

# Helping STEM Students Find a Sense of **Belongingness** and **Stay Excited** about Their Studies

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# Our Purpose Today...

... is to share the experience of the ENLISTEM Scholars Program so other schools can implement practices that excite students with little financial investment.

- Faculty perspective
- Student perspective
  
- Applications for you
- Your questions



# ENLISTEM

A Scholarship Program to Educate and Nurture Leadership  
in Science, Technology, Engineering, and Mathematics



- 5-year S-STEM Grant
- 32 students each year
- Mostly sophomores



# The ENLISTEM Program

## GOALS :

- Increase retention of STEM students
- Improve student support for participants



# Our Students – 102 total

- Majors:
  - 8 Biology, 12 Chemistry, 1 Geology, 1 Physics
  - 17 Computer Science
  - 58 Engineering
  - 5 Mathematics
- 73 Male and 29 Female
- 49 Black or African American, 18 Asian, 19 White, 1 American Indian (15 did not report); 8 identified as Hispanic or Latino
- Wide range of ages
  - 25 “traditional” students (21 or younger)
  - 37 ages 22 to 25
  - 40 non-traditional (26 or above)



# Our Students – 102 total

- Graduation and/or transfer statistics
  - 17 were not yet finished at Perimeter when ENLISTEM concluded
  - 65 graduated or transferred
  - 18 left the program because no longer financially eligible, no longer a full time student, or for an unknown reason
  - 2 left the program due to the transfer out of a STEM major
- Because of scholarship requirements, students must have a 3.0 GPA to apply
- In addition, students must have unmet financial need and, due to NSF requirements, US citizens or permanent residents



# The ENLISTEM Program

## GOALS :

- Increase retention of STEM students
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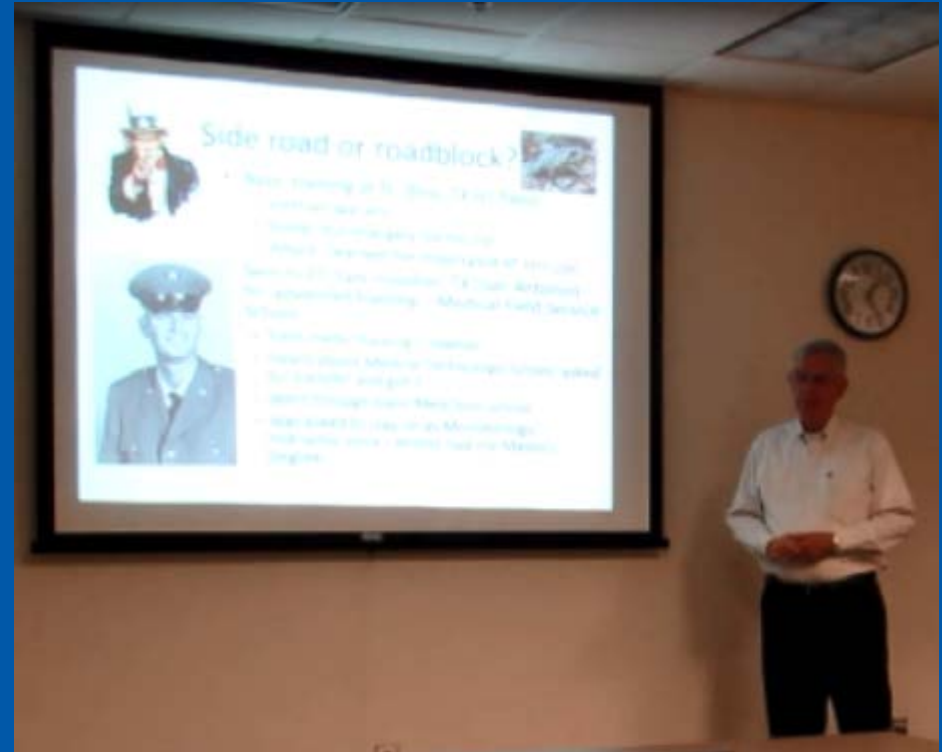
## MEANS OF ACHIEVING THESE GOALS BEYOND FINANCIAL ASSISTANCE:

- Mentor and advise students
- Organize activities that
  - Encourage persistence
  - Foster a sense of belongingness
  - Serve the community



