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ASEE 2020 Edition

Engineering & Engineering Technology **BY THE NUMBERS**





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Profiles of Engineering and Engineering Technology, 2020

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COVID-19 and Engineering Education¹

Introduction

The American Society for Engineering Education (ASEE) has collected data from engineering, computing, and engineering technology programs in its annual Profiles of Engineering and Engineering Technology (Profiles) since 2001. The data collected reflects detailed demographic headcounts for program enrollment, department tenured/tenure-track faculty, and degrees awarded.

This report is an initial analysis of the data collected for Profiles 2020 as ASEE's Department of Institutional Research & Analytics prepares a longer version of this report on the effects of COVID-19 on engineering education in the United States to be released separately before the end of 2021.

Executive Summary

- While there is a large amount of institution-specific variability, the number of domestic applications to undergraduate engineering programs for Fall 2021 have remained steady. There has been a decrease in applications for master's and doctoral engineering programs.
- Engineering schools at Hispanic-Serving Institutions (HSIs) and Asian American, Native American, Pacific Islander-Serving Institutions (AANAPISIs) admitted a higher rate of applicants in Fall 2020.
- Whether or not applications translate into enrollments is a difficult question to answer for Fall 2021. Several institutions have reported an expected large increase in Fall 2021 enrollments due to deferrals from Fall 2020 and Spring 2021. Several institutions are reporting they are preparing for "mega-classes," especially for first-year students.
- Nationally, representation of women and underrepresented minorities² shows no decline in undergraduate engineering programs, including for the Fall 2020 freshman class.
- Freshman enrollment showed a median decline for all engineering disciplines in Fall 2020.

¹ This work is part of an ongoing project on the effects of COVID-19 on engineering education funded by NSF-EEC Award #1748840. Any views expressed are those of the individual author and do not necessarily represent the views of the National Science Foundation.

² ASEE uses the definition of underrepresented minority (URM) for the engineering fields from NSF's *Science and Engineering Indicators* report (<https://nces.nsf.gov/pubs/nsb20201/glossary>): "This category comprises three racial or ethnic minority groups (blacks or African Americans, Hispanics or Latinos, and American Indians or Alaska Natives) whose representation in S&E education or occupations is smaller than their representation in the U.S. population."

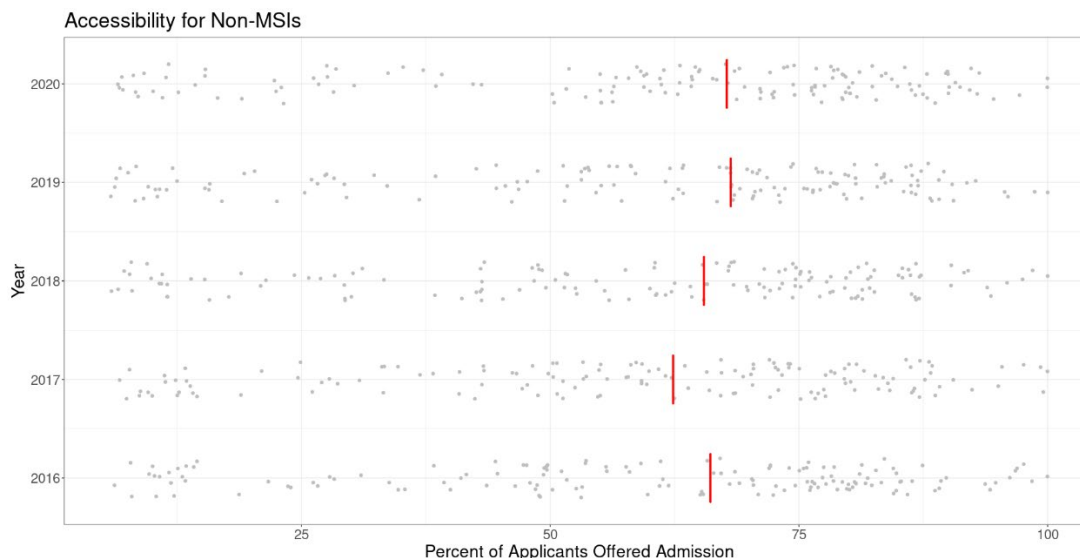
- Total research volume showed a slight increase in FY 2020 with disciplines requiring in-person lab work the most likely to have a moderate decrease.
- Only half of engineering technology disciplines showed a median decrease in enrollments for all undergraduates and for freshmen.

Applications, Offers, and Enrollments in Engineering, Fall 2020 and Fall 2021

For each college of engineering, ASEE collects data on the total numbers of applications, offers, and enrolled students for Fall in each survey year. From each college, we can calculate two numbers: one of accessibility (out of the total number of applications, what percent are admitted), and the other of melt (of those offered admissions, what percent enroll and attend for the Fall). The data below are from participating institutions 2016–2020 who report all three data points for each year. Some institutions do not report this data across all years, and they are excluded from this analysis. The graphs presented in this section visualize the spread of the data. The grey dots represent institutional values for accessibility. The thick red line in the middle represents the median for each measure (in Figure 1, this is the accessibility for institutions that are not minority-serving, see appendix for definition and sample characteristics).

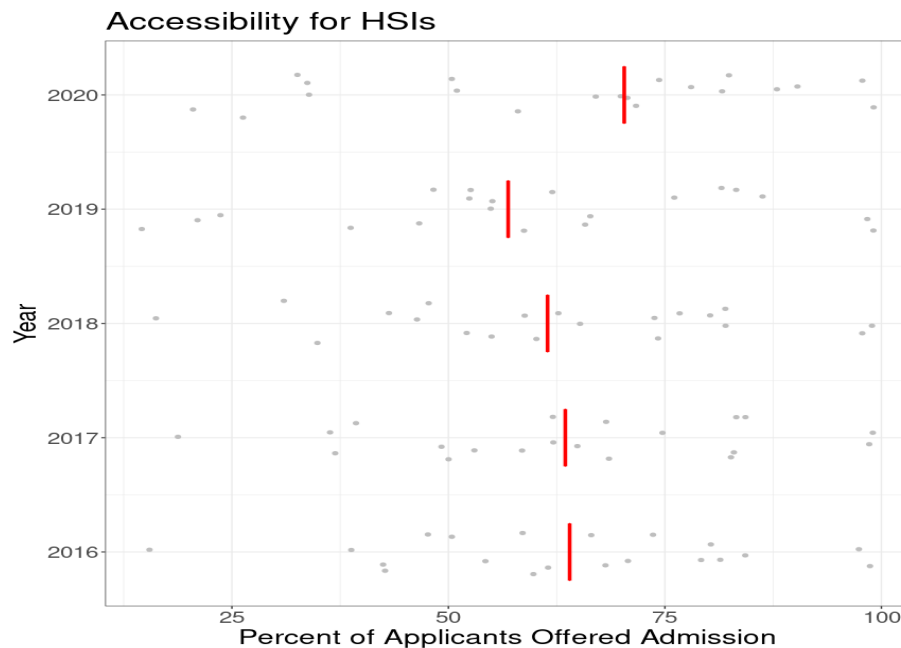
Figures 1-3 shows the distribution of accessibility by MSI type for those types with more than 10 institutions in the sample who reported data for every year in the Profiles survey for 2016-2020. MSI types include Hispanic-Serving Institutions (HSIs) and Asian American, Native American, Pacific Islander-Serving Institutions (AANAPISIs) as well as non-minority serving institution (non-MSIs).

