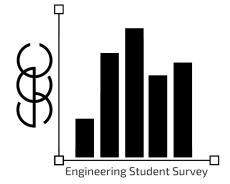


# ENGINEERING STUDENT SURVEY



#### **Results Report**

Fall 2017



## **Survey Executive Summary**



### Mission

A primary mission of the Student Engineers' Council is to serve as the representative voice for the students within the College of Engineering.

### Purpose

This survey exists to embody and communicate the student perspective with the administration of the College of Engineering.



# **Survey Executive Summary**



#### **Open-Ended Questions**

Questions labeled "Free Response" allowed for open-ended student responses. These responses were read by members of SEC's Legislation committee and sorted into representative categories.

#### Productive Feedback

This survey features some questions that focus specifically on students' negative feedback. This is intended as helpful, productive information highlighting areas for improvement.

Texas A&M University...



## **Survey Response Summary**



## **4-Week Survey Period** October 29, 2017 – November 27, 2017

### 7712 Total Responses

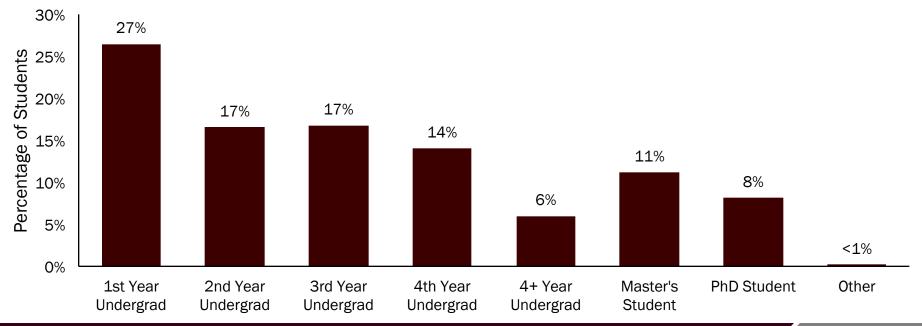
41% of Engineering Student Body (42% of Undergraduate Students + 39% of Graduate Students)

# **Demographic Questions**

Asked to all students

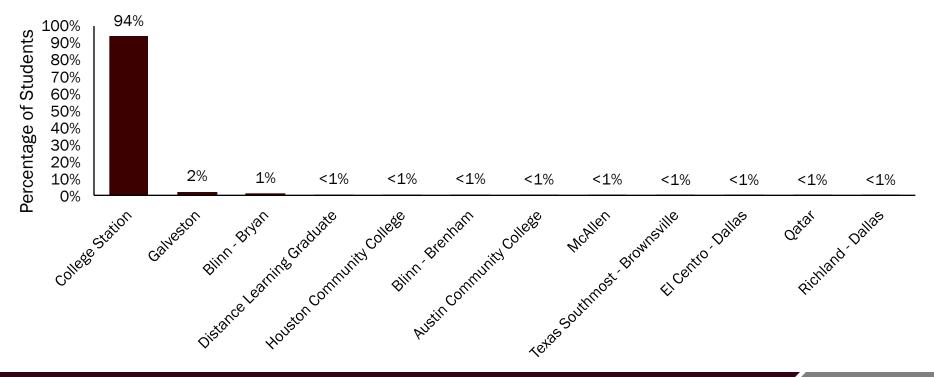


# Which of the following most accurately represents your class year at Texas A&M University?



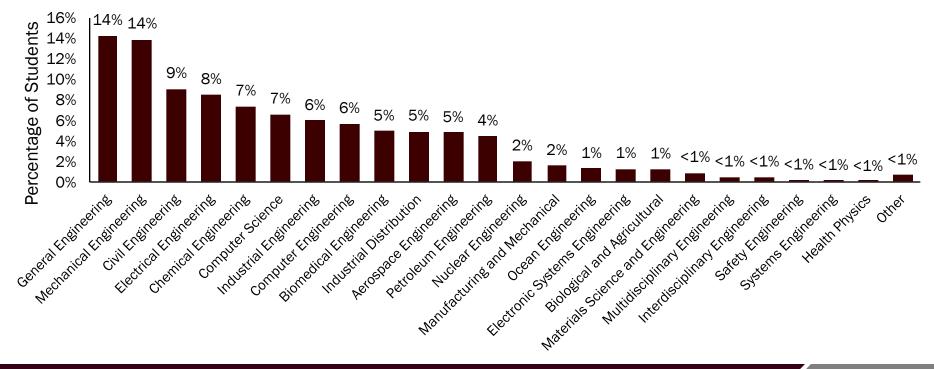


## At which campus do you take the majority of your courses?



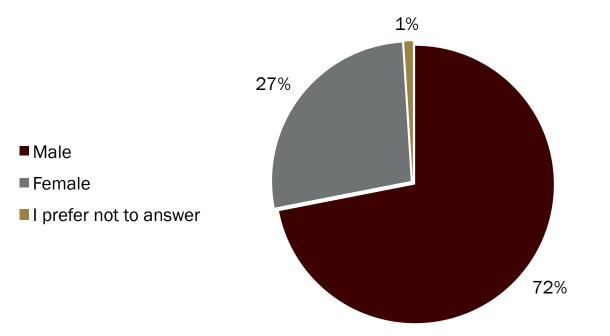


## What is your major?

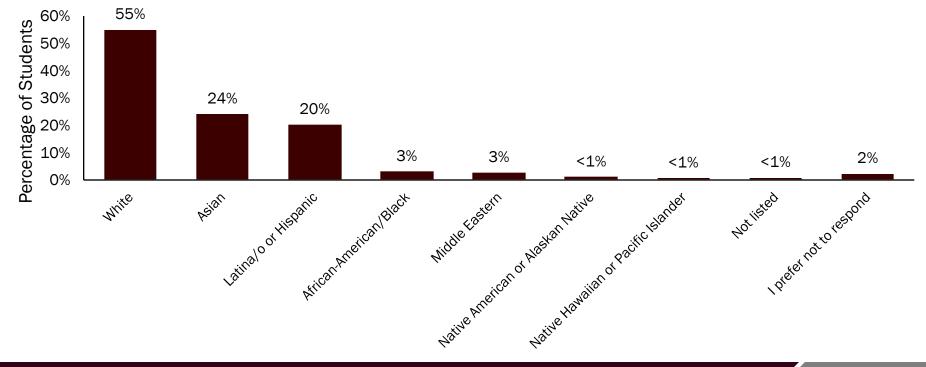


### Sex/Gender







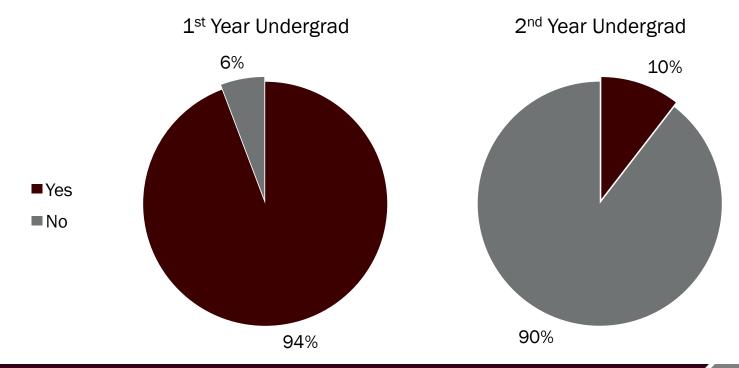




Asked to only 1<sup>st</sup> and 2<sup>nd</sup> year undergraduate students Responses: 3273



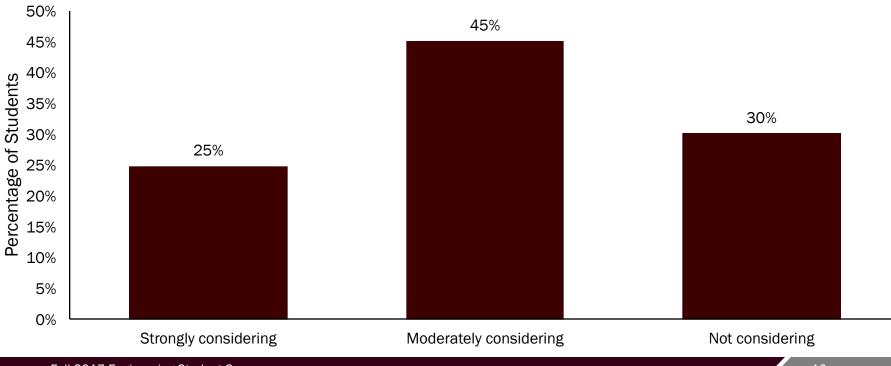
### Are you currently enrolled in ENGR 111 or ENGR 112?



Asked to only undergraduate students Responses: 6101



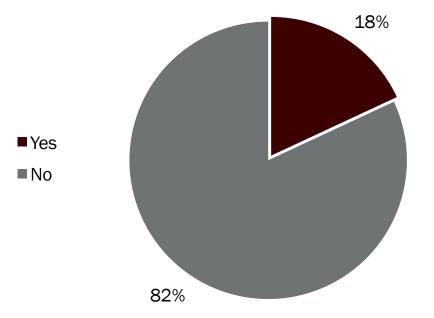
## To what extent are you considering graduate school?



Fall 2017 Engineering Student Survey



### Are you graduating in December 2017 or May 2018?

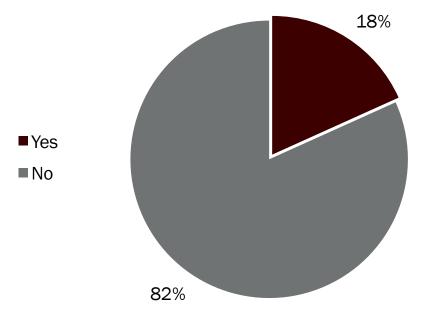


# International Awareness/ Global Competence Questions

Asked to all students

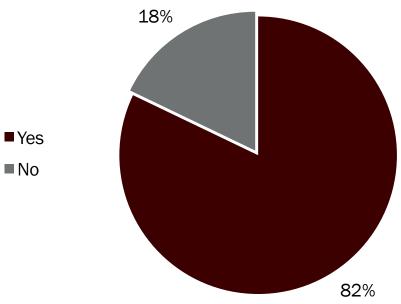


## Are you an international student?





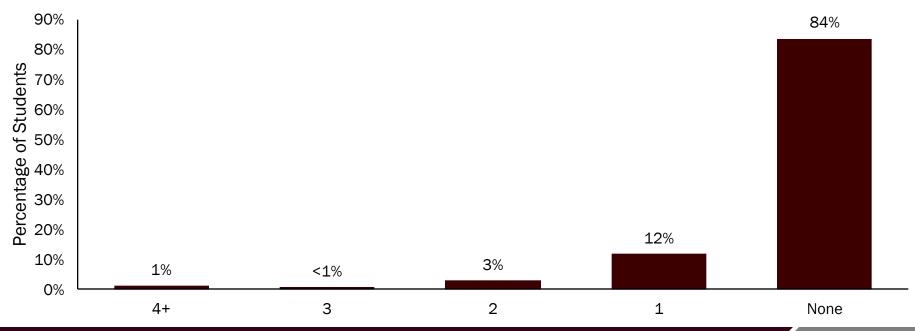
# Do you have a passport which allows you to travel outside of the United States?



