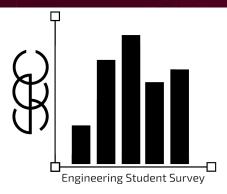
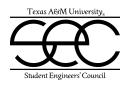


# FIRST-YEAR STUDENT ENTRY/EXIT SURVEY

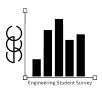


#### **Results Presentation**

April 27, 2022



## Survey Executive Summary

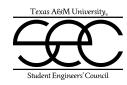


#### Mission

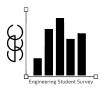
A primary mission of the Student Engineers' Council is to serve as a representative voice for the students within the College of Engineering. This survey seeks to communicate the student perspective to College of Engineering administration.

#### Survey Restructuring

This presentation serves to combine the Entry and Exit surveys cohesively to best compare data. This is the first time this has been done and is presented in-person.



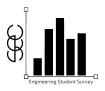
## Survey Question Breakdown



Title and Identification Questions	Slide 7
Pre-College and Programming Questions	Slide 14
First-Year Coursework Questions	Slide 21
MPE and NSC Questions	Slide 36
Resources and Academic Services Questions	Slide 45
Extracurricular Questions	Slide 60
Engineering Development Event Questions	Slide 66
Choosing a Major Questions	Slide 82
Summer Plans Questions	Slide 92
Inclusion and Final Questions	Slide 97



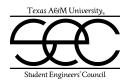
## Special Thanks



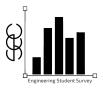
**Dr. Angie Hill Price**, Associate Dean for Undergraduate Programs **Dr. Tony Cahill**, First-Year Program Director

James Rushing, SEC President 2022-2023

Sarah Beamer, SEC VP Internal 2022-2023



## First-Year Entry Survey Response Summary



### 2.5-Week Survey Period

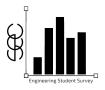
October 4, 2021 - October 22, 2021

#### 873 Total Respondents

~19% of Freshmen Engineering Student Body



## First-Year Exit Survey Response Summary



### 2.5-Week Survey Period

March 28, 2022 - April 14, 2022

### 528 Total Respondents

~12% of Freshmen Engineering Student Body

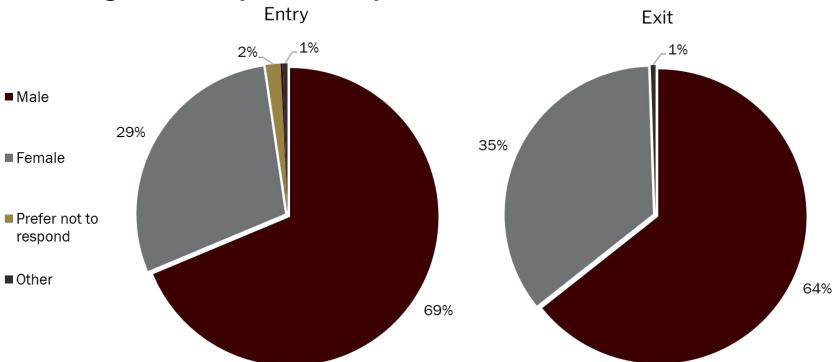
## Title and Identification Questions

Entry and Exit Surveys

## Asked in Entry and Exit Survey Responses: 873/504

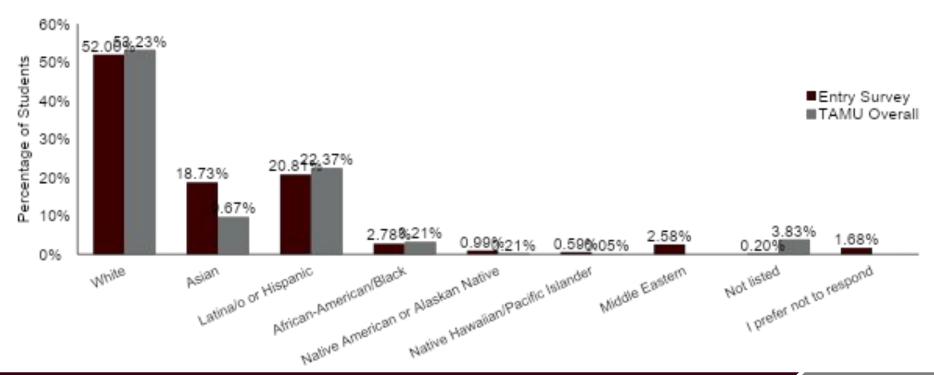


What gender do you identify as?



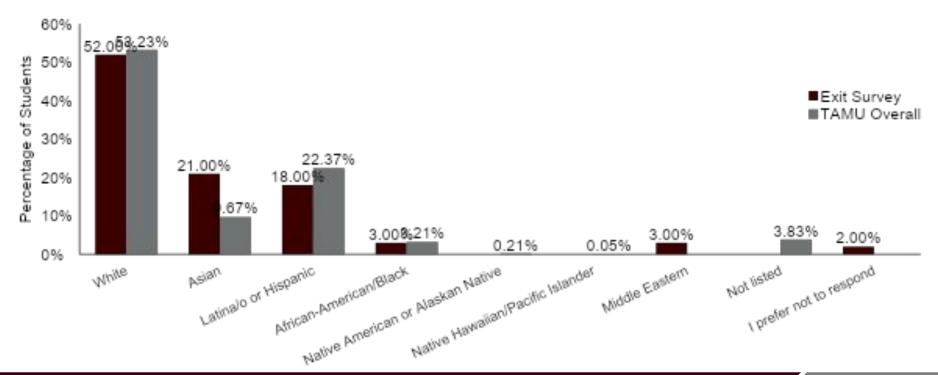


Race/Ethnic Identification: (select all that apply)





Race/Ethnic Identification: (select all that apply)



## Asked in Entry and Exit Survey Responses: 873/504

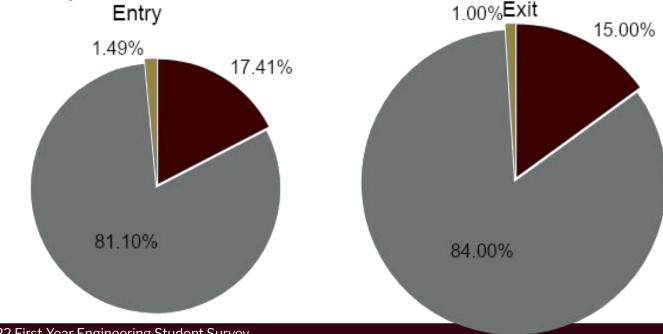
■Yes ■No

> I prefer not to respond



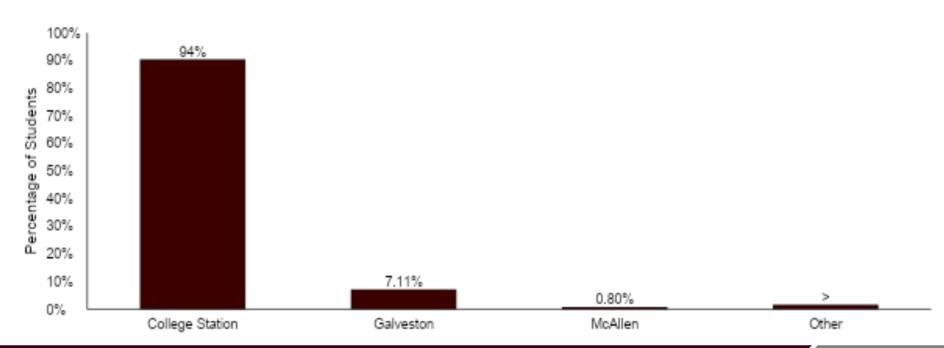
#### Are you a first-generation college student?

The U.S. Department of Education defines a first-generation college student as a person "whose parents both have had no postsecondary education experience and have a high school education or a lower level of educational attainment."



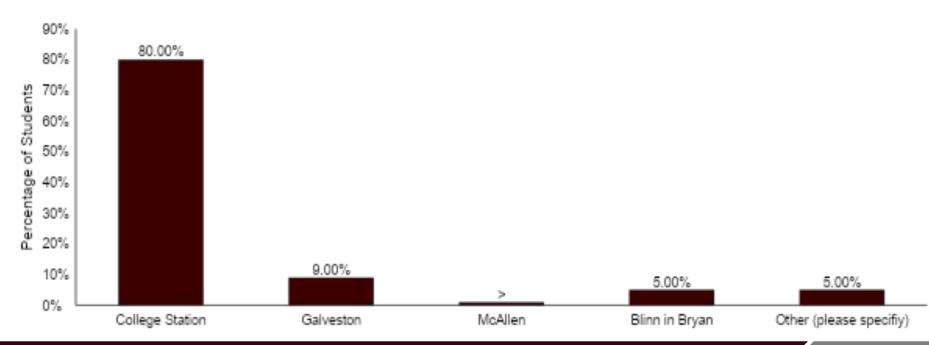


At which campus do you take the majority of your courses?





At which campus do you take the majority of your courses?

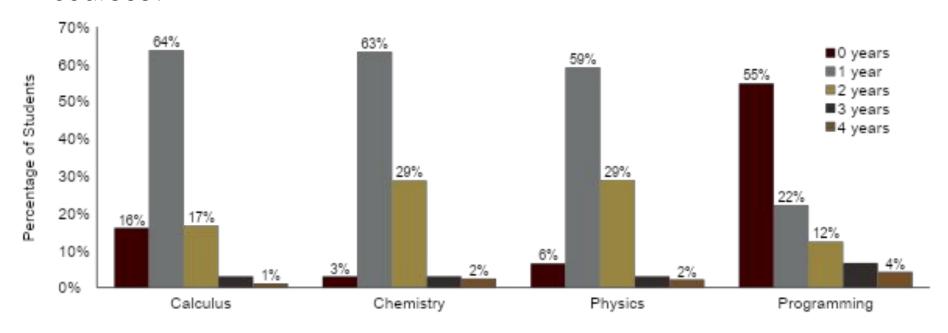


## Pre-College & Programming Experience Questions

Entry and Exit Surveys

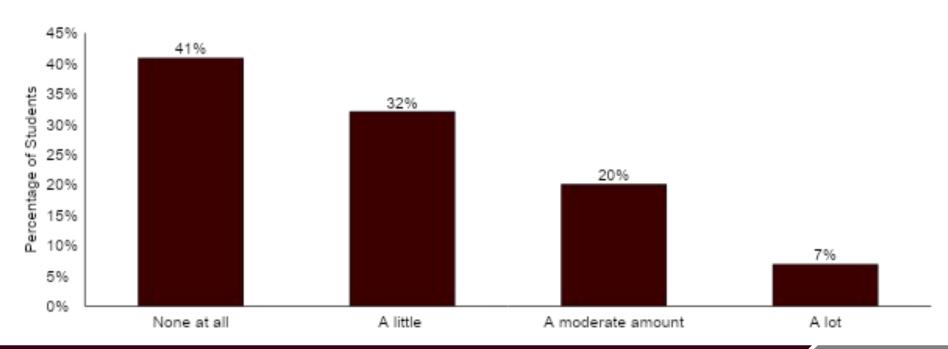


During high school, how many years did you take of the following courses?



