

# Recruiting and Retaining Students in High-Need Degree Areas

HEPC Master Plan Event  
Compact Planning Forum/Impact  
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# OUTLINE

- Problem Statement
- Recruitment & Enrollment
- Retention
- Impact



# PROBLEM STATEMENT

Need to:

- ***Recruit*** and ***retain*** qualified, capable, and diverse students to STEM fields
- Encourage STEM graduates to pursue jobs in the state







STEM Ambassadors (4-H)

# RECRUITMENT & ENROLLMENT

Recruitment  
Outreach & Engagement  
Educational Partnerships  
Enrollment



Summer Camp

# RECRUITMENT

- 3 Programs
  - Engineering
  - General Engineering
  - Pre-Engineering
- Methods
  - Individual student and family visits
  - News blasts
  - Scholarship program
  - Engineering Open Houses
  - Weekly emails from an engineering faculty





# OUTREACH & ENGAGEMENT

- Relationships with K-12 and Community

- Boy, Girl, & Venture Scouts; Schools
- Summer Camps; State Fair
- STEM Ambassadors (4H)
  - met 20,000+ 4H campers

- Student Engagement

- Statler Ambassadors
- 40+ Engineering Student Organizations
  - SHPE; NSBE; SWE; Alpha Omega Epsilon
  - Engineers on Wheels; Engineers without Borders

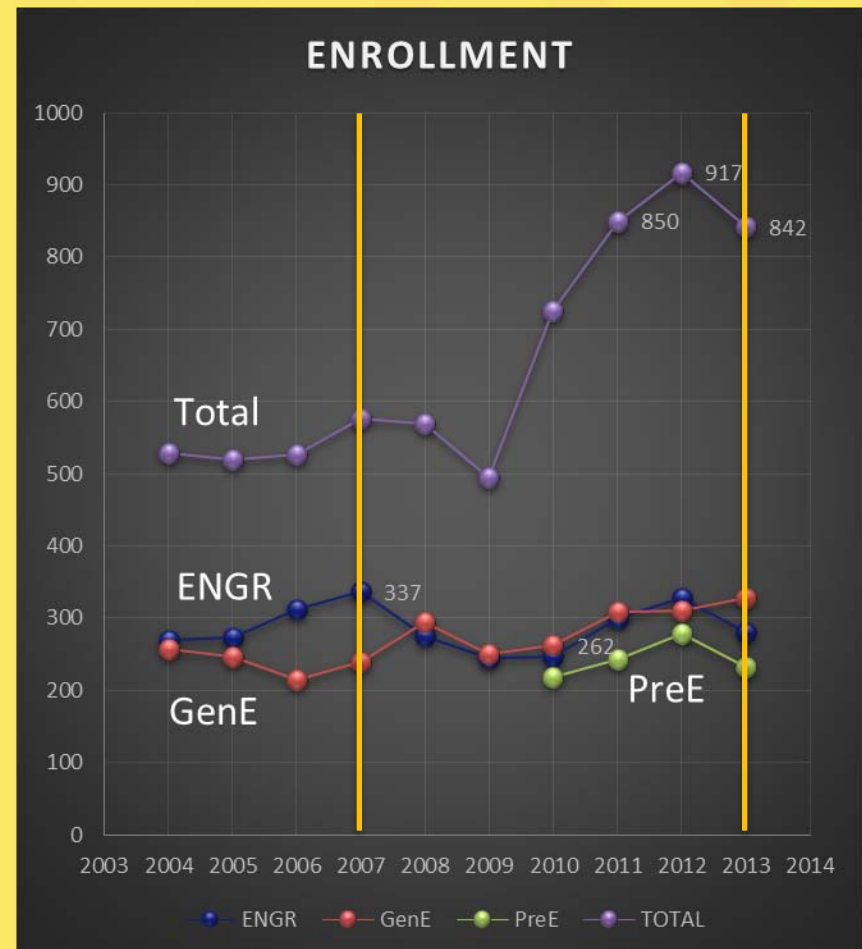


# EDUCATIONAL PARTNERSHIP

- **Project Lead The Way**
  - Nationally recognized K-12 Engineering Curriculum
  - Linked to National Standards and Common Core
  - Partner with WV Department of Education, County Schools, and Industry
  - HS Teacher Core Training at WVU Engineering
- **ACCESS Program**
  - WVU MATH Department offers College Algebra, College Trigonometry, and Calculus in High Schools
  - WVU ENGR collaborates with select High Schools to offer ENGR 101