Asked to only domestic students Responses: 6181



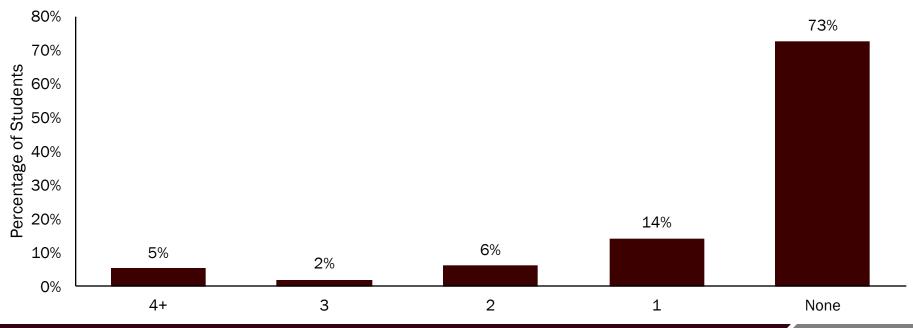
# How many learning experiences have you had **outside the U.S.** while in college?



Asked to only international students Responses: 1375



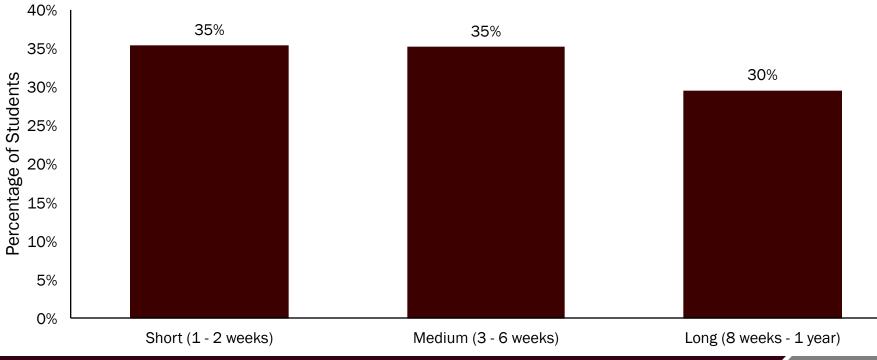
# Aside from your experience in the U.S., how many international learning experiences have you had while in college?



Asked to only those with international learning experiences Responses: 1373



## What was the length of your learning experience abroad?

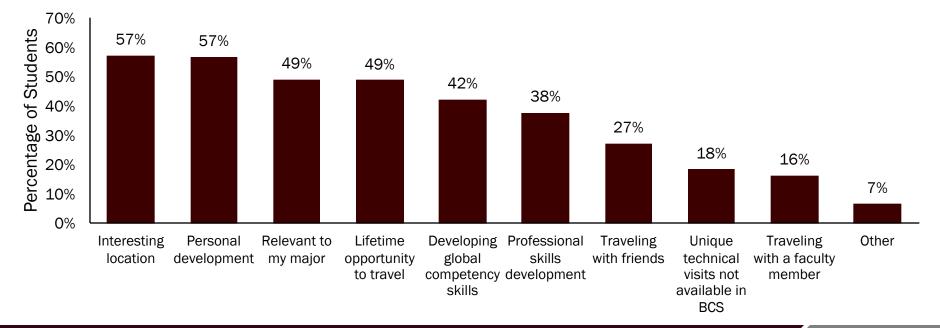


Fall 2017 Engineering Student Survey

Asked to only those with international learning experiences Responses: 1373



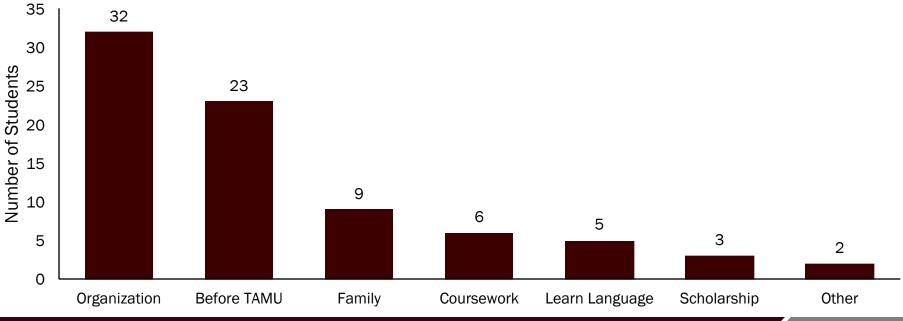
# Why did you choose to participate in international learning experience(s)? (select all that apply)



Asked to those who selected "other" for the previous question Responses: 83



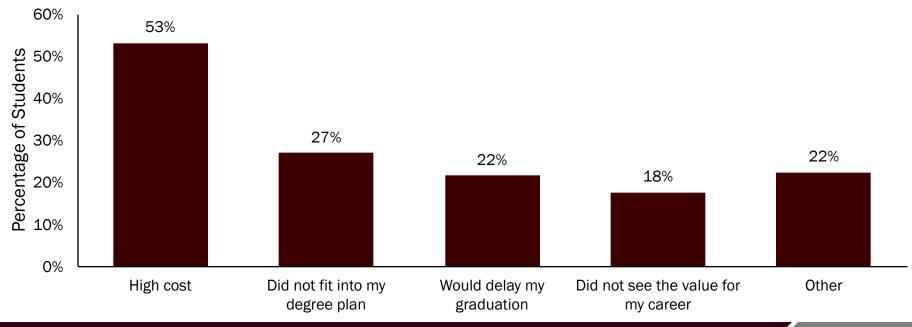
# *Free Response:* Why did you choose to participate in international learning experience(s)? – Other



Asked to only those without international learning experiences Responses: 6103



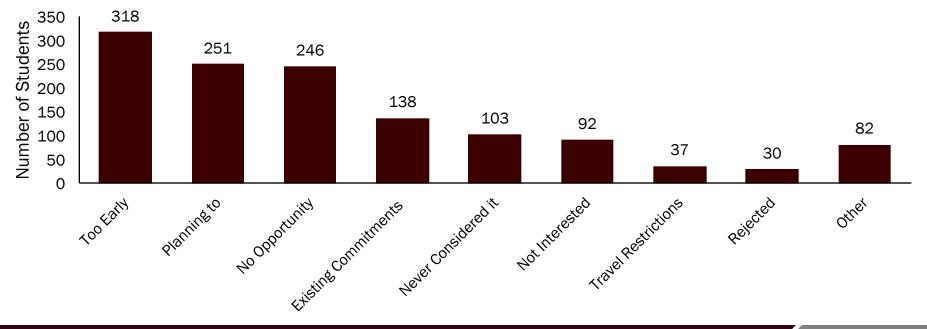
# Why did you choose not to participate in international learning experience(s)? (select all that apply)