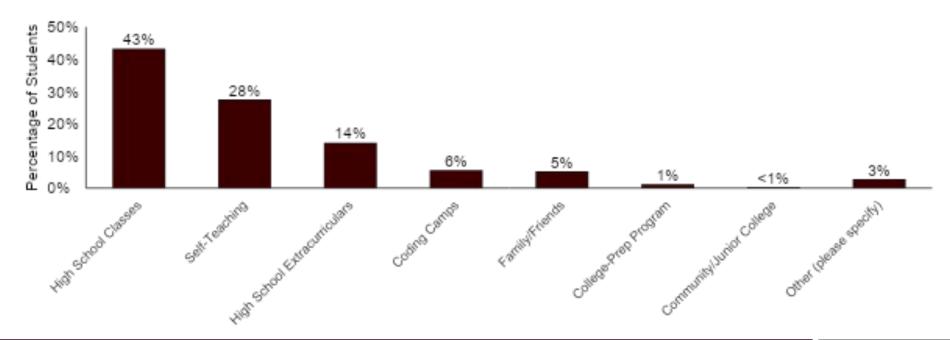


How much prior programming experience do you have?



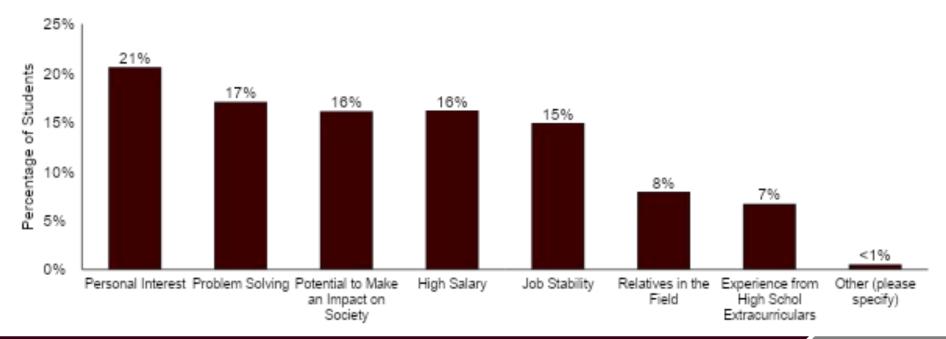


How did you gain your programming experience? (select all that apply)



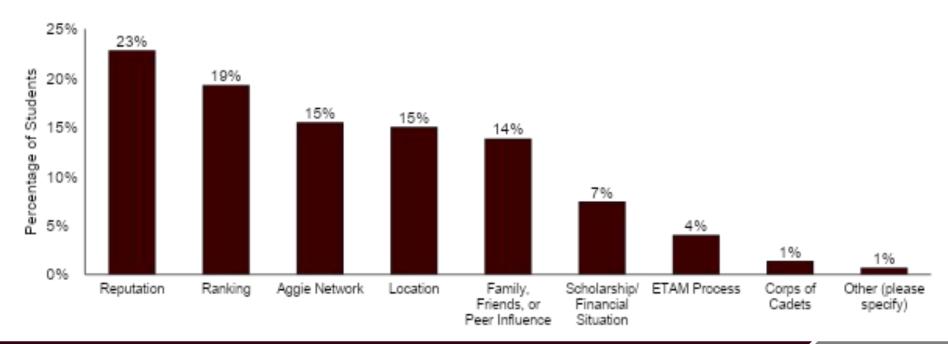


Why did you choose to study Engineering? (select all that apply)





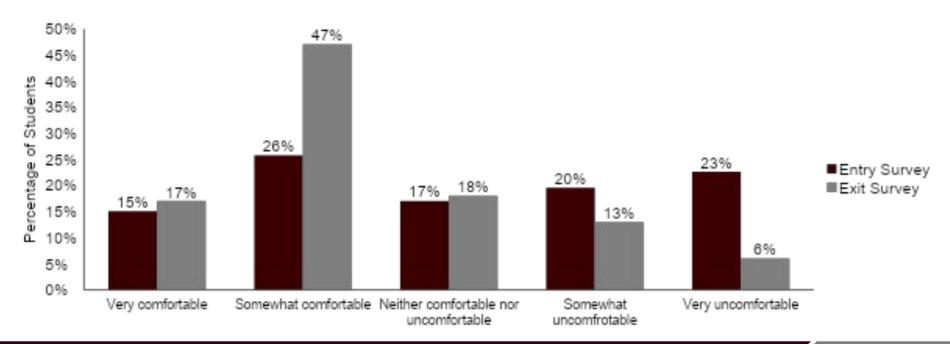
Why did you choose Texas A&M Engineering? (select all that apply)



## Asked in Entry and Exit Survey Responses: 1168/463



How would you describe your comfort level with computer programming?

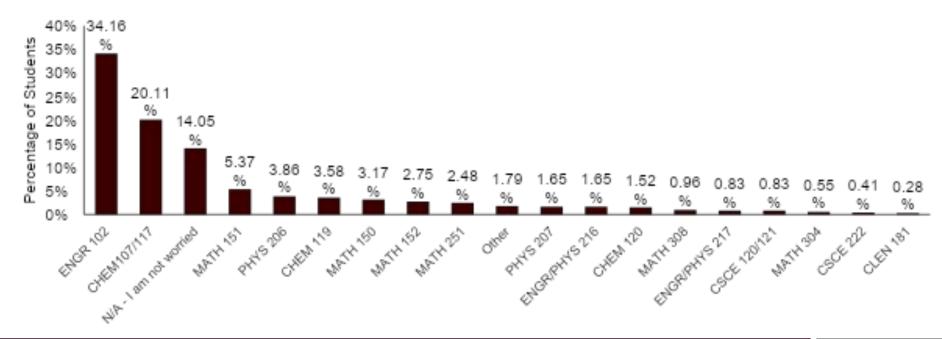


## First Year Coursework Questions

Entry and Exit Surveys



Out of the general engineering courses you are registered for Fall 2021, select the course that you are most concerned/worried about.





Why are you concerned/worried about this course? (open ended)

#### Lack of Previous Experience

- "I did not take it in high school, and they expect you to have prior knowledge in every unit. Only class I'm struggling in."
- "I have no coding experience and it is proving very difficult for me, and I'm not doing very well already."

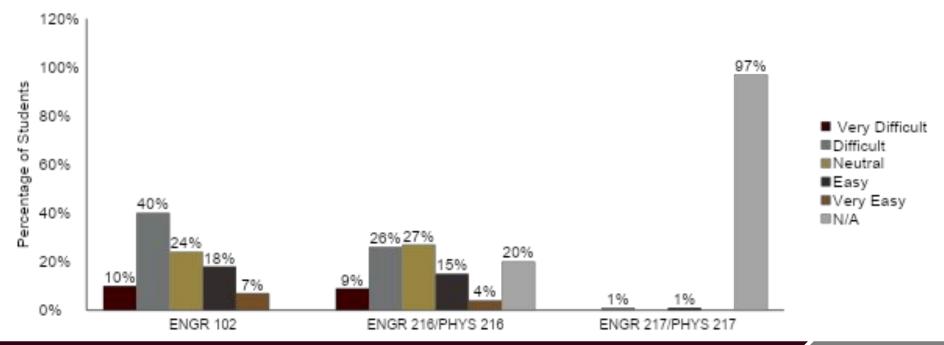
#### **Subject Weaknesses**

"It's challenging and chemistry is a weak spot for me."

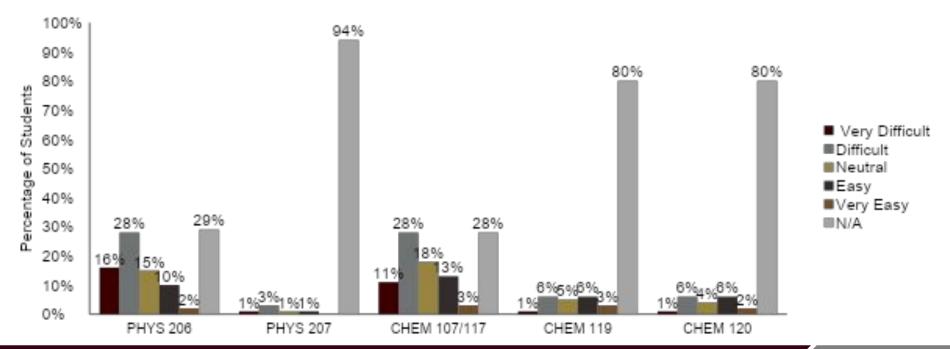
#### Incompatible Professor/Pace of Class

 "The teacher skips over important topics in class and says 'learn them on your own time', it is difficult to understand what you need to study or what information you need to know, class moves too fast."

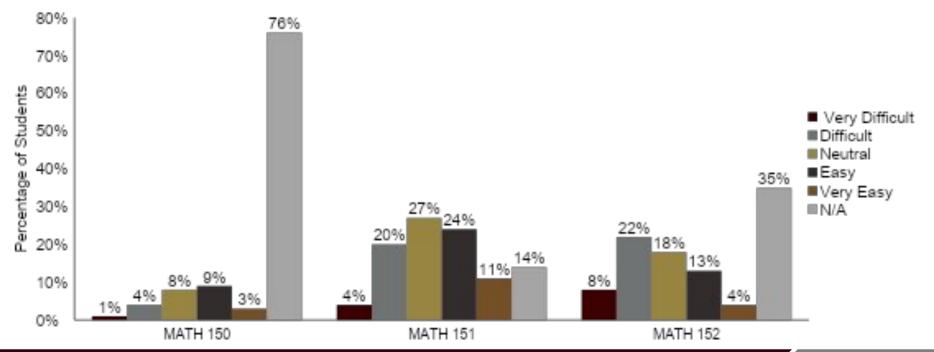




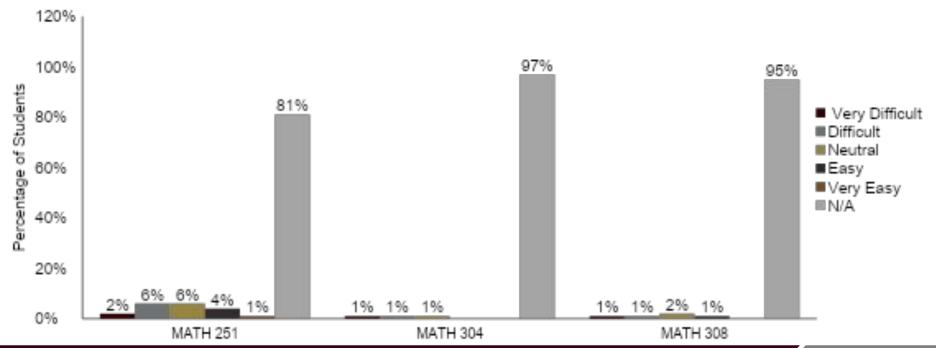




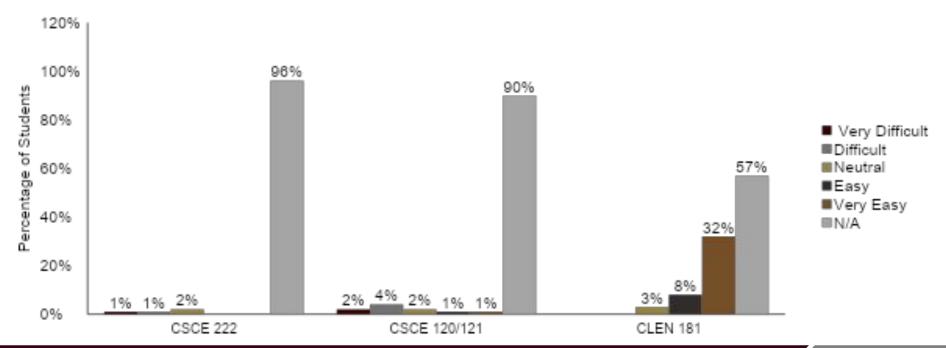














Please elaborate on your reasoning for any of your responses above. (open ended)

#### Past Experiences

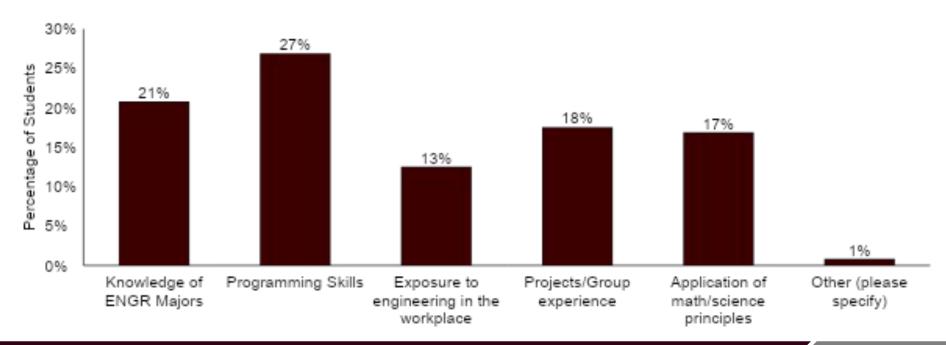
- "I felt as though the classes were all reasonably difficult, however having taken some AP classes in high school that corresponded with some classes helped me in them."
- "It seems like the beginner courses (PHYS 206, ENGR/PHYS 216) are taught with the assumption that people took multiple years of physics in high school."
- "The teacher for ENGR 102 taught the class as if it were for intermediates rather than beginners."

