



ENGINEERING

TEXAS A&M UNIVERSITY

First Generation Engineering (FGEn) Student Mentoring Program

Bimal Nepal, PhD.

Outline

- FGen Team
- First Generation Students in CoE
 - Retention & Graduation Rate
- FGen Mentoring Program
 - Current State
- Initial Results
- Next Steps

FGEn Team



Bimal Nepal
Program Co-Lead



Michael Johnson
Program Co-Lead



Timothy Jacobs



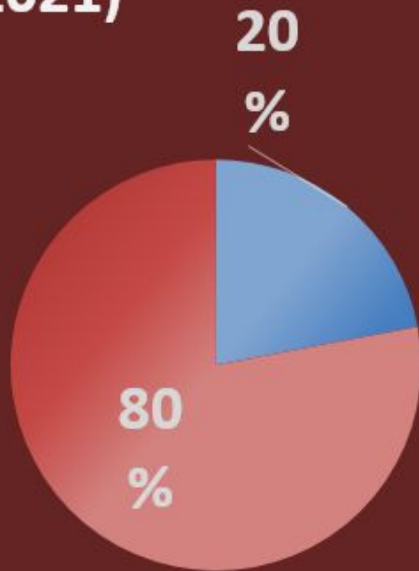
Bonnie Bustos-Rios



P. Adrian Garza

FG Students in Engineering

CoE Undergraduate Students (Fall 2021)



■ First Generation ■ Non First Generation

FGEEn Students by Ethnicity

Hispanic	49%
White	31%
Asian	14%
Black	3%
Multi-Racial/ Others	4%

FGEEn Students by Gender

Male	78%
Female	22%

Source: accountability.tamu.edu, accessed on Sept. 6, 2021

Retention and Graduation Rate: FG Vs. Non FG



Average of Cohorts from Fall 2013- Fall 2018	FG	Non-FG
1-Yr Retention Rate	77%	84%
4-Yr Graduation Rate	25%	34%
5-Yr Graduation Rate	51%	66%
6-Yr Graduation Rate	56%	69%

Source: accountability.tamu.edu accessed on Sept. 6, 2021

Literature on FG Students

- FG students tend to take fewer classes and work more
- Lack of preparation during high school
- FG students may be less prepared academically
- FG students perceive the college experience differently

FGEEn Aims

- To enhance TAMU first-generation engineering students' educational and social experiences on campus
- Leverage university and community resources to provide a sense of community to FGEEn students and help them reach their personal and professional goals
- Provide additional support structure for FGEEn students
- FGEEn program is not about academic advising or tutoring

Mentoring Management

- **Connection Plan (based on Chronos)**
 - Specifies the activities that the mentors and mentees are supposed to engage in (e.g., emails, meetings, surveys)
 - Provides discussion topics and mentoring resources
 - Connection plan customized based on the FGen program goals
- **Mentoring Relationship**
 - One-on-one mentoring
 - Up to two mentees per mentor (three for peer mentors)

FGEEn Mentoring Program Numbers



	Fall 2017 Cohort	Fall 2018 Cohort	Fall 2019 Cohort	Fall 2020 Cohort	Fall 2021 Cohort
Total Connected Mentees	105	140	136	80*	186
Freshmen	105	115	127	80	186
Sophomore	NA	25	9		
Total Mentors	98	111	119	100	111
Faculty/Staff Mentors	51	91	94	82	91
Peer Mentors	47	20	25	18	20
Connected Mentors	About 60	75	63	49	111

* The University was operating under COVID-19 restrictions in Fall 2020-Spring 2021. Most classes were happening remotely viz live Zoom session. Campus activities were severely restricted.

FGEEn Vs. Non-FGEEn

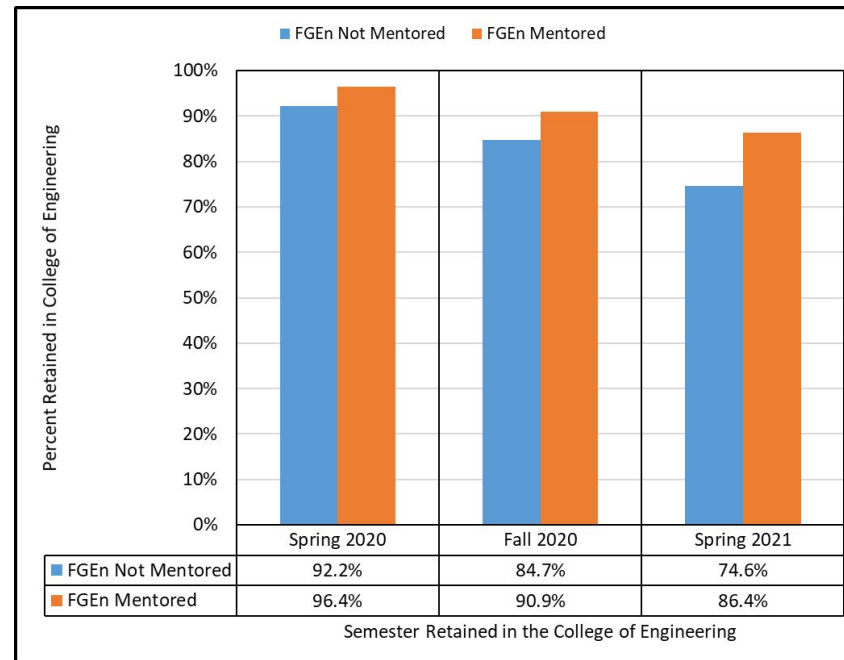
% of Students with >2.0 GPA: An Indirect Measure of 1st Year Retention

Cohort	Non-FGEEn	Connected FGEEn	Not Connected FGEEn
Fall 2017	91%	86%	80%
Fall 2018	91%	89%	81%
Fall 2019	88.5%	91%	85%
Fall 2020	87.8%	83.1%	78.7%

Data Source: Courtesy of Chris Cantrell, EASA (Updated Sept 6, 2021)



Fall 2019 First-Time In-College FGen Cohort Retention Analysis



	Fall 2019	Spring 2020	Fall 2020	Spring 2021
FGen Cohort *	# of Students	# Retained in COE	# Retained in COE	# Retained in COE
Not Mentored	615	567	521	459
Mentored	110	106	100	95

High Impact Enablers

- Scholarship to FGen students who are not in the Regents Program (family income above \$40K and below \$60K)
- Peer Mentor Support
- Enrichment and research programs to support FGen students
- Staff Support
- Collaborative Space for FGen students