Asked to those who selected "other" for the previous question Responses: 1308

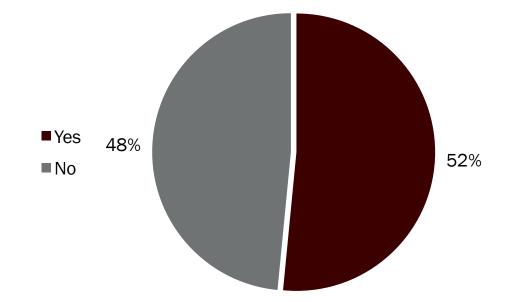


# *Free Response:* Why did you choose not to participate in international learning experience(s)? – Other



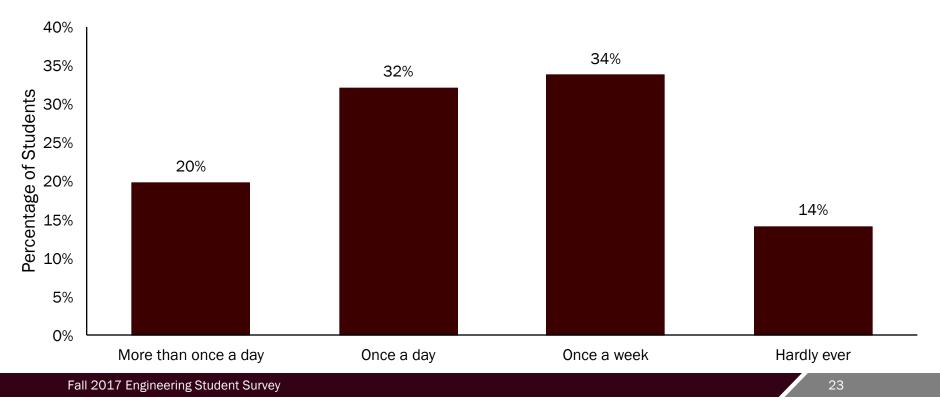


## Are you able to communicate in more than one language?



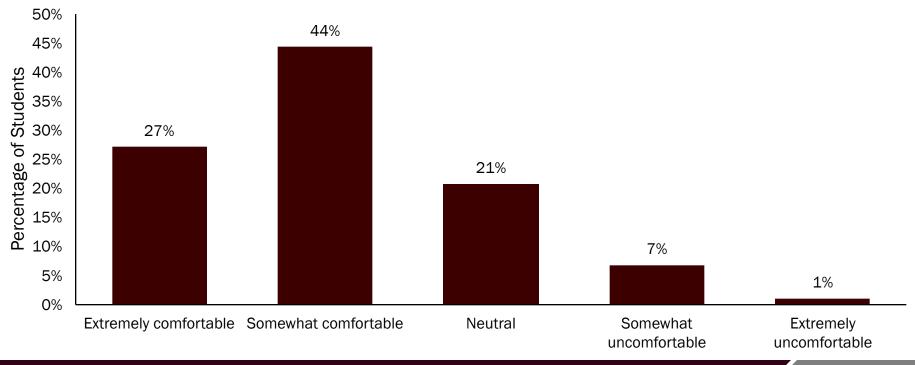


## How often do you update yourself on world news?





## How comfortable do you feel operating in another culture?

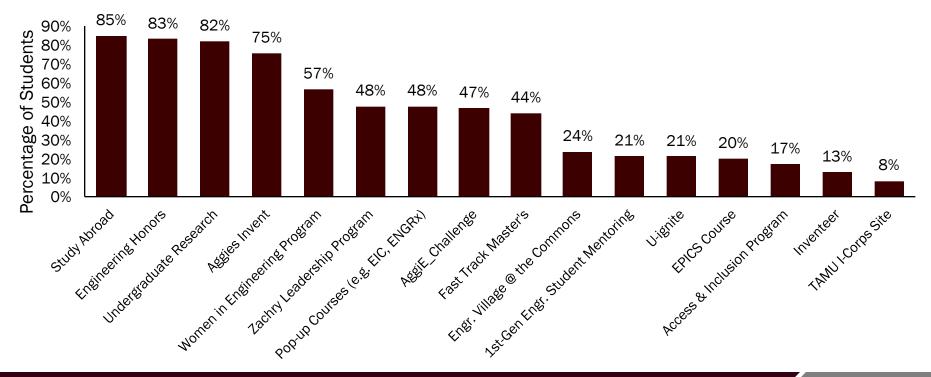


# Accessibility of Academic Programs and High-Impact Experiences

Asked to only undergraduate students

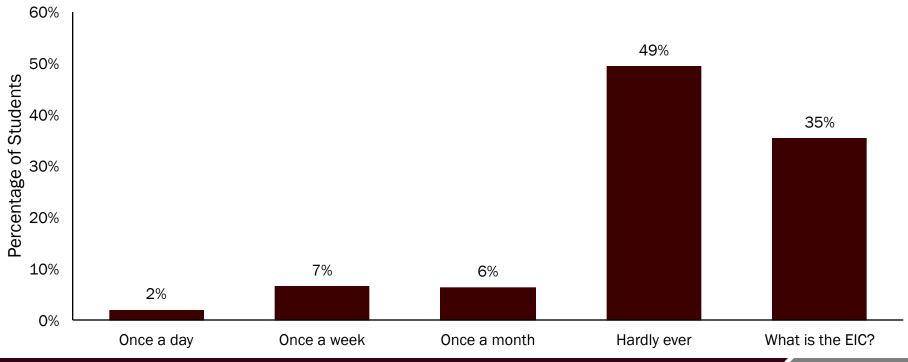


### Are you aware of the following Academic Enrichment Programs?





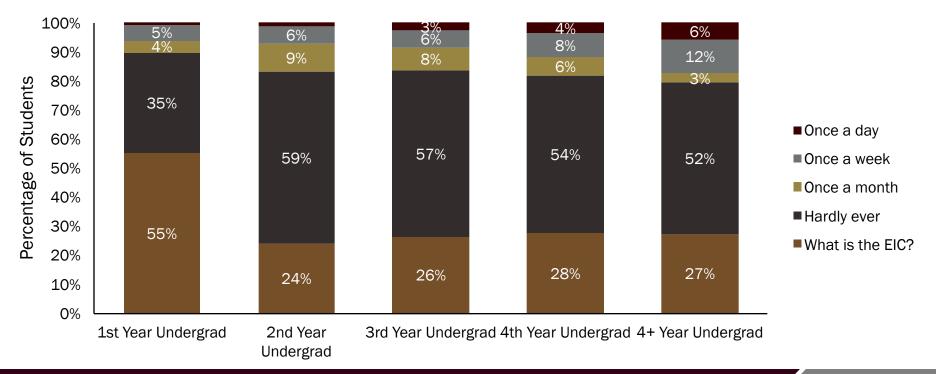
### How often do you use the Engineering Innovation Center (EIC)?



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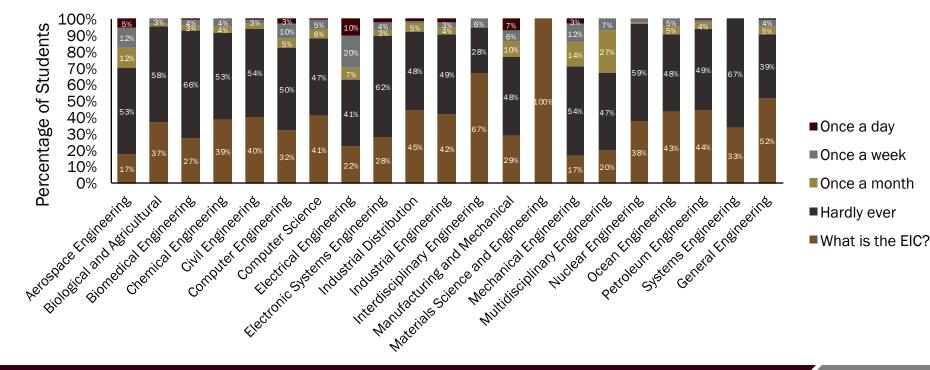
Responses: 5872

#### How often do you use the Engineering Innovation Center (EIC)?



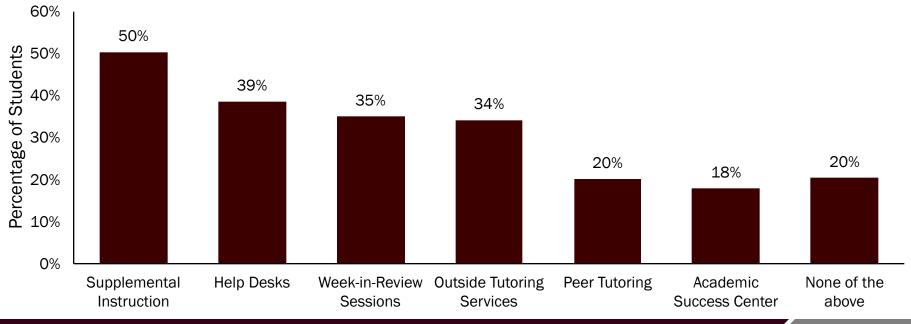


#### How often do you use the Engineering Innovation Center (EIC)?





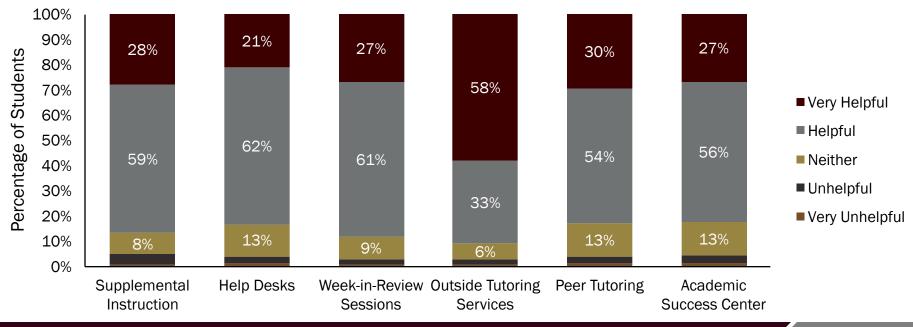
# Select the following Academic Support Programs that you have utilized. (select all that apply)



Each asked to only those who have utilized that program Responses: varied

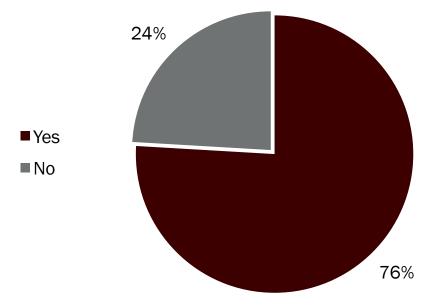


# How helpful are the following Academic Support Programs in helping you succeed academically?





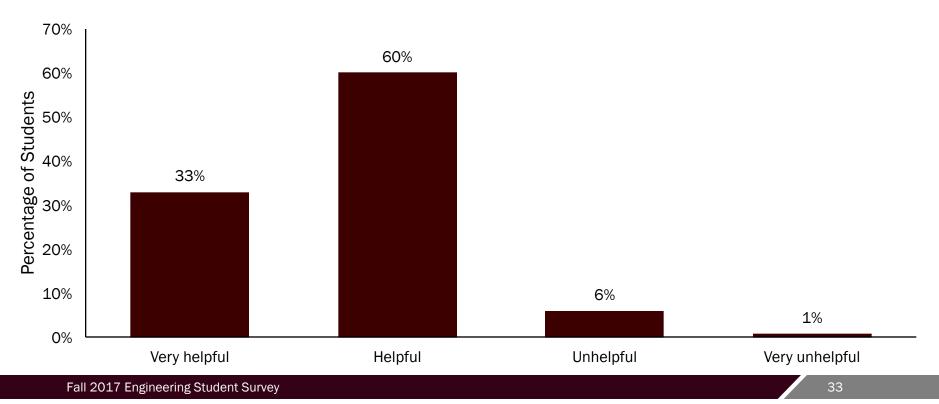
### Have you gone to see any of your professors outside of class?



Asked to only those who had visited professors Responses: 4426

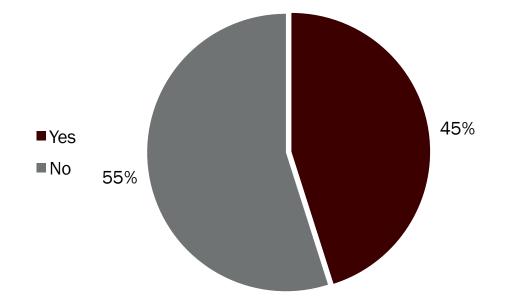


#### How helpful was your visit(s) with your professor?





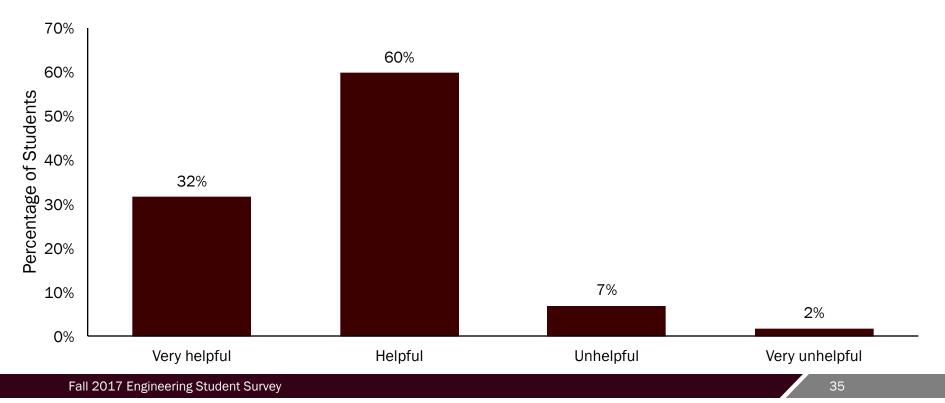
### Have you gone to see any of your TAs outside of class?



Asked only to those who had visited TAs Responses: 2628



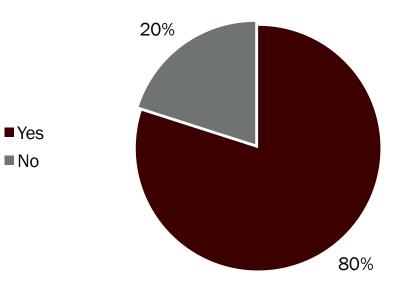
#### How helpful was your visit(s) with your TA?



Asked to all students, including graduate students Responses: 7293



### When you registered for Fall 2017, were you able to register for all of the classes you needed?



### Use of Instructional Technology

Asked to all students



#### **Definition of "Instructional Technology"**

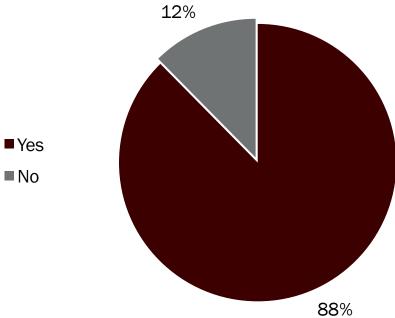
Instructional technology includes (but is not limited to) the following:

- Computer labs
- Smart Podiums (computers with writing capability)
- Technologies that promote student engagement (e.g. iClickers, Learning Catalytics).