#### Adjusting to the Pace of College

- "Topics are easy once learned. However, it makes it hard to learn because of how fast classes move."
- "I struggled my first semester because of adjusting to college life, Texas weather, and moving."



What do you hope to gain from ENGR 102? (select all that apply)





Other (please specify) example responses:

#### Academic Skills

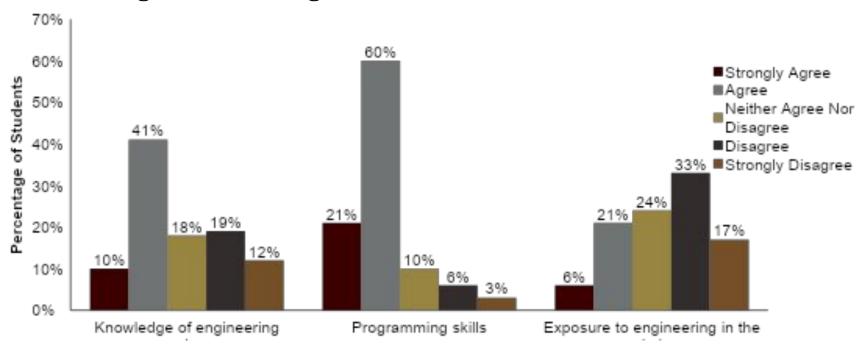
- "Problem Solving Skills."
- "Communication Skills."

#### **Career Direction**

"Idea of whether or not I want to do programming as a career."

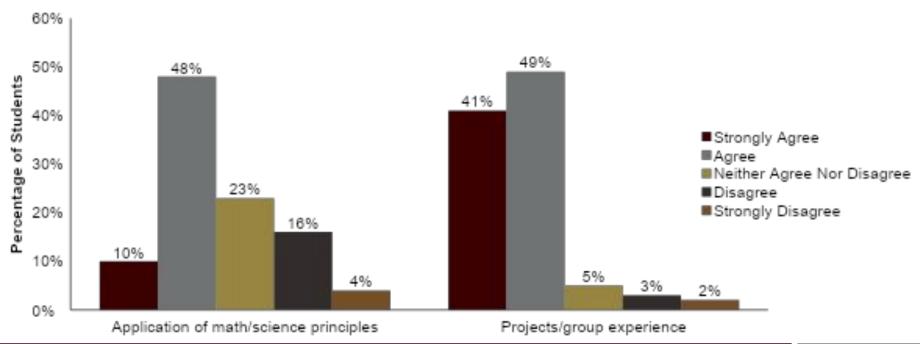


Please indicate the extent to which you agree or disagree with obtaining the following skills in ENGR 102.



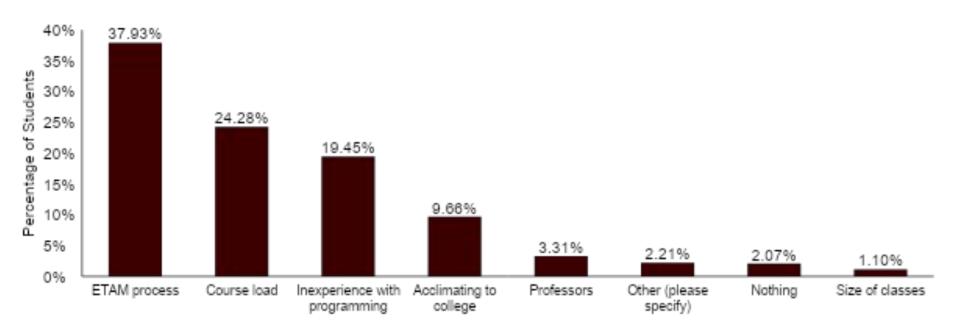


Please indicate the extent to which you agree or disagree with obtaining the following skills in ENGR 102.





What are you most concerned/worried about as a first-year engineering student?



### Asked in Entry Survey

Responses: 293



Is there any support or services the College of Engineering can provide to help address the issue you are most worried about? *(open ended)* 

#### **Expanding Coding Resources**

- "Holding python tutoring services like you do for math."
- "Provide tutoring services for those who haven't taken programming before."
- "Give a summer preparation coding course to get students ready for ENGR 102"

#### **ETAM Information Resources**

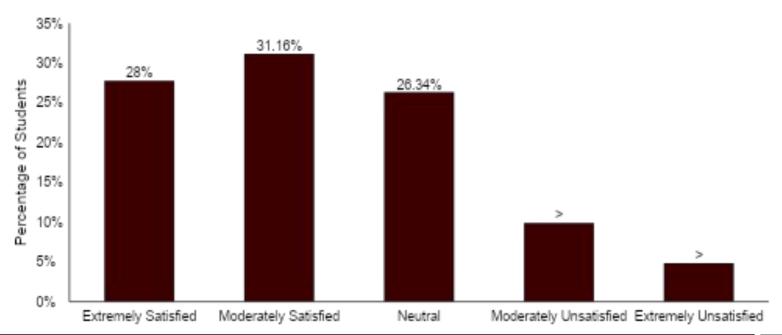
- "Somehow giving some statistics about the ETAM process and how likely people are to get into a selected major."
- "Better clarity of ETAM stuff."

## Math Placement Exam & New Student Conference Questions

Entry Survey Only

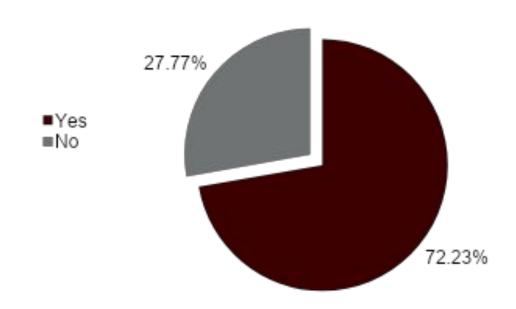


Please rate your satisfaction with the MPE regarding environment, timing, content, etc.





### Did you feel well-prepared to take the MPE?



### Asked to students that selected 'No' Responses: 213



Please explain why you did not feel prepared for the MPE.

#### **Preparation**

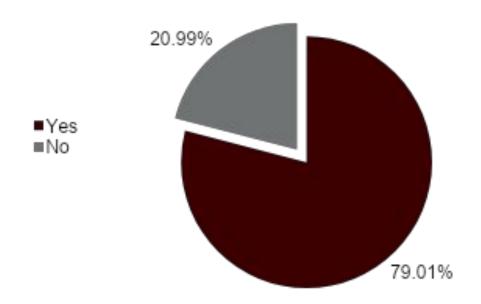
- "I had not done MPE concepts for two years prior to the exam."
- "I failed to study beforehand."

#### **Impact of Online Classes**

"I took my pre-calculus class during COVID."



Was the provided MPE information (http://tx.ag/MathPlacement) sufficient in preparing you for the exam?



### Asked to students that selected 'No' Responses: 159



What additional MPE information would have been helpful?

#### **Review Materials**

- "More practice exams."
- "Video reviews."

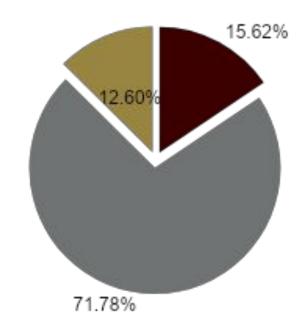
#### Impact of Online Classes

"A difficulty scale for each question like the SAT."



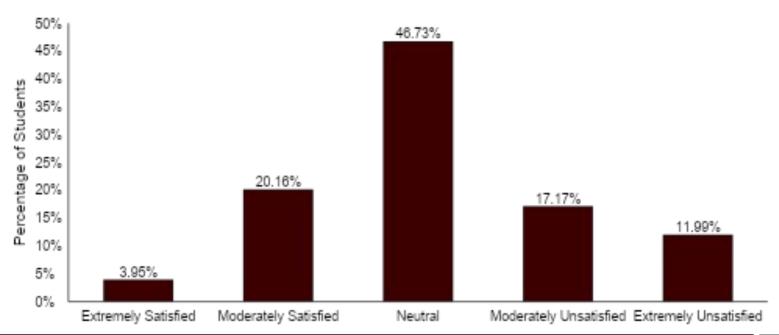
### How did taking the MPE online affect your performance?







Please rate your satisfaction with registering for courses at your New Student Conference.





Please share any suggestions or feedback to improve the NSC course registration process.

#### **Registration Preparation**

- "A video walk-through of the registration process."
- "More time to build a course plan."

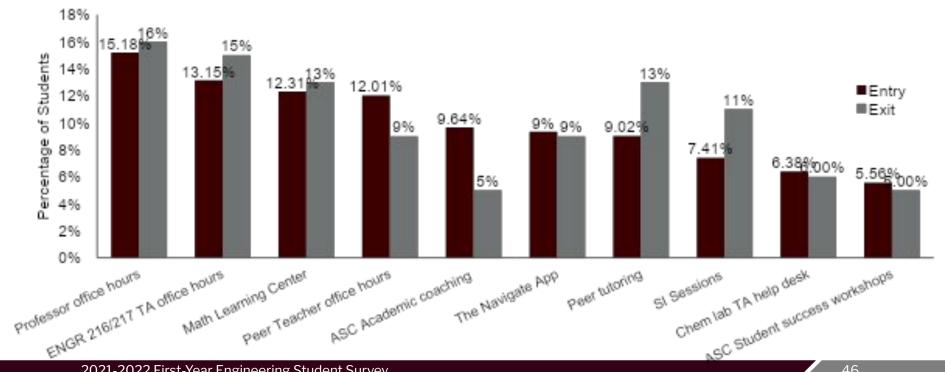
## Resources and Academic Services Questions

Entry and Exit Surveys

### Asked in Entry and Exit Survey Responses: 4046/2705

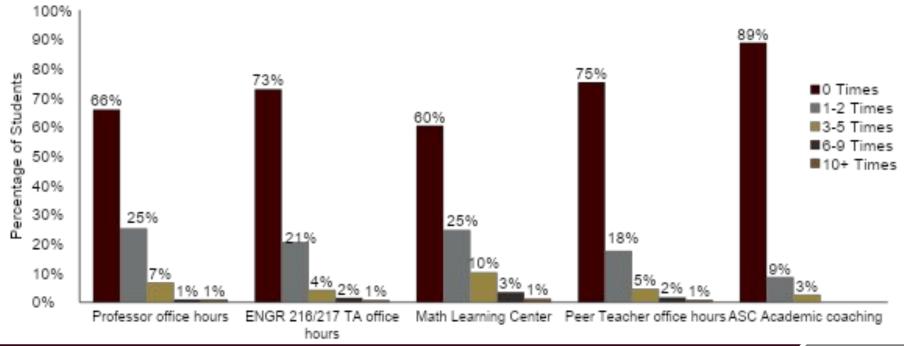


What academic support services have you heard of? (select all that apply)



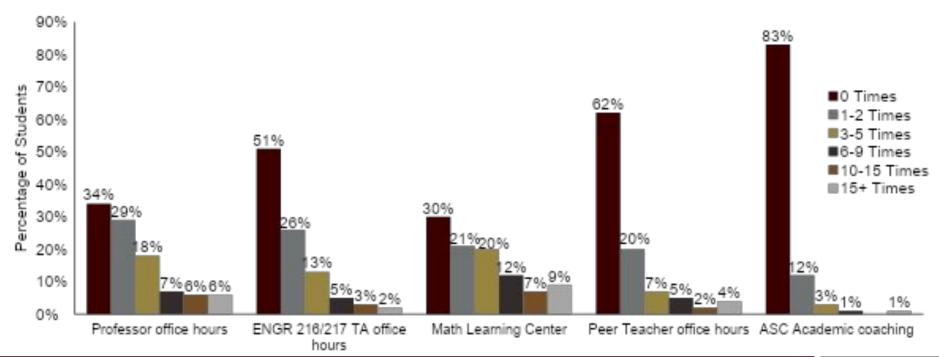


Of the resources that you are aware of, how often have you used these resources so far?