Figure 1: Percent of Applicants Admitted for Engineering Programs 2016-2020, non-MSIs



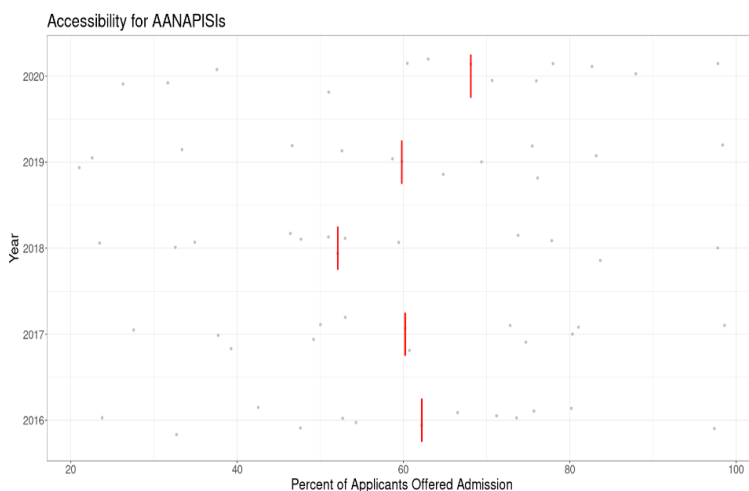
For non-Minority-Serving Institutions, in Figure 1 there was no visible change in accessibility for Fall 2020 and a small decrease in the percent who attended in Fall 2020. The small decrease, however, was in line with the trend in the data from Fall 2016 to Fall 2019.

Figure 2: Percent of Applicants Admitted for Engineering Programs 2016-2020, HSIs



For both MSIs and AANAPISIs, as seen in Figures 2 and 3, there is a median increase in accessibility for Fall 2020 in contrast to the median trend for Fall 2016–2019. The institutional variability, however, remains stable for Fall 2020. The enrollment melt remained stable for Fall 2020 (as can be seen by graphs in the appendix); some institutions, however, have reported that fewer students had chosen to enroll due to the inability of an institution to provide financial aid in the amount they had in past years.

Figure 3: Percent of Applicants Admitted for Engineering Programs 2016-2020, AANAPISIs



Fall 2021 Survey (May 2021): A survey was sent to institutions in early May 2021 requesting numbers for domestic and international student applications for Fall 2021 and, similarly, for Fall 2020 as a baseline. Since the Profiles data collection does not

differentiate between domestic and international applicants, this ad-hoc survey allowed for some investigation of the effect of the pandemic on international application, especially since there were reports of fall off of international student interest due to the prior administration’s change in policy regarding student visas in July 2020 and the general difficulty over the pandemic of travelers’ entry into other countries due to local restrictions.

Thirty-six institutions participated in the survey, with 14 private and 22 public institutions responding. The data below represent the median, minimum, and maximum change in applications reported by institution type. Institutions were asked to report the data as of April 30 for both 2020 and 2021 to have comparable results regardless of application deadline.

Table 1: Change in Applications from Fall 2020 to Fall 2021 for Engineering Programs

Level	Type	Percent Change in Domestic Applicants			Percent Change in International Applicants		
		Median	Min	Max	Median	Min	Max
Bachelor’s	Public	-1.4	-30.3	61.3	-6.0	-27.0	103.4
Bachelor’s	Private	2.2	-9.9	16.9	14.7	-85.0	61.9
Master’s	Public	1.5	-32.8	50.0	2.1	-78.2	208.2
Master’s	Private	-9.1	-32.8	17.8	-38.1	-85.7	50.3
Doctoral	Public	-6.1	-60.0	52.9	11.4	-15.0	80.0
Doctoral	Private	-3.7	-44.4	94.4	200	-30.7	946.1

Table 2 illustrates that the fluctuation in accessibility is not an artifact of an increase or decrease in the number of applications nationally. Engineering schools had a median percent change of around +/- 1.0 in the number of applications from 2019.

Table 2: Median Year-to-Year Percent Change in Number of Applications

Institution Type	2017	2018	2019	2020
Non-MSIs	1.8	5.0	0.0	-0.9
HSIs	6.3	8.1	-2.0	1.1
AANAPISIs	1.5	12.0	-1.7	0.4

Institutional Context: Discussions with several institutions as well other external stakeholders have pointed to a marked increase in applications when shifting graduate programs to become test-optional (either SAT/ACT at the undergraduate level or GRE at the graduate level). The large maximum percent change in international students for some institutions reflects both the shift to test-optional as well as the loosening of restrictions for the pandemic (specifically, in some locations, for required in-person interviews). At the graduate level, however, there is a decrease for domestic applicants for graduate programs. While several doctoral programs in the humanities and social

sciences have suspended admissions for Fall 2021³, no engineering program has stated that they are suspending admissions or lowering the number of students admitted due to the pandemic. This may be due to the potentially strong job market in engineering and technical occupations as the U.S. economy emerges from the widespread shutdowns in March 2020. Finally, some institutions reported that beyond the overall variability in application numbers, they witnessed a shift in the pool of applicants for Fall 2021 to more local rather than geographically dispersed populations.

Fall 2020 Enrollment by Engineering Discipline

Institutions report data to ASEE by class (including freshman, sophomore, junior, and senior), gender, race/ethnicity, engineering discipline, program name, and department name. For this section of the report, we examine the change from 2019 to 2020 for undergraduate enrollment and doctoral enrollment.

