

# FALL 2015 ENGINEERING SURVEY RESULTS

---

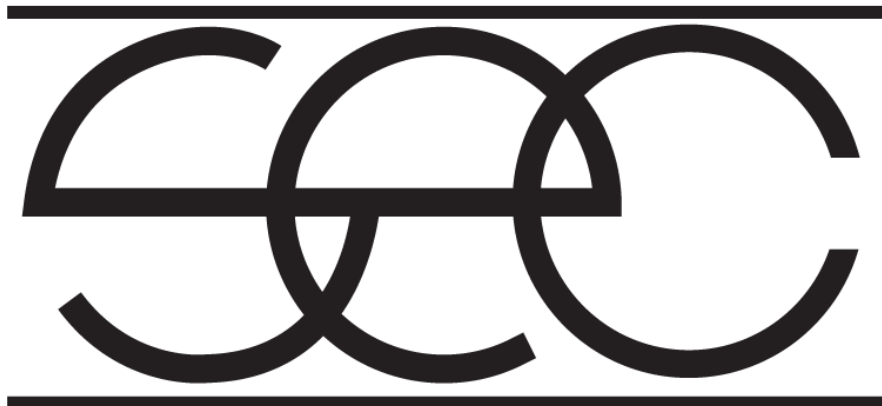
Prepared and Presented by:

Student Engineers' Council

2015-2016 Legislation Committee

[legislation@sec.tamu.edu](mailto:legislation@sec.tamu.edu)

*Texas A&M University®*



*Student Engineers' Council*

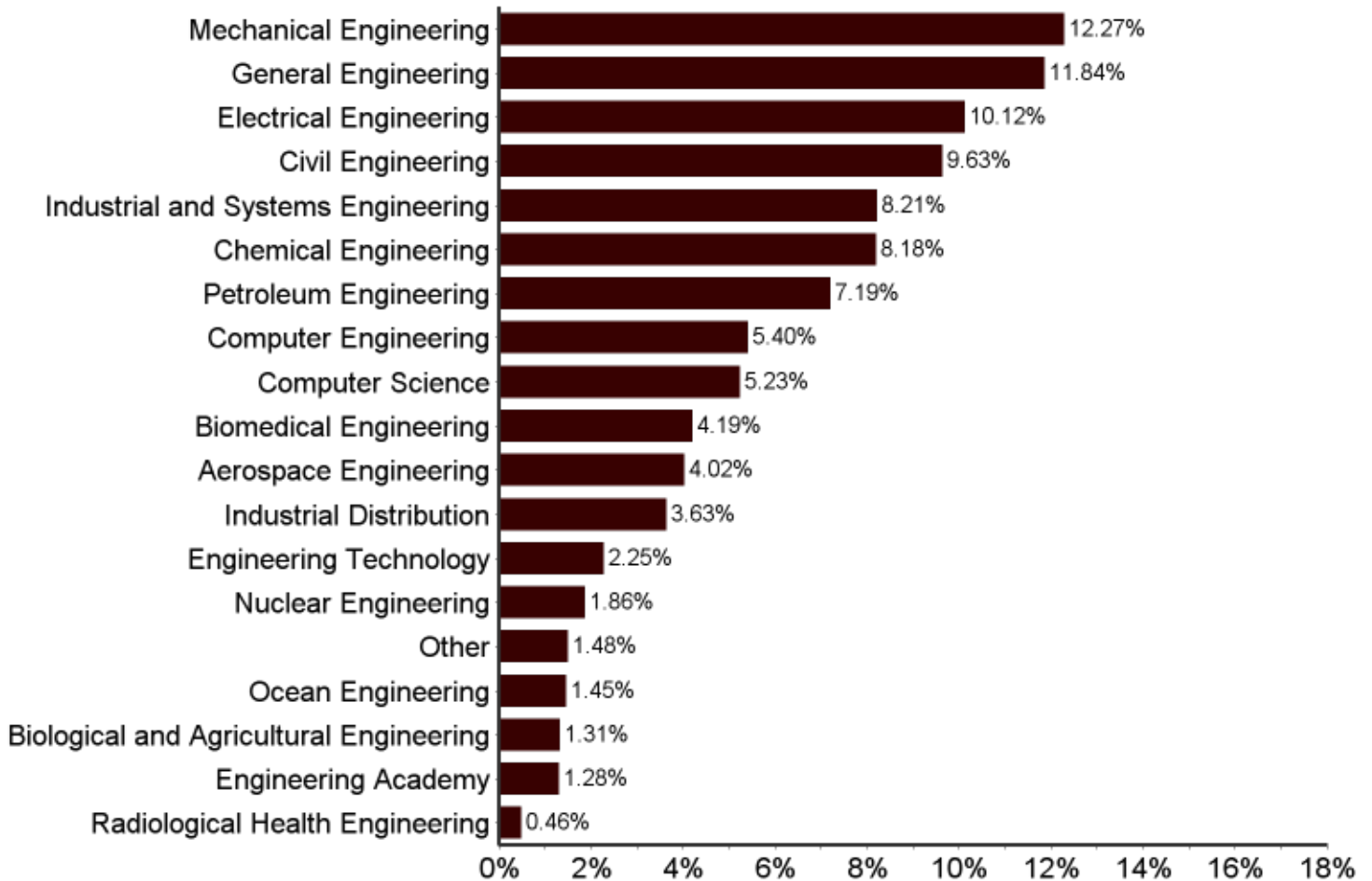
## TABLE OF CONTENTS

INTRODUCTION QUESTIONS.....	3
DEMOGRAPHICS.....	3
CORE QUESTIONS.....	11
GLOBAL COMPETENCE.....	11
ACCESSIBILITY OF ACADEMIC PROGRAMS.....	13
USE OF INSTRUCTIONAL TECHNOLOGY.....	20
UNDERGRADUATE ENVIRONMENT.....	23
ENTRY TO A MAJOR.....	26
PRE-COLLEGE ENGINEERING ACTIVITIES.....	28
DIFFERENTIAL TUITION.....	29
25 BY 25 INITIATIVE.....	30
INNOVATION AND ENTREPRENEURSHIP.....	32
GRADUATE STUDENT QUESTIONS.....	37
ON-CAMPUS GRADUATE STUDENTS.....	37
POST-GRADUATION QUESTIONS.....	40
POST-GRADUATION.....	40

## INTRODUCTION QUESTIONS

### DEMOGRAPHICS

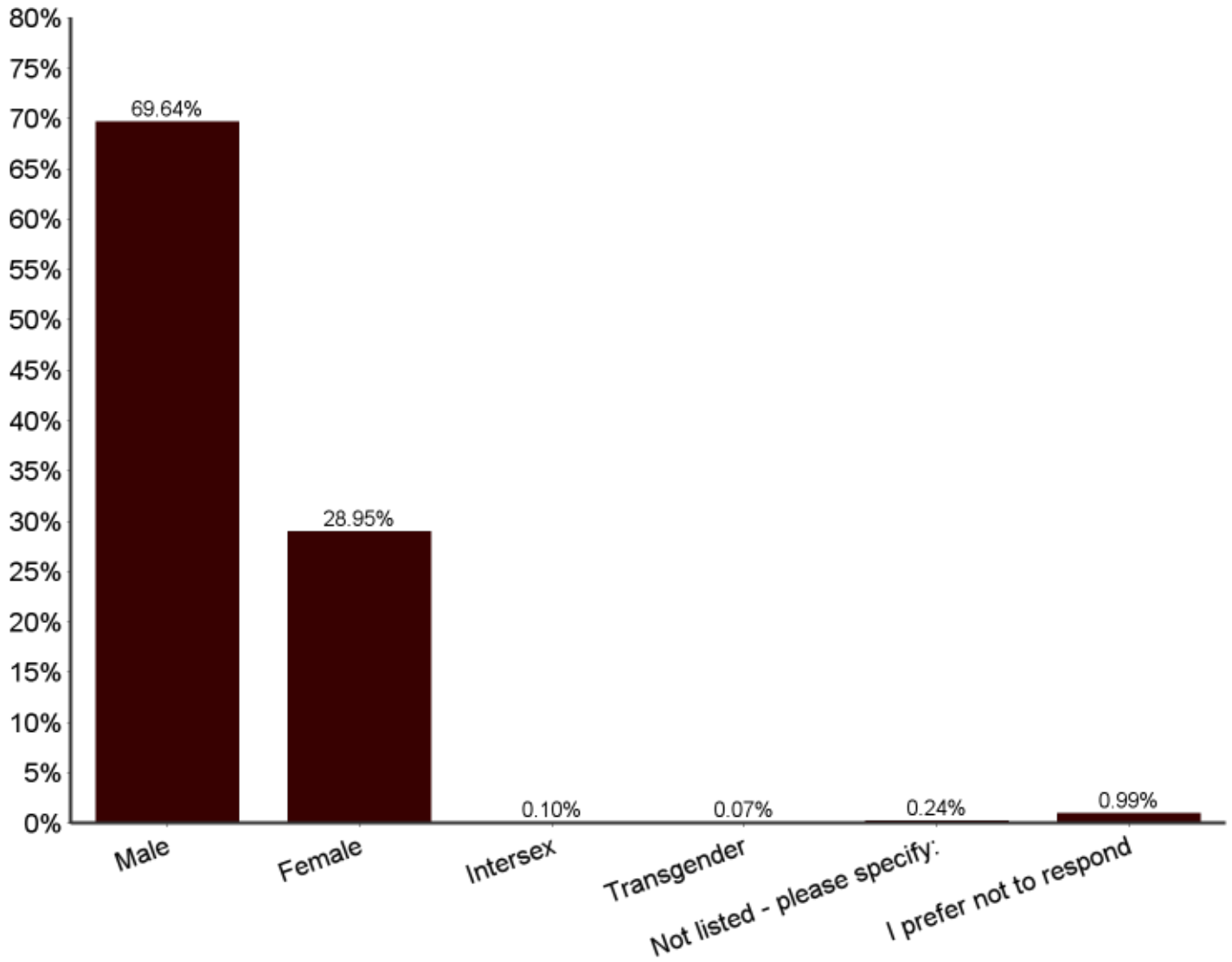
#### What is your major?



## What is your major?

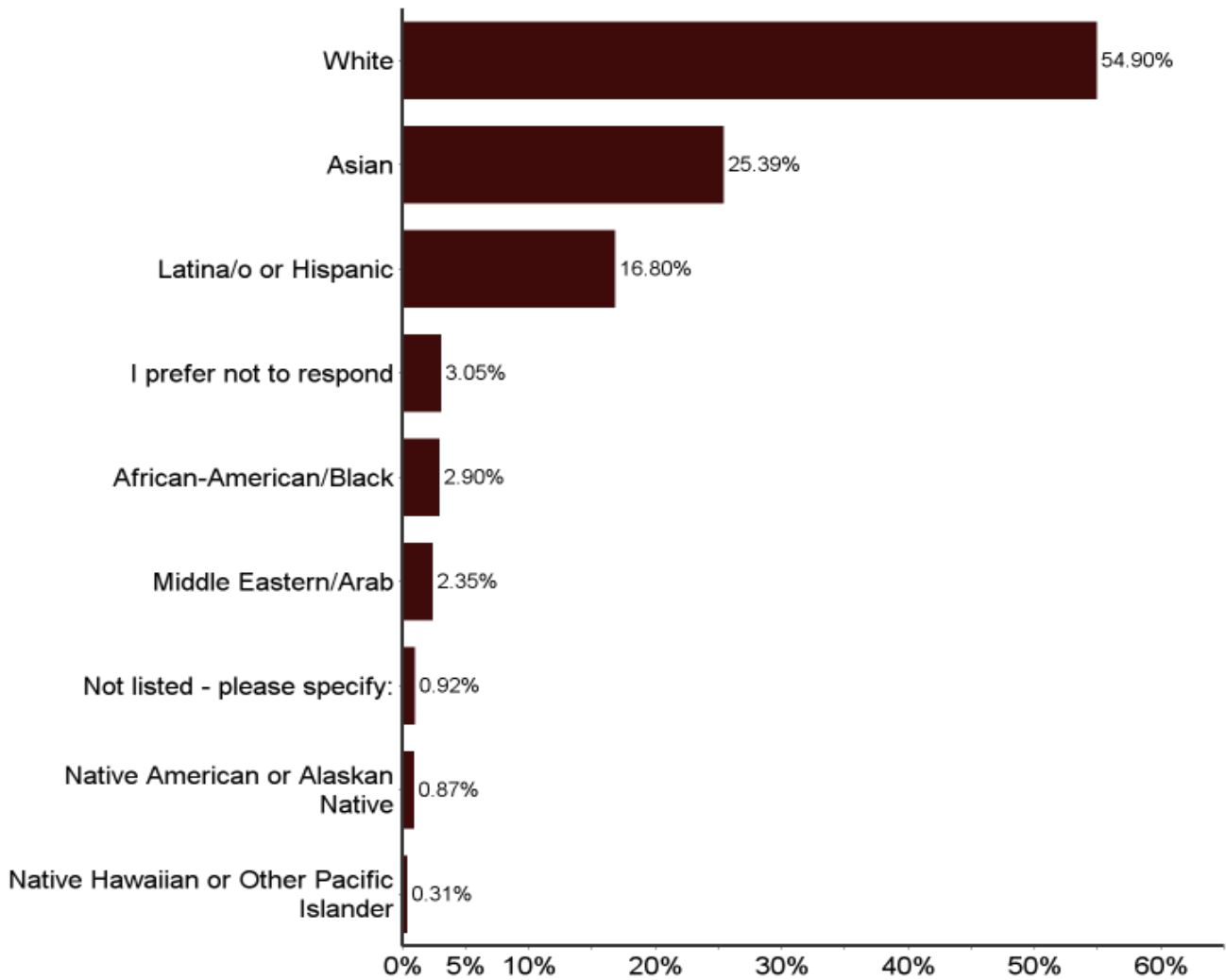
Aerospace Engineering	166	4.02%
Biological and Agricultural Engineering	54	1.31%
Biomedical Engineering	173	4.19%
Chemical Engineering	338	8.18%
Civil Engineering	398	9.63%
Computer Engineering	223	5.40%
Computer Science	216	5.23%
Electrical Engineering	418	10.12%
Engineering Technology	93	2.25%
Industrial Distribution	150	3.63%
Industrial and Systems Engineering	339	8.21%
Mechanical Engineering	507	12.27%
Nuclear Engineering	77	1.86%
Ocean Engineering	60	1.45%
Petroleum Engineering	297	7.19%
Radiological Health Engineering	19	0.46%
Other	61	1.48%
General Engineering	489	11.84%
Engineering Academy	53	1.28%
Total	4131	100.00%

**Sex/Gender:**



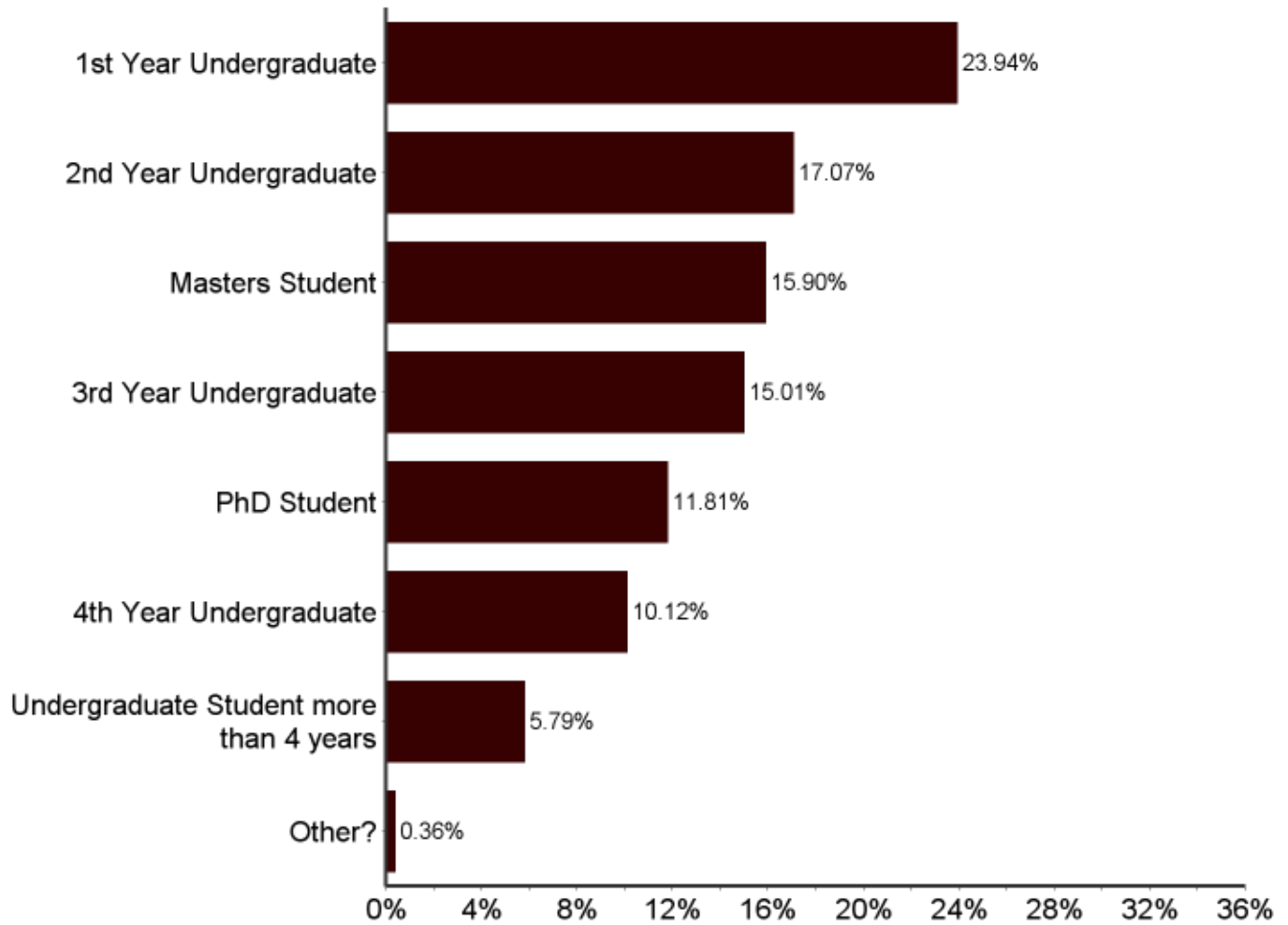
Answer	Response	%
Male	2877	69.64%
Female	1196	28.95%
Intersex	4	0.10%
Transgender	3	0.07%
Not listed - please specify:	10	0.24%
I prefer not to respond	41	0.99%
Total	4131	100.00%