# Interaction with STEM experts

- Career advice



- Personal advice

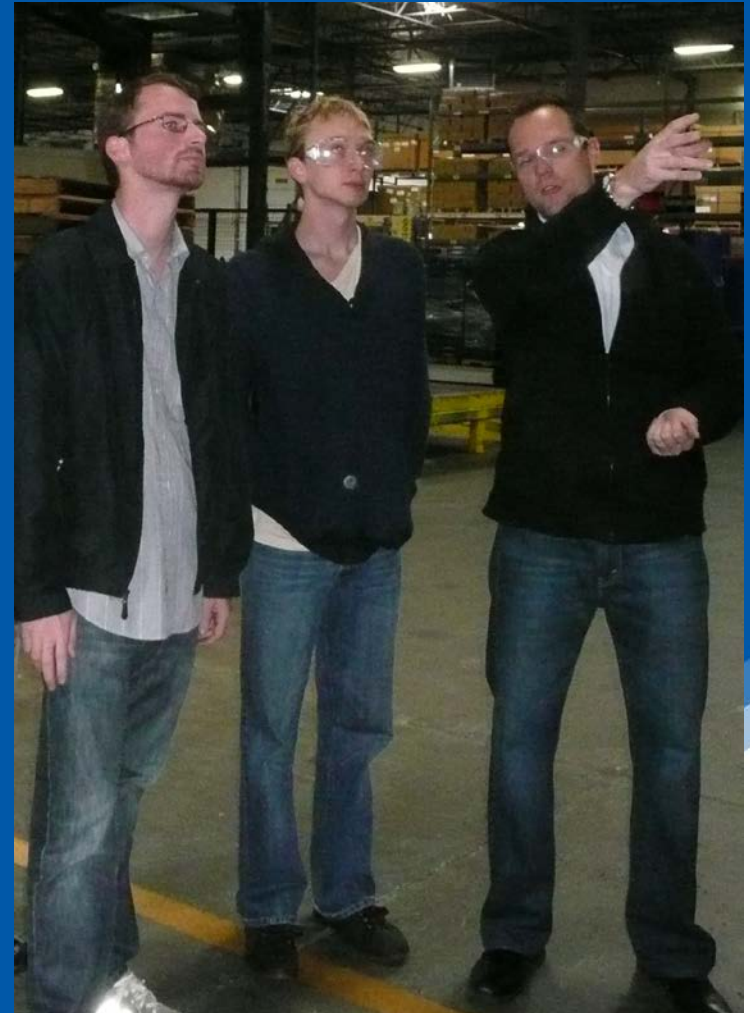




# Interaction with STEM experts



- During tours



- During talks

# STEM careers in action



- Tours typically involve time to speak with experts in addition to the actual facility tour



# STEM careers in action

Delta Air Lines



# STEM careers in action

Our most recent tour



# Leading children in STEM activities

- STEM Nights
- Grade-specific activities



# Leading children in STEM activities

- Benefits both the elementary and the college students



# Student perceptions of ENLISTEM



# Our Experience – Speakers and Tours

- Who do we know? Who do our colleagues know?
  - Alumni associations
  - Friends
  - Colleagues who used to work in industry
- Where else could you keep an eye or ear out for possibilities?
  - Local news
  - Casual conversations
- What resources are in our community?
  - Google that company and “company tours”





# Our Experience – Speakers and Tours

- PERSEVERANCE PAYS OFF!!
- Almost everyone we spoke with really wanted to assist future engineers and scientists – we just had to work to find the right people to talk to!
- Thank-you gifts
  - Extra goodies from a conference
  - Office of Student Life
  - Admissions



# Our Experience – Elementary Schools

- Different than speakers and tours because they came to us.
- All-school STEM nights and grade-specific day visits
- Low-cost activities
  - Science
  - Math
  - Engineering



# Guided Brainstorming

- Who is your student audience?
  - Engineering club, STEM class, etc.
  - Freshmen/sophomores or juniors/seniors?
- Which would you like to pursue first, working with an elementary school, having speakers come to your campus, or organizing a tour?
- On what timescale are you going to try to organize an activity?
  - This semester?
  - For a summer class?
  - Next fall?



# Student comments

The program has nurtured my growth in my own field of study, computer science. Since joining the program in the fall of 2015, I have learned a lot about many STEM fields, *met tons of great people with similar interests*, and I am able to network efficiently. I enjoy touring different companies, learning about what they have to offer, and *meeting people who have established themselves* within my field of study.



# Student comments

The FIDO Project presentation was great, and it *made me think a lot about doing what I love*, the presenter seemed very passionate and happy because she was doing what she loves, so I will make sure I only do what I love for my career that way I can live a happy life.



# Student comments

The event I liked the most was an elementary school STEM day. We went to an elementary school and showed the students a few things science can do. It was fun. The enthusiasm in the eyes of the kids was very energizing. The coordinators of the program are not only good at picking the best activities, but are also nice and resourceful.



# Summary

There you have it...

- Be nice.
- Be resourceful.

***Remember:*** Our experts were once students, too – every one of them that said yes to us truly wanted to assist future engineers and scientists!