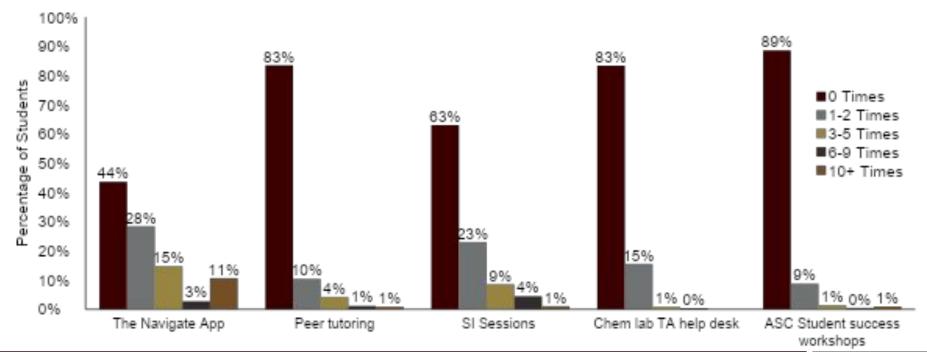


Of the resources that you are aware of, how often have you used these resources so far?



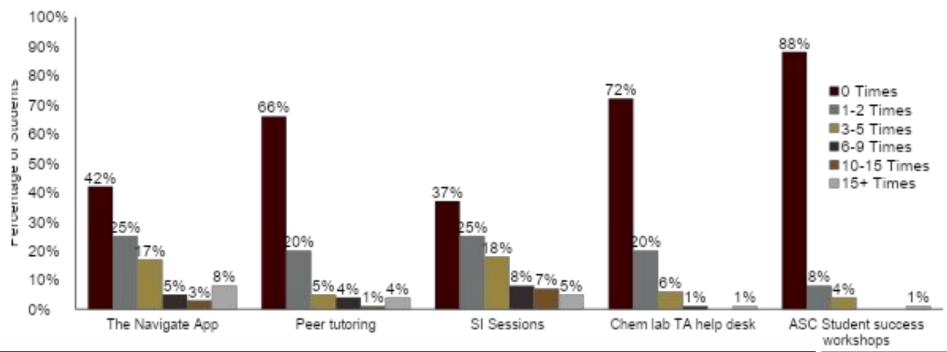


Of the resources that you are aware of, how often have you used these resources so far? (Continued)



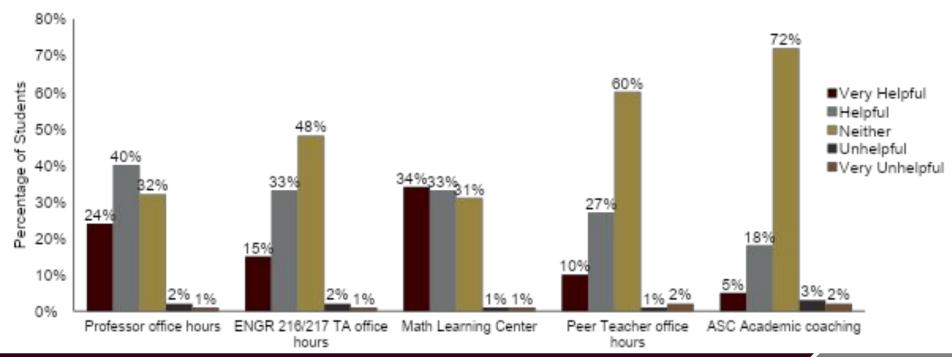


Of the resources that you are aware of, how often have you used these resources so far? (Continued)



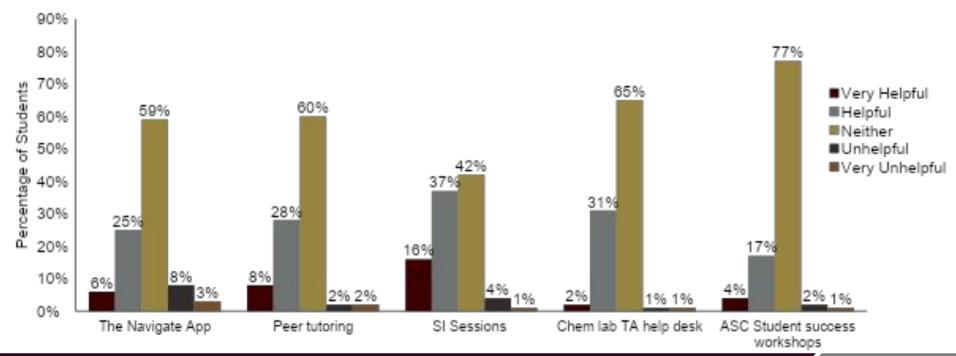


How helpful are the following Academic Support Services in helping you succeed academically?



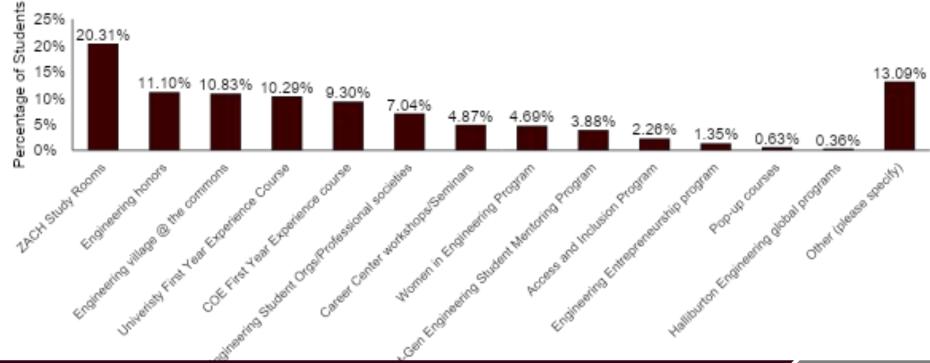


How helpful are the following Academic Support Services in helping you succeed academically? (Continued)



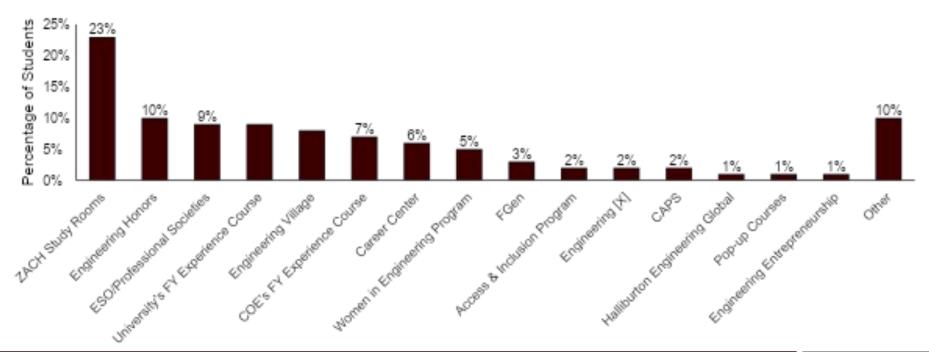


What resources/programs/services are helping you adjust to the College of Engineering? (select all that apply)





As a first-year engineering student at Texas A&M University, what resources/programs helped you adjust to the College of Engineering?



## Asked to students who participated in the Engineering Village Responses: 37



Please elaborate on what areas could be improved in the Engineering Village?

#### **Events**

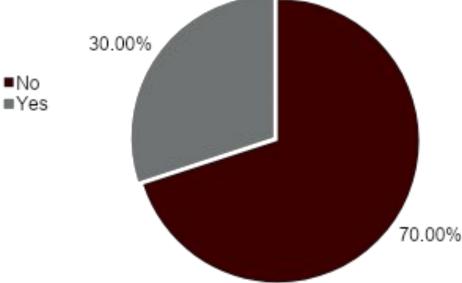
- "Have current freshmen help plan the programs."
- "More engineering-focused programs. Activities like Shrek movie night are great opportunities to network with fellow engineering students, but don't provide much help with academics or information about the major."

### Asked in Exit Survey - to first generation students Responses: 64



Are you currently participating in the First-Generation Engineering Mentoring Program (FGen)?

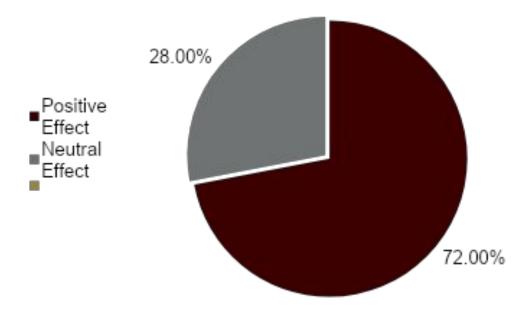
The U.S. Department of Education defines a first-generation college student as a person "whose parents both have had no postsecondary education experience and have a high school education or a lower level of educational attainment."



## Asked in Exit Survey - to students who are involved in FGen Responses: 18



What impact has the First-Generation Engineering Mentoring Program (FGen) had on your first-year experience in the College of Engineering?



### Asked in Exit Survey - to students who are involved in FGen Responses: 7



Please explain your answer to the previous question.

#### **Positive Effect**

- "My mentor gave me lots of great advice and we were able to establish a good friendship outside the program. They are also just easy to talk to and they provide a comforting conversation."
- "My mentor has helped guide me throughout my academic journey and has helped in many ways beyond the average study tips and guides."

#### Neutral Effect

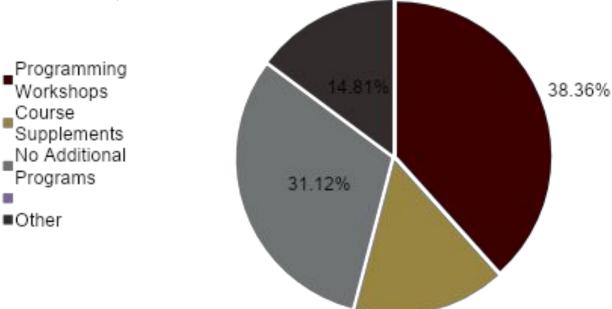
 "I don't think I learned too much, but I had nice conversations with the mentor about school life and life in general."