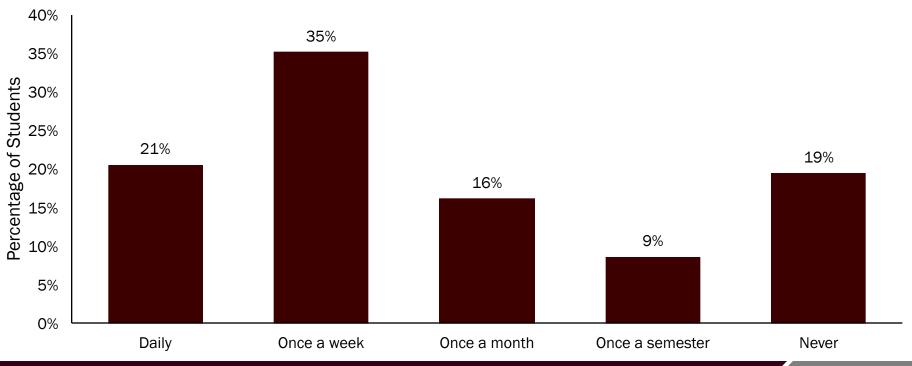
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Responses: 7226

# Do your instructors incorporate instructional technology into their courses?





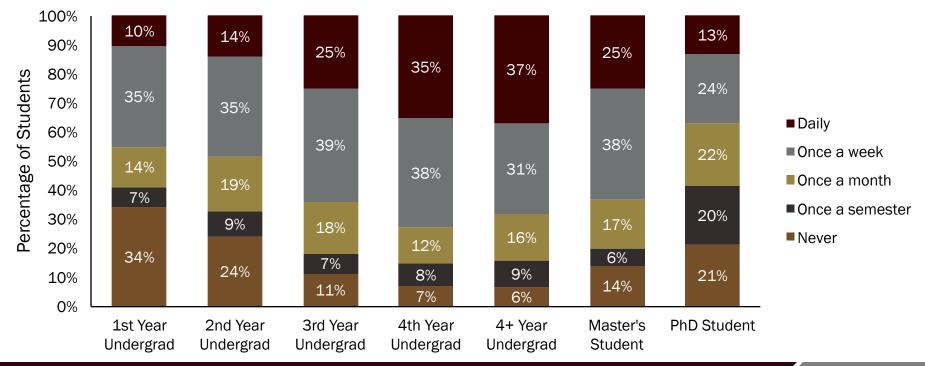




**ENGINEERING** TEXAS A&M UNIVERSITY

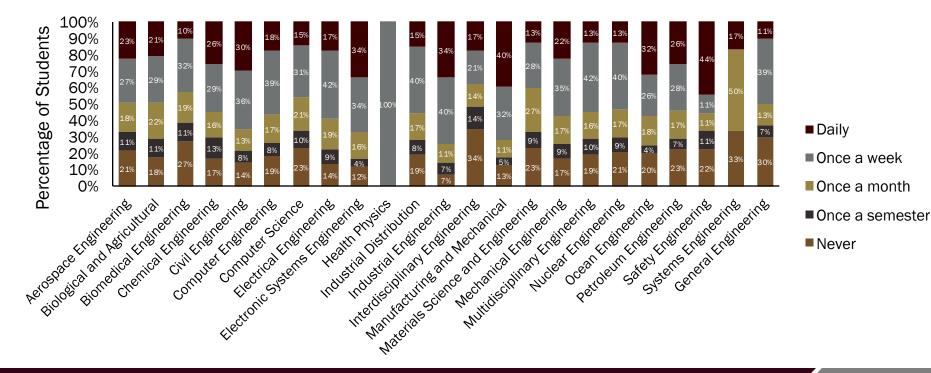
Responses: 7226

#### How often do you use the Open Access Computer Labs on campus?



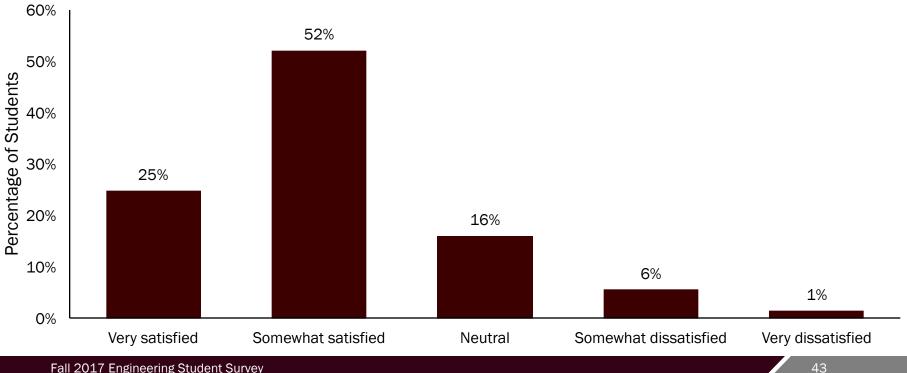


#### How often do you use the Open Access Computer Labs on campus?



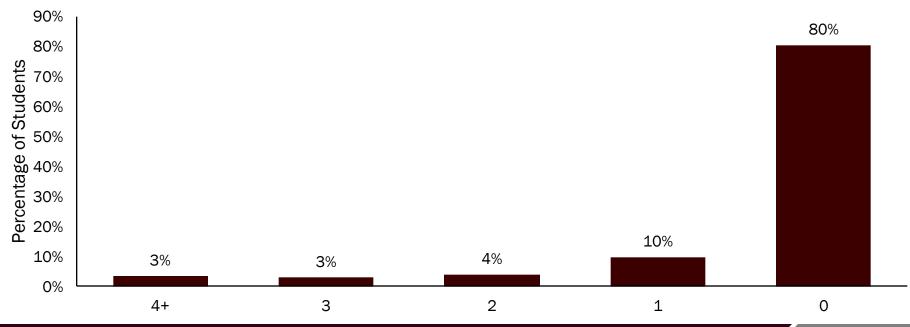


#### How would you rate your experience with eCampus?





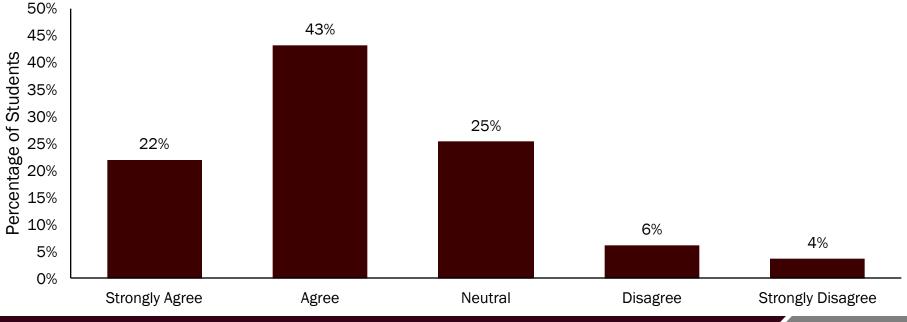
## How many online courses are you taking, or have taken, within the College of Engineering at Texas A&M?



Asked to only those who had taken online courses Responses: 1418



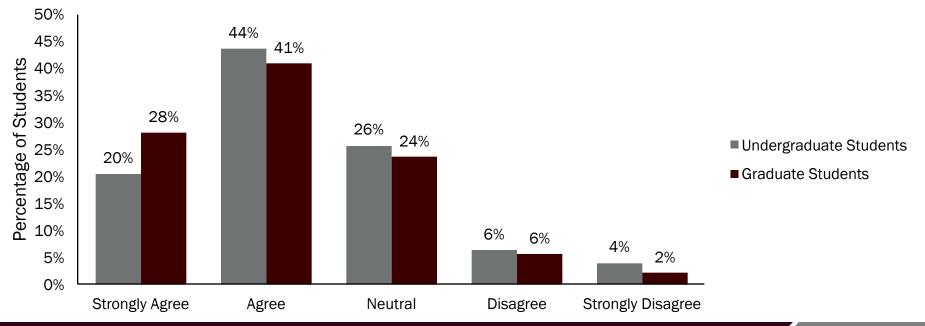
# I am satisfied with the quality of education provided by the online course(s) I took through Texas A&M.