# ENROLLMENT

- Average Enrollment  
2004 – 2009: **536**
  - 286 ENGR
  - 250 GenE
- Average Enrollment  
2010 – 2013: **834**
  - 289 Engr
  - 302 GenE
  - 243 PreE
- Raised Admission  
criteria: 2007 & 2013







Engineering Learning Center

# RETENTION

Freshman Engineering Program  
Keys to Success  
Engineering Learning Center  
Retention Data: in ENGR & at WVU



EngineerFEST

# FRESHMAN ENGINEERING PROGRAM

WVU Freshman Engineering Program (FEP) provides students with academic and co-curricular support for:

- Transition to college life
- Development of academic discipline and skills needed to succeed as an engineering student
- Foundational courses
- Selection of an Engineering major

# KEYS TO SUCCESS

- Communication
  - Early messaging of expectations
  - Frequent communication with students and parents
- Focus on engagement and career preparation
- Dedicated faculty & staff
- Facilities



ENGR 101 Project



# Engineering Learning Center

*A Home Away From Home*

- Vibrant and supportive community
- One-stop shop:
  - Advising
  - Tutoring
  - Meet with Faculty
  - Place for Study, homework, & project work
  - Information about careers, speakers, events
  - Brando: Therapy Dog



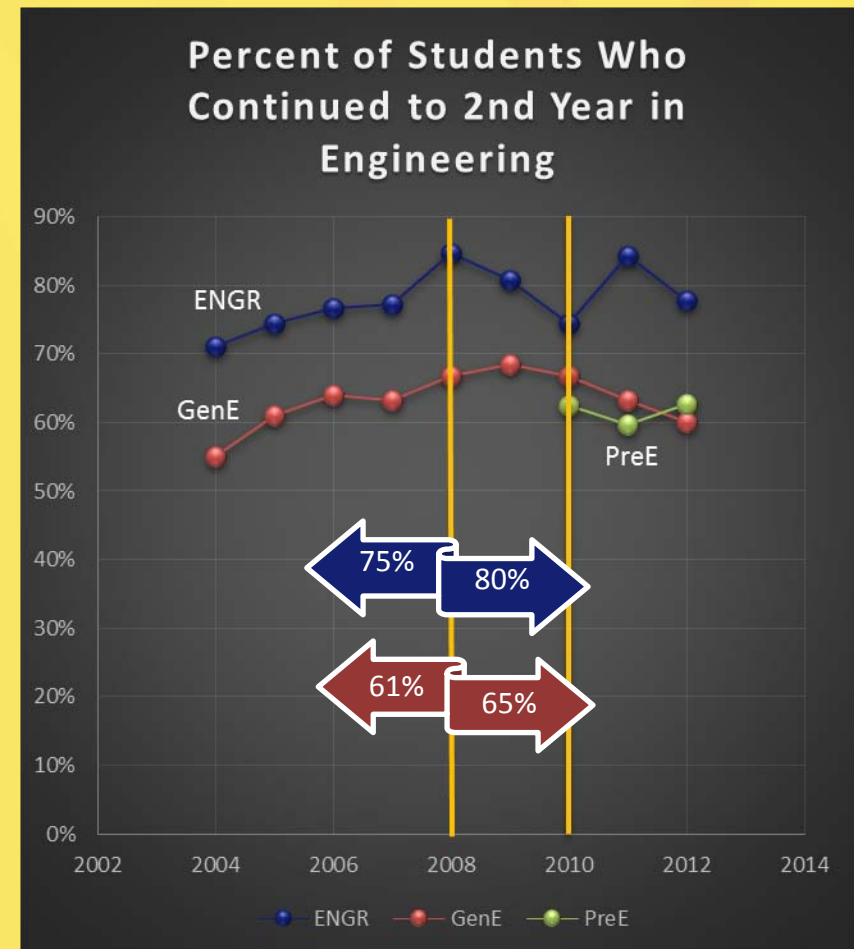
Brando



ELC

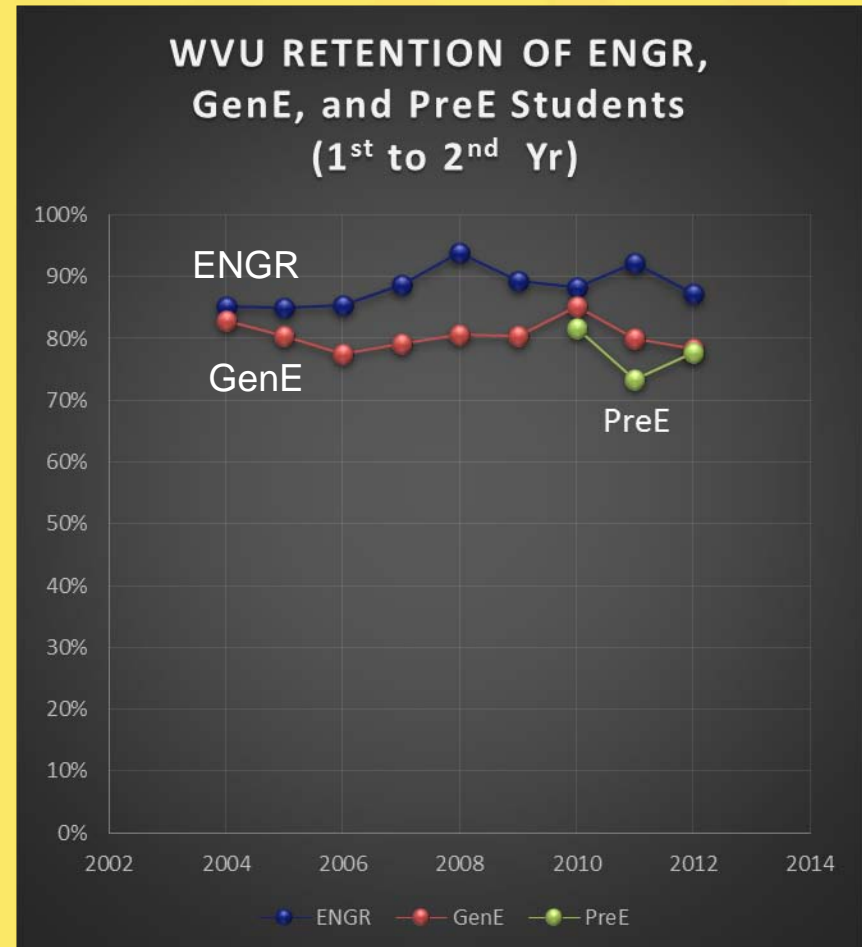
# RETENTION in ENGR

- Average Retention
  - Engr: 78% (80% since 2008)
  - GenE: 63% (65% since 2008)
  - PreE: 62%
- 2008: ELC Opened
- 2010: Changes
  - Added PreE major; enrollment jumped 47% YoY 495 to 726)
  - Modified triggers to transfer students to General Studies



# RETENTION AT WVU

- Average Retention
  - ENGR: **88%**
    - High: 94% (2008)
    - Low: 85% (2004-2006)
  - GenE: **81%**
    - High: 85% (2010)
    - Low: 78% (2012)
  - PreE: **78%**
    - High: 82% (2010)
    - Low: 73% (2011)