**Race/Ethnic Identification (check all that apply):**



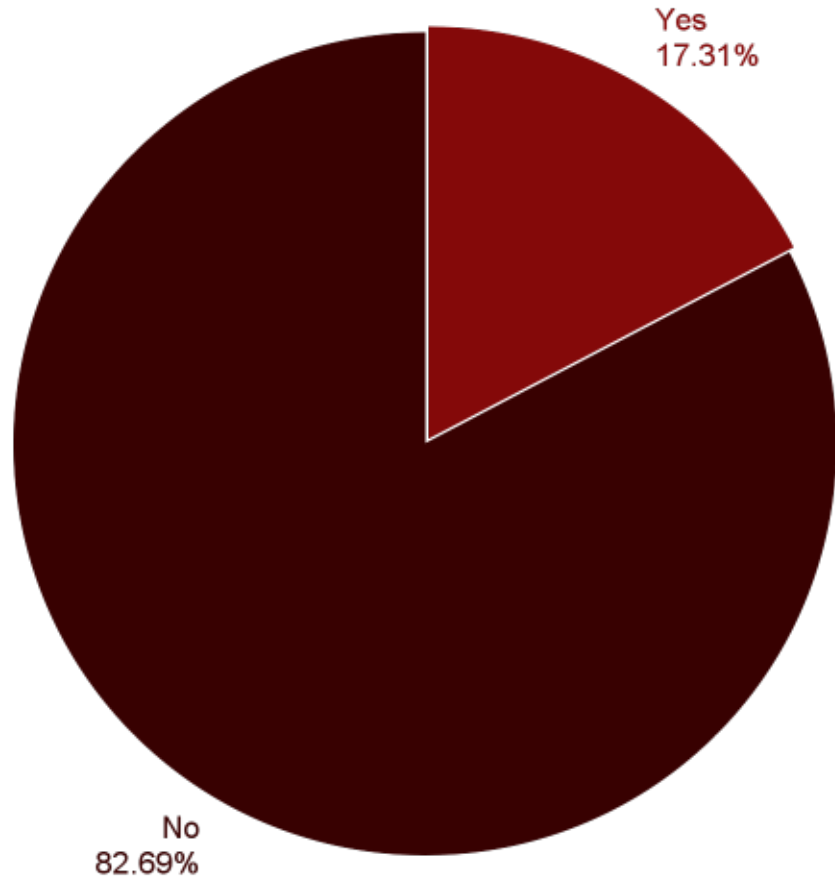
Answer	Response	%
African-American/Black	120	2.90%
Native American or Alaskan Native	36	0.87%
Latina/o or Hispanic	694	16.80%
Native Hawaiian or Other Pacific Islander	13	0.31%
Middle Eastern/Arab	97	2.35%
White	2268	54.90%
Asian	1049	25.39%
Not listed - please specify:	38	0.92%
I prefer not to respond	126	3.05%
Total	4441	100.00%

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



Answer	Response	%
1st Year Undergraduate	989	23.94%
2nd Year Undergraduate	705	17.07%
3rd Year Undergraduate	620	15.01%
4th Year Undergraduate	418	10.12%
Undergraduate Student more than 4 years	239	5.79%
Masters Student	657	15.90%
Other?	15	0.36%
PhD Student	488	11.81%
Total	4131	100.00%

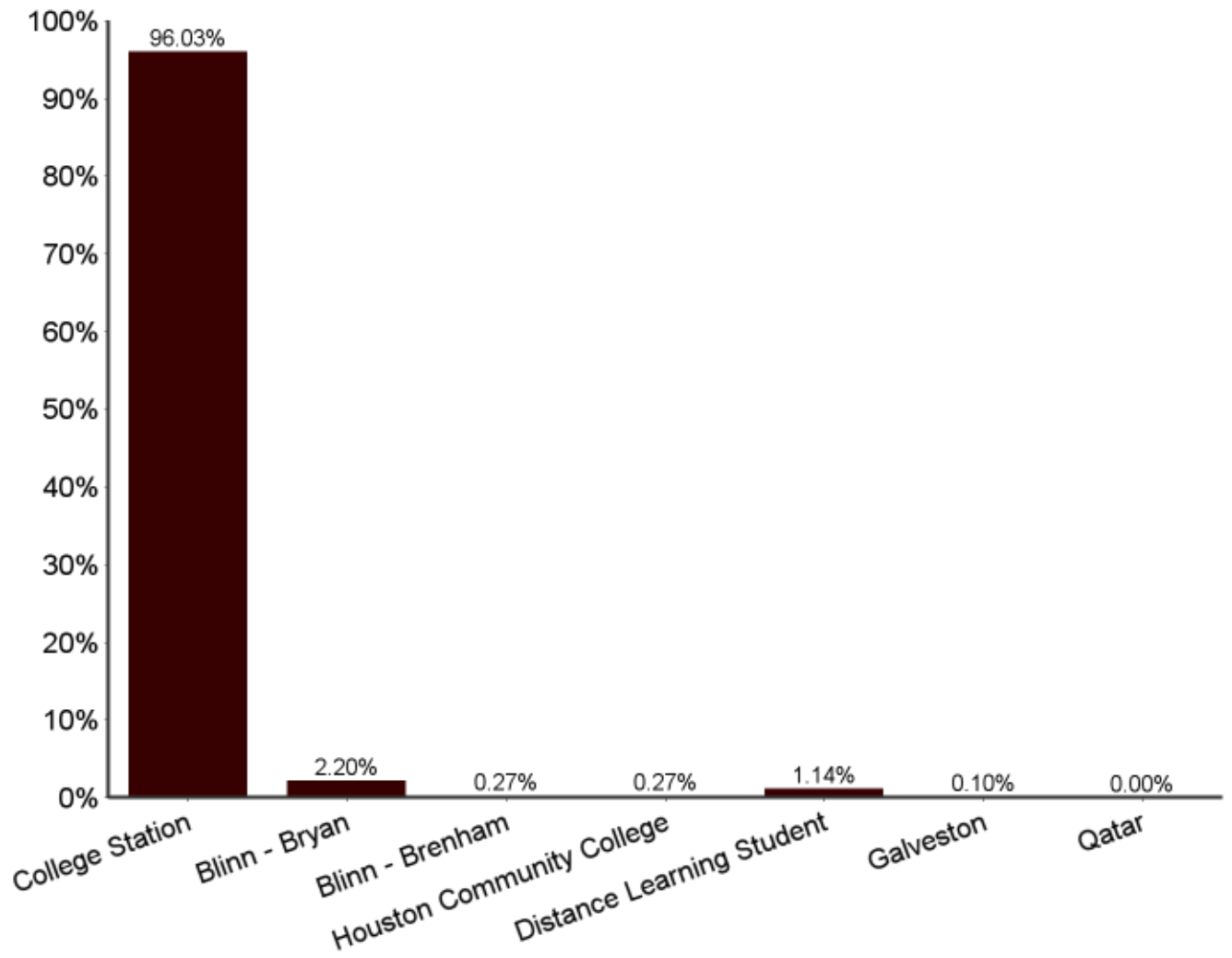
**Are you graduating in December 2015 or May 2016?**



Answer	Response	%
Yes	715	17.31%
No	3416	82.69%
Total	4131	100.00%

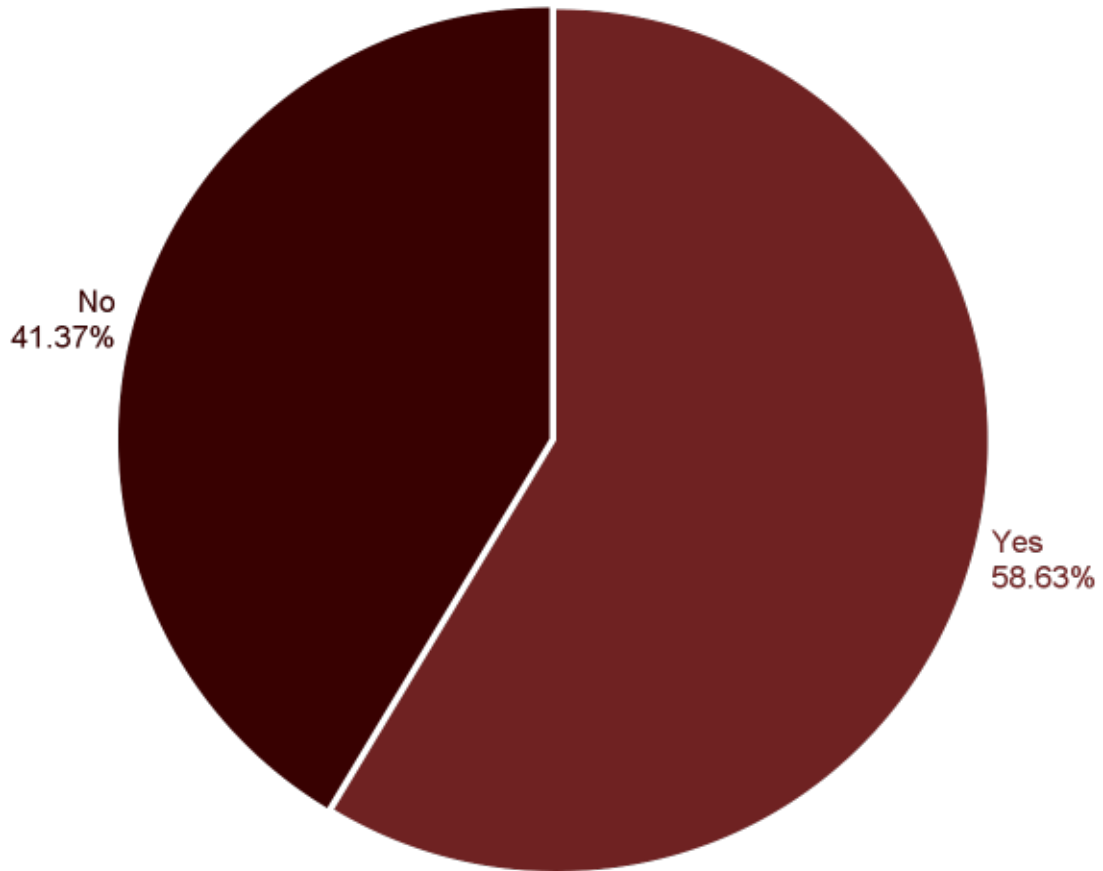


**Which campus do you take the majority of your courses?**



Answer	Response	%
College Station	3967	96.03%
Blinn - Bryan	91	2.20%
Blinn - Brenham	11	0.27%
Houston Community College	11	0.27%
Distance Learning Student	47	1.14%
Galveston	4	0.10%
Qatar	0	0.00%
Total	4131	100.00%

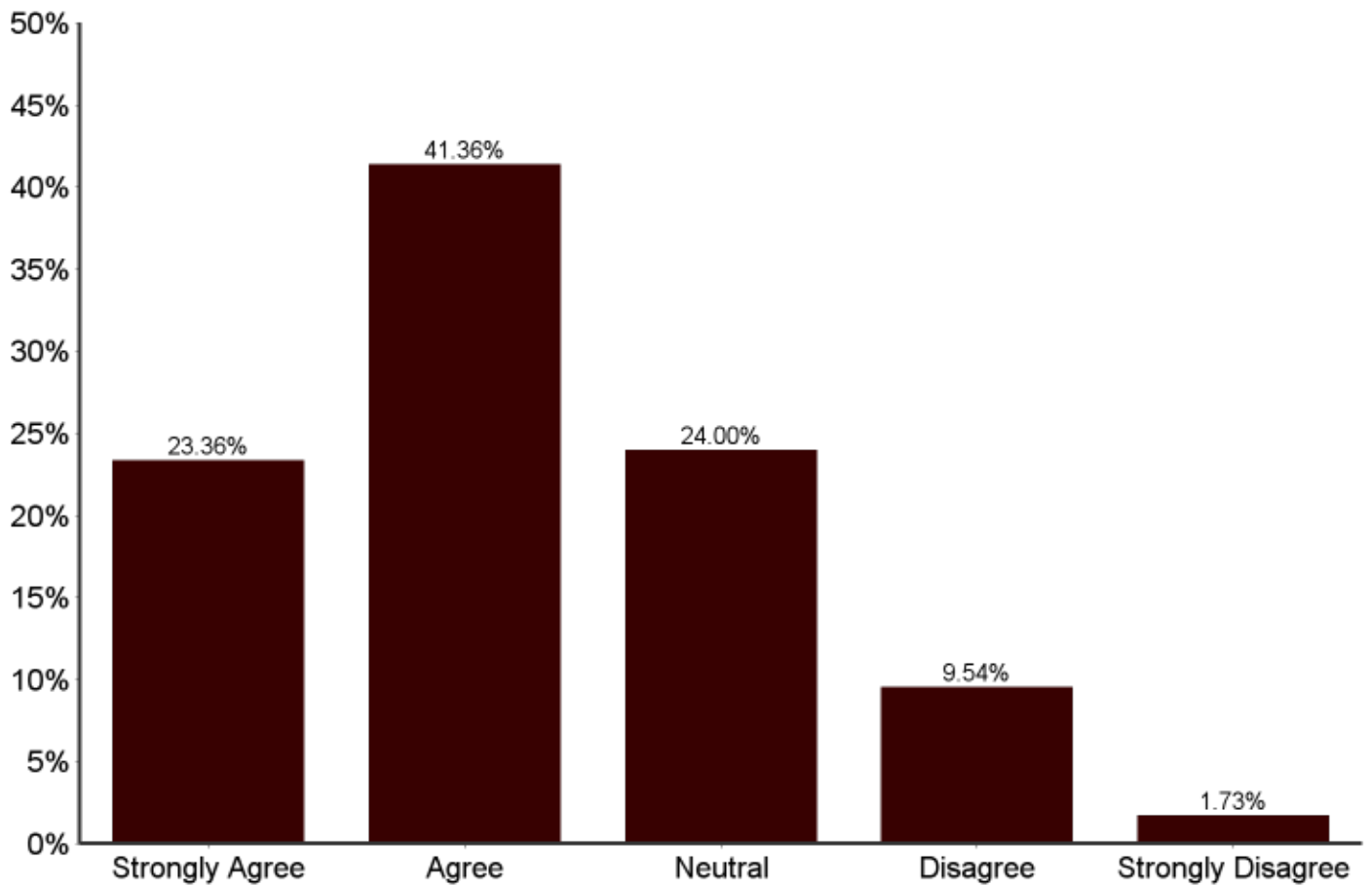
Are you currently enrolled in ENGR 111 or ENGR 112?



Answer	Response	%
Yes	992	58.63%
No	700	41.37%
Total	1692	100.00%

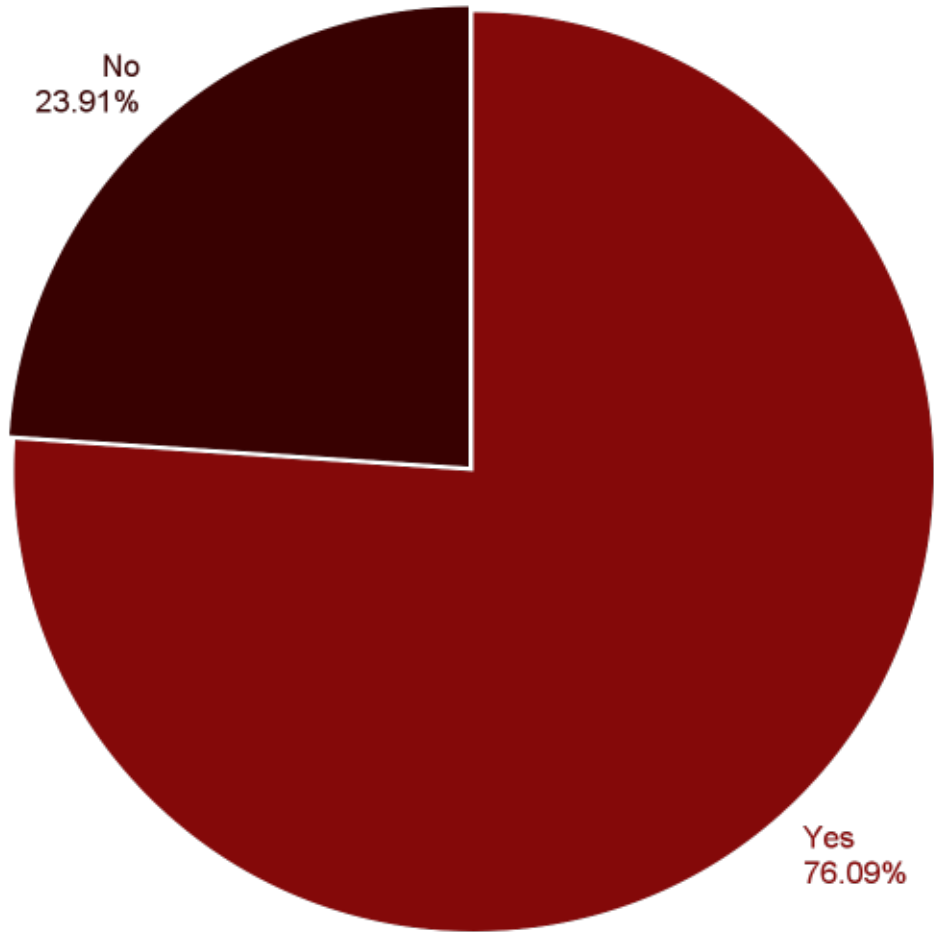
**Globally competent engineering students have knowledge and skills to**

- (i) investigate globally significant questions,**
- (ii) weigh multiple perspectives from multiple cultures and countries,**
- (iii) communicate ideas in more than one language and in more than one way,**
- (iv) take action, and**
- (v) apply disciplinary and interdisciplinary expertise.**



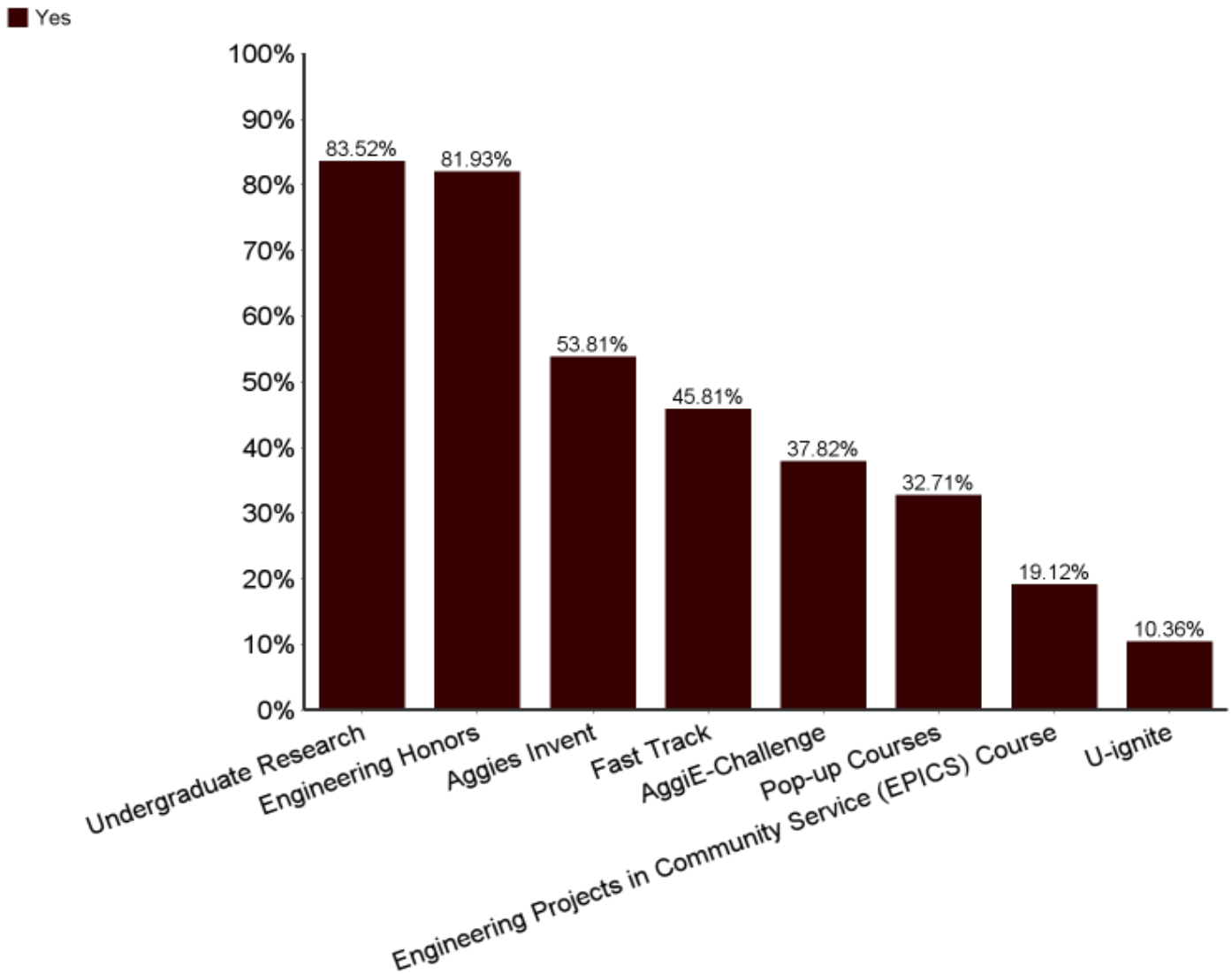
Answer	Response	%
Strongly Agree	945	23.36%
Agree	1673	41.36%
Neutral	971	24.00%
Disagree	386	9.54%
Strongly Disagree	70	1.73%
Total	4045	100.00%

Part of being a globally competent engineer is the ability to travel outside of the United States on very short notice. Do you have a passport that enables you to do so?