Asked to only those who had taken online courses Responses: 1418

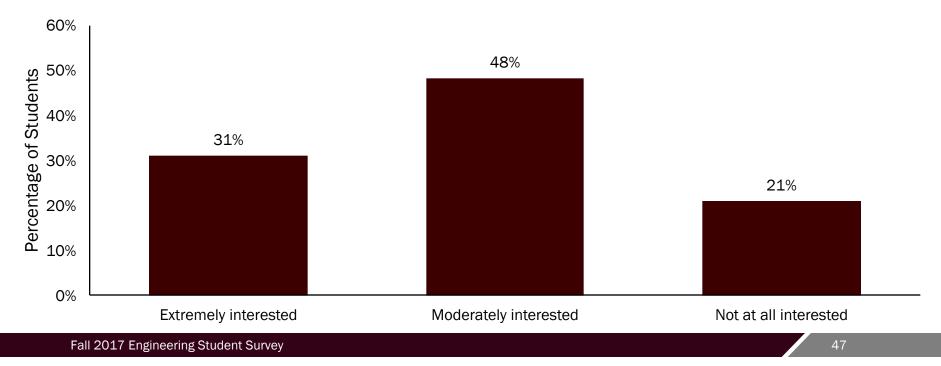


# I am satisfied with the quality of education provided by the online course(s) I took through Texas A&M.



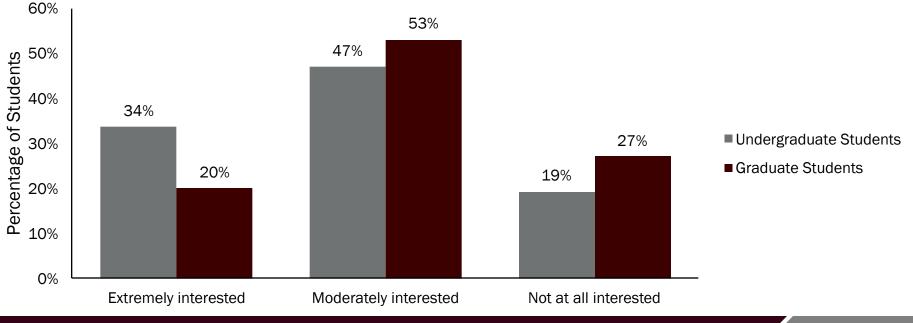


### If there were more online courses offered for your degree, how interested would you be in taking them?





### If there were more online courses offered for your degree, how interested would you be in taking them?

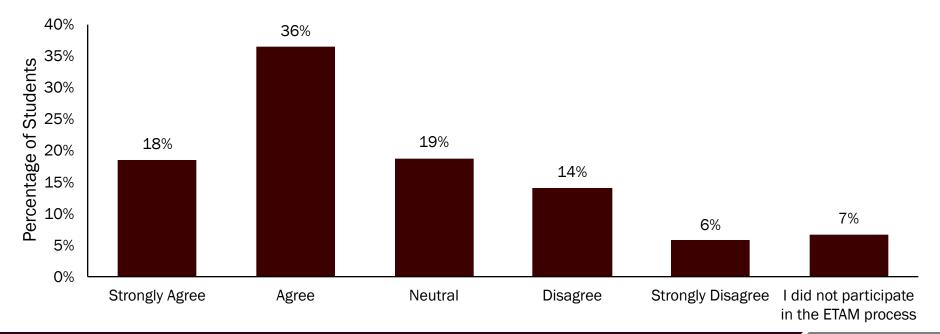


### Entry to a Major

Asked to only 1<sup>st</sup> and 2<sup>nd</sup> year undergraduate students

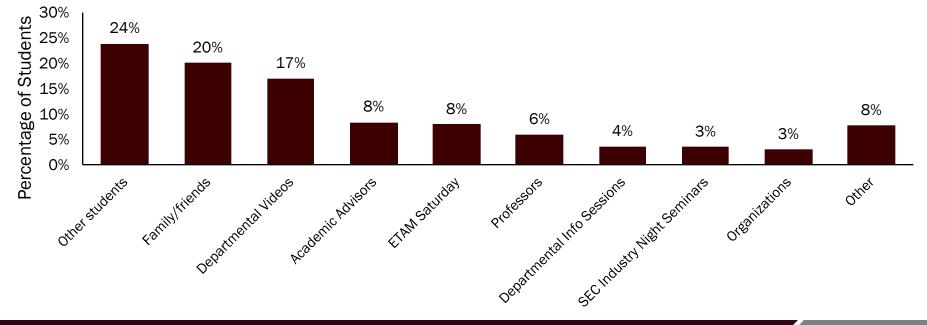


# I receive(d) sufficient information about the different majors to make an informed decision about my major.





# During your first year at Texas A&M, what is/was the most helpful source of information when applying to your major?

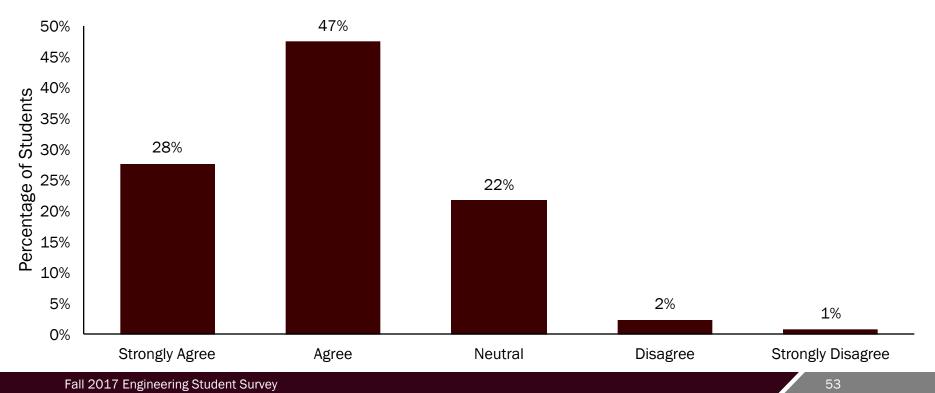


### **Undergraduate Environment**

Asked to only undergraduate students



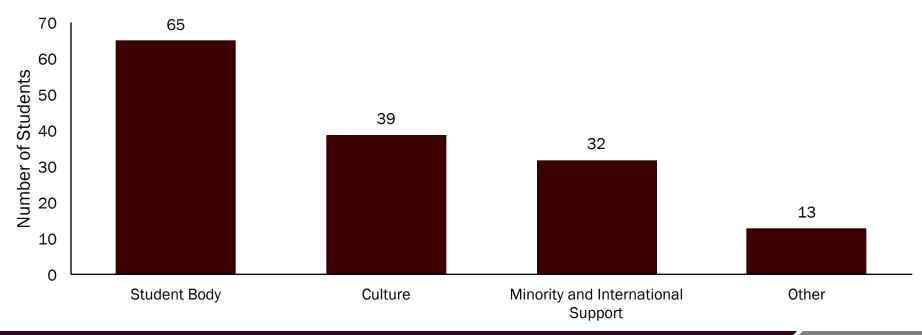
#### I think the College of Engineering values diversity.



Asked to only those who felt the college undervalued diversity Responses: 183



# *Free Response:* Please provide an example of how the College of Engineering undervalues diversity.



Asked to only those who felt the college undervalued diversity Responses: 183



# *Free Response:* Please provide an example of how the College of Engineering undervalues diversity.

Student Body

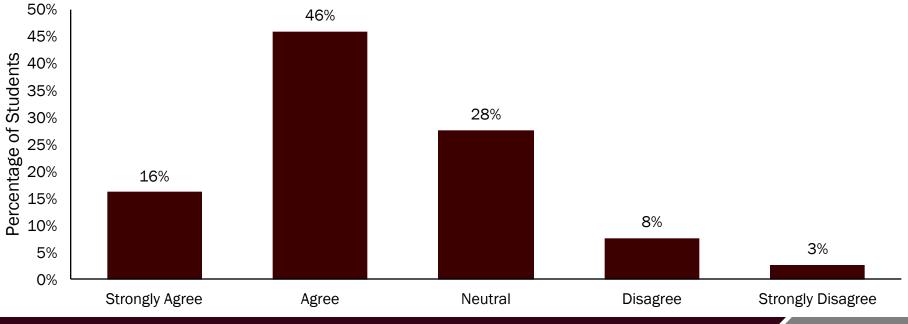
• "[the college] does not provide enough opportunities for women and people of color to stand out and be recruited"

#### <u>Culture</u>

• "...those that do not fit the mold are not welcomed into the discipline or the College of Engineering "



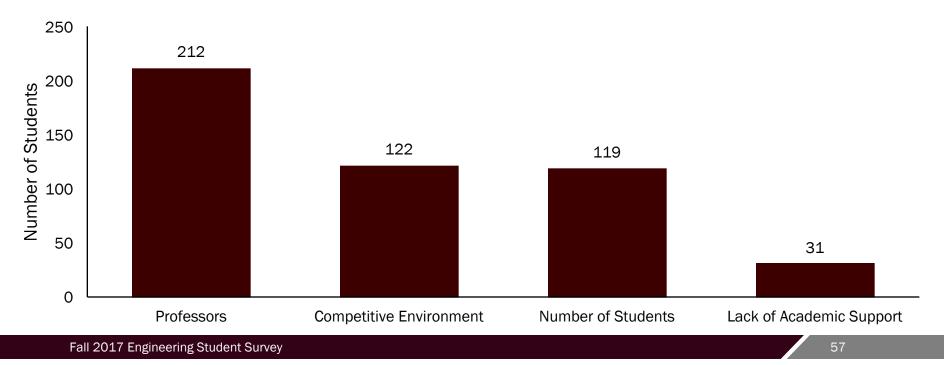
### The environment within the College of Engineering helps me succeed academically.



Asked to only those who felt the college did not help them Responses: 589



## *Free Response:* Please provide an example of how the College of Engineering does not help you succeed academically.



Asked to only those who felt the college did not help them Responses: 589



## *Free Response:* Please provide an example of how the College of Engineering does not help you succeed academically.

#### **Professors**

• "If there is something that does not make sense to me, the professors tend to not know how to explain it in a way besides the way that it was originally explained."

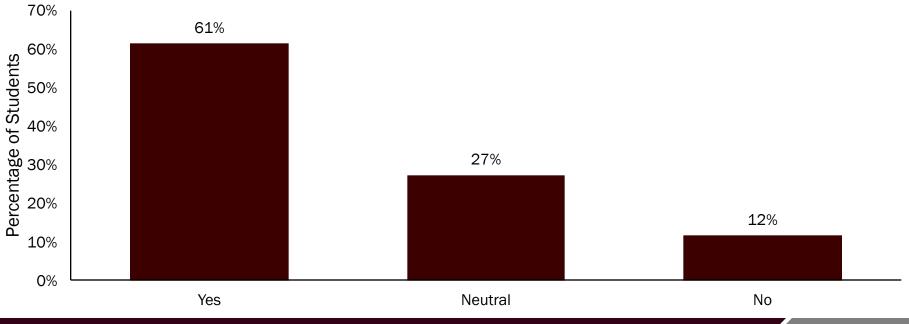
#### **Competitive Environment**

• "I think the environment forces students to compete for the best grades, instead of trying to help each other understand the material."



### I am satisfied with the size of my **engineering** classes.

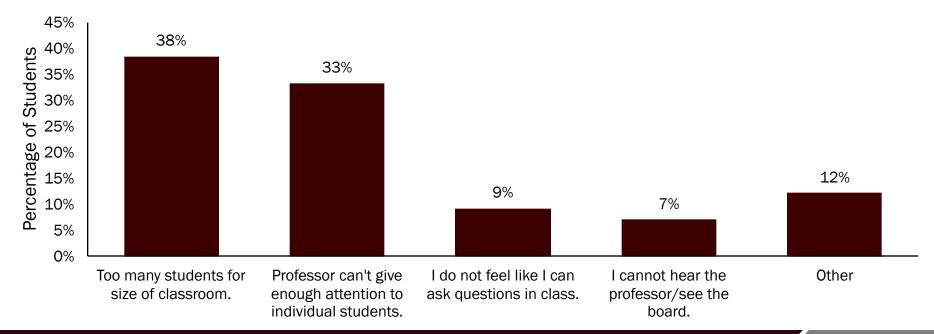
(Only classes within the College of Engineering... *i.e.* MATH, PHYS, CHEM **do not** count.)



Asked to only those who were not satisfied with class size Responses: 661



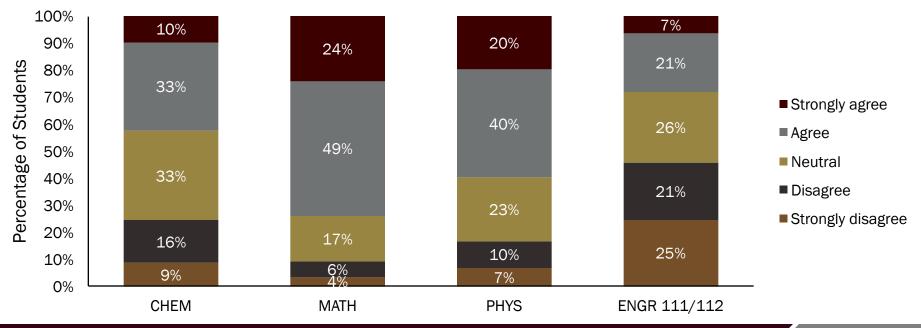
# For which of the following reasons are you dissatisfied with the size of your engineering classes?



Not asked to freshmen Responses: 3858



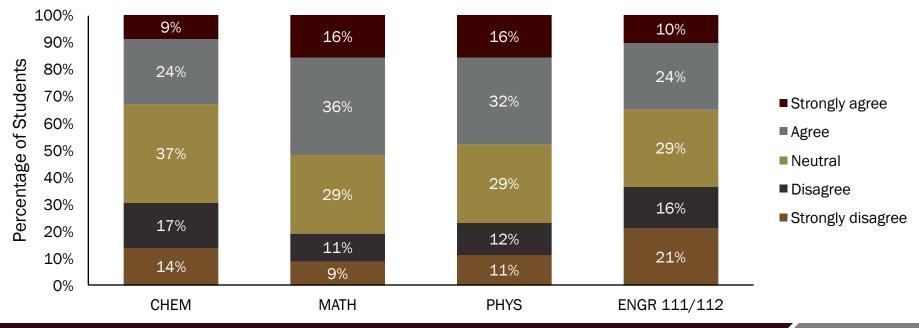
### My first-year coursework (in CHEM, MATH, PHYS, or ENGR 111/112) adequately prepared me for my engineering coursework.



Not asked to freshmen Responses: 3858



### My first-year coursework (in CHEM, MATH, PHYS, or ENGR 111/112) helped me decide that being an engineer was right for me.