Percent Change: This measure represents the percent difference between 2019 versus 2020 totals. For example, when looking at institutional total enrollment, if there were 50 students enrolled in 2019 and 55 students enrolled in 2020, that would represent a +5 percent change in enrollment $(55-50)/50 \times 100$.

Change in Percent: This measure represents the change in percent of each group between 2019 and 2020. For example, if women represent 10 percent of total undergraduate enrollment in 2019 and 15 percent of total undergraduate enrollment in 2020, the change in percent would be 5 (15 percent-10 percent) and represents a normalized measure across years. This measure more closely reflects year-to-year change when the focus is on increasing representation.

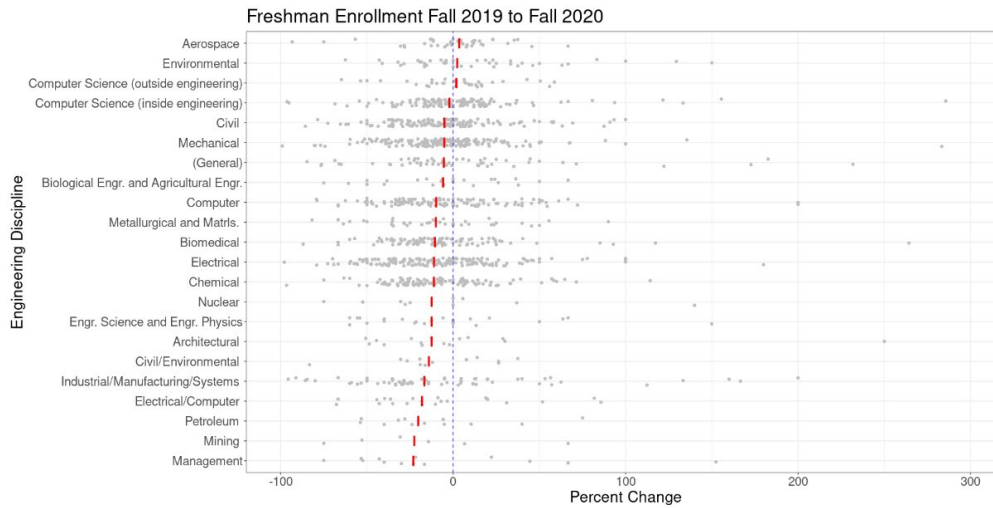
Each figure represents the percent change in enrollment by engineering discipline, with the grey dots representing each institution in the sample and the red lines the calculated medians for each discipline. The blue dashed line represents no difference between 2019 and 2020.

Freshman Enrollment

Total undergraduate enrollment represents one dimension of potential worry for the future engineering workforce, but an important subset of that is the change in the first-year enrollment for 2020. Throughout the past year, many stakeholders have reported that first-year undergraduate students deferred enrollment. Nationally, this effect can be seen in the decrease in median percent change of freshman enrollment for all disciplines shown in Figure 4. The exceptions to this were programs in computer science, environmental engineering, and aerospace engineering.

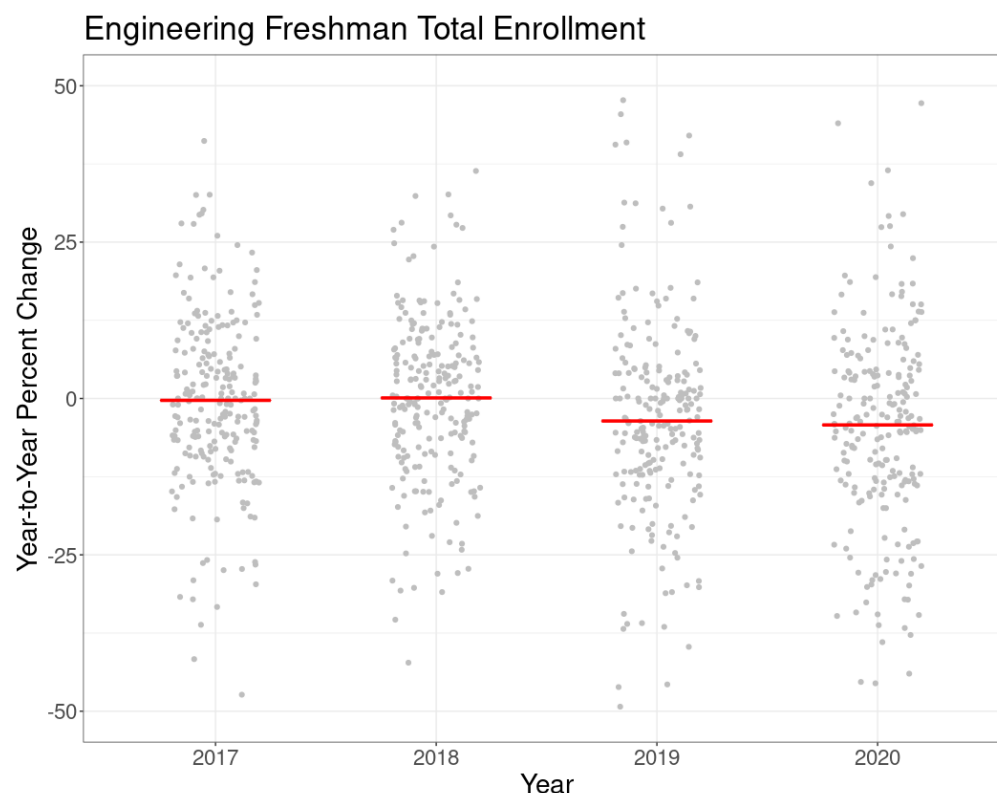
³ A recent *Chronicle* story tracks those programs: https://www.chronicle.com/article/more-doctoral-programs-suspend-admissions-that-could-have-lasting-effects-on-graduate-education?cid2=gen_login_refresh&cid=gen_sign_in

Figure 4: Change in Freshmen Enrollment for Fall 2020 for Engineering Disciplines



To contextualize the decreases seen in the freshman cohort for Fall 2020, some analysis of recent year trends is necessary: in other words, is there already an on-going trend of enrollment decline or was Fall 2020 an aberration. Figure 5 illustrates the year-to-year change for the freshman cohort from 2017 to 2020. Some institutions have first-year engineering programs that they do not report in the Profiles survey (i.e. programs where students are admitted to the college of engineering, but are undeclared and select a engineering major after the first or later year). Only institutions that report at least one freshman enrolled the college of engineering in each year from 2016 to 2020 were included. There were 234 institutions that met that inclusion criteria for Figure 5 and Table 3.