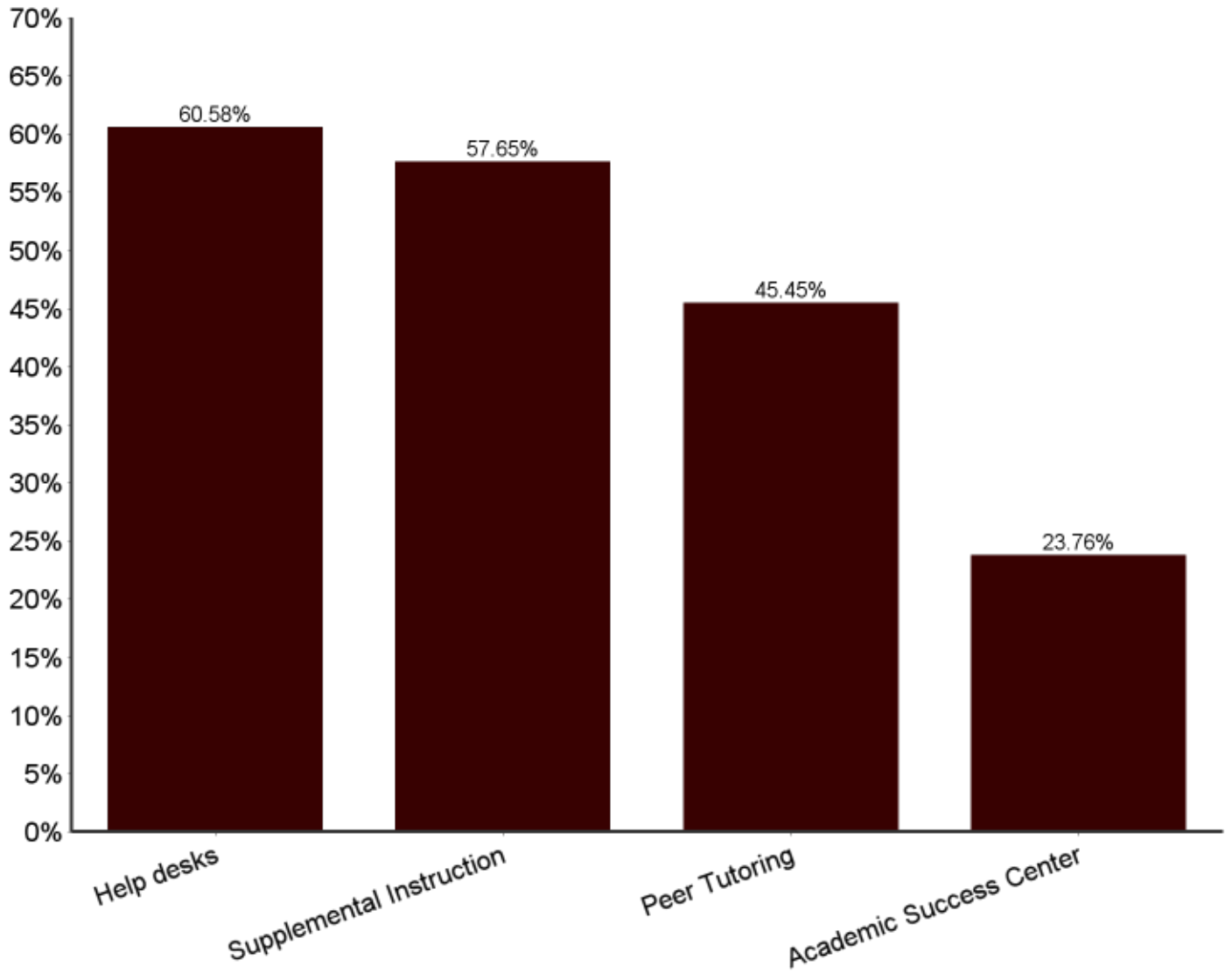
Answer	Response	%
Yes	3078	76.09%
No	967	23.91%
Total	4045	100.00%

Are you aware of the following Academic Enrichment Programs?



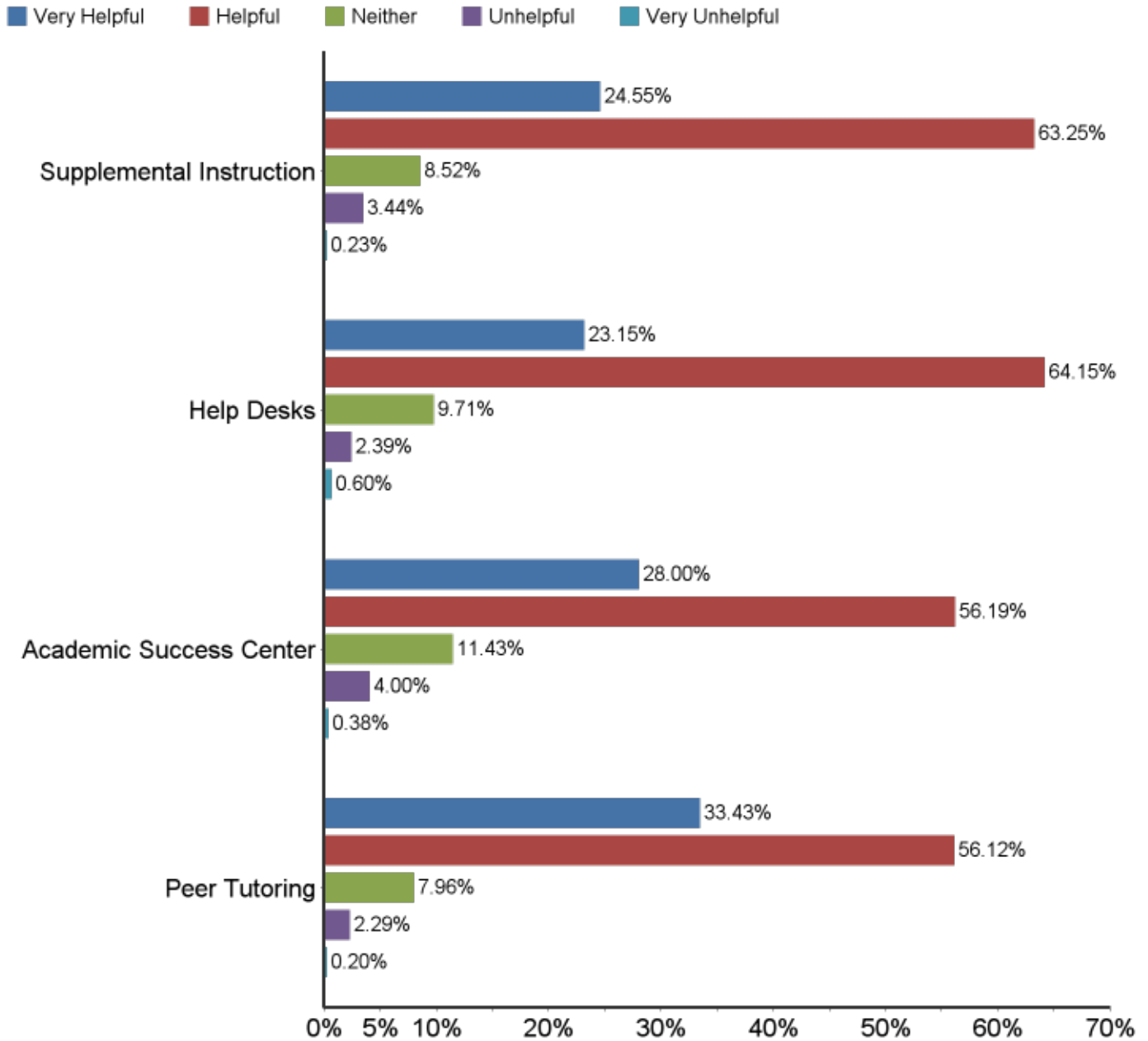
Question	Yes	No	Response
AggieE-Challenge	1088	1789	2877
Aggies Invent	1548	1329	2877
Pop-up Courses	941	1936	2877
Fast Track	1318	1559	2877
Undergraduate Research	2403	474	2877
Engineering Projects in Community Service (EPICS) Course	550	2327	2877
Engineering Honors	2357	520	2877
U-ignite	298	2579	2877

Select the following Academic Support Programs that you have utilized.



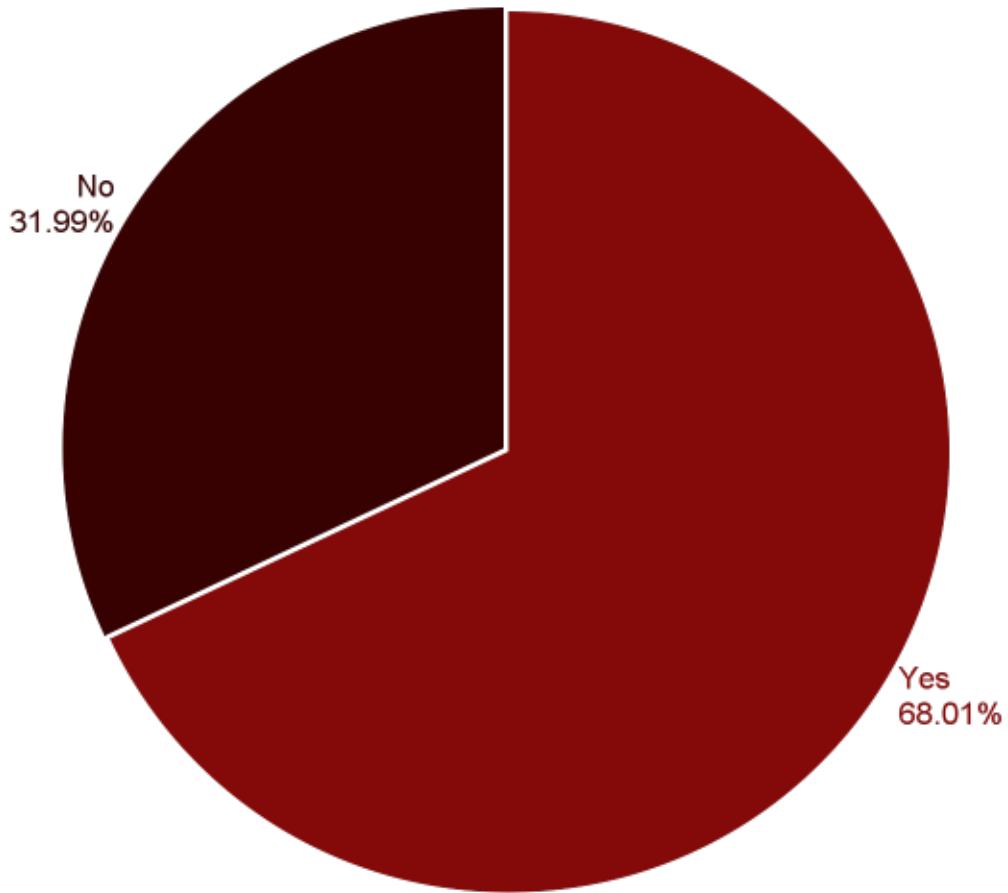
Answer	Response	%
Supplemental Instruction	1281	57.65%
Help desks	1346	60.58%
Academic Success Center	528	23.76%
Peer Tutoring	1010	45.45%
Total	4165	100.00%

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



Question	Very Helpful	Helpful	Neither	Unhelpful	Very Unhelpful	Response
Supplemental Instruction	314	809	109	44	3	1279
Help Desks	310	859	130	32	8	1339
Academic Success Center	147	295	60	21	2	525
Peer Tutoring	336	564	80	23	2	1005

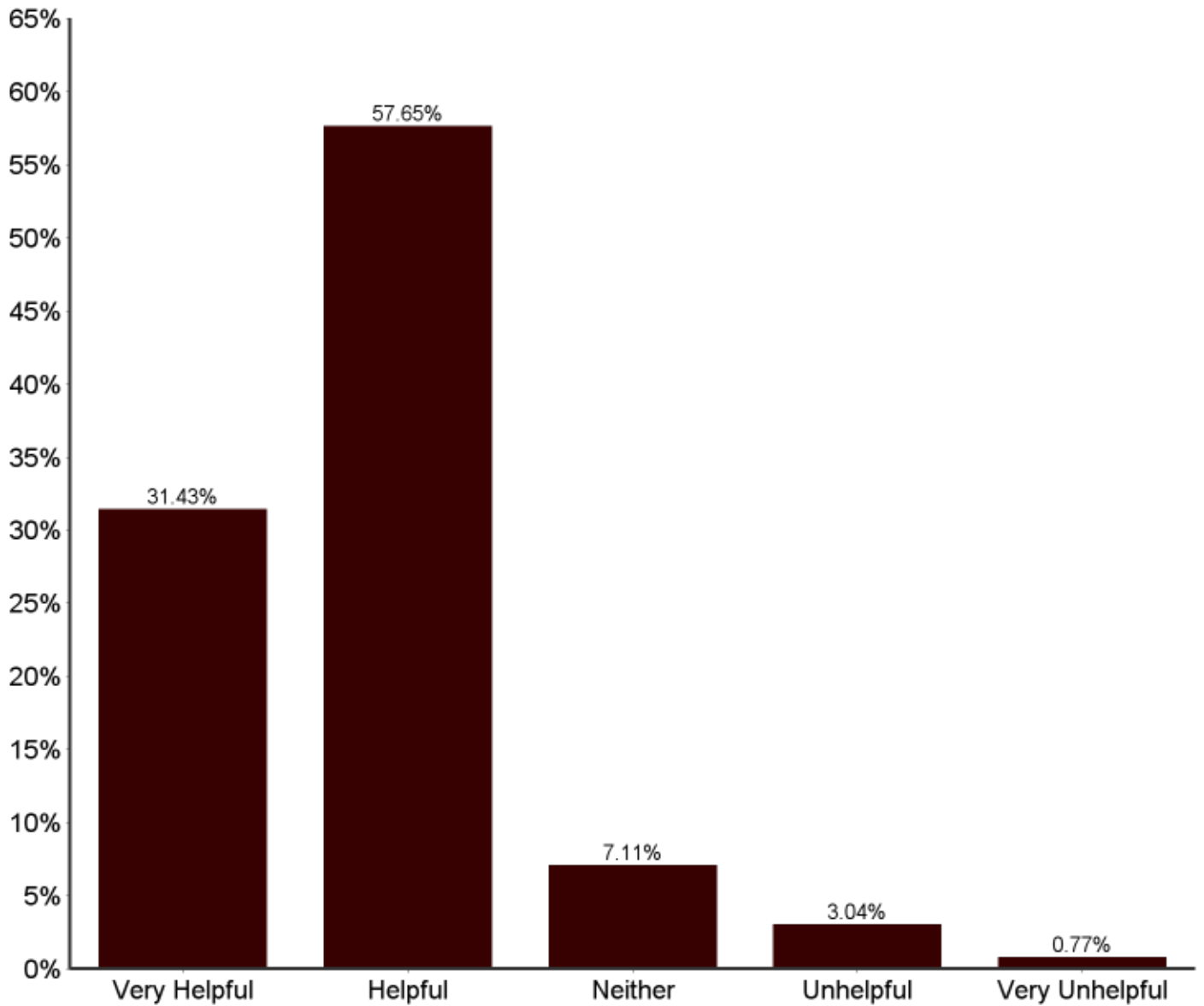
Have you gone to see your instructor outside of class?