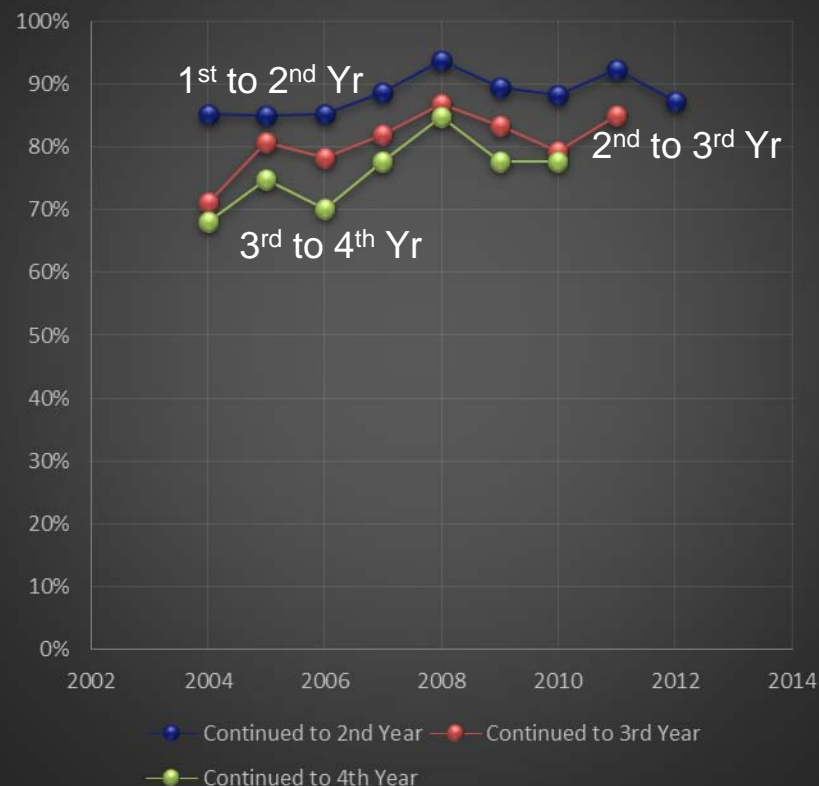


# RETENTION CHALLENGE

**ENGR Retention to 2nd, 3rd, and 4th Yr in ENGR**



**ENGR Retention to 2nd, 3rd, and 4th Yr at WVU**

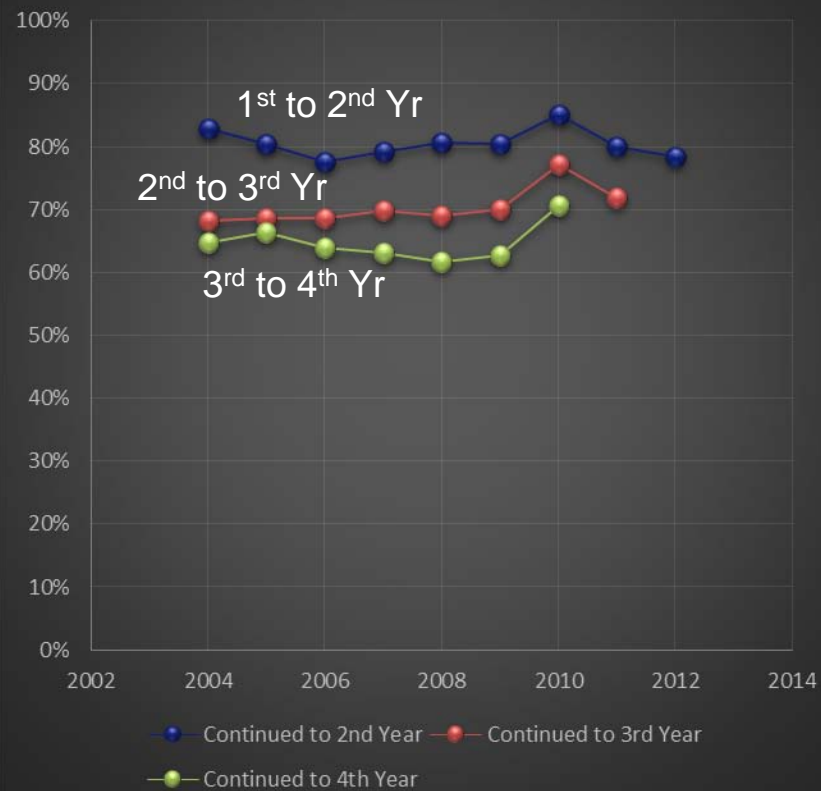


# RETENTION CHALLENGE

**GenE Retention to 2nd,  
3rd, and 4th Years in ENGR**



**GenE Retention to 2nd,  
3rd, & 4th Yr at WVU**





Career Fair

IMPACT  
Corporate & Gov't Partners

# IMPACT



Student Project



Student Project



# IMPACT

## ENGAGING EDUCATION

Engagement &  
Outreach  
Service  
Quality  
Education with  
Academic  
Support  
FE Exam

## CAREER CONNECTIONS

Career Fairs &  
Preparation  
Internships &  
Co-Op  
Experiences  
Research

## EMPLOYMENT

Corporate  
Partners  
State & Federal  
Government

# Corporate & Gov't Partners

- Corporate Partners

Addivant; ATK; Axiall; Braskem; Cytec; Dow; Dominion; Dupont; First Energy; Greer Industries; Murray Energy; Mylan; Patriot; Pietro Fiorentini; Swanson Industries; Thrasher Engineering; Whiting Turner; Toyota

- Community & Government Agencies

Dept of Energy; NIOSH; FBI; NASA

WV Dept of Education; WV Dept of Transportation

Hospitals

# IMPACT

We graduate engineering professionals in a reasonable timeframe who can:

- Get good jobs
- Pay back their student loans
- Contribute to their local communities.



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Thank You!

**QUESTIONS?**