Figure 5: Engineering Freshman Percent Change in Enrollment 2016-2020



All institutions report a median percent decrease in freshmen engineering enrollment in Fall 2020 of -4.1, but also reported a median percent decrease in Fall 2019 (pre-pandemic) of -3.6. Overall engineering enrollment has increased since 2005 as reported in Engineering by the Numbers from ASEE in 2005-2019, but the data from 2016 to 2020 suggest the potential start of a decline which be accelerated by the pandemic.

Table 3: Year-to-Year Percent Change in Total Freshmen Engineering Enrollment by Type of Institution

Type	2017	2018	2019	2020
Asian American, Native American, Pacific Islander Serving Institution (AANAPISI)	-0.8	0.9	-6.7	-3.2
Historical Black College or University (HBCU)	-3.4	5.4	0.0	-0.8
Hispanic Serving Institution (HSI)	0.52	-0.51	-12.2	-4.1
Minority Serving Engineering Improvement Program (MSEIP)	-4.8	4.2	-15.6	-9.4
Non-Minority Serving Institution (non-MSI)	-0.9	0.9	-3.6	-4.1
All Institutions	-0.3	0.3	-3.6	-4.1

The discipline level trends of the last few years as appearing in Table 4, indicates there is variability within engineering disciplines for these trends. Institutions report both the specific name of a program to the ASEE, e.g. Cybersecurity & Networks (B.S.) and report the engineering discipline (for this example, Computer Science (inside engineering)). Computer science housed inside a college of engineering is classified as “inside engineering” and computer science programs outside the college of engineering are classified as “outside engineering”. There are two joint disciplines: Civil/Environmental Engineering (CEE) and Electrical/Computer Engineering (ECE). There is some variability in whether a program is reported by an institution as Electrical Engineering, Computer Engineering or Computer/Electrical Engineering by the same institution year-to-year even when there are no programmatic changes. For the purposes of this analysis, all ECE and CEE programs are reported in one joint discipline to track year-to-year changes. A program is only included for Table 4 for an institution if at least one freshmen enrollment is reported each year from 2016 to 2020. The number of institutions meeting that criteria is in the far-right column. Aerospace Engineering, except for a small median percent decrease in 2017, is the only engineering discipline to show an increase from 2018 to 2020. All other disciplines within engineering, have shown some decline in freshmen enrollment, especially in Fall 2020.

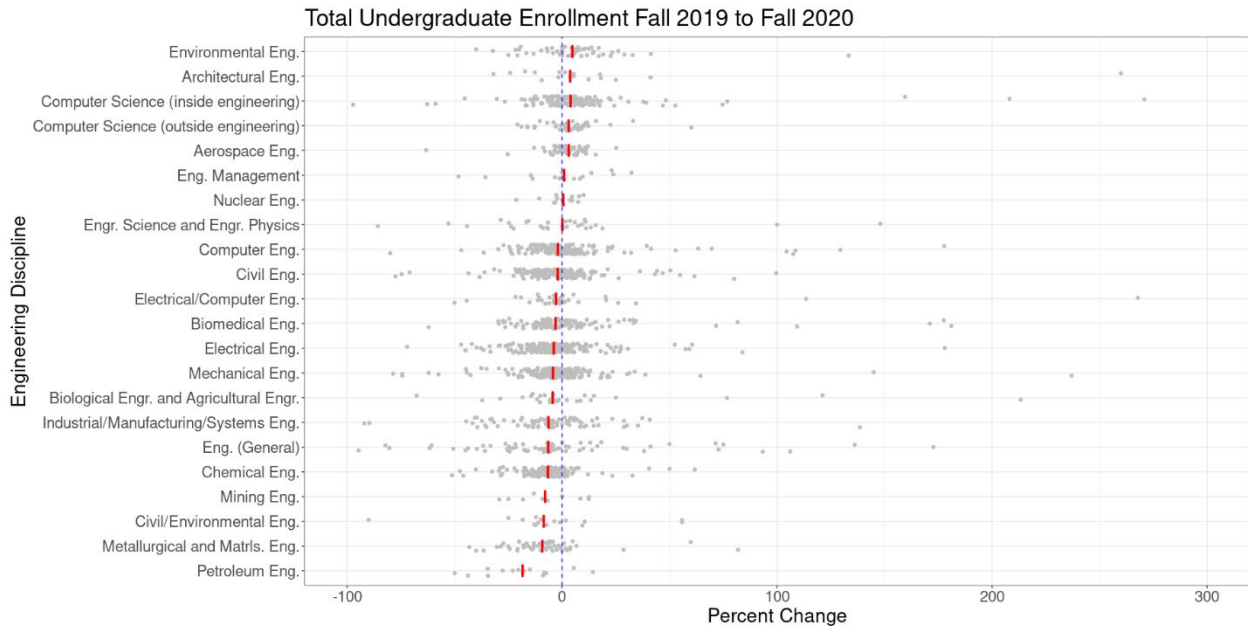
Table 4: Year-to-Year Median Percent Change in Freshmen Enrollment by Engineering Discipline.

Discipline	2017	2018	2019	2020	# Institutions
Aerospace Eng.	-1.5	1.4	8.5	5.0	37
Architectural Eng.	6.5	-4.4	4.1	-18.2	12
Biological Engr. And Agricultural Engr.	-8.5	12.3	-11.8	-6.3	21
Biomedical Eng.	4.3	-4.5	-1.6	-10.2	86
Chemical Eng.	5.6	-5.3	-1.0	-10.4	96
Civil or Environmental Eng.	0.0	0.0	-3.0	-3.6	167
Computer Science (inside engineering)	-7.7	6.9	2.0	-2.2	115
Computer Science (outside engineering)	-5.0	7.3	7.0	6.4	29
Electrical or Computer Eng.	0.0	0.0	-5.6	-9.8	269
Eng. (General)	8.3	-4.7	-7.4	0.0	39
Eng. Management	8.6	-9.2	0.0	0.2	8
Engr. Science and Engr. Physics	0.0	0.0	25.0	-16.7	19
Industrial/Manufacturing/Systems Eng.	0.0	0.0	-5.2	-14.3	63
Mechanical Eng.	1.3	-1.2	-1.3	-5.0	174
Metallurgical and Matrls. Eng.	-8.7	7.7	-3.9	-8.8	32
Mining Eng.	56.3	-23.4	-8.3	-3.8	4
Nuclear Eng.	13.9	-13.6	33.3	-25.0	9
Petroleum Eng.	-3.3	6.0	-3.6	-11.2	10

