



# What Counts?

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**Carolyn Vallas, PI**  
**Chad Smith, Counselor & ACES Coordinator**



# Academic Community for Engineering Students (ACES)

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- Five year grant (August 1, 2007 - July 31, 2012)
  - Amount Awarded: \$1,999,914 Million
  
- Overarching Goal:
  - To increase the number of students earning engineering baccalaureate degrees, with an emphasis on increasing the number of graduates from underrepresented populations.
  
- Investigators:
  - Carolyn Vallas (PI)
  - Patricia Taylor (Co-PI)
  - Paxton Marshall (Co-PI)
  - Larry Richards (Co-PI)
  
- Engineering Program/Support:
  - Ji Hyon Mun, Department Head of Engineering at TNCC
  - Chad Smith, TNCC ACES Program Coordinator
  - Wraegen Williams, UVA SEAS/CDE Research Scientist
  - Juliet Trail, UVA SEAS/CDE Research Assistant
  - Kristel Townsend, UVA SEAS/CDE Program Coordinator

# Grant Goals & Strategies

## **GOAL 1**

Increase SEAS cohort's year-one-to-year-two retention rate by 2% each year



## **Strategies**

- Summer Bridge
- Tutoring
- Creative Introductory Engineering Design Courses
- Academic Counseling
- Summer Tuition Awards
- Outreach Activities
- Industry Tours

## **GOAL 2**

Increase SEAS cohort's 5-year graduation rate by 2% each year



## **Strategies**

- Tutoring
- Transfer Student Network
- Research Experiences for Undergraduates/Internships
- Industrial Information Sessions
- Academic Counseling
- Career Fairs
- Organizations
- International Experiences

## **GOAL 3**

Increase TNCC cohort's transfer rate by 2% each year



## **Strategies**

- UVA-to-TNCC Summer Laboratory Research
- Campus Visits
- Community College Day
- Articulation Agreement
- PRODUCED
- Academic Counseling

## **GOAL 4**

Increase TNCC cohort's three-year graduation rate by 2% each year



## **Strategies**

- Emerging Scholars Program
- Engineering Club
- Industry Tours
- Introductory Engineering Course
- Study Groups
- Internships

# Strategies

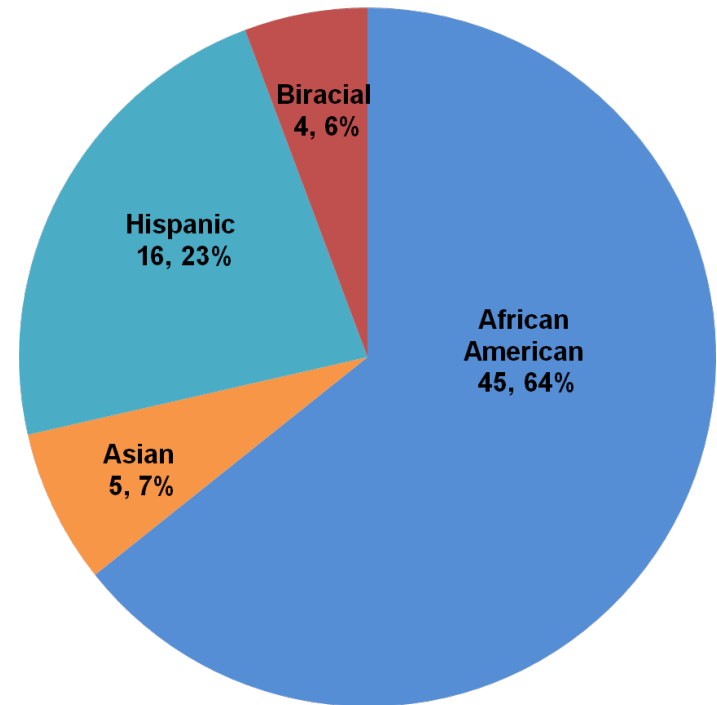
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# Transition to UVA Summer Bridge

- Intensive six-week summer program, that assists incoming first-year students in making a smooth transition
- Students will
  - Complete university courses for credit:
    - Calculus I
    - Science, Technology and Society
    - Chemistry I Lab
  - Gain first-hand experience about college life

