

About PEER: A place to belong
College is an amazing time, and our programs for underrepresented students in the College of Engineering, Computing and Applied Sciences (CECAS) make it even better, nurturing academic and professional success while fostering life-building personal connections. Our diversity program are designed to enrich the student experience at Clemson by helping students develop the skills they’ll need to be excellent engineering and science majors.

Effective study skills, time-management techniques and insights from current, successful CECAS majors are all available, but these offerings go far beyond academics. Along the way, they provide opportunities to make lifelong friends. So come in. Sit awhile. Laugh, study, socialize, share. Find your fit – with STEM opportunities with PEER at Clemson.

Staff Members: Serita Acker (Director), Lisa Jackson, Nancy Pate, Frennise Thomas, Sue Lasser, VeeAnder Mealing
### IMPACT

<table>
<thead>
<tr>
<th>It's a Girl Thing: An average of 90% increase in awareness in engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>WISE Choice: Typically 80% continue to pursue degrees in STEM at Clemson</td>
</tr>
<tr>
<td>MEW: Students who attend are significantly more likely to persist and graduate than their counterparts</td>
</tr>
<tr>
<td>Mentoring: 70% of mentees participate in PEER &amp; WISE events and services and are “satisfied” or “highly satisfied” with their mentoring experience</td>
</tr>
<tr>
<td>WISER: 40 Students live on the living &amp; learning community floor each year</td>
</tr>
<tr>
<td>Project WISE: 55% continue on to Clemson and graduate with degrees in STEM</td>
</tr>
</tbody>
</table>
Best Practices & Recruiting & Retention

- PEER Mentors strive to practice “unconditional positive regard.”
- Persistence in contacting mentees in the face of initial disinclination is crucial
- Presenting information on the unspoken assumptions made by faculty and staff helps new students orient more quickly
- PEER mentoring should not be solely academic.
- Sometimes all you can do is listen

- Early exposure to STEM and PEER
- Providing a true view of campus and the college of engineering, computing, and applied sciences
- Early exposure to collegiate math
- Exposure to resources available on campus
- Early transitional resources and skills
- Introduction to undergraduate research opportunities
- Exposure to graduate student role models
Evaluation

- Consistency
- Learning outcomes
- Pre and post assessment
- Knowing what your company/funder desires
- Knowing what your university can do for you
KNOW YOUR STUDENTS’ NEEDS

- Financial Support
- Transportation
- Obligations at home
- Feeling like an outsider
- Negative Influences
- Dealing with failure and adversity
- Social acceptance
- Navigating through campus
- Awareness of resources
### SWOT Analysis Worksheet

<table>
<thead>
<tr>
<th>Internal Factors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths (+)</strong></td>
<td><strong>Weaknesses (‐)</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>External Factors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opportunities (+)</strong></td>
<td><strong>Threats (‐)</strong></td>
</tr>
</tbody>
</table>

S  ________________  
(Specific)

M  ________________  
(Measurable)

A  ________________  
(Achievable)

R  ________________  
(Realistic)

T  ________________  
(Time Bound)

E  ________________  
(Embrace)

R  ________________  
(Recognize)