Total Undergraduate Enrollment

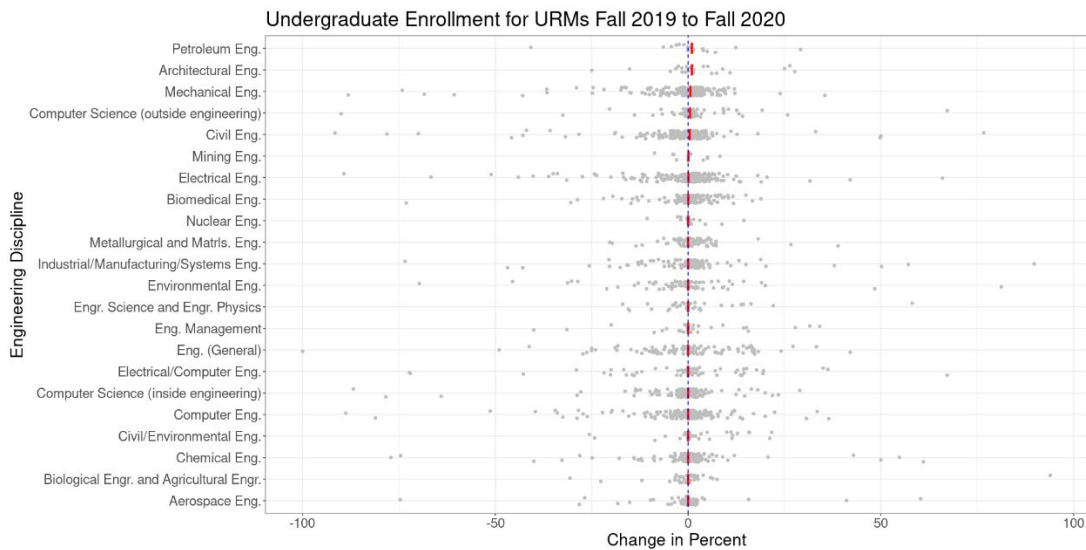
Figure 6 represents the change in Fall 2020 enrollment for all undergraduates. Over half of all engineering disciplines showed a median percent decrease in undergraduate program enrollment, with petroleum engineering, metallurgical and materials engineering, and civil/environmental engineering showing the largest decrease from Fall 2019 to Fall 2020.

Figure 6: Change in Undergraduate Enrollment in Fall 2020 by Discipline



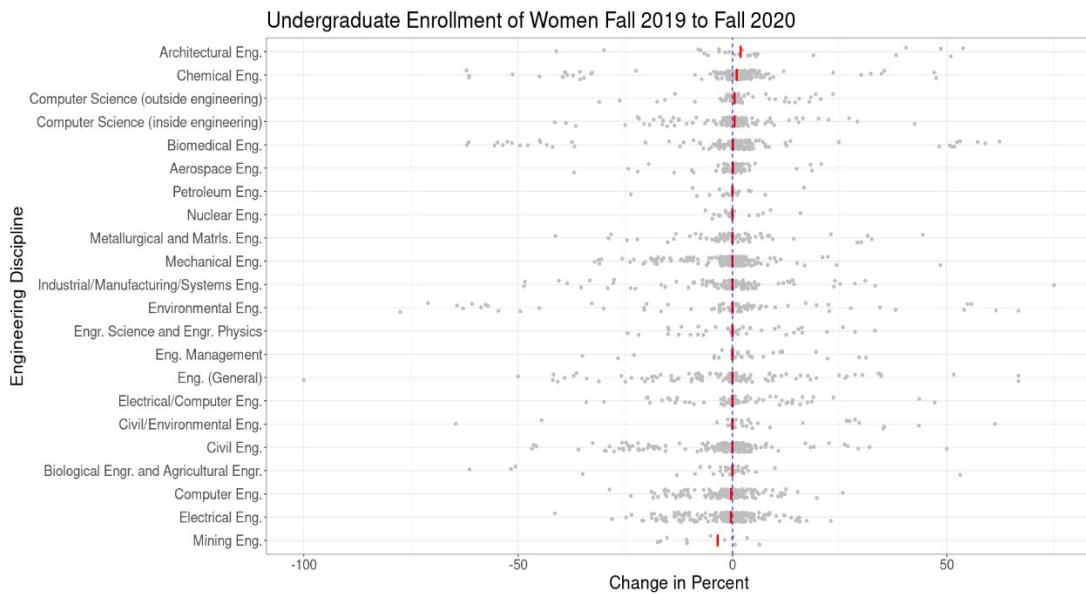
In examining underrepresented minority enrollment by engineering discipline in undergraduate programs, a noticeable difference appears, in that most engineering programs report near zero median change in percent. This indicates that in the disciplines with an overall decrease in enrollment, representation of URMs in that cohort remained stable nationally, even with large institutional swings as seen in the distribution of the institutional level responses (seen in the grey dots).

Figure 7: Change in Undergraduate Enrollment for URM students in Fall 2020 by Discipline



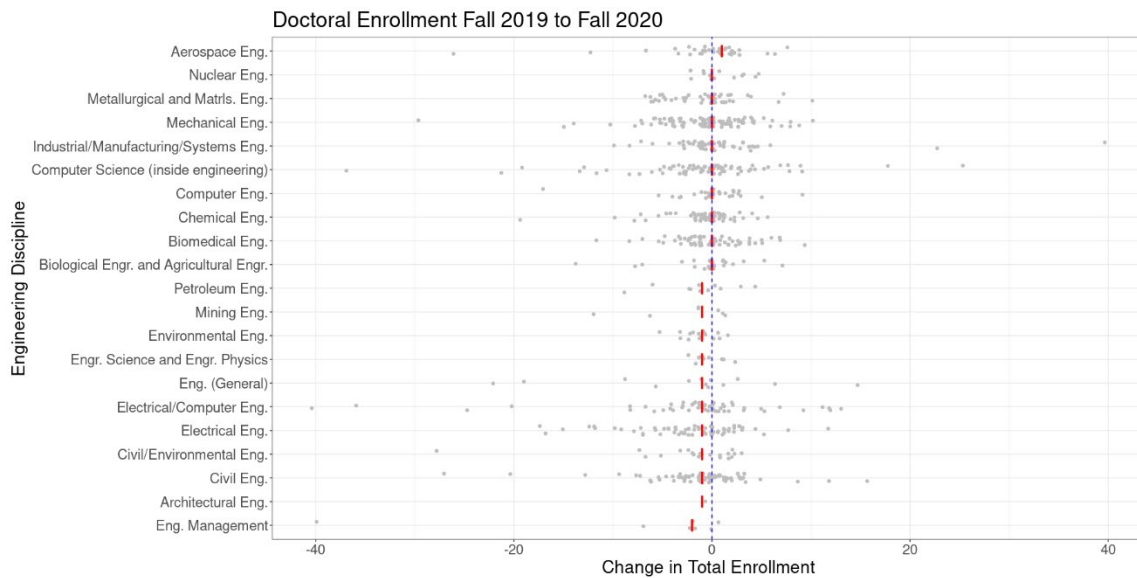
In Figure 8, the percent change in enrollment by women from Fall 2019 to Fall 2020 is displayed. Nearly all engineering disciplines show no or a small positive median change in percent enrollment with one discipline, mining engineering, displaying a median decrease for change in percent.