Answer	Response	%
Yes	1952	68.01%
No	918	31.99%
Total	2870	100.00%

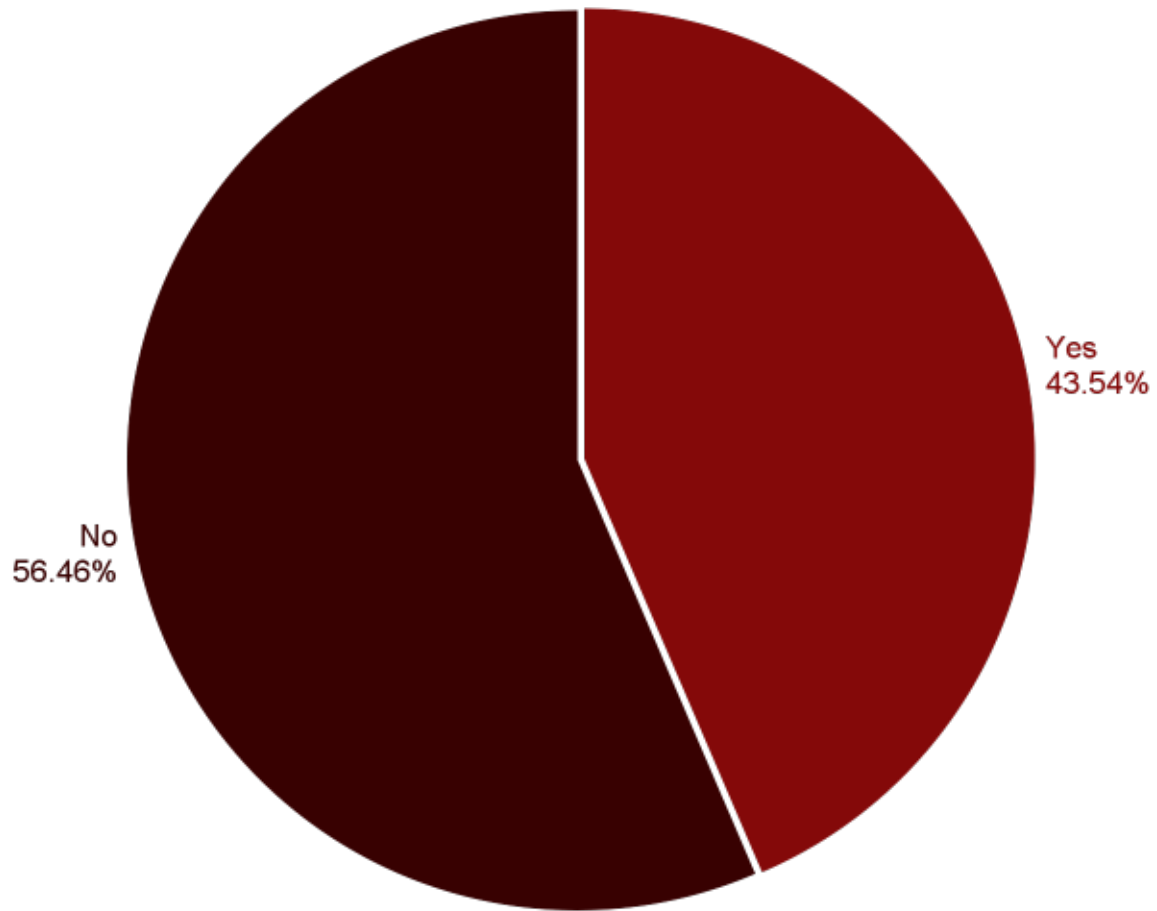


## How helpful was your visit(s) with your instructor?



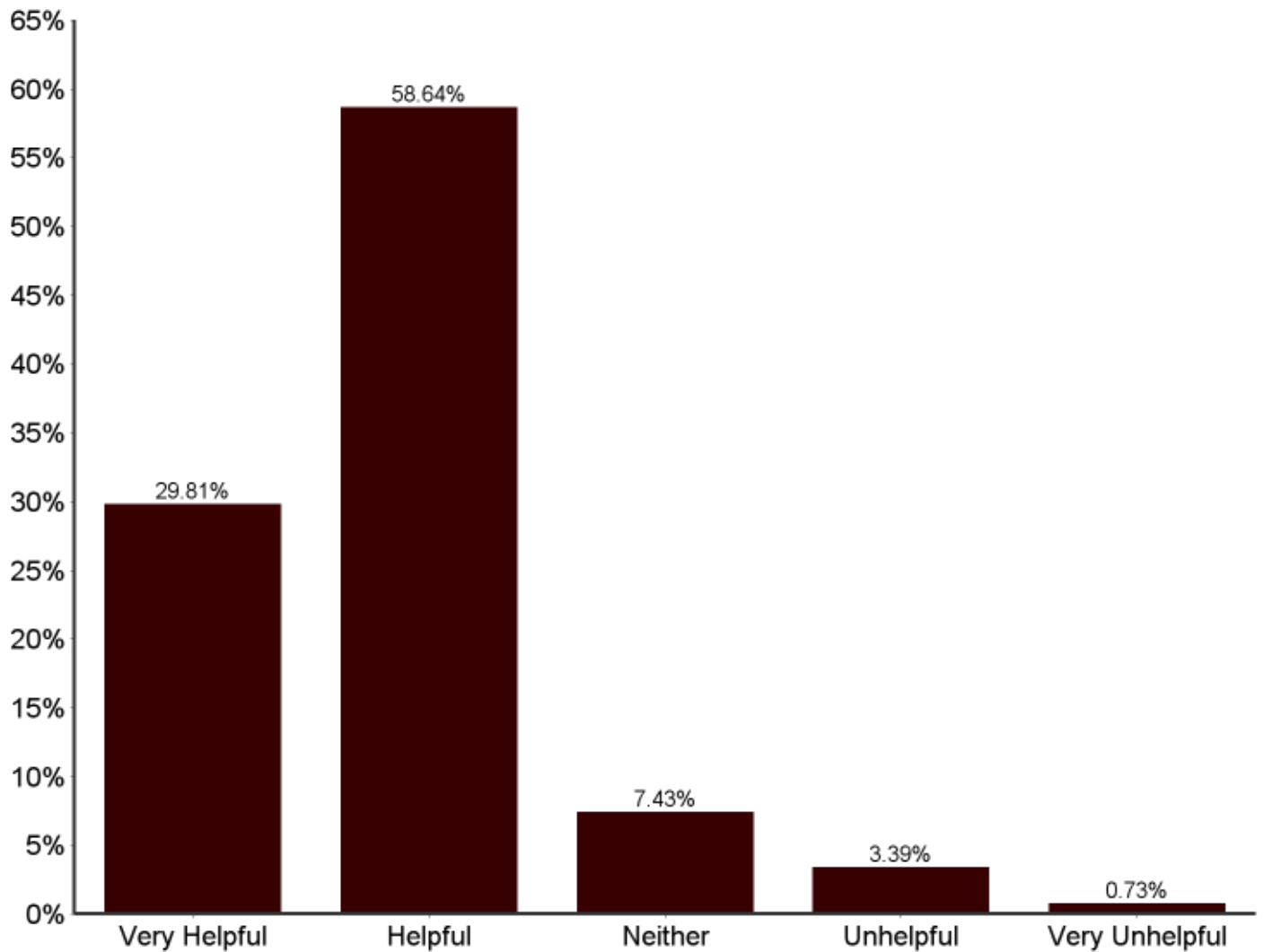
Answer	Response	%
Very Helpful	610	31.43%
Helpful	1119	57.65%
Neither	138	7.11%
Unhelpful	59	3.04%
Very Unhelpful	15	0.77%
Total	1941	100.00%

Have you gone to see your TA outside of class?



Answer	Response	%
Yes	1243	43.54%
No	1612	56.46%
Total	2855	100.00%

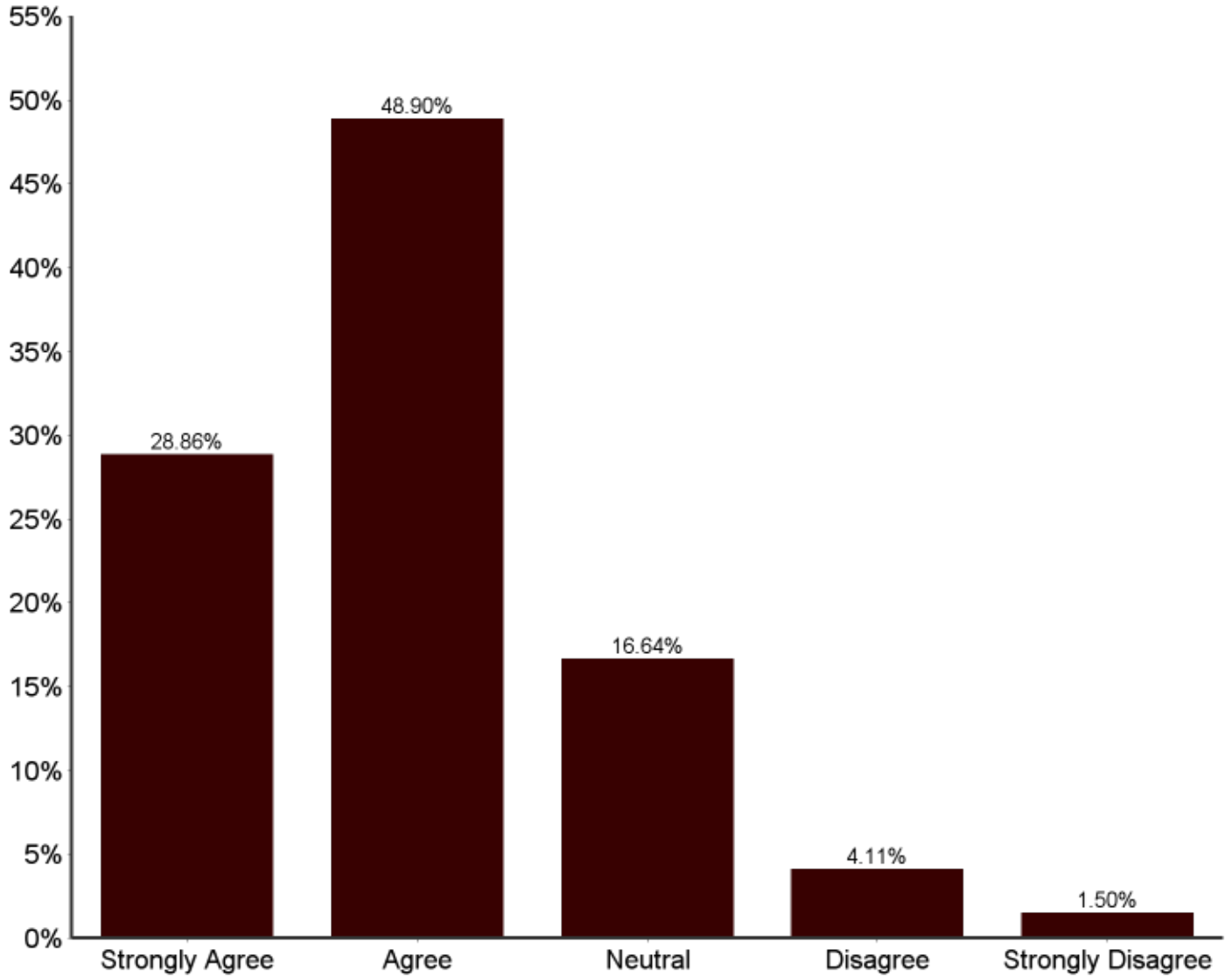
## How helpful was your visit(s) with your TA?



Answer	Response	%
Very Helpful	369	29.81%
Helpful	726	58.64%
Neither	92	7.43%
Unhelpful	42	3.39%
Very Unhelpful	9	0.73%
Total	1238	100.00%

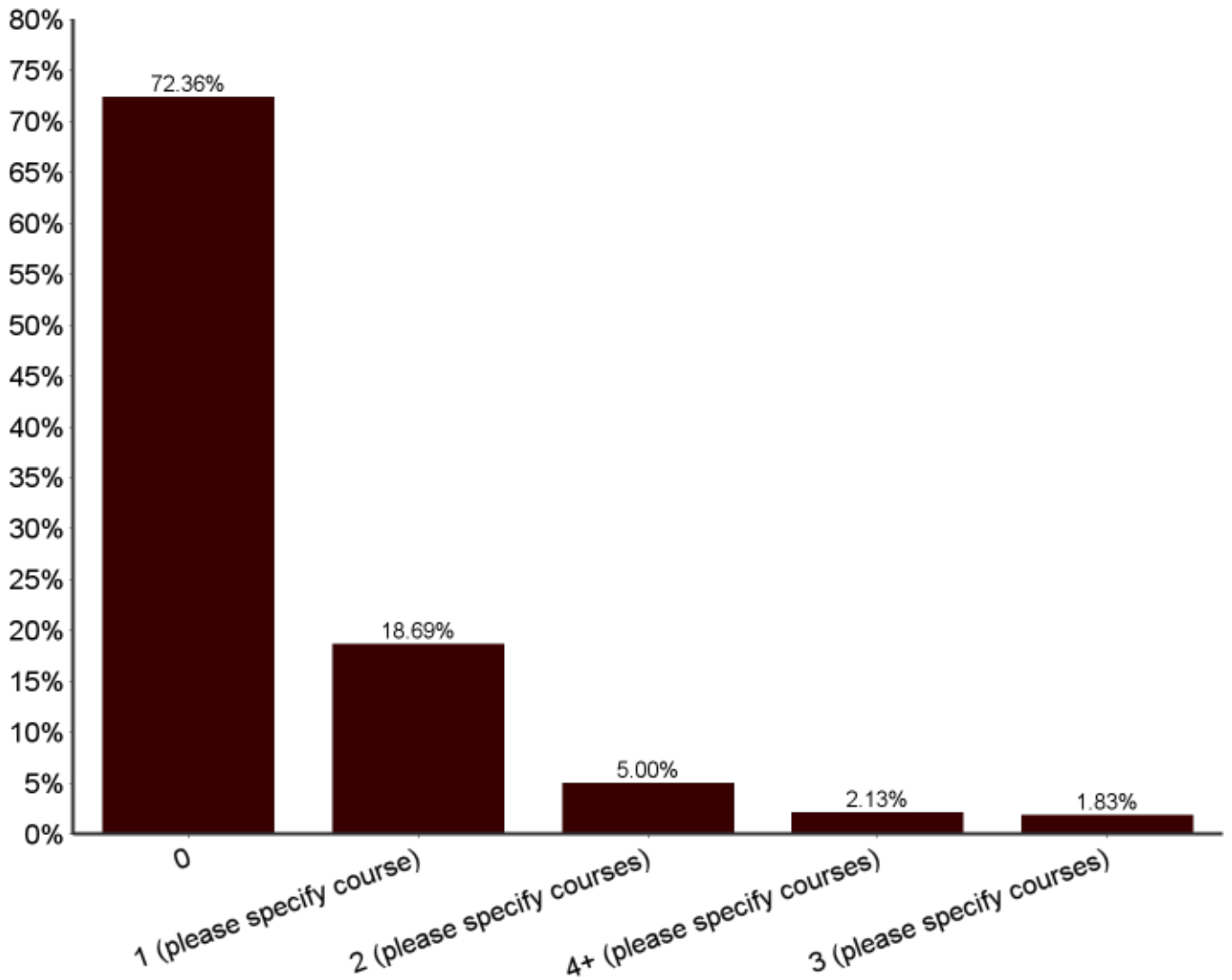
USE OF INSTRUCTIONAL TECHNOLOGY

Use of instructional technology in courses that I take at Texas A&M enhances my ability to learn.



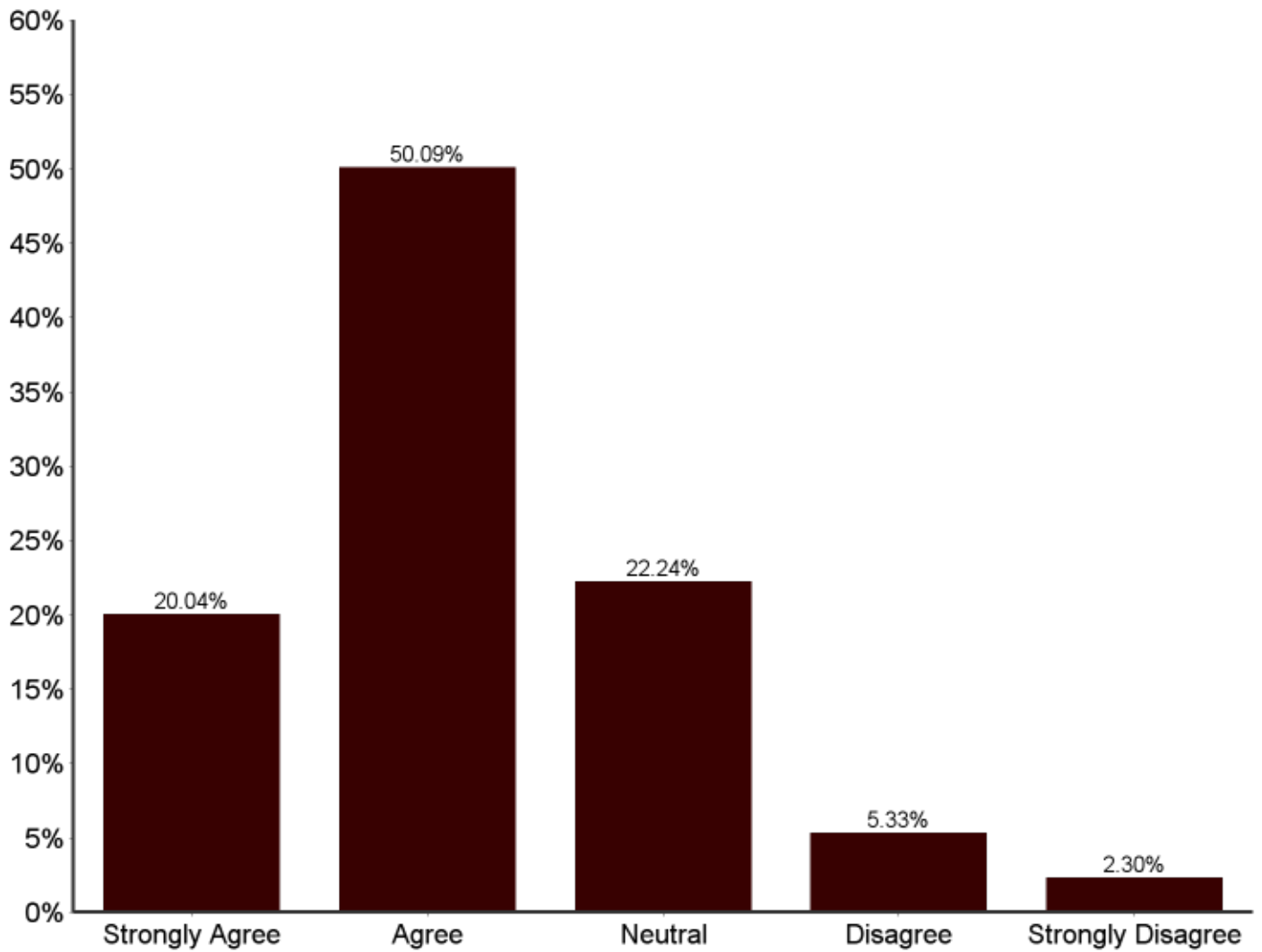
Answer	Response	%
Strongly Agree	1138	28.86%
Agree	1928	48.90%
Neutral	656	16.64%
Disagree	162	4.11%
Strongly Disagree	59	1.50%
Total	3943	100.00%