If you feel there should be additional services to better your experience as a first-year engineering student, what would be most helpful for you?

15 72%

(open ended)

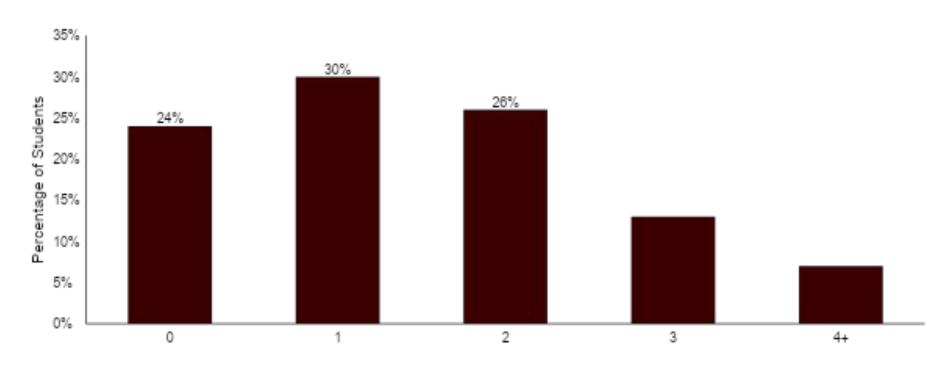


# Extracurricular Questions

Exit Survey Only

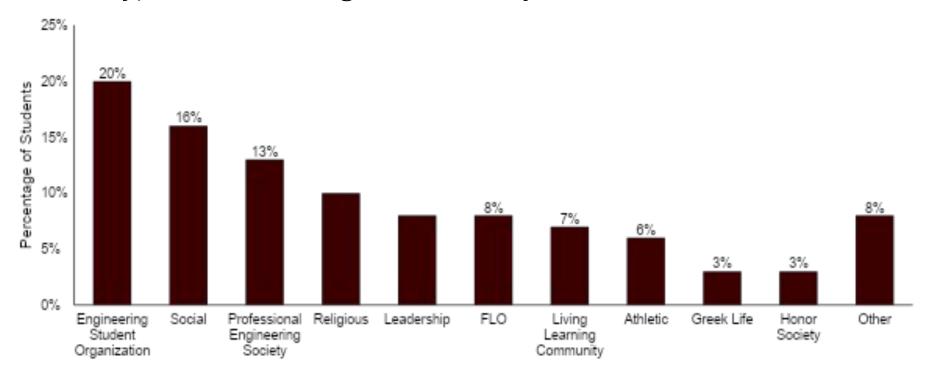


How many student organizations are you currently involved in?





What type of student organization are you involved in?



## Asked to students that were not in any student organizations Responses: 16



Which of the following, if any, contributed to your lack of involvement in extra-curricular activities?

#### Not on College Station Campus

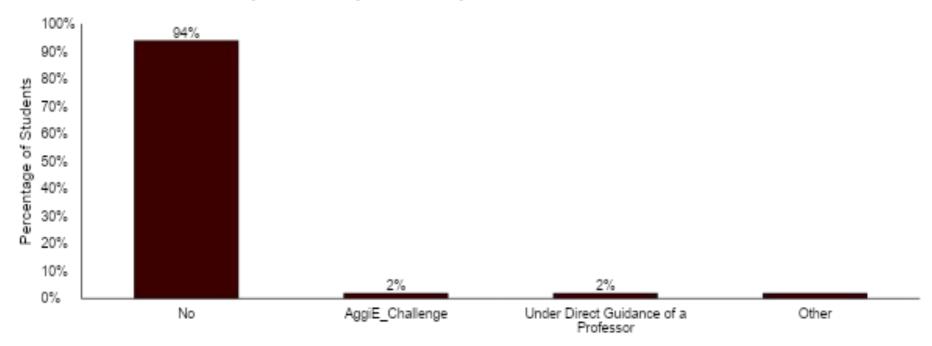
- "My campus ACC doesn't have many student organizations and there's not any organizations that allow remote membership."
- "Organizations that I'm interested in are not available at my location."

#### Rigorous Coursework

 "I really wanted to transition into the new level of coursework and homework load that I was not accustomed to, and focusing on schoolwork rather than extracurriculars has allowed me to do this."



Did you participate in undergraduate research during your first year in the College of Engineering?



### Asked to students that participated in research Responses: 21



Please elaborate on how you got involved in undergraduate research and what factors made this opportunity possible.

#### Aggie Research Program

"Saw an email from the Aggie Research Program and applied to a few. Luckily, I
got accepted to one and learned a lot."

#### **Networking**

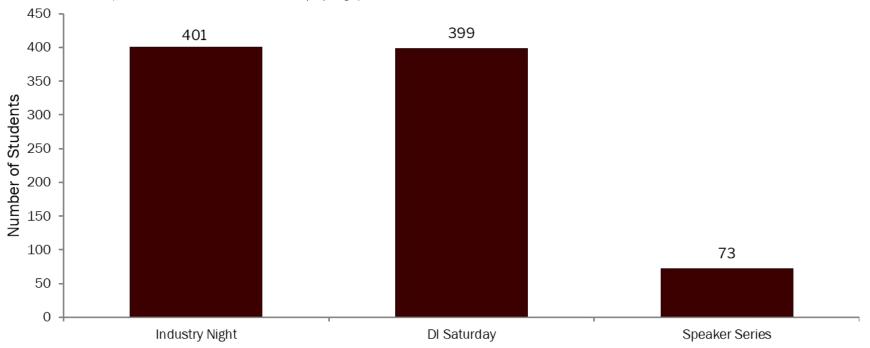
- "I just emailed many professors whose research I was interested in & we had meetings from there. I finally chose a professor where I knew I could see myself growing as a person and researcher."
- I expressed my interest in research to my ENGR 102 professor, and she let me come to her lab and meet her students. From there, I began working with one of her students on his projects."

# Engineering Development Questions

Exit Survey Only

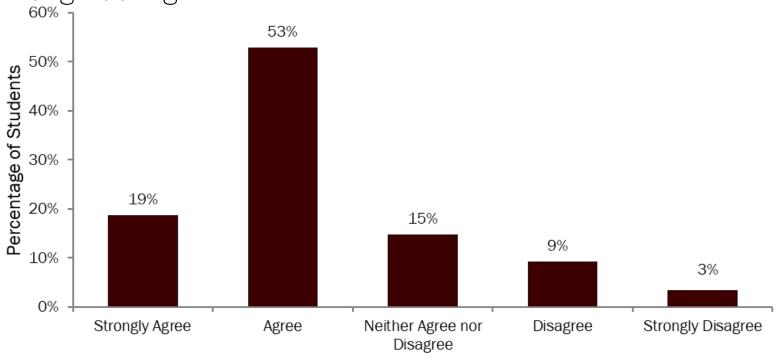


Select all of the events you attended in either Fall 2021 or Spring 2022. (select all that apply)



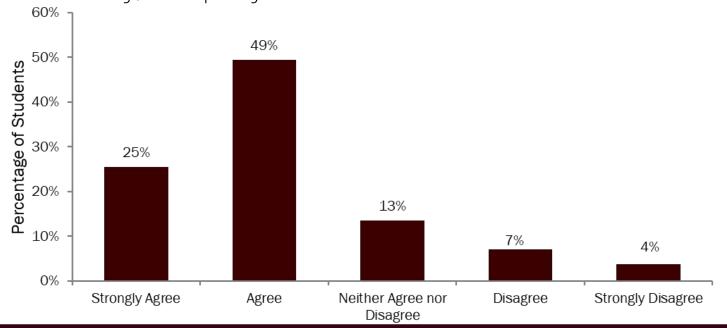


Industry Nights helped me learn about opportunities in the field of engineering.



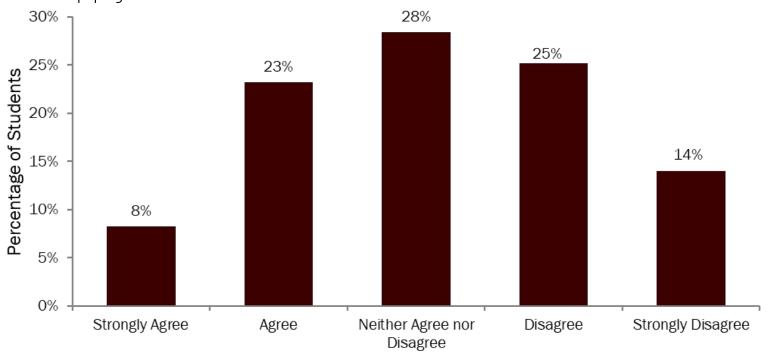


Industry Nights helped me understand how multiple engineering disciplines work together and collaborate within a single industry/company.



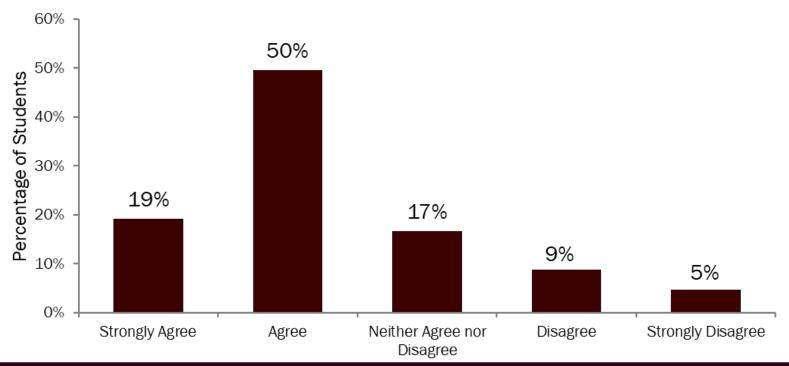


Industry Nights helped me decide which department/major I want to apply to.





Industry Nights helped me learn about industry and what companies look for in intern/co-op candidates.





Please provide any additional comments or suggestions regarding SEC Industry Nights (optional). (open ended)

#### Types of Industries

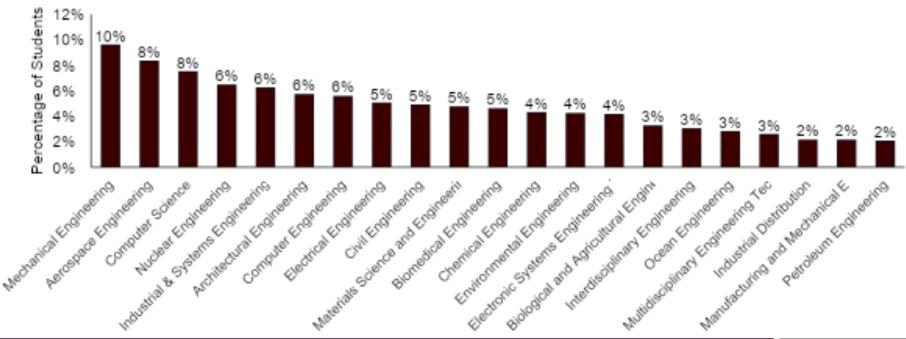
- "The industry nights tend to be focused on just a **few** majors, mainly the computer side of engineering or the industrial/mechanical side."
- "Great opportunities, but wish there were some more **computer science**-related companies."
- "Although they are smaller majors/departments, I would suggest having an Industry Night Seminar that pertains more to **Biomedical Engineering** and/or **Material Science** and Engineering.

#### **Large Focus on Consulting**

- "Some of the people coming to talk are **consultants** who rarely use their engineering majors so I would have liked to see companies and industries come talk about how their engineering major was useful to them."
- "So many of the seminars are from aerospace or **consulting** companies. It'd be nice to see some more **variety**."