Figure 8: Change in Undergraduate Enrollment for Women in Fall 2020



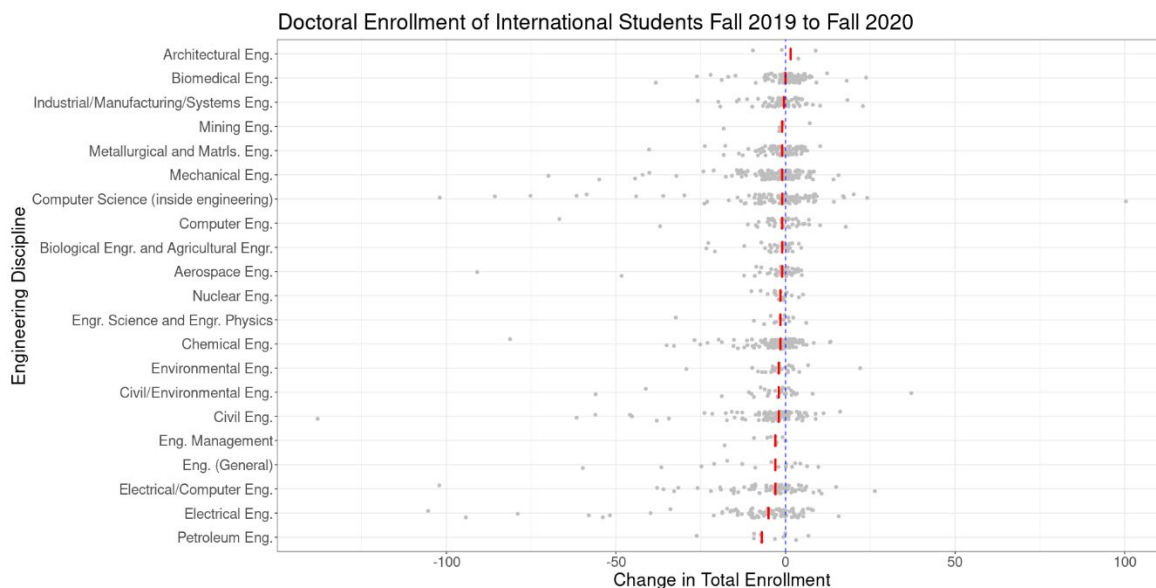
Doctoral Enrollment

Figure 9: Change in Doctoral Enrollment for Fall 2020



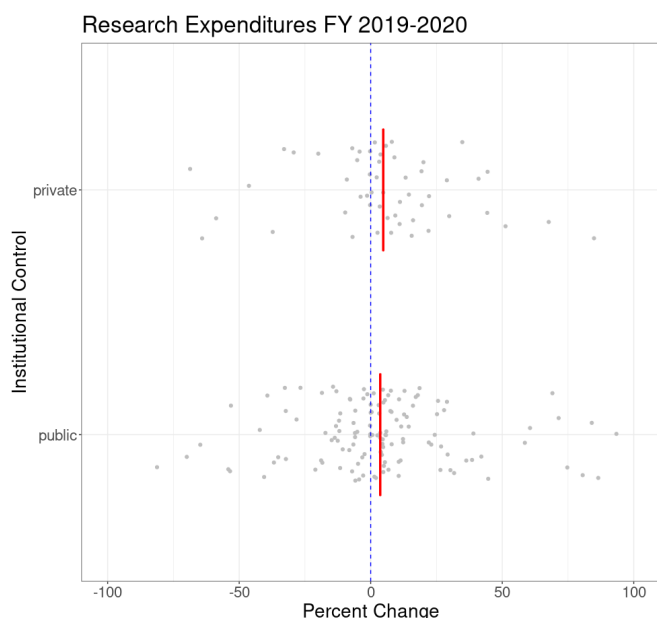
Due to the small cohort size for many doctoral programs, we chose to focus on change in total enrollment rather than a percent-based measure (which is subject to large volatility when dealing with $n < 20$). Doctoral enrollment for Fall 2020, in Figure 8, stayed relatively stable with small decreases in the median enrollment for over half of engineering disciplines. Surprisingly, total international enrollment for Fall 2020 follows the same pattern.

Figure 10: Change in Doctoral Enrollment of International Students for Fall 2020



Research Volume

Figure 11: Percent Change in Total Research Expenditures by Institutional Control



The Profiles data collections gathered research volume as measured by expenditures on research by external sources (gifts, federal, state, local, and corporate) during the 2020 fiscal year (FY). For over 95 percent of reporting institutions, FY 2020 is July 1, 2019 to June 30, 2020, representing the initial four months of the pandemic. Institutions that do not align to the FY 2020 dates of July 1, 2019 to June 30, 2020 are excluded from the results reported below. There was a slight median increase in the percent change for total institutional research expenditures in FY 2020. As seen in Figure 10 there was a slight for public and private institutions in the total research expenditures for FY 2020 from FY 2019. This slight increase aligns with responses from institutions that they were able to keep research output continuing during the first few months of the pandemic by focusing on writing up results for labs that could not be open in the pandemic.