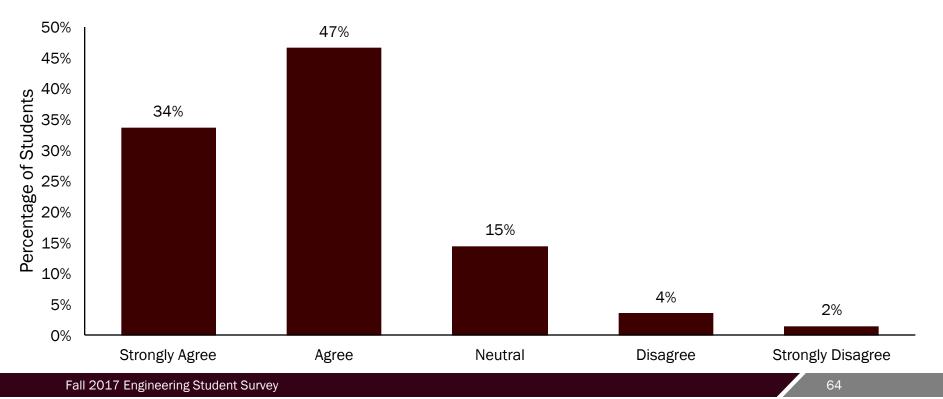


### **Graduate Environment**

Asked to only graduate students



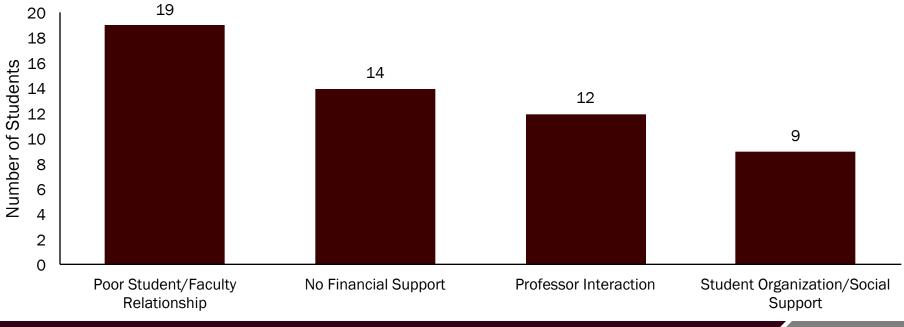
#### My department creates a welcoming environment.



Asked to only those who felt unwelcome in their department Responses: 73



# *Free Response:* Please provide an example(s) of how your department does not create a welcoming environment.



Asked to only those who felt unwelcome in their department Responses: 73



# *Free Response:* Please provide an example(s) of how your department does not create a welcoming environment.

#### Poor Student/Faculty Relationship

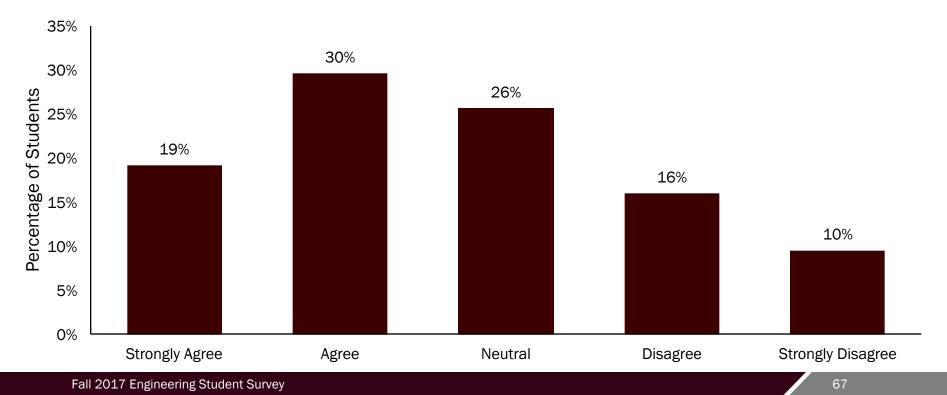
• "There's no outreach from the department to ask for our suggestions, when asked... they have stated that there's no process for and dismissed our concerns."

#### **Professor Interaction**

 "The competitive nature of the publishing environment causes professors to favor some of their students, and disregard the work of other students."

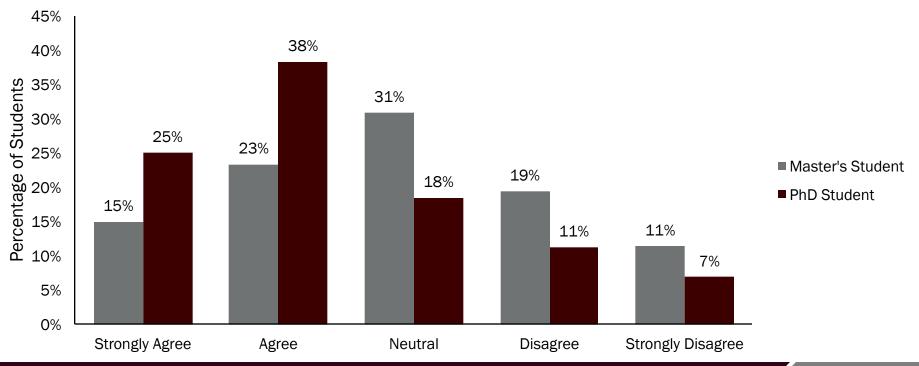


#### I am given adequate financial support to succeed in graduate school.



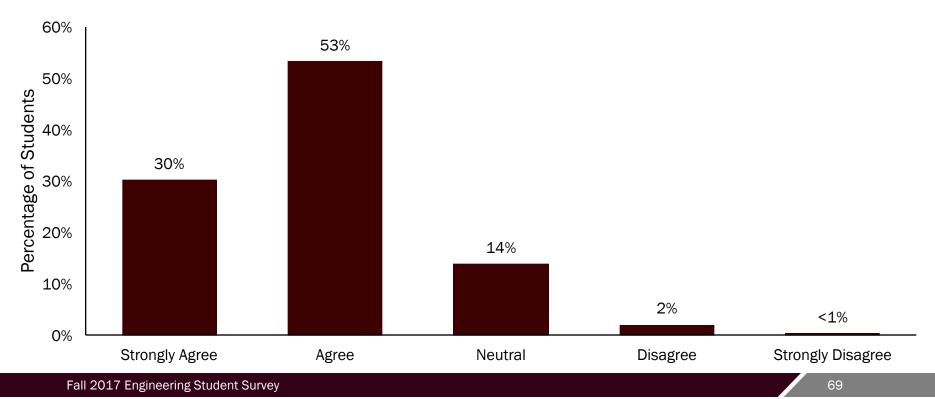


#### I am given adequate financial support to succeed in graduate school.





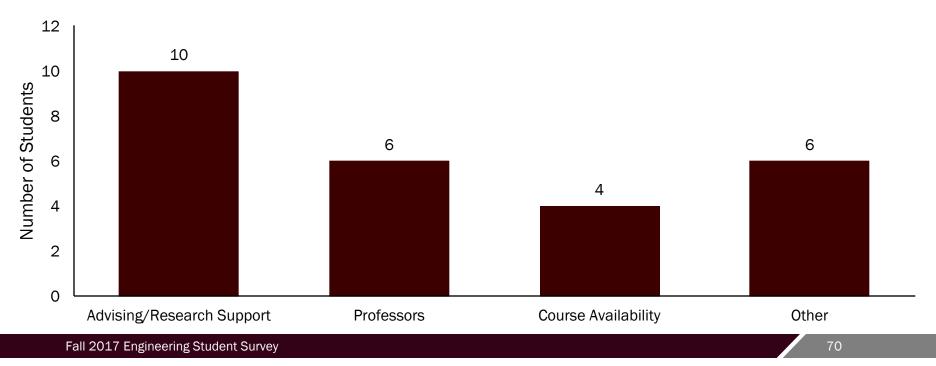
#### I am able to succeed academically in my department.



Asked to only those unable to succeed in their department Responses: 35



# *Free Response:* Please provide an example(s) of how you are unable to succeed academically in your department.



Asked to only those unable to succeed in their department Responses: 35



# *Free Response:* Please provide an example(s) of how you are unable to succeed academically in your department.

#### Advising/Research Support

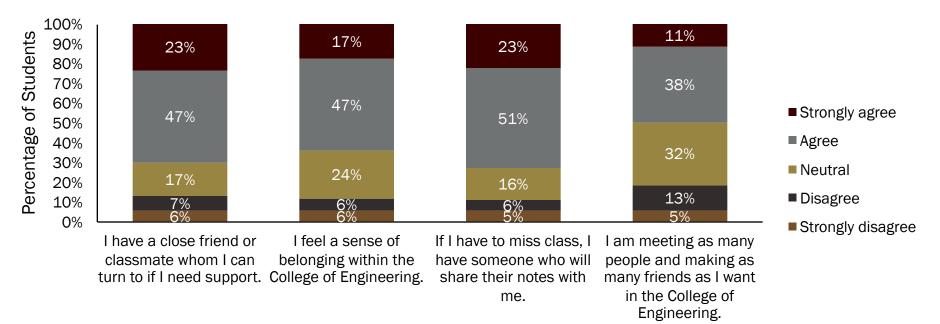
• "My graduate advisory committee is difficult to get a hold of and hard to connect with."

#### Course Availability

• "Graduate student focuses are quite specific, so it is difficult to find classes that support my field of study."



# Please indicate the extent to which you agree or disagree with the following statements.



## 25 by 25 Initiative

Asked to all students

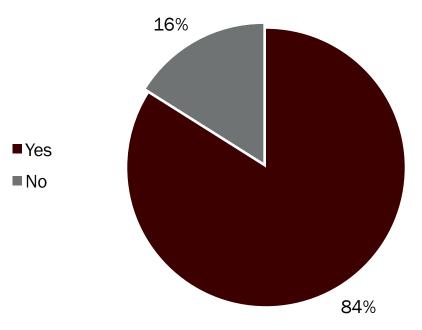


### Definition of "25 by 25 Initiative"

According to the College of Engineering, the 25 by 25 initiative is "a transformational education program designed to increase access for qualified students to pursue engineering education at Texas A&M University and increase our total enrollment to 25,000 students by 2025. This includes students on our College Station, Galveston, Qatar, and McAllen campuses, online master's degree students and students in our statewide engineering academies. 25 by 25 is not just about increasing numbers, it is also about enhancing quality and excellence." You can find more information at: engineering.tamu.edu/25by25



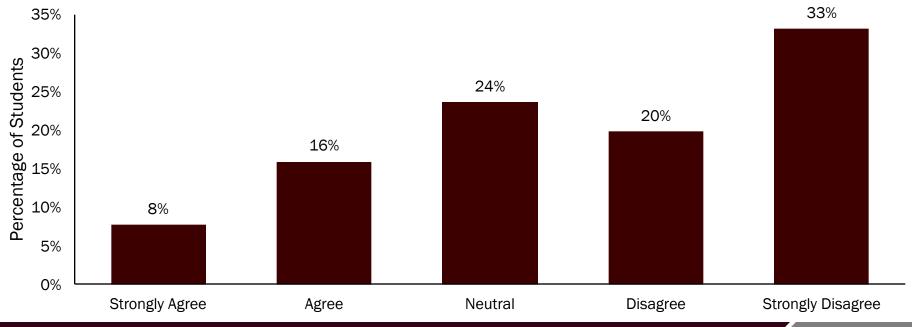
### Are you aware of the 25 by 25 initiative?