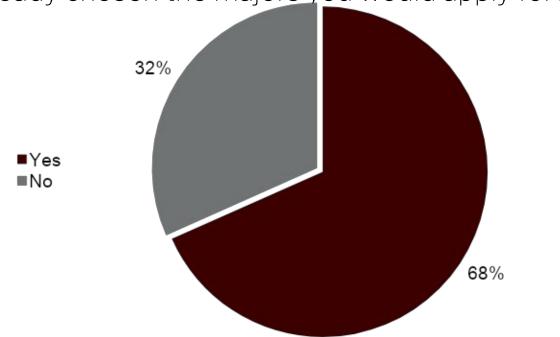


Which department/major presentations did you attend? (select all that apply)



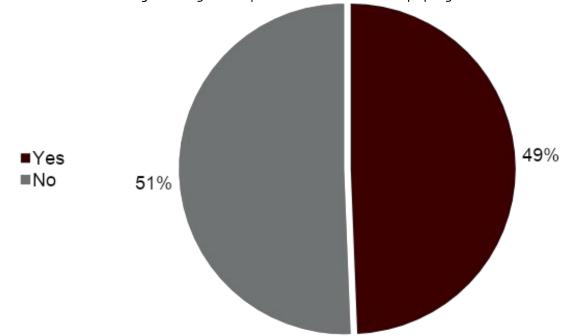


Before attending the SEC Department Information Saturday, had you already chosen the majors you would apply for?



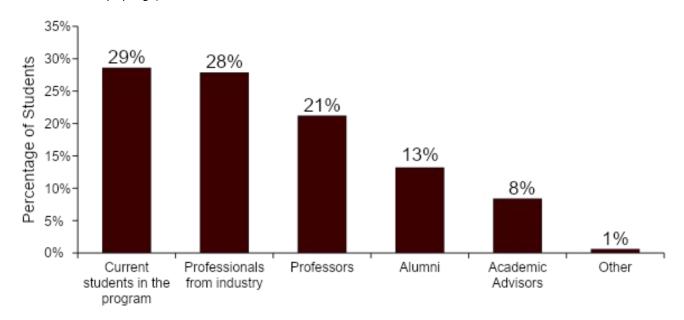


Did the SEC Department Information Saturday change one or more of the majors you planned to apply for?





During the SEC Department Information Saturday, which group(s) would you have preferred to have heard from more? (select all that apply)





Please provide any additional comments or suggestions regarding the Department Information Saturday (optional). (open ended)

#### Information from Students/Alumni

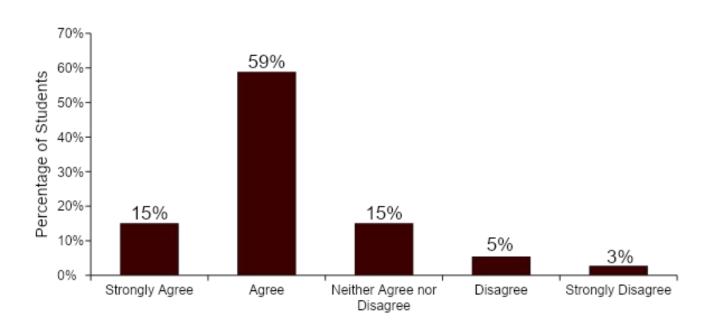
- "Students were so helpful. I wish there was a way to contact or reach out to them again."
- "It would be nice if alumni could talk about why they chose the major they did and what helped them decide."

#### More Info on Courses/Advising

- "The most important thing for me is hearing what classes are taken and what makes up those classes."
- "Maybe add at the end of the presentations a link to sign up for a meeting with the undergraduate advisor for that major or mention when they have their drop-in advising."

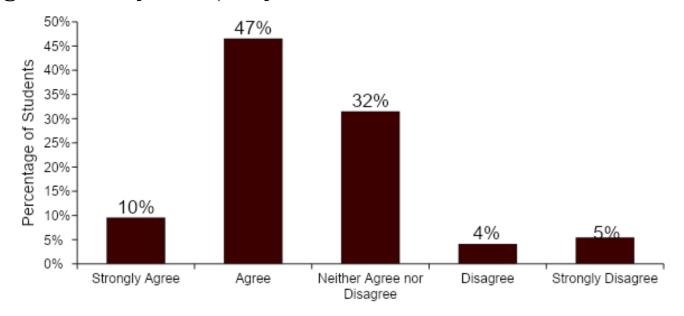


SEC Speaker Series helped me learn about opportunities in the field of engineering



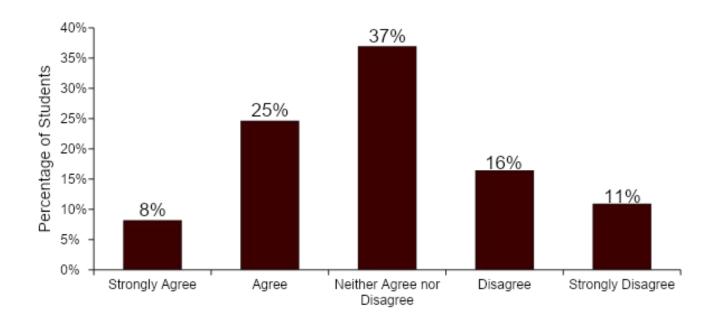


SEC Speaker Series helped me understand how multiple engineering disciplines work together and collaborate within a single industry/company.



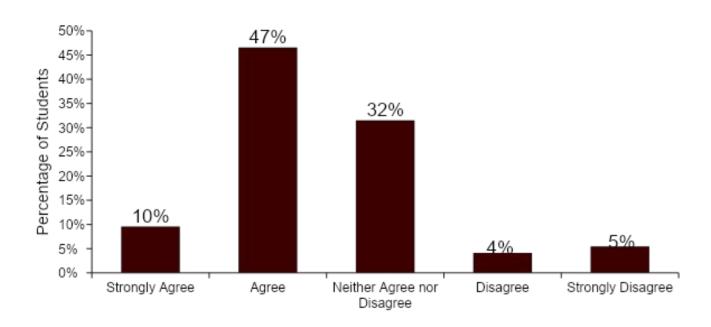


SEC Speaker Series helped me decide which department/major I want to apply to.





SEC Speaker Series helped me learn about industry and what companies look for in intern/co-op candidates.

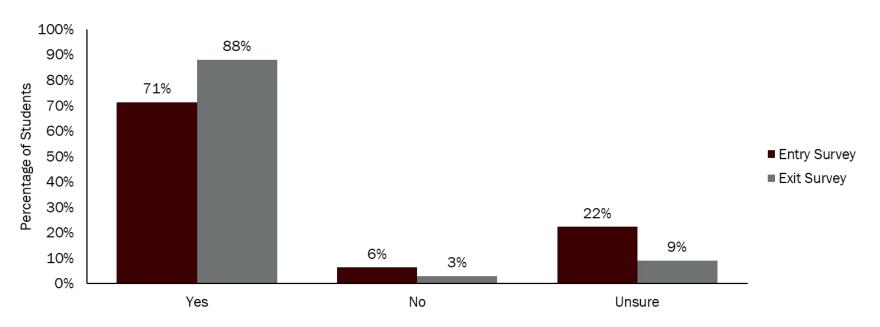


### Choosing a Major Questions

Entry and Exit Surveys

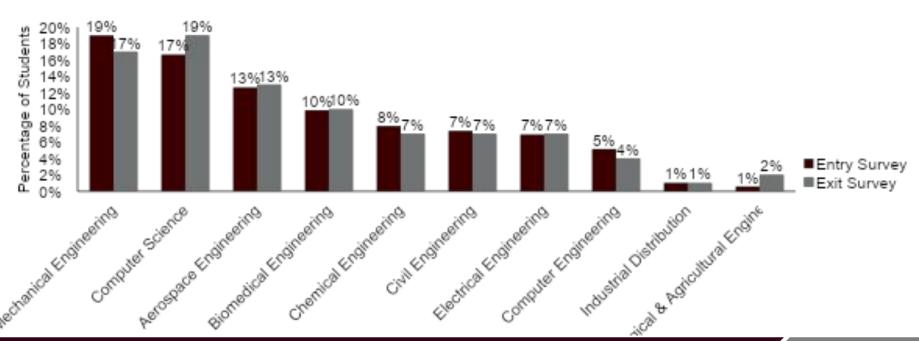


Have you decided on an engineering discipline in which you would like to major?



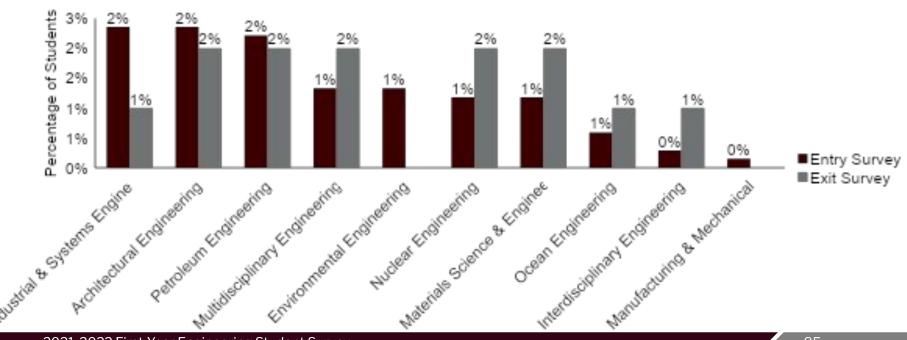


As of now, what is your First Choice Major?



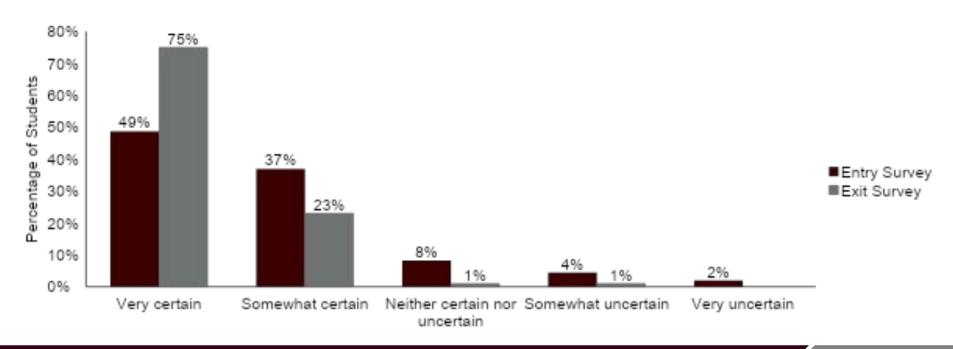


As of now, what is your First Choice Major? (Continued)



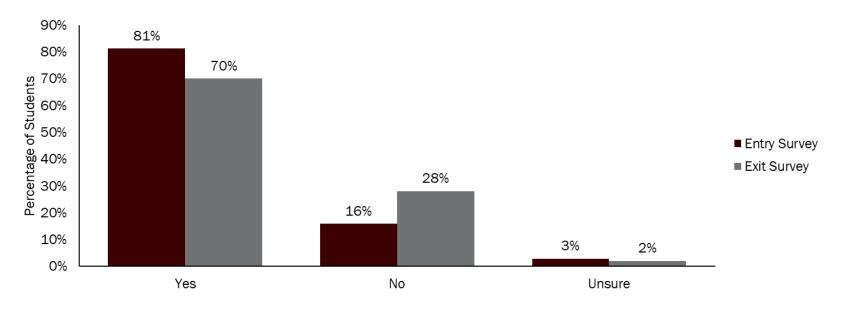
ENGINEERING
TEXAS A&M UNIVERSITY

How certain are you of this decision?





To your best memory, is this the same major you chose when you applied to Texas A&M?