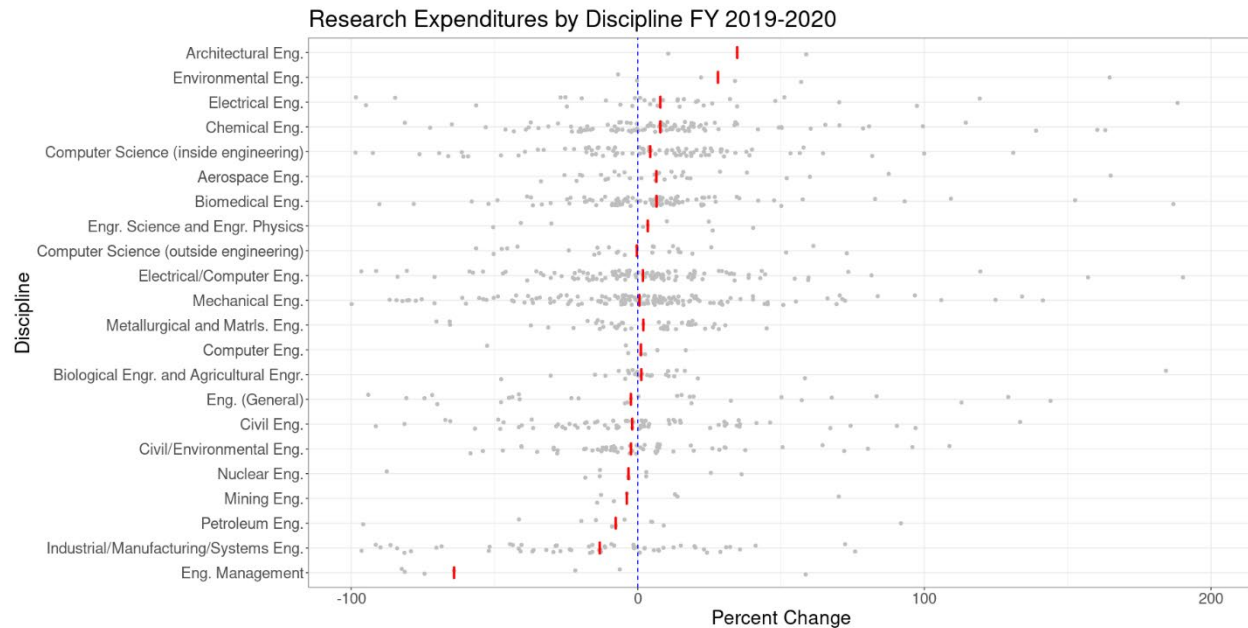
A disciplinary breakdown of percent change for research expenditures is displayed in Figure 11. The largest median increases and decreases are artifacts of the low numbers of institutions that report research expenditures within those disciplines⁴. There is a moderate median increase in percent change for research expenditures for electrical engineering, computer science, chemical engineering, aerospace engineering, and biomedical engineering. There were widespread reports of institutions producing personal protective equipment (PPE) using resources available to them in the final months of FY 2020⁵. This redeployment (for non-research purposes) along with in-person research

⁴ Architectural engineering: two institutions reported expenditures in FY 2020 & FY2019; environmental engineering: five institutions; and engineering management: six institutions.

⁵ <https://www.cnbc.com/2020/05/05/how-colleges-and-universities-are-producing-ppe-for-health-care-workers.html>

being shut down or minimized during the initial months of the pandemic could account for the median decrease in percent change for industrial/manufacturing/systems engineering.

Figure 12: Change in Research Expenditures by Discipline



Engineering Technology Enrollment

In Figure 13, the change in undergraduate enrollment for each engineering technology discipline is displayed. Figure 14 displays the change in total enrollment for freshman from Fall 2019 to Fall 2020. Both total undergraduate enrollment and freshmen enrollment for Fall 2020 show similar trends: there were a median decrease in programs for half of engineering technology disciplines. Three disciplines, however, had only 1 or 2 programs represented in the Profiles data set: civil engineering technology, aerospace engineering technology and architectural engineering technology.

Figure 13: Change in Engineering Technology Undergraduate Enrollment

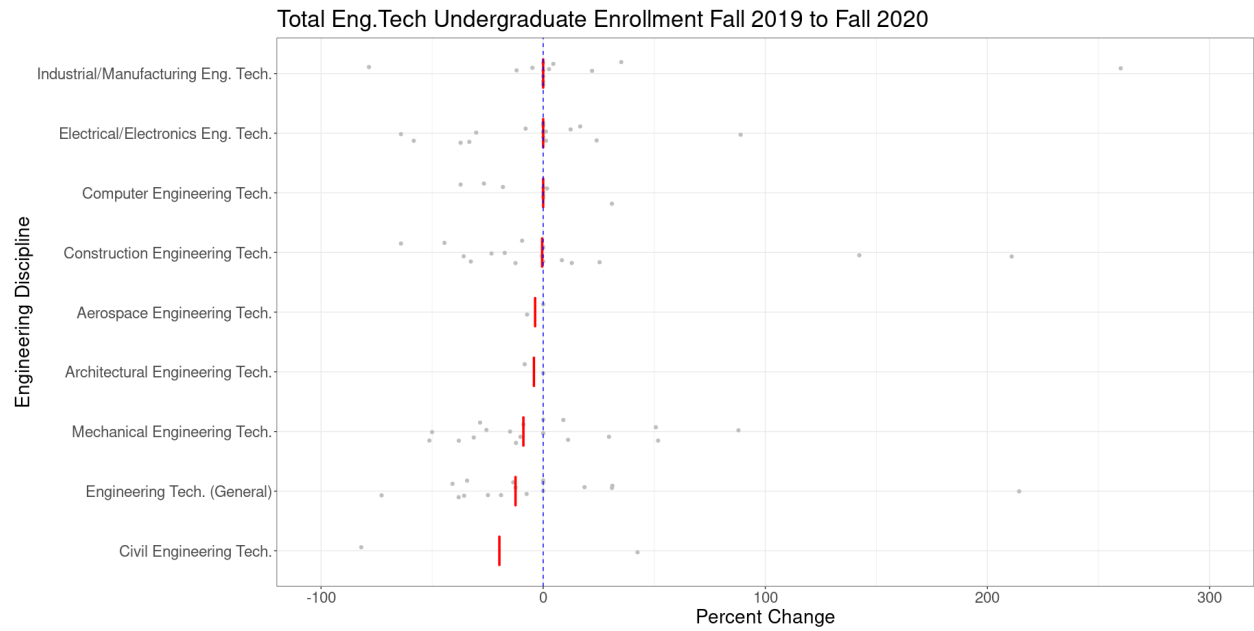
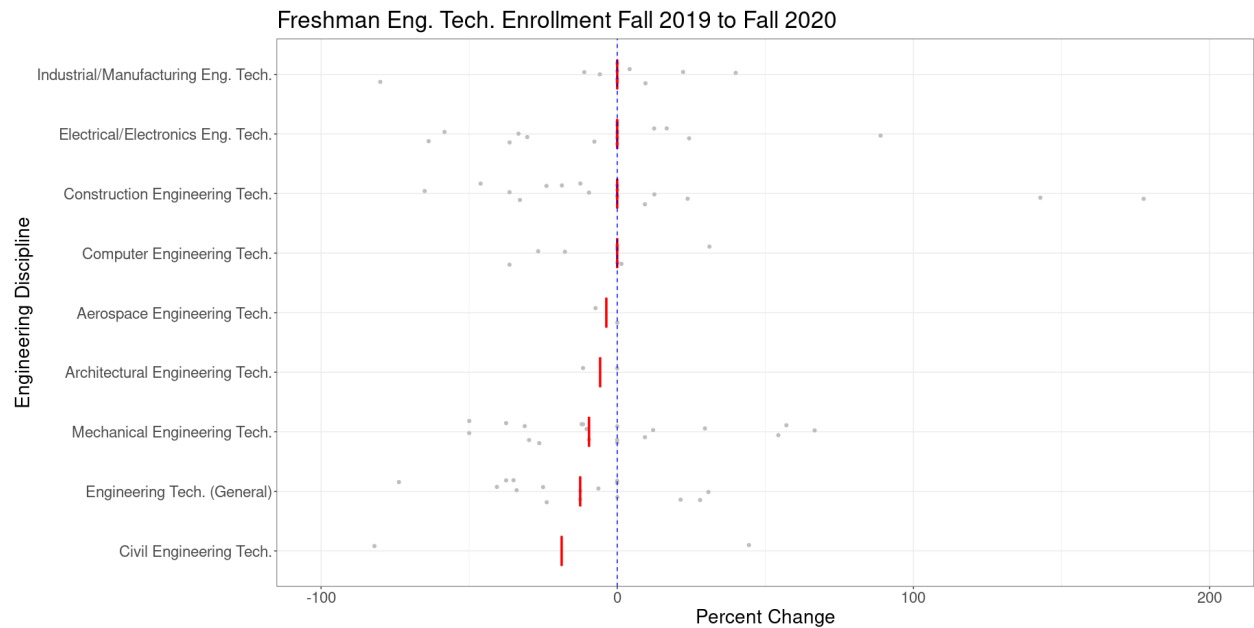