Asked to only those aware of the 25 by 25 initiative Responses: 5991



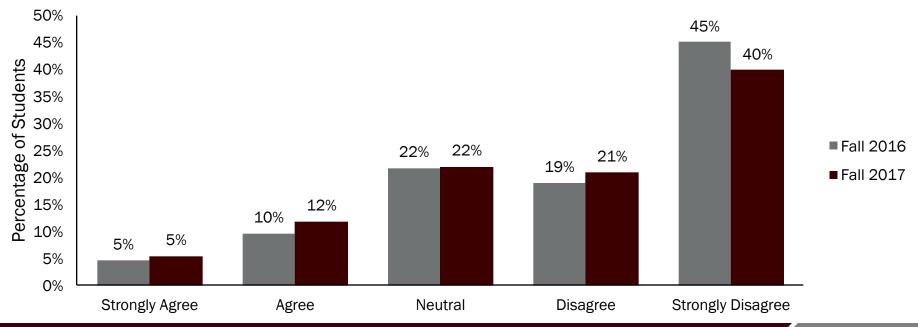
### Please rank your agreement with the following statement. I support the 25 by 25 initiative.



Asked to only those aware of the 25 by 25 initiative \*Filtered to exclude  $1^{st}$  Year Undergrads



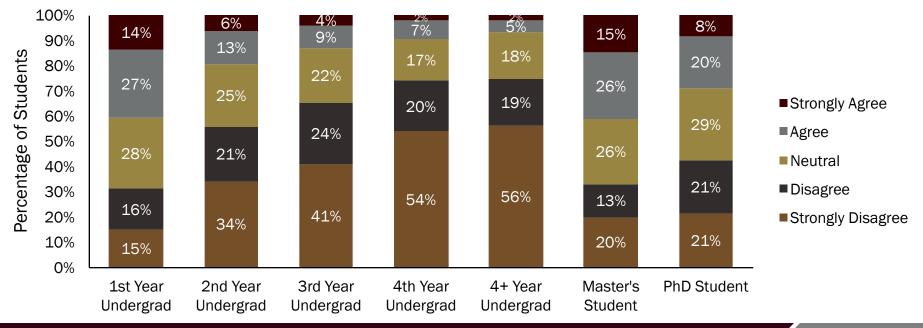
### Please rank your agreement with the following statement. I support the 25 by 25 initiative.



Asked to only those aware of the 25 by 25 initiative Responses: 5991



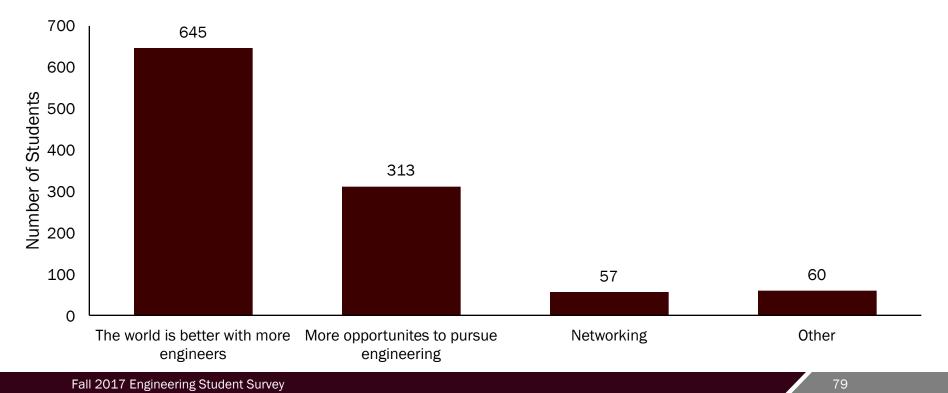
### Please rank your agreement with the following statement. I support the 25 by 25 initiative.



Responses: 854 \*Filtered to show those who agree with the 25 by 25 initiative



#### Free Response: Please explain your stance on the 25 by 25 Initiative.



Responses: 834 \*Filtered to show those who agree with the 25 by 25 initiative



#### Free Response: Please explain your stance on the 25 by 25 Initiative.

The world is better with more engineers

- **"The more engineers, the better**. The world could always use more engineers. I just hope that they keep up the quality and excellence that A&M is known for."
- "I think **the world will always need more engineers**, and Texas A&M is going to have to supply them."

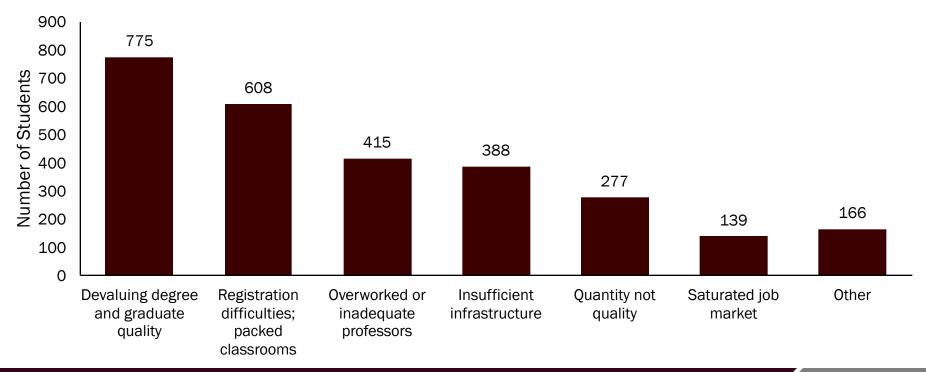
#### Networking

• **"Texas A&M University is a great place for networking**, so having even more engineers means that in the future, there will be more Aggies engineers around the world that will help you."

Responses: 2767 \*Filtered to show those who disagree with the 25 by 25 initiative



#### Free Response: Please explain your stance on the 25 by 25 Initiative.



Responses: 2767 \*Filtered to show those who disagree with the 25 by 25 initiative



#### Free Response: Please explain your stance on the 25 by 25 Initiative.

#### Devaluing degree and graduate quality

- "I think this initiative undervalues an engineering degree from Texas A&M. [It is]...keeping engineers in the program that are **not up to the high academic standard** expected come graduation."
- "An engineering degree from Texas A&M did not earn its reputation by being a degree mill with retests and learning objectives. I fear that an institution that values such things will **allow for other allowances to be made in higher level classes** later on and further devalue the degree."

#### Insufficient infrastructure and Registration difficulties; packed classrooms

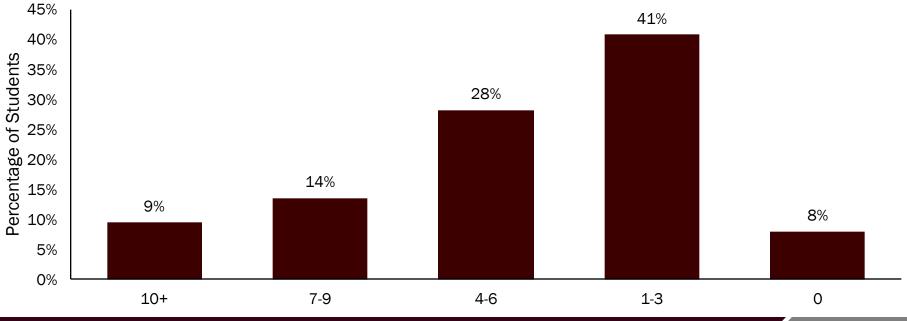
• "The college likes to say the growth comes from retention and it won't affect the environment. That statement is an insult to the intelligence of anyone who is currently an engineering student. Retention will keep students in the college that should have left during the freshmen year. Already, the **facilities in ENPH** can hardly handle the number of students. It is impossible to find a place to sit during the week and class registration is a complete nightmare."

#### Quantity not quality

• "A&M should be a world-class university that offers every major, and I don't want engineering to dominate over everything else. Engineers shouldn't always be surrounded by other engineers."



#### During your time at Texas A&M, how many of your courses have promoted an active and engaging learning environment facilitated by the professor?



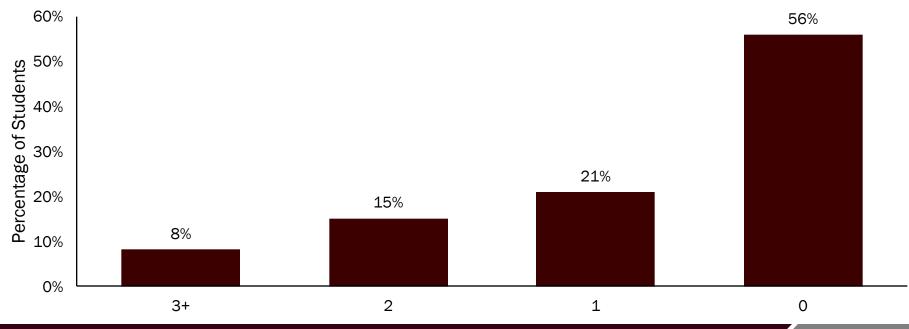


### Definition of "Flipped/Inverted Classroom"

According to the College of Engineering, "a flipped classroom is one where class lectures are viewed by students at home before the class session allowing students the opportunity to better utilize in-class time to work with their professors through exercises and on projects."



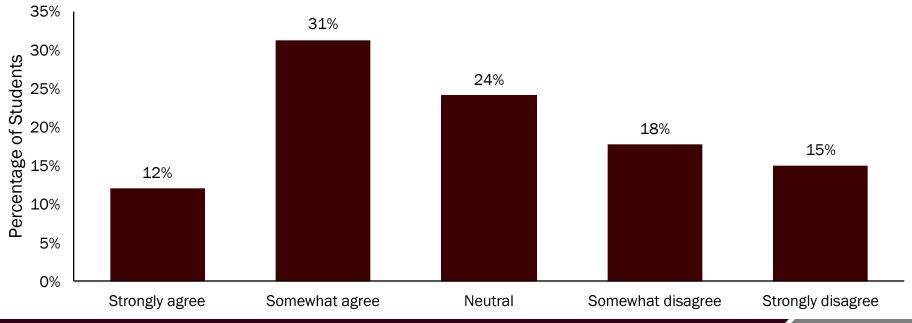
# How many flipped or inverted learning courses are you taking, or have taken, within the College of Engineering at Texas A&M?



Asked to only those who had taken flipped/inverted courses Responses: 3122



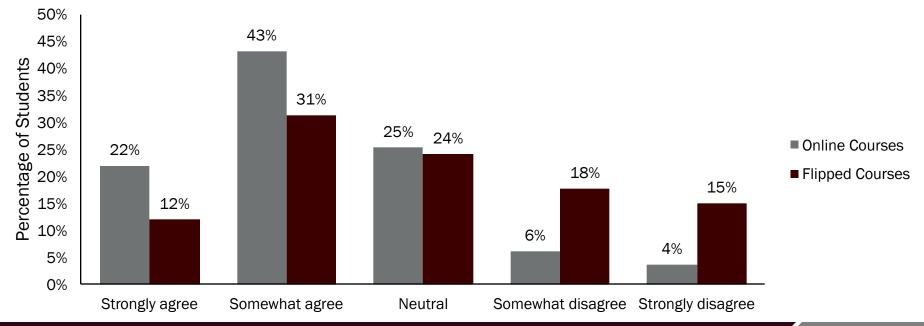
# I am satisfied with the quality of education provided by the flipped or inverted learning course(s) I took through Texas A&M.