**How many online courses are you taking, or have taken, at Texas A&M while obtaining your Texas A&M Degree?**



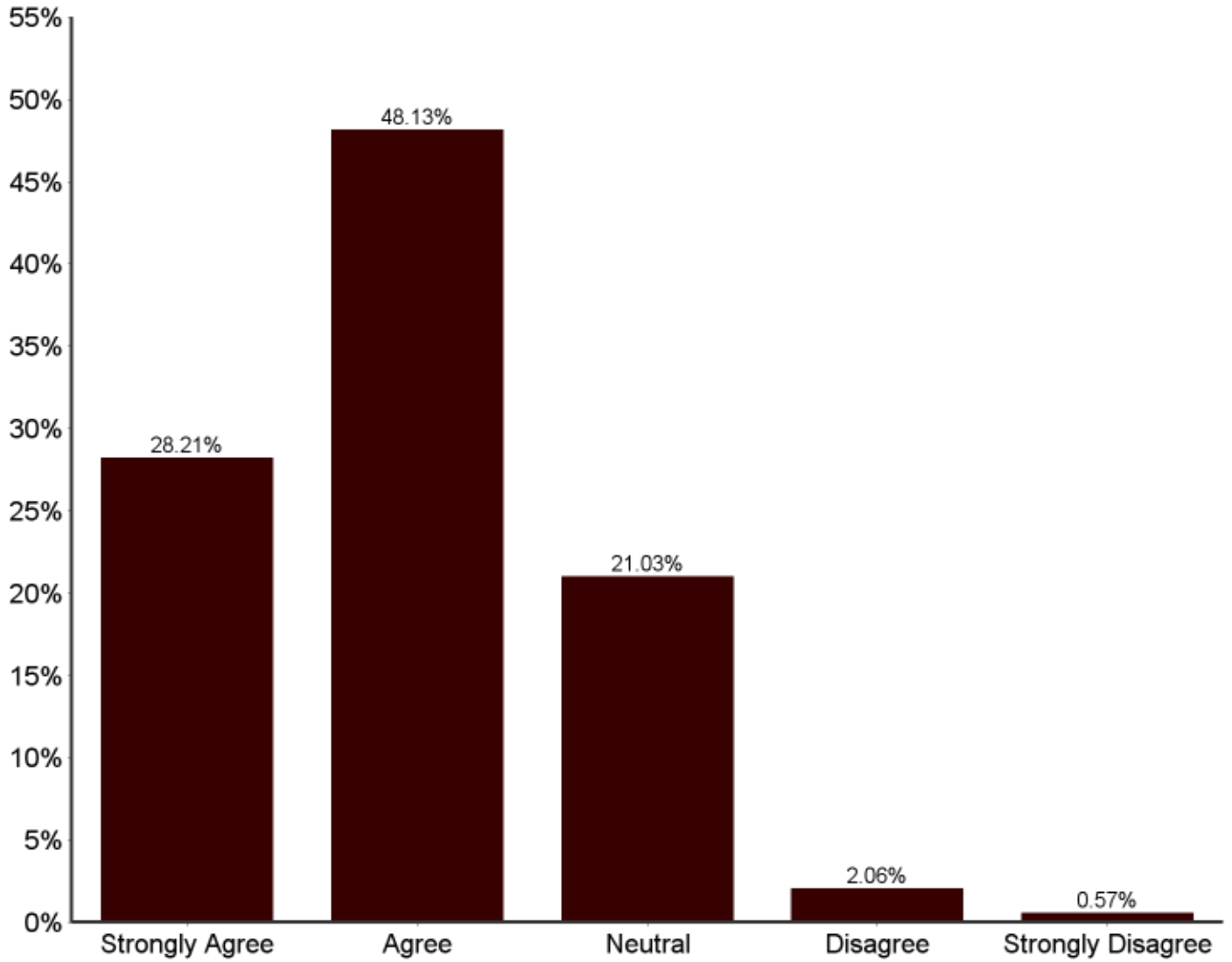
Answer	Response	%
4+ (please specify courses)	84	2.13%
3 (please specify courses)	72	1.83%
2 (please specify courses)	197	5.00%
1 (please specify course)	737	18.69%
0	2853	72.36%
Total	3943	100.00%

I am satisfied with the quality of education provided by the online course(s) I was enrolled in at Texas A&M.



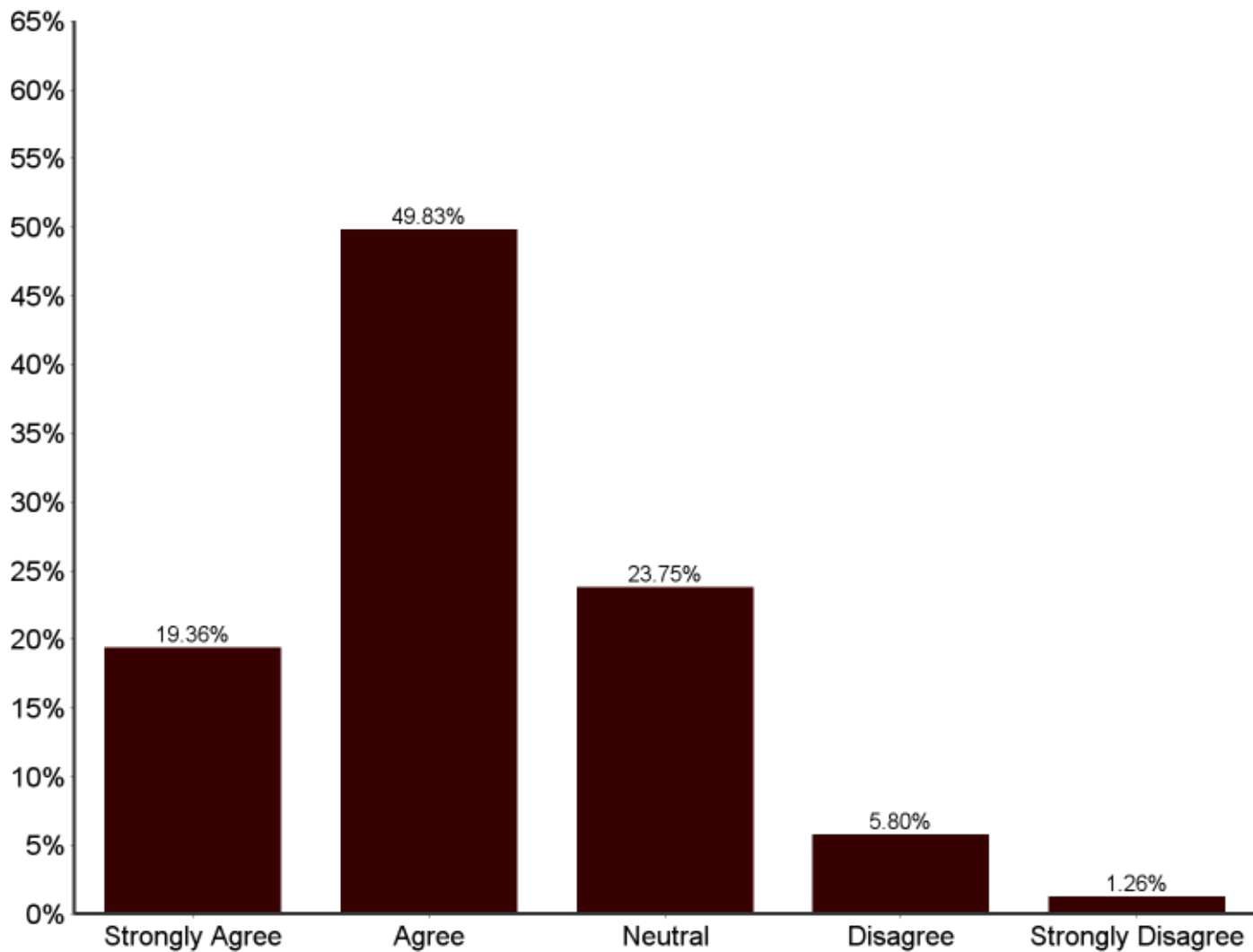
Answer	Response	%
Strongly Agree	218	20.04%
Agree	545	50.09%
Neutral	242	22.24%
Disagree	58	5.33%
Strongly Disagree	25	2.30%
Total	1088	100.00%

I think that the College of Engineering values diversity.



Answer	Response	%
Strongly Agree	794	28.21%
Agree	1355	48.13%
Neutral	592	21.03%
Disagree	58	2.06%
Strongly Disagree	16	0.57%
Total	2815	100.00%

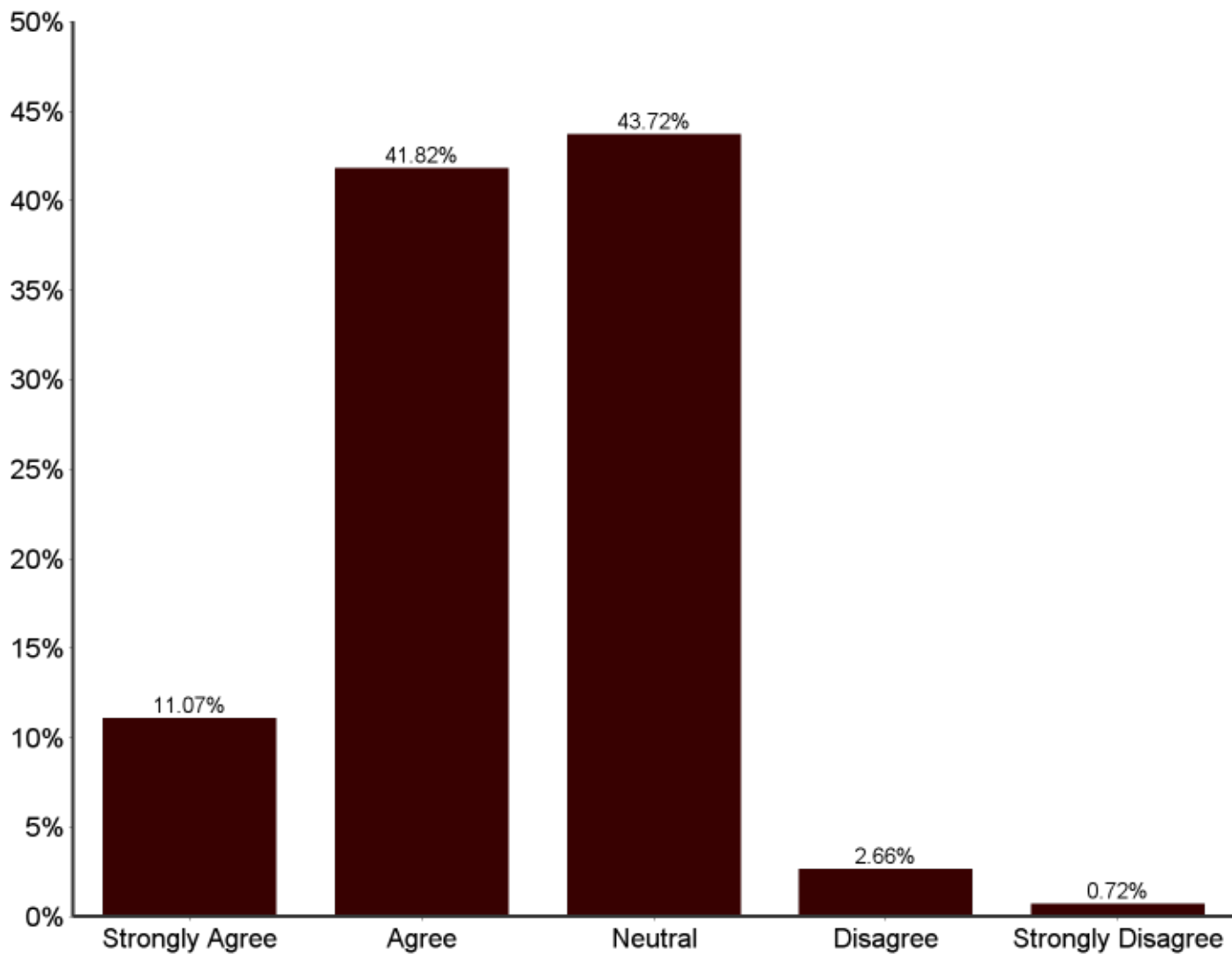
**I find the environment in the College of Engineering to be supportive.**



Answer	Response	%
Strongly Agree	521	19.36%
Agree	1341	49.83%
Neutral	639	23.75%
Disagree	156	5.80%
Strongly Disagree	34	1.26%
Total	2691	100.00%

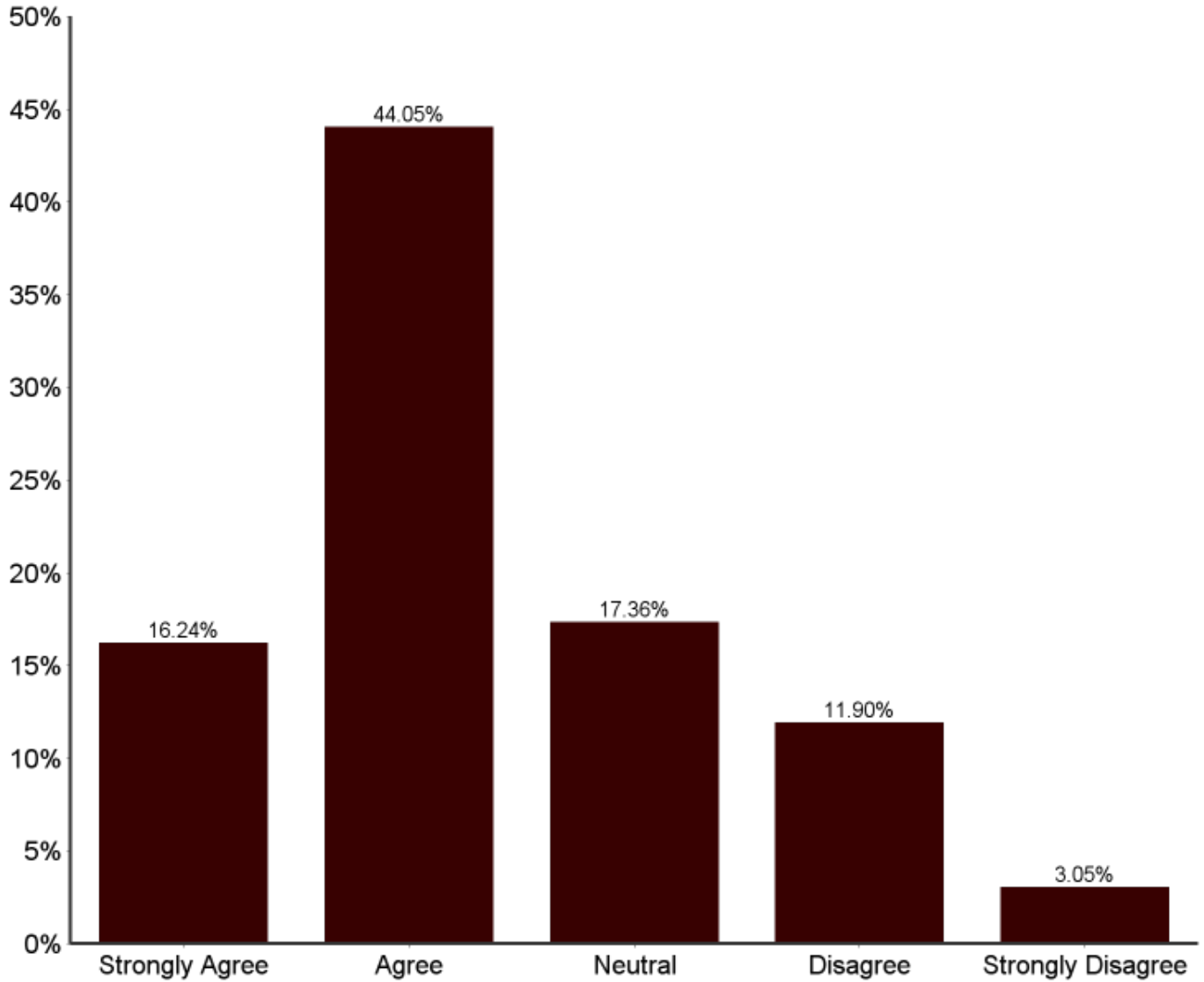


**I find the environment in the College of Engineering to be inclusive.**



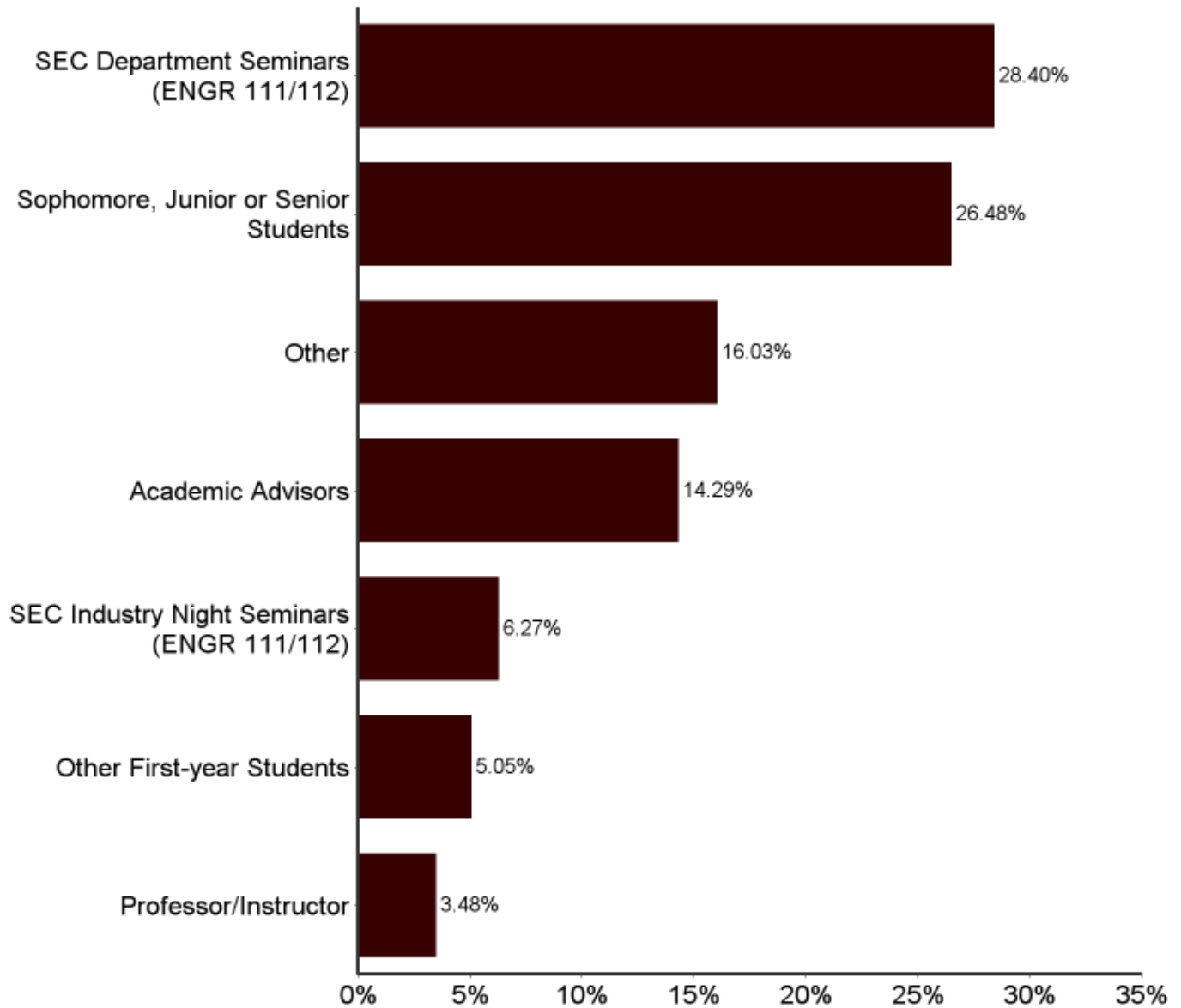
Answer	Response	%
Strongly Agree	291	11.07%
Agree	1099	41.82%
Neutral	1149	43.72%
Disagree	70	2.66%
Strongly Disagree	19	0.72%
Total	2628	100.00%