### Asked in Exit Survey - to students that selected 'No' Responses: 90



Please describe what factors influenced your decision to change the Engineering Discipline you wanted to major in. (open ended)

#### Deeper Understanding of the Major (DI Saturday)

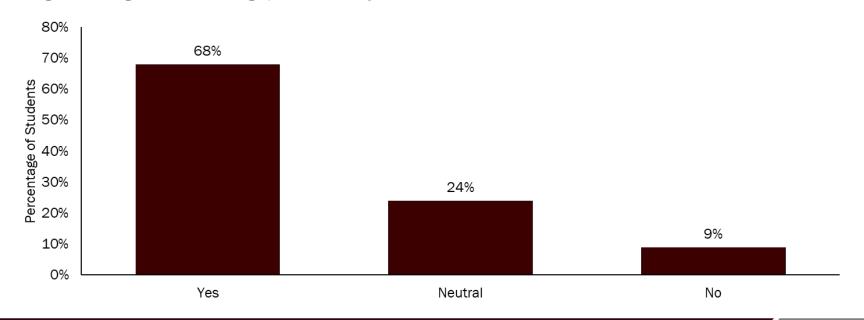
- "Speaking to students in the department, academic advisors, recruiters, and industry professionals."
- "I had more resources and experience to properly understand the major."
- "After going to DI Saturday, I learned more about the disciplines I chose and realized which one I was really interested in."

#### **ENGR 102**

- "When I was in ENGR 102, I got more exposure to other majors and Civil Engineering caught my eye due to its practicality."
- "After taking ENGR 102, I found that I didn't love programming as much as I thought



Do you feel as if you have received sufficient information about the different engineering majors to make an informed decision regarding choosing your major?



### Asked in Exit Survey – to students that selected 'No' Responses: 90



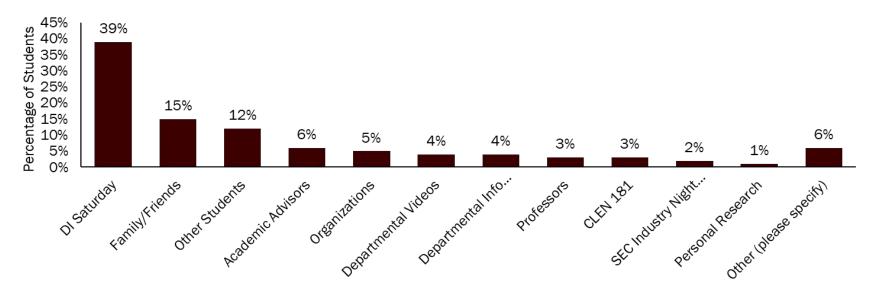
Please explain why you feel you have not received sufficient information regarding different engineering majors.

#### Lack of Application and Career Information

- "Not enough true application, also no process to help kids figure out what they are good at."
- "Didn't get a great idea of daily life in other career options."
- "It's difficult to grasp an idea of the major without having a better understanding of what careers you'd be going into."



During your first year at Texas A&M, what is/was the most helpful source of information to aid you in making an informed decision about your major?



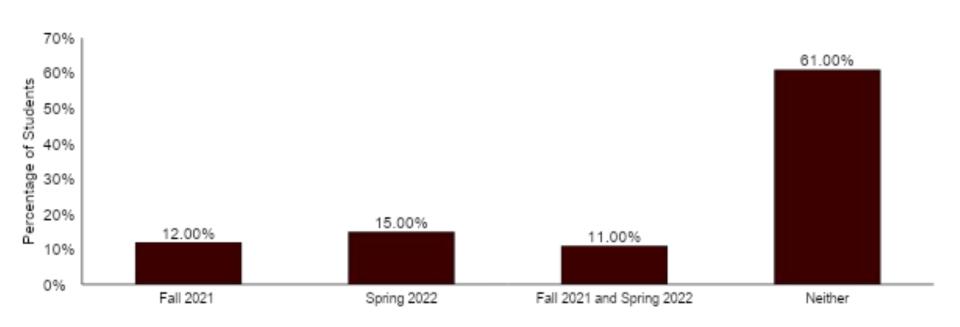
### Summer Plans Questions

Exit Survey Only



#### Responses: 414

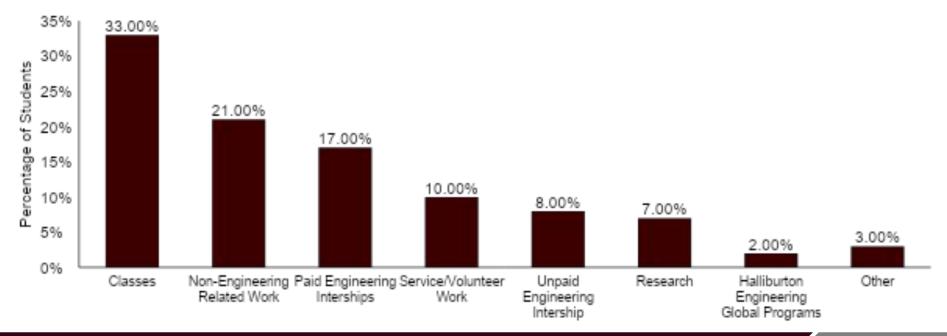
#### Did you attend any of the following SEC Engineering Career Fairs?





#### Responses: 777

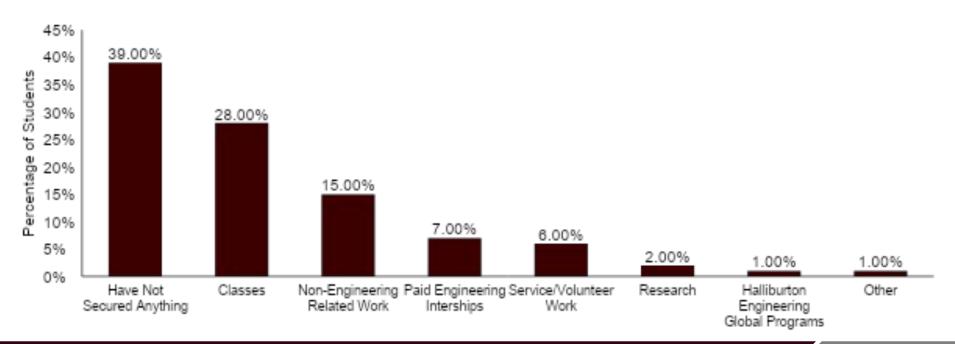
When planning for Summer 2022, which of the following have you actively tried to secure? (select all that apply)





#### Responses: 478

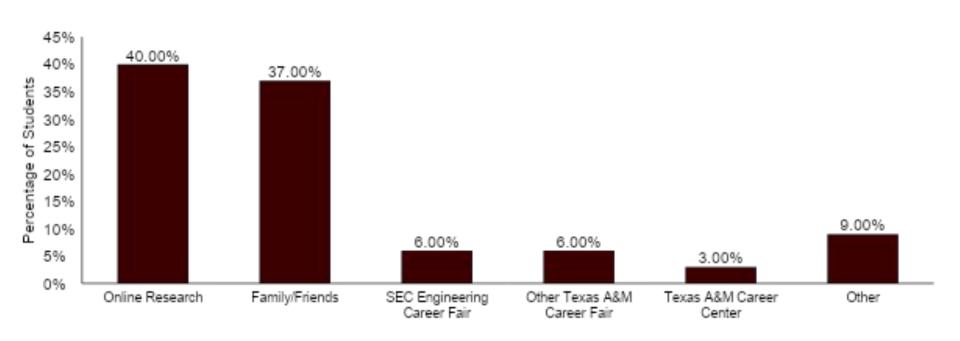
Which of the following summer plans have you successfully secured? (select all that apply)



### Asked to students that obtained an internship Responses: 35



How did you obtain your Summer 2022 internship?

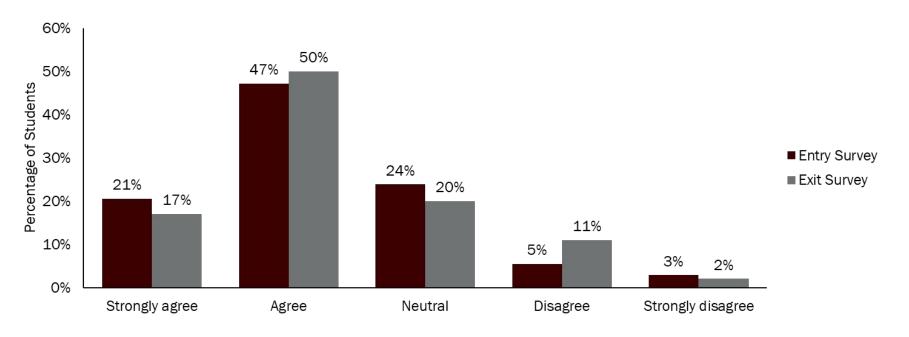


## Inclusion and Final Questions

Entry and Exit Surveys

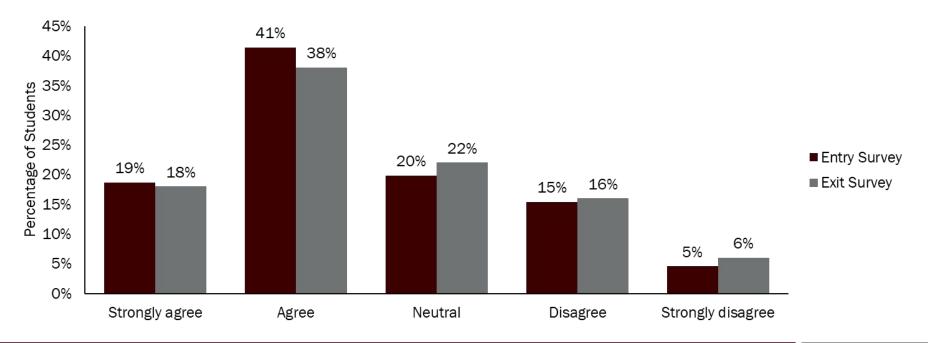


I feel a sense of belonging within the College of Engineering.



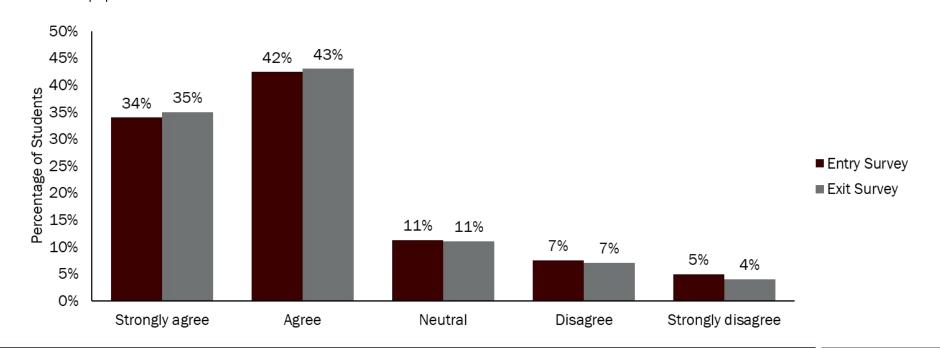


I am meeting as many people and making as many friends as I want in the College of Engineering at Texas A&M.