Asked to only those who had taken online or flipped courses Responses: 1418, 3122

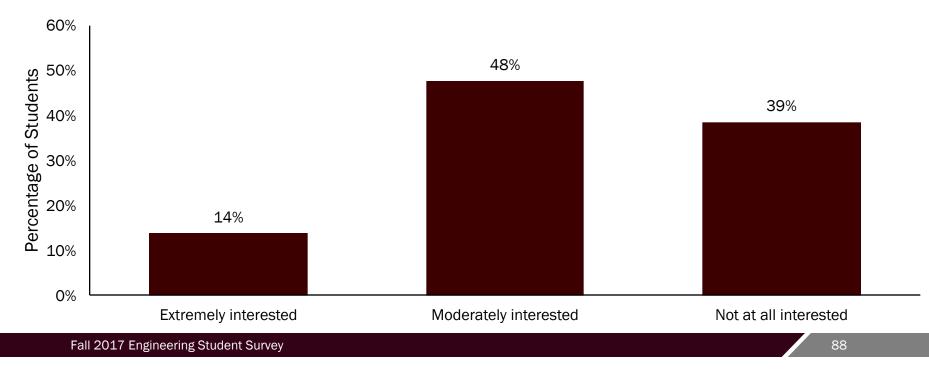


### Comparison of satisfaction in the quality of education provided by online courses vs. flipped courses





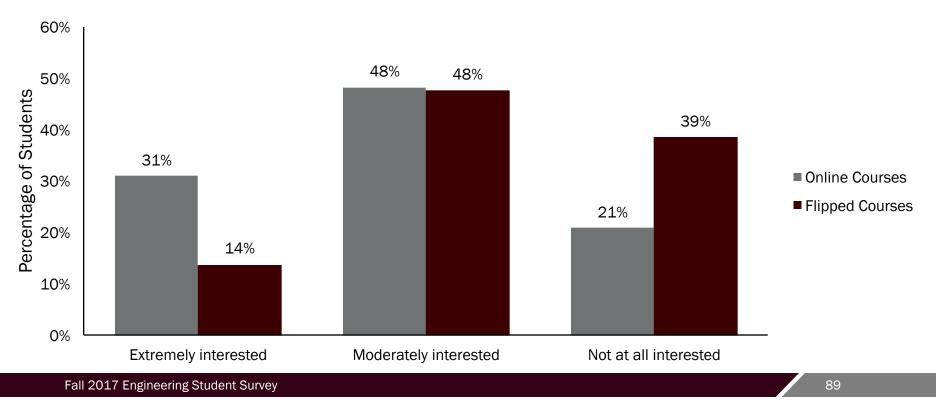
### If there were more flipped or inverted learning courses offered for your degree, how interested would you be in taking them?



Responses: 7219, 7069



### Comparison of interest in online courses vs. flipped courses

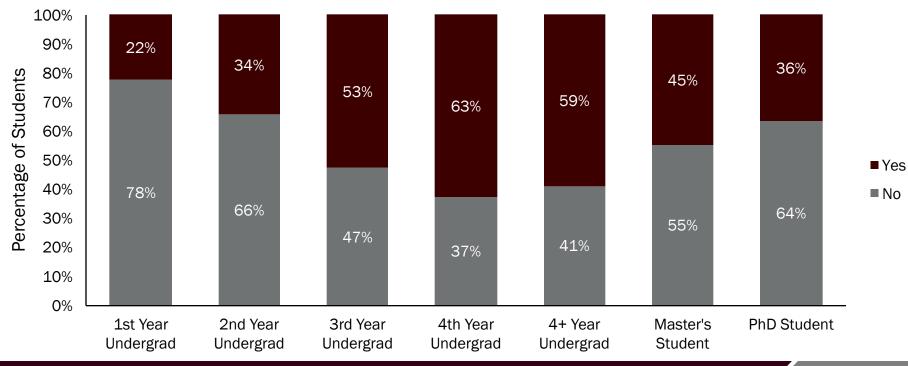


## **Career/Post-Graduation**

Asked to all students



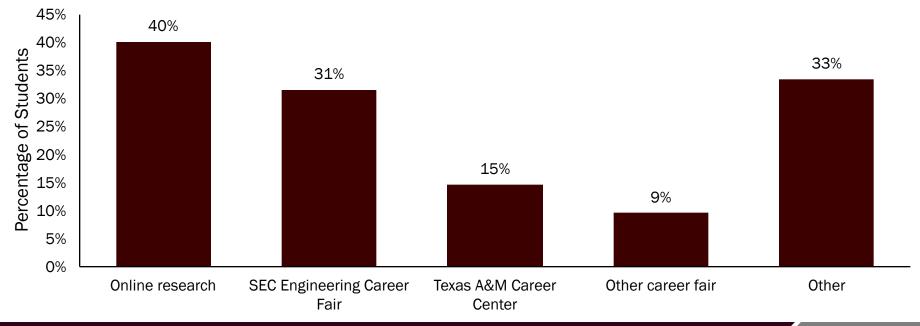
### Have/will you be working an internship or co-op?



Asked to only those with an internship/co-op Responses: 2910



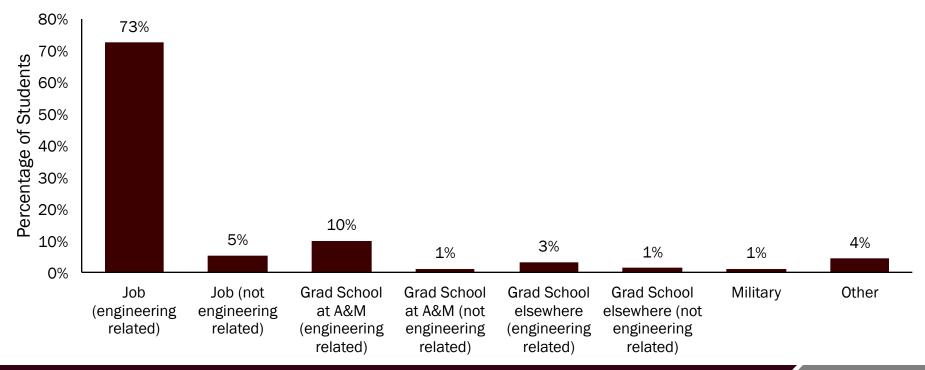
# How did you obtain your internship/co-op opportunity? (select all that apply)



Asked to only those graduating in December 2017 or May 2018 Responses: 1293



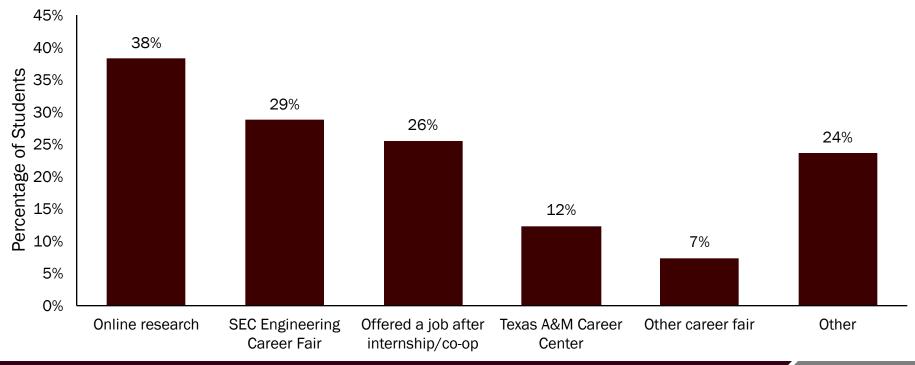
#### Which one of the following will you pursue after you graduate?



Asked to only those pursuing a job Responses: 1007



### How did you obtain your job opportunity? (select all that apply)

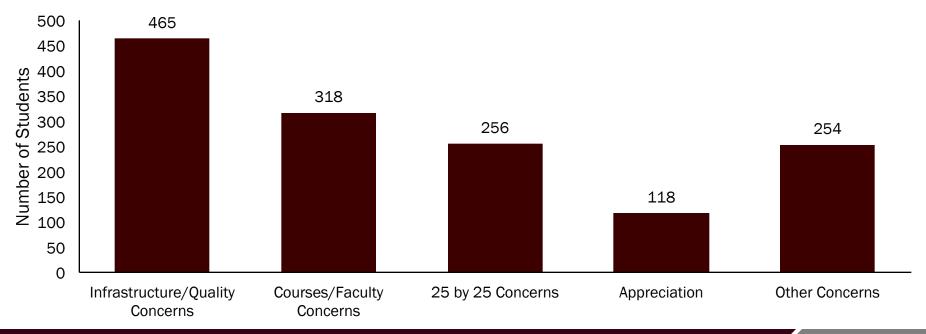


## **Closing Question**

Asked to all students



# Free Response: Any additional comments or concerns regarding engineering at Texas A&M?





# Free Response: Any additional comments or concerns regarding engineering at Texas A&M?

#### Infrastructure/Quality Concerns

 "From my experience and many other people's, the engineering department doesn't seem to have a firm grasp on how to facilitate a quality learning environment for its students. I think that if Texas A&M wishes to remain as a nationally acclaimed engineering school, then the administration needs to refocus on providing an excellent education instead of trying to increase the size of the school."



# Free Response: Any additional comments or concerns regarding engineering at Texas A&M?

#### Courses/Faculty Concerns

• "I have been decidedly disappointed in the professors in my classes. They have taught theory but not application, and taught for us to regurgitate and for them to get their grades in, not for us to really know the material in a way that we will use in a potential career. Senior Design is the best thing this department has going for it."



# Free Response: Any additional comments or concerns regarding engineering at Texas A&M?

#### 25 by 25 Concerns

• "I believe that maintaining the prestige of the college of engineering is imperative. The 25 by 25 program seems that it would devalue that prestige as everyone would believe that it is easy to get into the college of engineering. Aggies are best known for graduating from a good institution and it helps when finding/competing for a career."



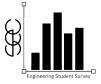
# Free Response: Any additional comments or concerns regarding engineering at Texas A&M?

**Appreciation** 

 "This is a very nice engineering school, and I really like the people, the environment, the research, and the resources. I love to see the university growing to epic proportions as we take on more people from around the world and spread a passion for engineering to people everywhere. There are some very real concerns about how the college of engineering is moving forward, but as I said earlier, I'm largely optimistic."



## **2017-2018 Legislation Committee**

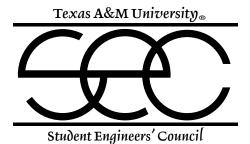


#### Chairs

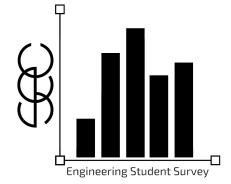
Gabrielle Joubran Jake Leland

#### Members

Abhi Dhillon Rebecca Dudley Oishik Faruque Allison Godfrey Clayton Petty Melissa Potts Theo Spencer Rachel Sternberg Trent Wilson



## ENGINEERING STUDENT SURVEY



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