## ***Highlight***

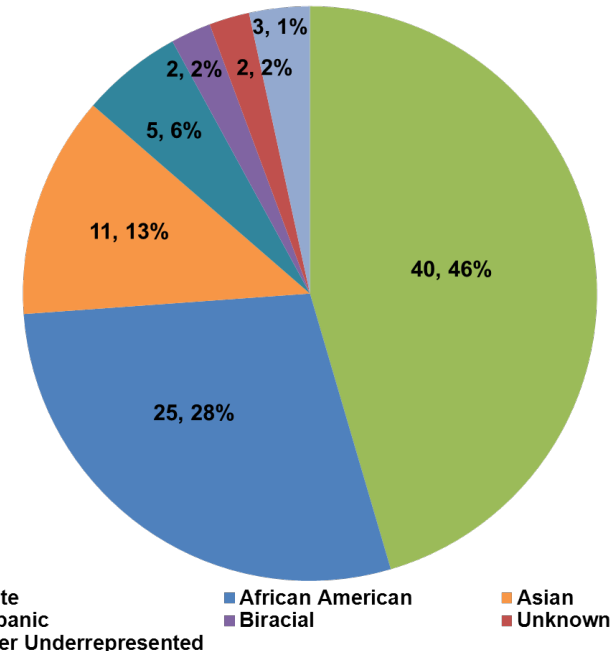
***94.4% of 2008-11 Bridge students have been retained within UVA SEAS***



2008 (14) | 4 Male | 10 Female  
2009 (8) | 7 Male | 1 Female  
2010 (31) | 17 Male | 14 Female  
2011 (17) | 10 Male | 7 Female

# Transition to UVA Community College Day

- Lab Tours
- Class Visits
- Student Panels
- Conversations with Faculty & Student Organizations
- Campus Tour
- Resume Workshop

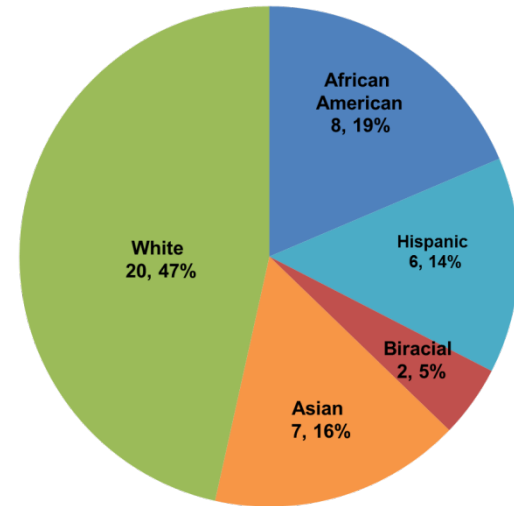


2009 (22) | 17 Male | 5 Female  
 2010 (15) | 13 Male | 2 Female  
 2011 (15) | 13 Male | 2 Female  
 2012 (36) | 30 Male | 6 Female

**Highlight:** In 2012, number of participants more than doubled

# Undergraduate Research

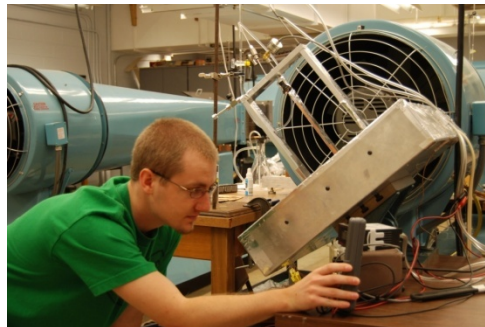
- Aims to
  - encourage interest in conducting engineering research
  - help participants learn what graduate and post-graduate work entails
- Students benefit by applying
  - concrete applications of theoretical, classroom concepts
- Students receive a \$4,000 stipend
- Room & Board
- Excursions & Social Activities



Total - 47 students

## **Highlights**

*19% of TNCC participants have transferred to UVA SEAS  
27% of UVA researchers have graduated and are pursuing graduate education or the engineering workforce*



# Academic Advising, Tutoring & Seminars

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- Academic advising support for ACES students
- Tutors support students in gateway academic courses
- No F.E.A.R Student Success Seminars
  - Future Engineers Achieving Results



# Scenarios

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It's Time to Work!