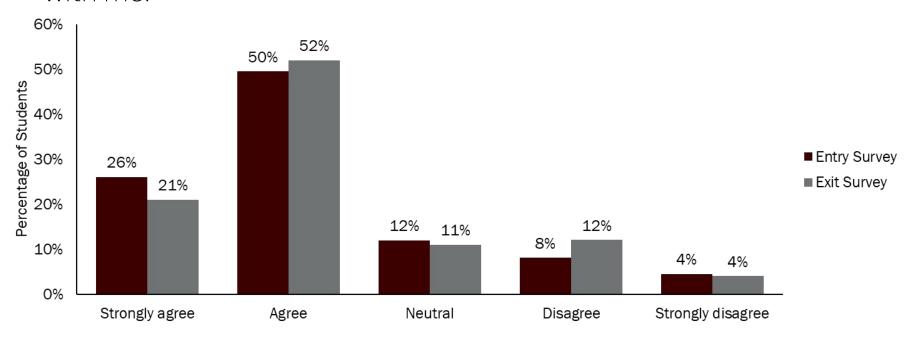


I have a close friend or classmate whom I can turn to if I need support.



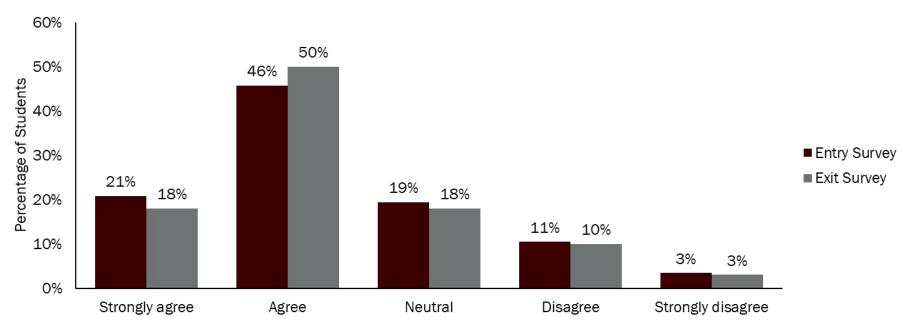


If I have to miss class, I have someone who will share their notes with me.



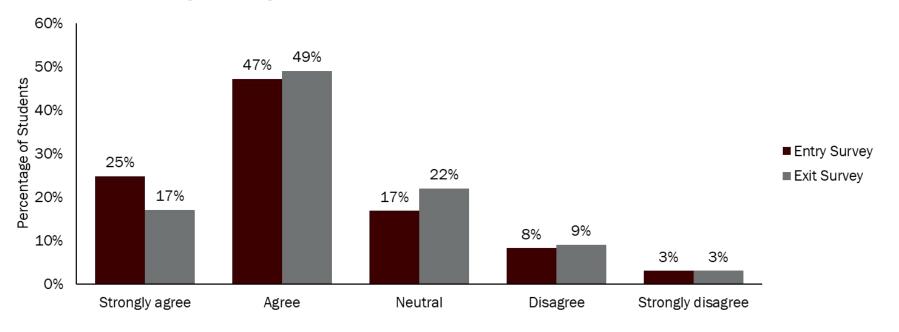


I feel comfortable approaching my professor(s) regarding the course or extra opportunities to learn.



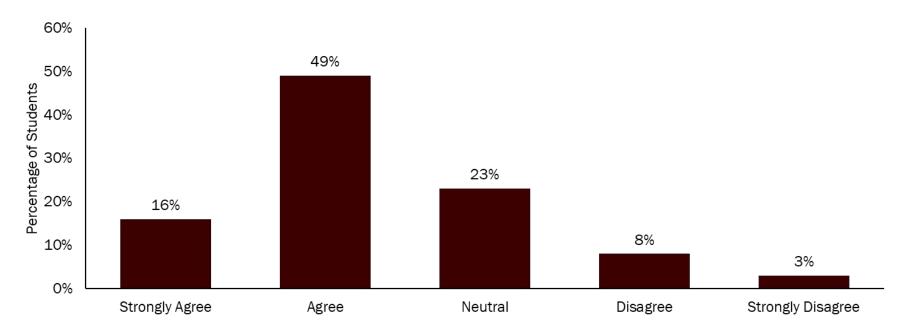


I feel comfortable approaching my Peer Teachers/Teaching Assistants regarding help with course work.



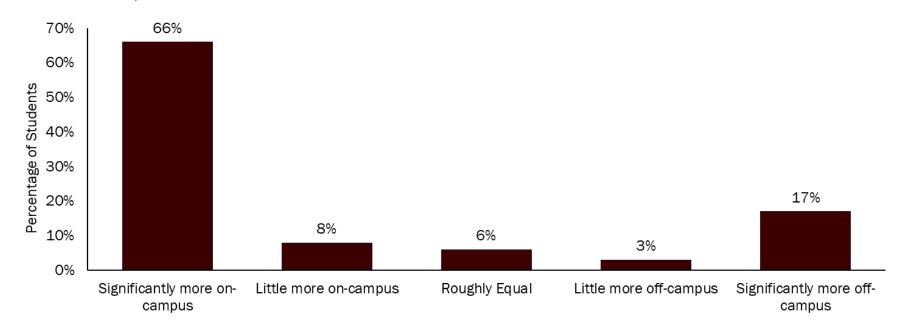


My first year experience was a collaborative environment where my peers and I supported each other in our academic goals.



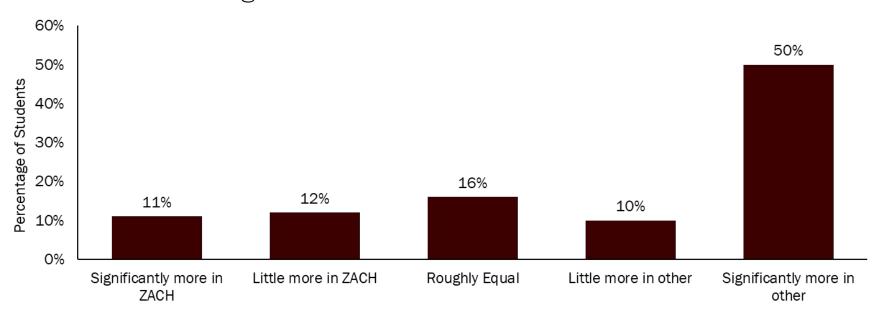


Do you, on average, spend more time studying on campus or off-campus?



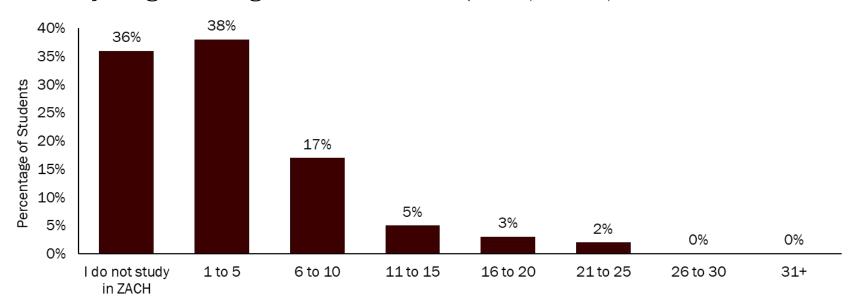


When studying on campus, do you spend more time studying in the Zachry Engineering Education Complex (ZACH) or other academic buildings?



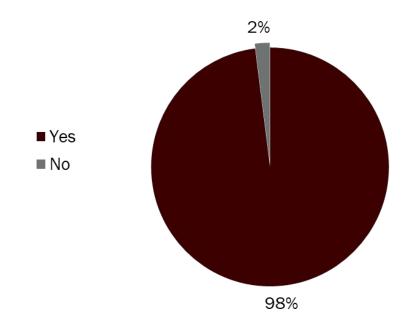


Approximately how many hours per week do you study in the Zachry Engineering Education Complex (ZACH)?





Are you continuing in Texas A&M Engineering in the Fall 2022 semester?



### Asked to students planning to leave Texas A&M Engineering Responses: 8



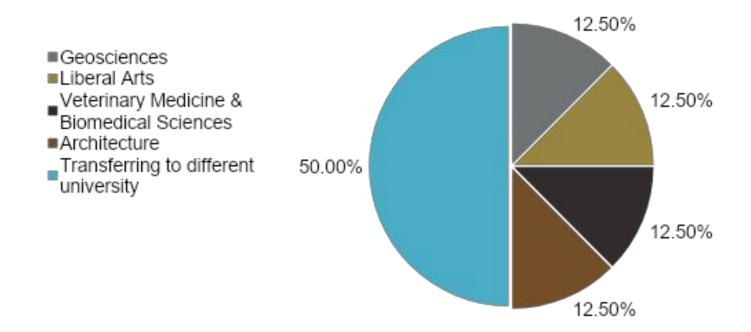
#### Why are you not continuing in Texas A&M Engineering?

- "I'm bad at coding, and I dislike the introduction courses feeling like 'weed-out' classes for those who are new to topics such as coding."
- "I want to pursue learning another language and I am not able to juggle Engineering and Language sustainably."
- "It's a stressful and war feel environment, non conducive to learning, teaching, inspiring, supporting and providing what a college student needs to thrive."
- "I feel burned out."

### Asked to students planning to leave Texas A&M Engineering Responses: 8



To which college are you switching your degree plan?



#### Asked in Exit Survey

Responses: 102



What might the College of Engineering (i.e., engineering faculty, staff, program directors, academic advisors) have done better to enhance your success or ease the transition to Texas A&M?

#### **ENGR 102**

- "I think an SI session for Engr 102 with example coding problems would have done wonders. If they could outline what students should be focusing on week by week, I think it would give some structure to students to follow in this intro to programming class."
- "Please reduce the intensity and workload of the ENGR 102 class."
- "Perhaps a brief introduction into coding for those entering ENGR 102 with no prior coding experience, or those who aren't familiar with the program that is used. It could just be a recommended YouTube instructional series or maybe just some quick, easy exercises to help ease them into coding."

#### Asked in Exit Survey

Responses: 102



What might the College of Engineering (i.e., engineering faculty, staff, program directors, academic advisors) have done better to enhance your success or ease the transition to Texas A&M?

#### **Internships**

- "It would have been really helpful to learn more about how to get into research or internship opportunities."
- "Increase awareness for internships please."

#### CLEN/FYEX 181:

- "I think that the CLEN class could be more interesting or take up only part of the semester, like the Engineering Honors seminar, which is 5 weeks long."
- "Many resources and skills offered in the class are available online, and I am more likely to make friends from one of my extracurricular or major classes."
- "The FYEX 101 is not as useful as it ought to be."
   2021-2022 First-Year Engineering Student Survey



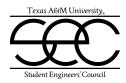
What might the College of Engineering (i.e., engineering faculty, staff, program directors, academic advisors) have done better to enhance your success or ease the transition to Texas A&M?

#### Texas A&M Galveston Campus

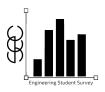
- "More needs to be done to inform engineering students on Galveston campus of different engineering majors available to them."
- "I feel very isolated as an engineering student at Texas A&M Galveston campus."
- "Bring more resources down to the Galveston campus."

#### **Industry Nights**

- "More work needs to be done to ensure industry night presentations are coherent and useful to a prospective engineer."
- "Many students are unable to attend company showcases which fit their intended majors and future careers."



#### 2021-2022 Legislation Committee

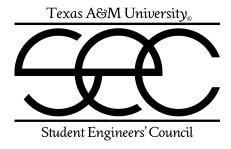


#### Co-Chairs

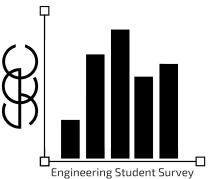
Andrew Paré Lulu Whitson

#### Members

Anirudh Madyastha
Drew DeHaven
Jake Isakson
Katheryn Jaeckle
Margaret McGurran
Matthew Cupich
Nick Dittemore
Samuel Blair
Trevor Gard
Vinisha Vasan



# FIRST-YEAR STUDENT ENTRY/EXIT SURVEY



sec.tamu.edu

legislation@sec.tamu.edu