**I received sufficient information about the different majors to make an informed decision about my major.**



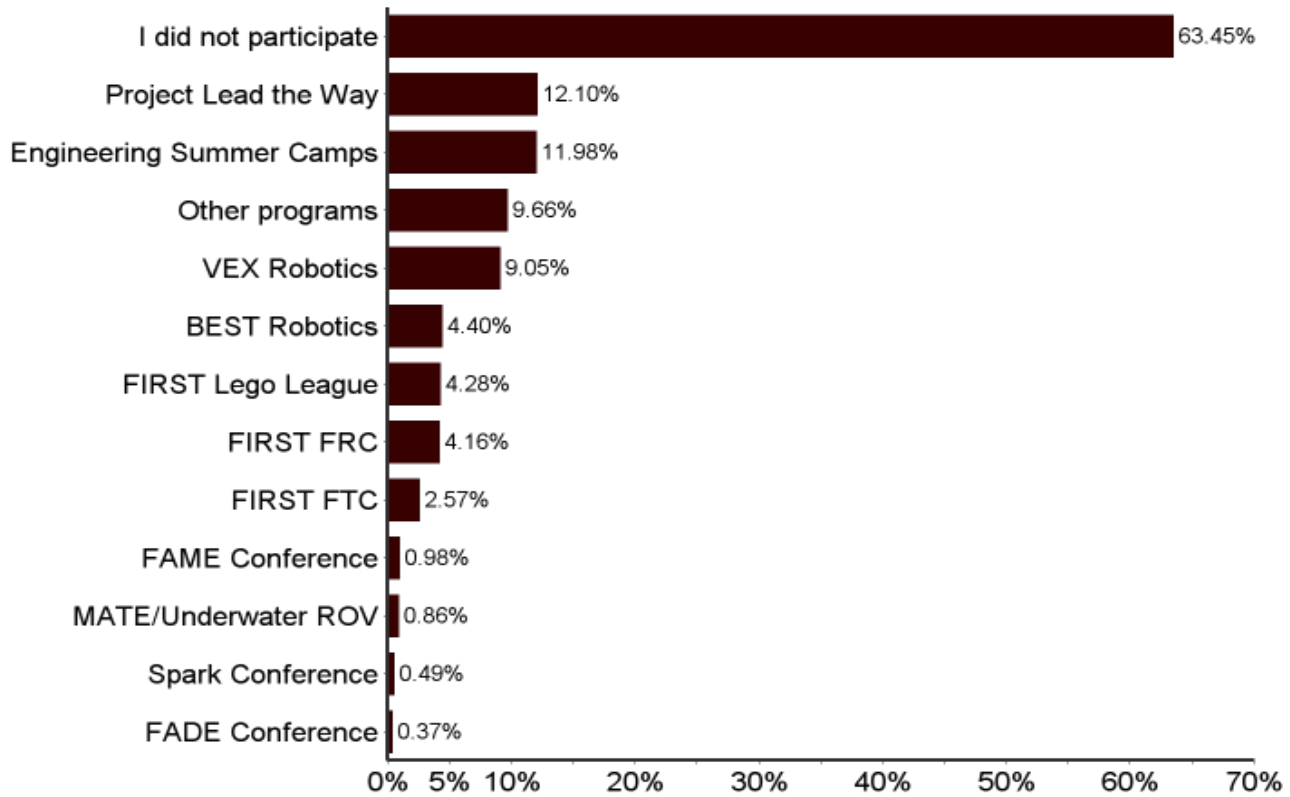
Answer	Response	%
Strongly Agree	101	16.24%
Agree	274	44.05%
Neutral	108	17.36%
Disagree	74	11.90%
Strongly Disagree	19	3.05%
I did not participate in the Entry to a Major process.	46	7.40%
Total	622	100.00%

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



Answer	Response	%
SEC Department Seminars (ENGR 111/112)	163	28.40%
Academic Advisors	82	14.29%
Sophomore, Junior or Senior Students	152	26.48%
Other First-year Students	29	5.05%
Other	92	16.03%
SEC Industry Night Seminars (ENGR 111/112)	36	6.27%
Professor/Instructor	20	3.48%
Total	574	100.00%

Please select any engineering activities that you participated in before attending Texas A&M.

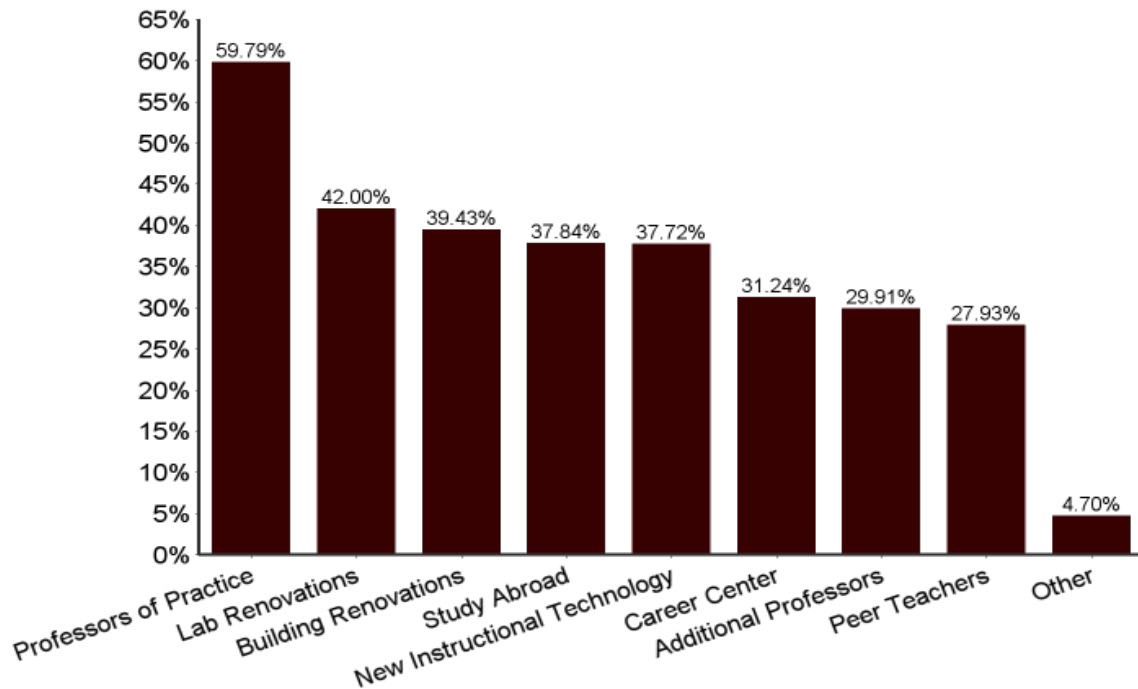


Answer	Response	%
FIRST First Lego League	35	4.28%
FIRST FTC	21	2.57%
FIRST FRC	34	4.16%
MATE/Underwater ROV	7	0.86%
Project Lead the Way	99	12.10%
BEST Robotics	36	4.40%
Engineering Summer Camps	98	11.98%
VEX Robotics	74	9.05%
Spark Conference	4	0.49%
FAME Conference	8	0.98%
Other events or robotics programs (please list)	79	9.66%
I did not participate in engineering activities before attending Texas A&M	519	63.45%
FADE Conference	3	0.37%
Total	1017	100.00%

## DIFFERENTIAL TUITION

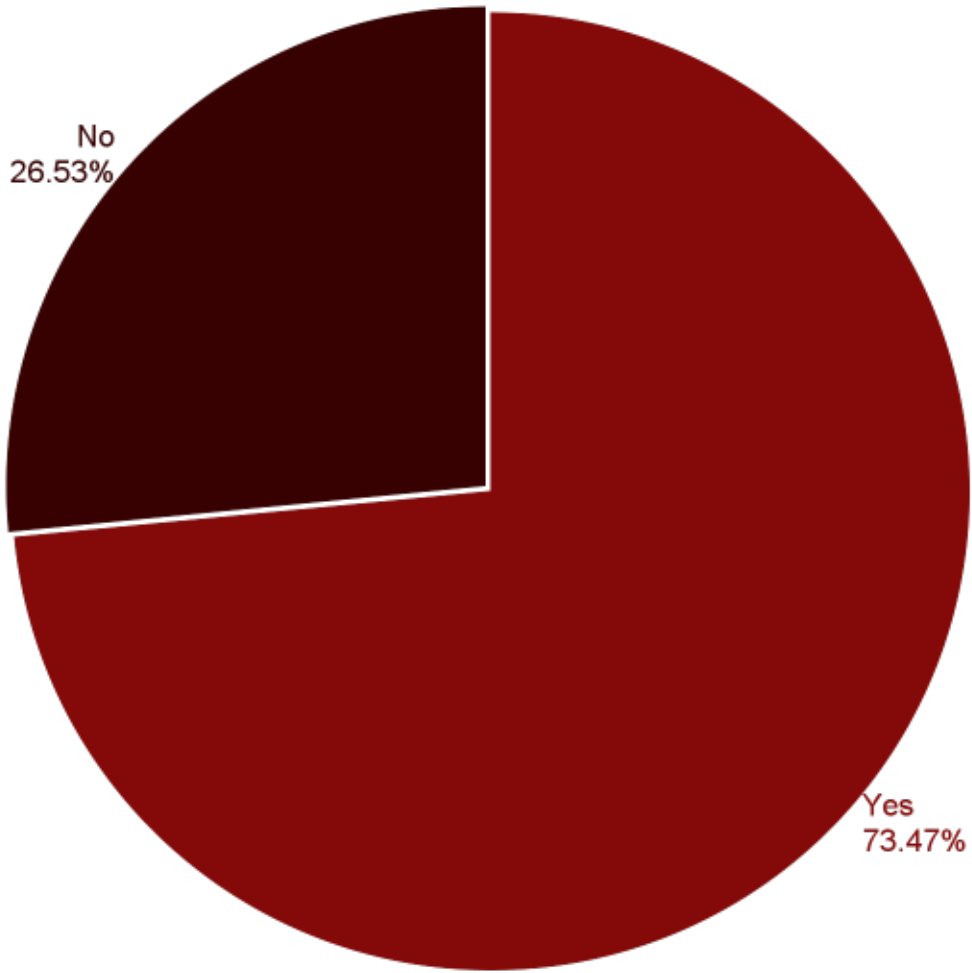
Effective September 1, 2014 instructional enhancement fees were no longer assessed. The replacement of these fees is an increase to the differential tuition by an additional \$383 bringing the total differential to \$783 each Fall and Spring semester. This change was brought forward by the University and approved by the Board of Regents. This change affects all students in all colleges. The rate assessed does vary by each college. We are seeking input from engineering students for strategic suggestions on utilizing this increased differential tuition. It is important to note that the endeavors supported by instructional enhancement fees must now be covered by the increased differential tuition.

Please select the endeavors and/or identify new endeavors that are most important to you when implementing the differential tuition:



Answer	Response	%
Study Abroad	974	37.84%
Lab Renovations	1081	42.00%
New Instructional Technology	971	37.72%
Peer Teachers	719	27.93%
Professors of Practice (faculty with significant experience in industry)	1539	59.79%
Building Renovations	1015	39.43%
Additional Professors	770	29.91%
Career Center	804	31.24%
Other:	121	4.70%
Total	7994	100.00%

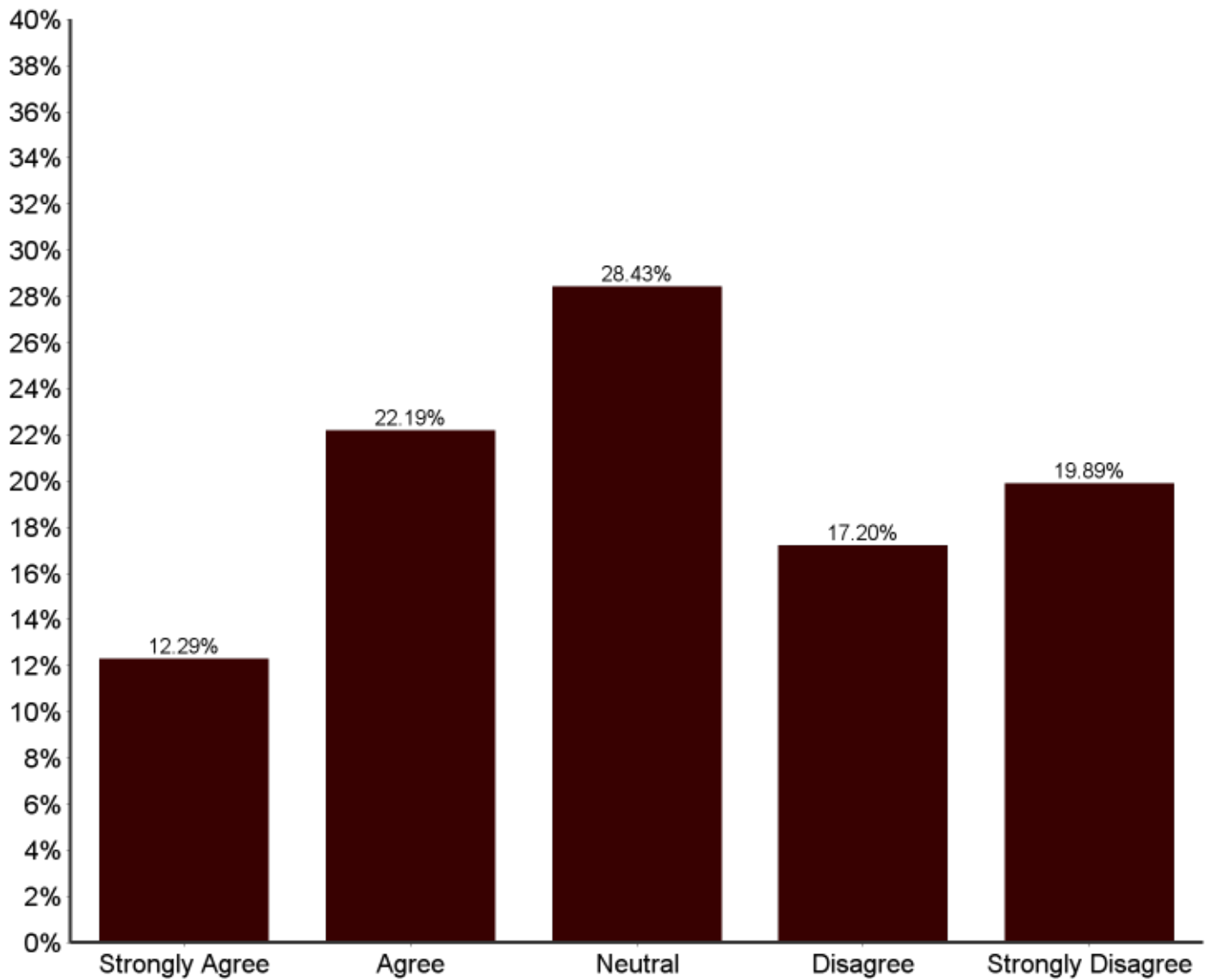
Are you aware of the 25 by 25 initiative?



Answer	Response	%
Yes	2708	73.47%
No	978	26.53%
Total	3686	100.00%

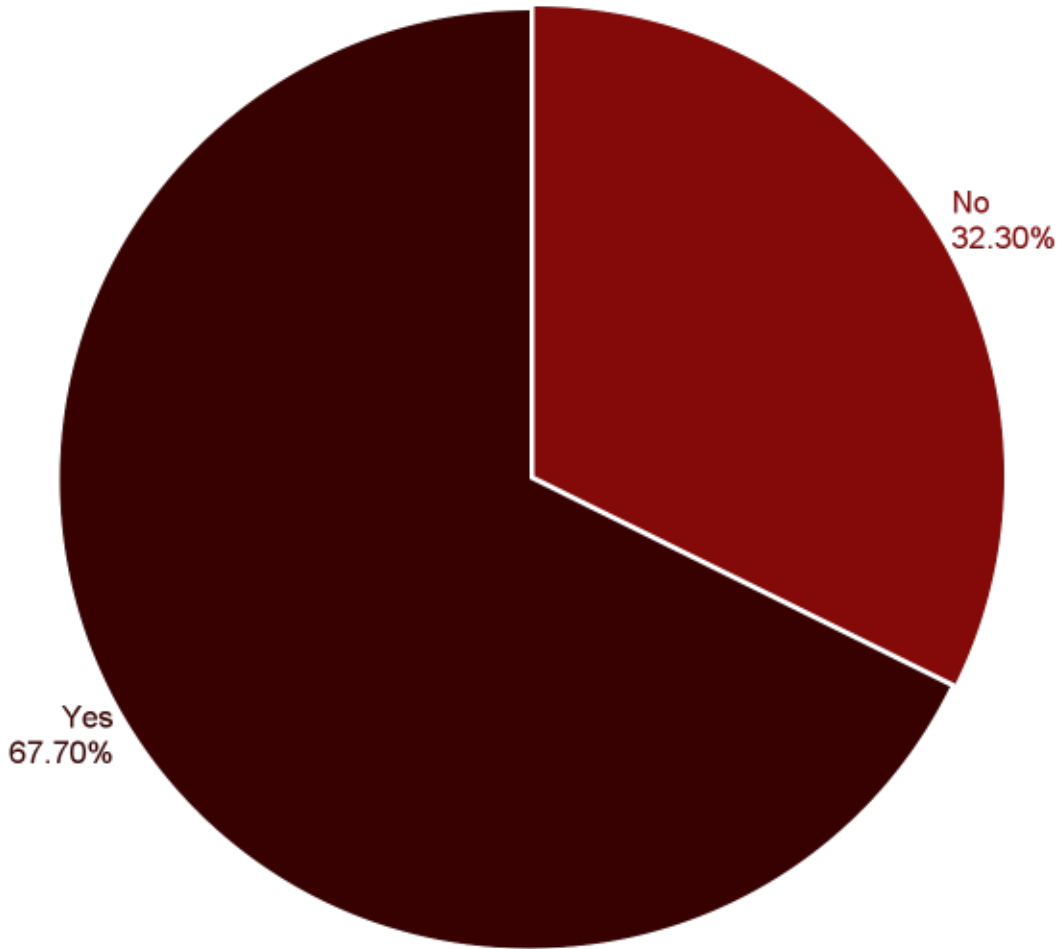
Please rank your agreement with the following statement.