# Scenario 1

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- Forty-two students participated in an annual Community College Day event at a four-year university to learn more about the updated Guaranteed Admission Agreement between their current Community College and the university through a Transfer Admissions Information Session. The students and CC advisors raised several issues of concern regarding differences in Guaranteed Admission for engineering versus arts & science majors.
- **The major differences between these two agreements have posed a significant issue for the PI. Please outline a brief step-by-step plan that will aid the PI in working with administration to alleviate these discrepancies.**

# Scenario 2

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- Jane Doe and James Smith have set up a meeting with the 2-year coordinator where they inform him that they have applied for admissions to the 4-year partner university. The coordinator also finds out that:
  - Jane Doe has not applied to any other schools as her life-long dream has been to attend the 4-year partner university.
  - James Smith lets the coordinator know that he is very interested in attending the 4-year partner school, but has kept his options open by applying to other state university as well.

A few months pass and... Jane and James were both waitlisted at the 4-year partner university. James also said that he was admitted to one other university to which he had applied. With this information, the coordinator is unsure of how to proceed, as he knows that only 2-3 students per year are removed from the waitlist and granted admissions to the partner university. On top of this, all of the deadlines for admissions at all other state university have passed.

# Scenario 2

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- **As the coordinator for this grant, and with the knowledge that you have about the partner schools transfer admissions and waitlist process how would you advise these students? (ie: Would your advice be different for these students?)**

# Scenario 3

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- As a STEP grantee, you attend the annual meeting and display your poster. The program officer for your grant comes by to visit and is concerned about the number of students from the 2-year school that are transferring to your university. As the PI, you did not understand his concern as the cohort transfer rate for the 2-year school has averaged 87% over the past four years. Through a deeper discussion with the program officer, you find that he wants students from the 2-year school to transfer to your university.
- Back at your home university, you review the NSF-STEP RFP and note the following language: “*Projects may involve a single institution, collaboration with business and industry partners, or collaboration among several institutions. For example, projects **may include** collaborative efforts that improve the transition of students among the collaborating institutions, such as transfer between two- and four-year institutions.*”

# Scenario 3

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- **How should the partnership demonstrate to the National Science Foundation that this grant was successful even though community college students did not transfer to the 4-year partner school?**

# Scenario 4

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- As the PI for the STEP grant, you evaluate the transfer requirements at other 4-year schools throughout the state via the Community College System's Transfer Wheel. The results of study indicate that other 4-year universities require a 2.5 GPA, a completed Associate's Degree, and grades of a C or better in transfer courses. In comparing these requirements to those of your university you find that your school's transfer requirements to be more rigorous, with the following minimum requirements:
  - Complete an Associate of Science or Associate of Arts and Sciences degree in Engineering or Science.
  - Achieves a cumulative grade point average in coursework at all CCS colleges of **3.4 or better**.
  - Earns a grade of C or better in every CCS course taken, with the exception that the grade in the following courses must be a B or better: English 111, and all Mathematics, Physics, and Chemistry courses.
  - Submits a completed application for fall transfer admission, including the application fee, **SAT scores**, and all supplemental materials by the March I application deadline.

<http://www.vccs.edu/transfer/>

# Scenario 4

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- The rigorous nature of your school's requirements are impeding the transfer process from the 2-year partner school and other community colleges throughout the state. **As the PI, what steps would you take to work with the administration to increase the number of applicants, offers, and acceptances to your university?**



# Scenario 5

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- A two-year community college and 4-year university that are approximately 150 miles apart developed a successful National Science Foundation STEP grant. One significant challenge for the partnership has been that the community college has a local 4-year Higher Education Center housed on their campus within walking distance of the engineering building. Furthermore, this local 4-year institution is widely known throughout campus and is active in all of the community colleges events and attends every college fair, promotes events in the newspaper, and is in regular contact with students and faculty. As a result of the distance, the 4-year partner university is in constant competition to establish a presence at the community college and the transfer rate to the 4-year partner university has not achieved the desired results.
- **As a member of the Advisory STEP Board, how would you advise the 4-year partner university?**
- **As the PI for the grant and given the above advice, what would you decide to do?**

# Scenario 6

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- The PI and Co-PI for the grant set up a conference call with the Advisory Board to discuss challenges with the grant. The major issue is that students from the 2-year school are transferring to institutions outside of the partnership. A member of the Advisory Board who conducted a rotation at the National Science Foundation suggests that this will be a major issue in applying for the next phase of funding. As such, the PI and Co-PI plan to develop a student tracking system for community college students that participated in activities funded through the grant that transfer to institutions outside of the partnership.
- **If you were the PI or Co-PI, who would you contact and what type of student tracking system would you create for community college students that participated in activities funded through the National Science Foundation grant but who later transferred to institutions outside of the partnership?**