I support the 25 by 25 initiative.



Answer	Response	%
Strongly Agree	453	12.29%
Agree	818	22.19%
Neutral	1048	28.43%
Disagree	634	17.20%
Strongly Disagree	733	19.89%
Total	3686	100.00%

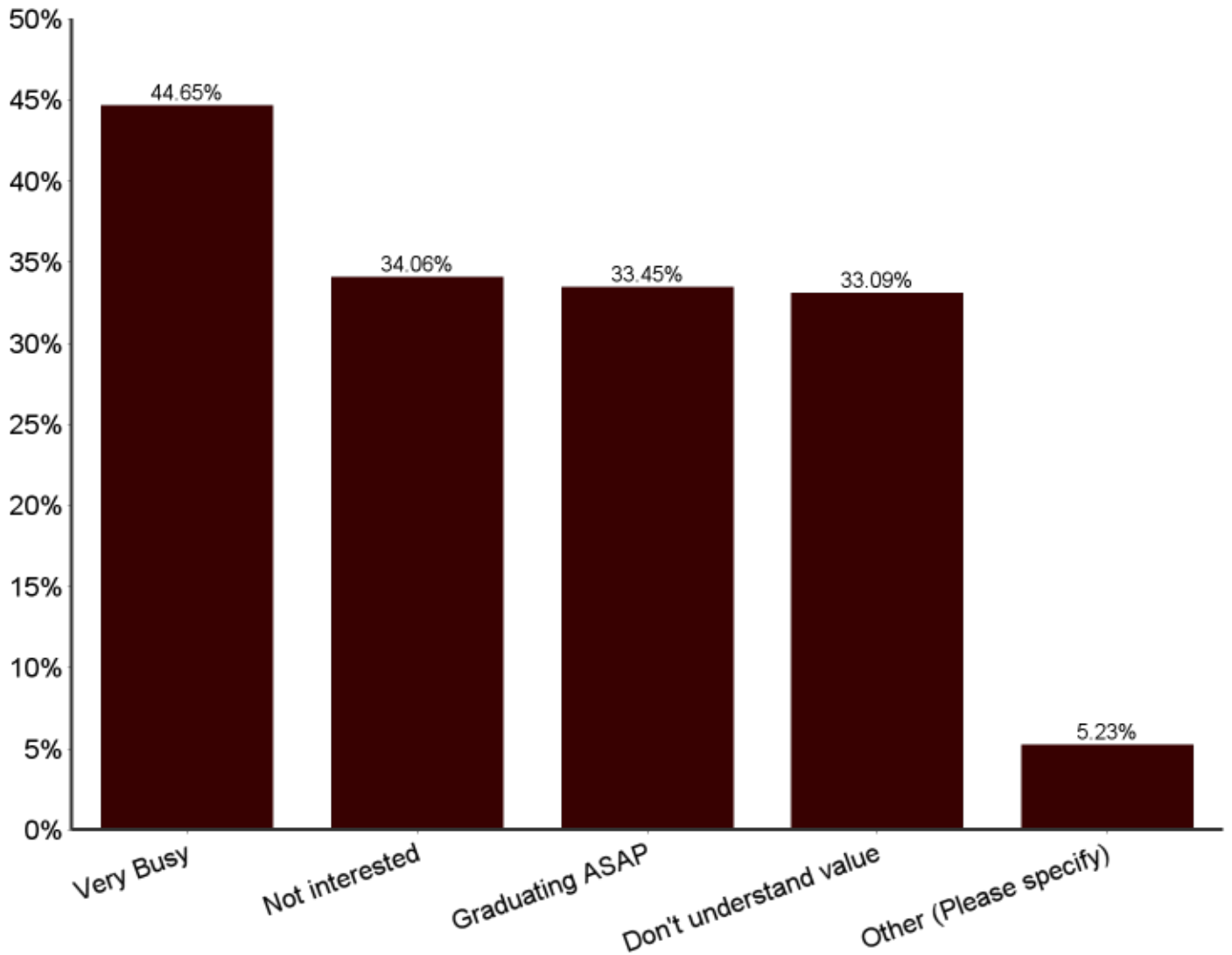
Are you interested in pursuing courses or programs associated with innovation and entrepreneurship during your engineering education at Texas A&M University?



Answer	Response	%
No	822	32.30%
Yes	1723	67.70%
Total	2545	100.00%

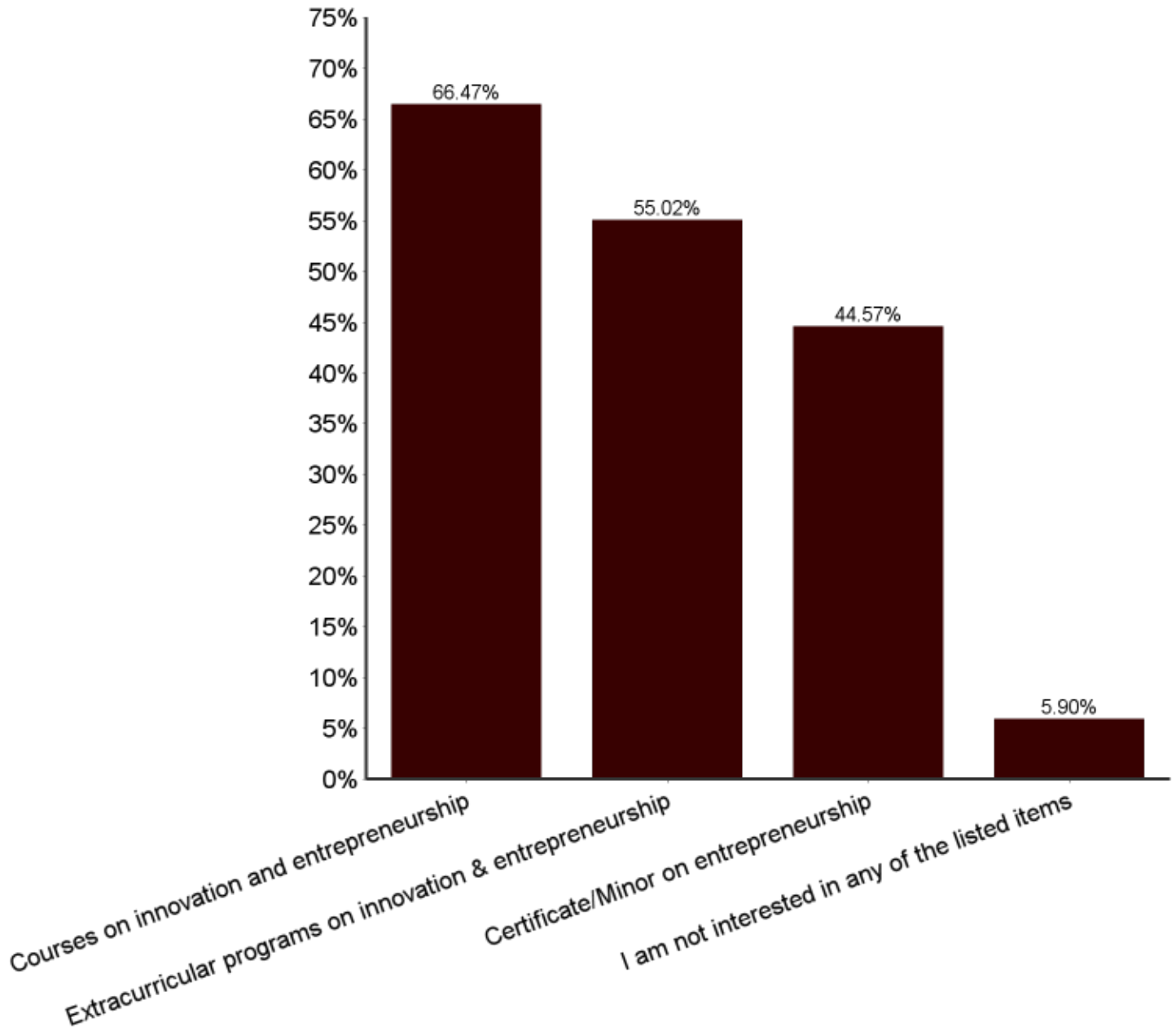


**Please check the reasons why you are not interested:**



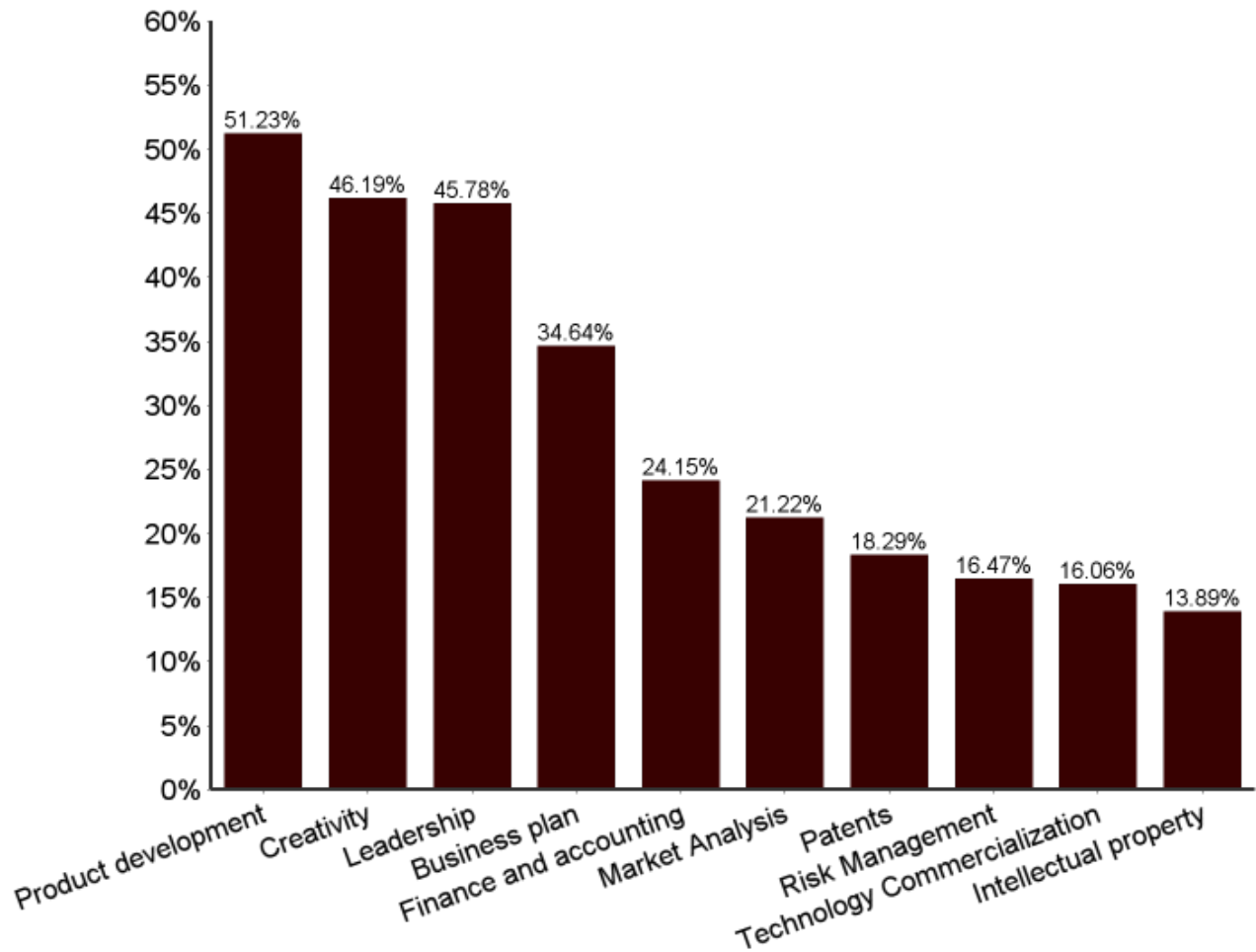
Answer	Response	%
I am not sure I fully understand the value these programs will offer for my professional career as an engineer	272	33.09%
I am planning to graduate as soon as possible and I am not interested on additional courses / minor	275	33.45%
I am very busy and will not be able to invest in informal programs on innovation and entrepreneurship	367	44.65%
I am not interested in pursuing a career in innovation and entrepreneurship	280	34.06%
Other (Please specify)	43	5.23%
Total	1237	100.00%

**Which of the following are you interested in? (Please check all that apply)**



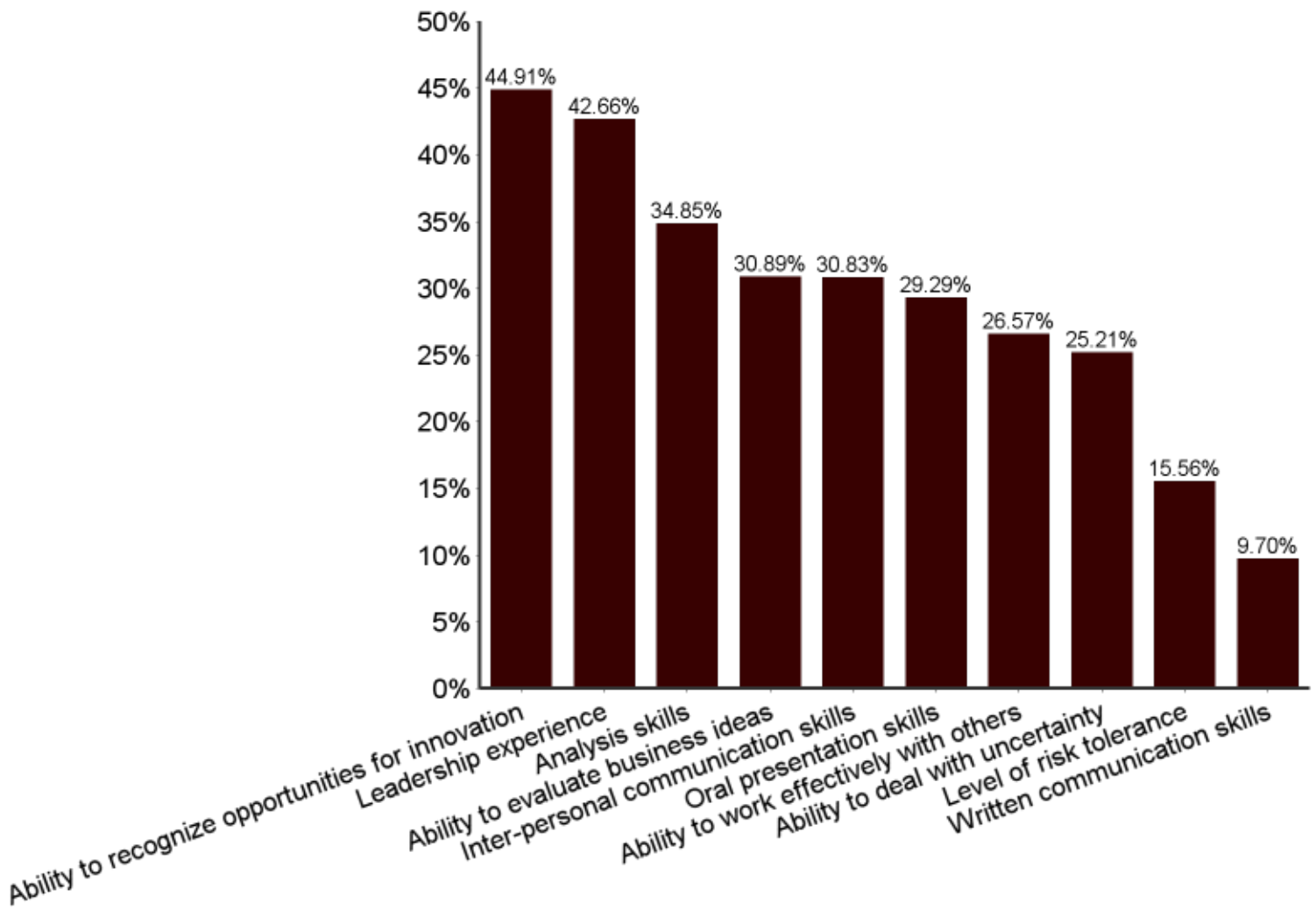
Answer	Response	%
Courses on innovation and entrepreneurship	1138	66.47%
Certificate/Minor on entrepreneurship	763	44.57%
Extracurricular programs on innovation & entrepreneurship	942	55.02%
I am not interested in any of the listed items	101	5.90%
Total	2944	100.00%

Please check up to three (3) knowledge areas in which you are most interested.



Answer	Response	%
Creativity	788	46.19%
Product development	874	51.23%
Intellectual property	237	13.89%
Patents	312	18.29%
Technology Commercialization	274	16.06%
Market Analysis	362	21.22%
Business plan	591	34.64%
Finance and accounting	412	24.15%
Risk Management	281	16.47%
Leadership	781	45.78%
Total	4912	100.00%

Please check up to three (3) skill areas in which you are most interested.

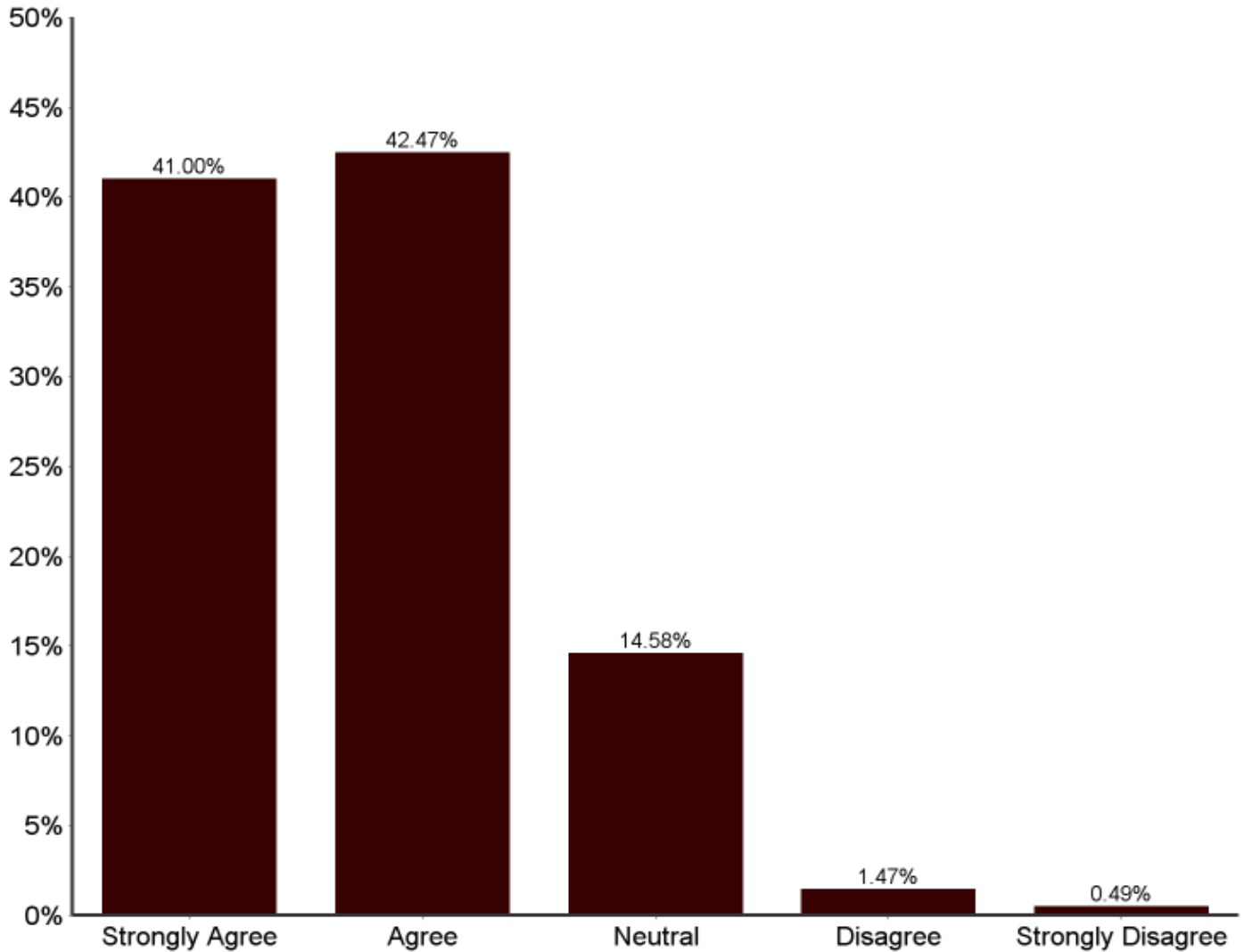


Answer	Response	%
Inter-personal communication skills	521	30.83%
Oral presentation skills	495	29.29%
Written communication skills	164	9.70%
Analysis skills	589	34.85%
Ability to evaluate business ideas	522	30.89%
Ability to recognize opportunities for innovation	759	44.91%
Level of risk tolerance	263	15.56%
Ability to deal with uncertainty	426	25.21%
Ability to work effectively with others	449	26.57%
Leadership experience	721	42.66%
Total	4909	100.00%

## GRADUATE STUDENT QUESTIONS

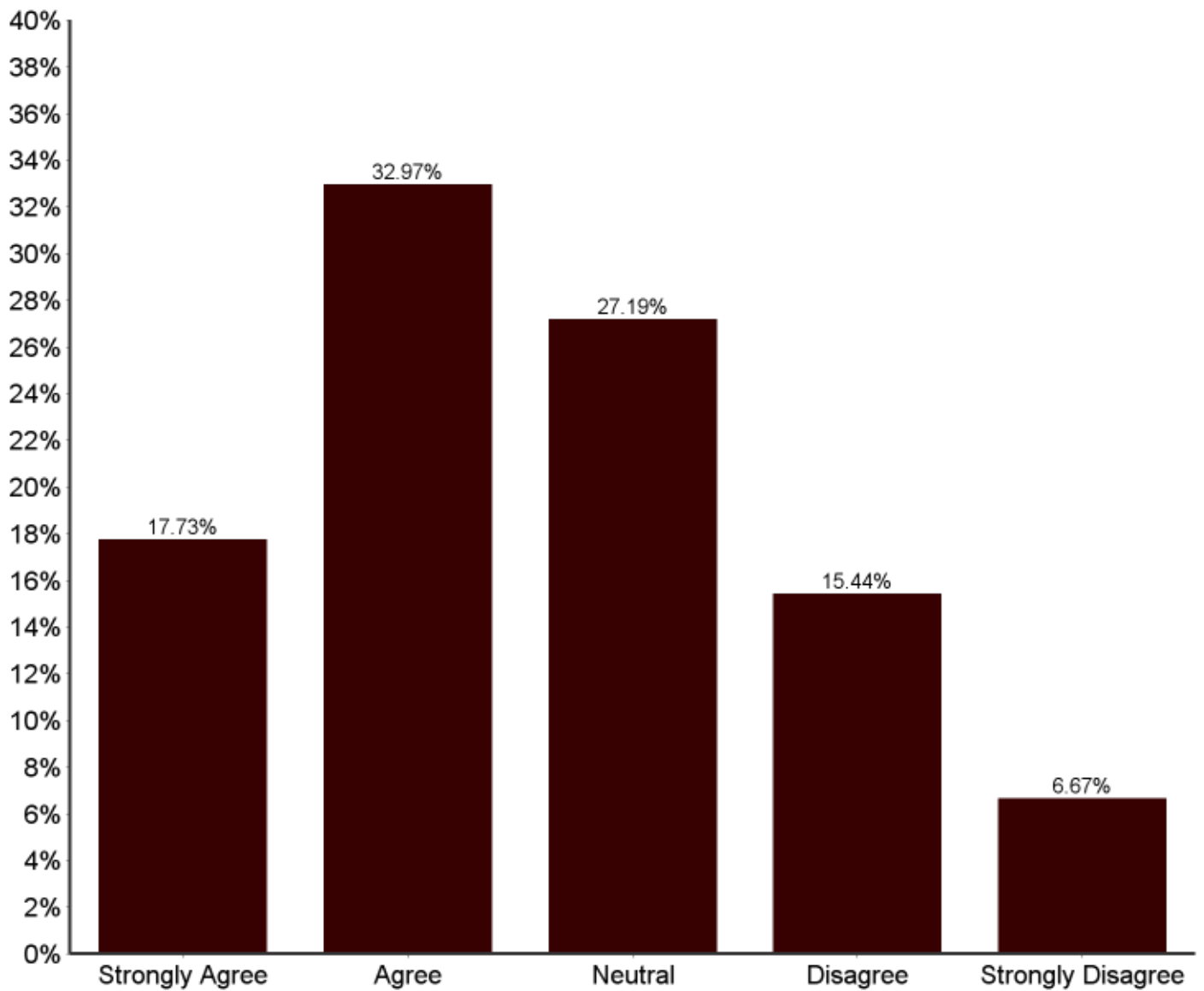
### ON-CAMPUS GRADUATE STUDENTS

**My computer science or engineering department provides a welcoming and inclusive environment for all people regardless of their demographic background.**



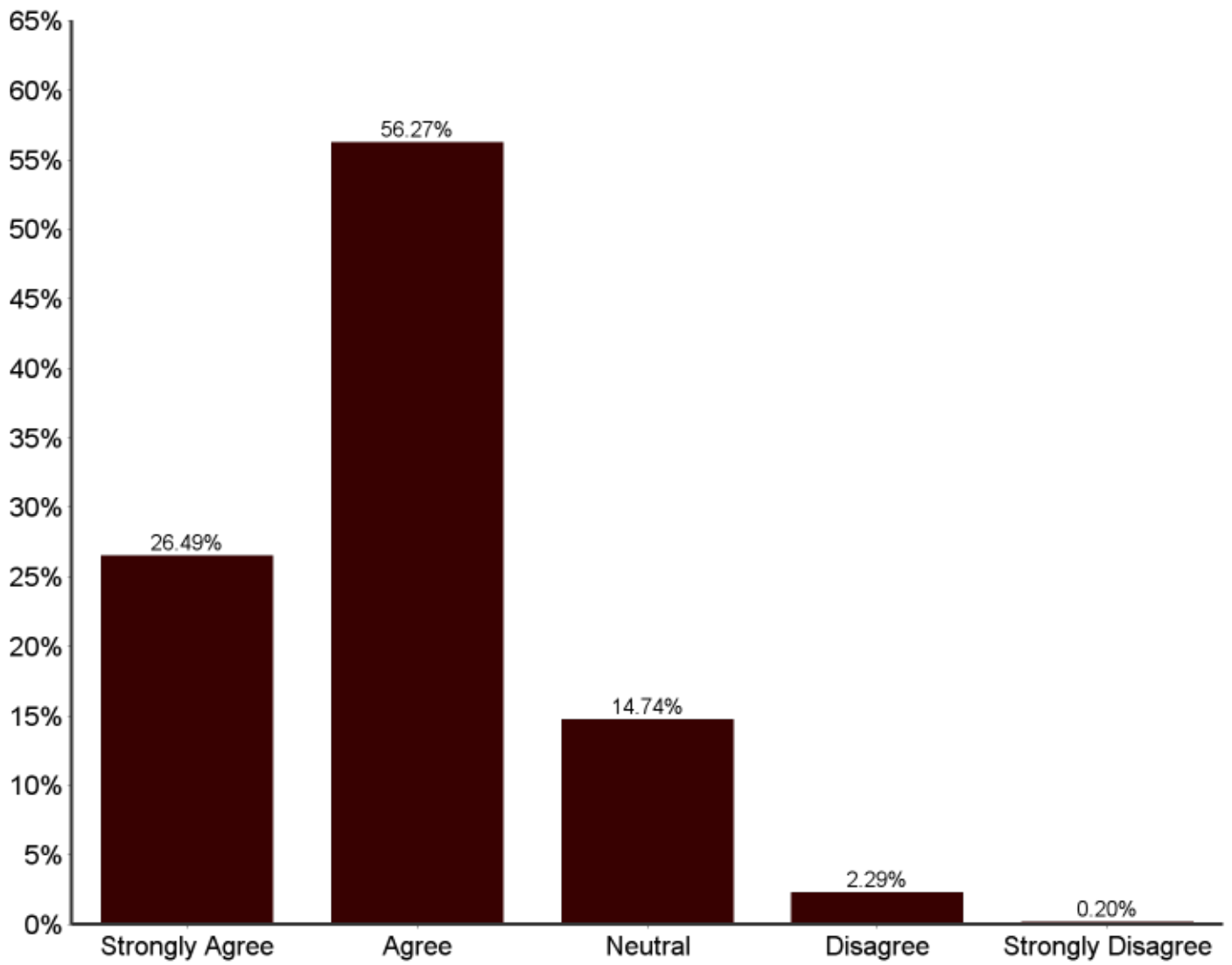
Answer	Response	%
Strongly Agree	419	41.00%
Agree	434	42.47%
Neutral	149	14.58%
Disagree	15	1.47%
Strongly Disagree	5	0.49%
Total	1022	100.00%

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



Answer	Response	%
Strongly Agree	178	17.73%
Agree	331	32.97%
Neutral	273	27.19%
Disagree	155	15.44%
Strongly Disagree	67	6.67%
Total	1004	100.00%

I am able to thrive academically in my engineering or computer science department.

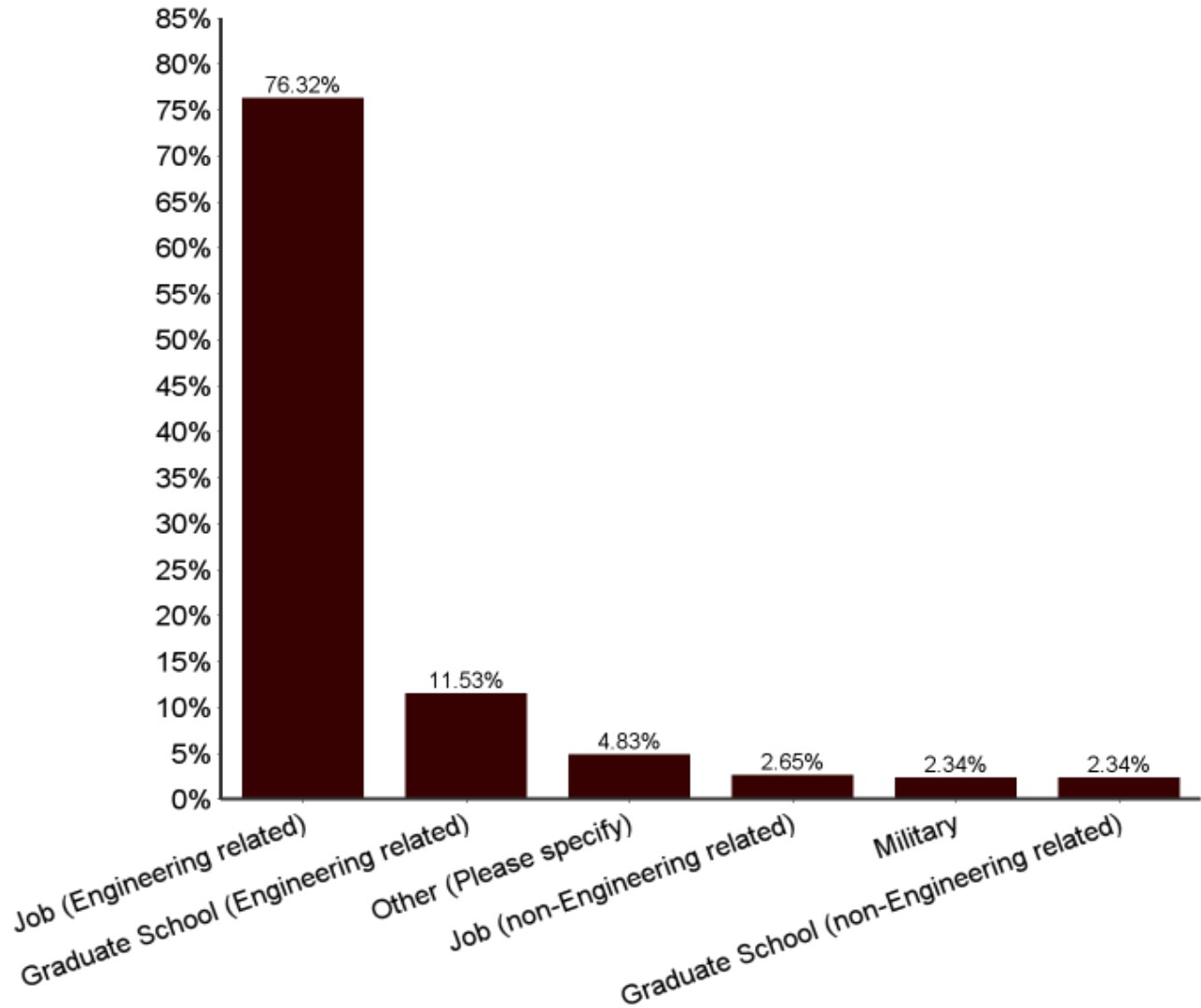


Answer	Response	%
Strongly Agree	266	26.49%
Agree	565	56.27%
Neutral	148	14.74%
Disagree	23	2.29%
Strongly Disagree	2	0.20%
Total	1004	100.00%

## POST-GRADUATION QUESTIONS

### POST-GRADUATION

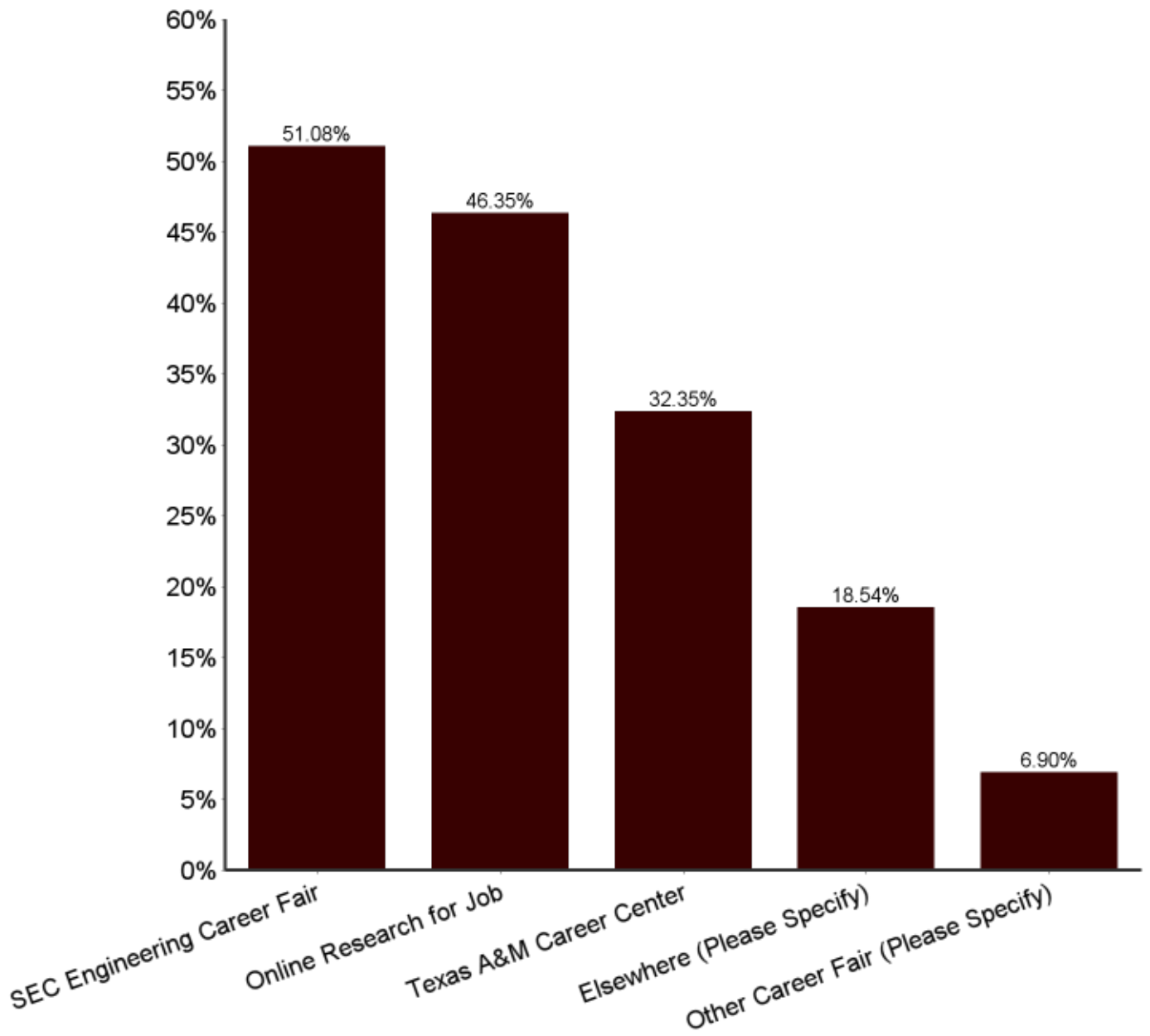
Which one of the following will you pursue after you graduate?



Answer	Response	%
Job (Engineering related)	490	76.32%
Job (non-Engineering related)	17	2.65%
Graduate School (Engineering related)	74	11.53%
Graduate School (non-Engineering related)	15	2.34%
Other (Please specify)	31	4.83%
Military	15	2.34%
Total	642	100.00%



## How did you obtain your job opportunity?



Answer	Response	%
SEC Engineering Career Fair	259	51.08%
Elsewhere (Please Specify)	94	18.54%
Other Career Fair (Please Specify)	35	6.90%
Texas A&M Career Center	164	32.35%
Online Research for Job	235	46.35%
Total	787	100.00%