Figure 14: Change in Freshman Enrollment for Engineering Technology Programs



Joseph Roy, Ph.D. is the Director of ASEE’s Department of Institutional Research and Analytics and is the author of this report. He can be reached at j.roy@asee.org for questions.

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The ASEE Data Collections National Advisory Board reviewed initial drafts of this work and provided valuable insights that were incorporated into this report. We would like to extend a thank you to the board members for those discussions that helped shaped this report. The members and institutional affiliations are below: Robert Cassidy (UC Irvine), Timothy Chow (Rose-Hulman Institute of Tech.), Patreena Parsons (Johns Hopkins), M.K. Poindexter (Morgan State), Kathryn Flack Potts (Stanford), Judith Stoddard (Rensselaer Polytechnic Institute), Letticia Ramlal-Lamble (Virginia Tech), David Robledo (Purdue) and JoAnne Valdenegro (Arizona State).

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Any views expressed are those of the individual author and do not necessarily represent the views of the National Science Foundation or the views of members on the ASEE Data Collections National Advisory Board.

Technical Definitions and Method

Profiles of Engineering and Engineering Technology is produced annually in collaboration with institutions with at least one ABET-accredited program in engineering, engineering technology, or computer disciplines.

Race/ethnicity: ASEE collects enrollment, degrees awarded, and tenure-track faculty numbers by the U.S. Department of Education's Integrated Post-Secondary Education Data System (IPEDS) reporting categories for race/ethnicity.

Underrepresented minority: ASEE uses the definition from NSF's *Science and Engineering Indicators* report (<https://nces.nsf.gov/pubs/nsb20201/glossary>): *"this category comprises three racial or ethnic minority groups (blacks or African Americans, Hispanics or Latinos, and American Indians or Alaska Natives) whose representation in S&E education or occupations is smaller than their representation in the U.S. population."*

Reporting Periods (Profiles 2020):

Fall 2020: institution enrollments, engineering college enrollments, engineering technology college enrollments, faculty head counts, admission requirements and recommendations, and personnel information. Degrees awarded between July 1, 2019 and June 30, 2020. Research expenditures are based on the most recently completed fiscal year ending in 2020.

Research Expenditures: Institutions report all expenditures associated with grants and contracts specifically budgeted for externally sponsored research and associated programs and expenditures associated with all gifts auditably used for research. Institutions are instructed to include expended funds provided by the following external sources:

1. Federal government
2. State government
3. Foreign government
4. Industry
5. Non-profit organizations (e.g., foundations)
6. Individuals
7. Local government

Gender: Institutions can report under IPEDS rules for gender or under an expanded set of options:

- Male/female (IPEDS)
- Male/female/non-binary gender/another gender or unknown (expanded gender)

If an institution chooses the binary gender option spreadsheet, it is reporting data to ASEE as it would be reported to the IPEDS survey. Gender for individuals (student or faculty) that is unknown would be reported in a category (male or female) selected by the

institution. Under this option, institutions are instructed to include counts for **all individuals** in the required cells.

Full-time staff: As defined by the institution. The type of appointment at the snapshot determines whether an employee is full-time or part-time. The employee's term of contract is not considered in making the determination of full- or part-time.

Full-time student: Undergraduate: A student enrolled for 12 or more semester credits or 12 or more quarter credits or 24 or more clock hours a week each term

Graduate: A student enrolled for 9 or more semester credits or 9 or a student involved in thesis or dissertation preparation that is considered full-time by the institution.

Non-tenure track, teaching faculty: Persons identified by the institution as such as typically those whose initial assignments are made for the purpose of conducting instructions as a principle activity (or activities). They may hold academic rank titles of professor, associate professor, assistant professor, instructor, lecturer, or the equivalent of any of those academic ranks. Graduate instruction (teaching) and research assistants are not included in this category.

Part-time student: Undergraduate: A student enrolled for either less than 12 semester or quarter hours or less than 24 clock hours a week each term.

Graduate: A student enrolled for less than 9 semester or quarter credits.

Research personnel: An occupational category used to classify persons whose specific assignments customarily are made for the purpose of conducting research. Regardless of title, academic rank, these employees formally spend the majority of their time conducting research (exclude tenure/tenure-track faculty from this count).

Tuition: The amount of money charged to students for instructional services. Tuition may be charged per term, per course, or per credit

Tuition and fees (published charges): The amount of tuition and required fees covering a full academic year most frequently charged to students. These values represent what a typical student would be charged and may not be the same for all students at an institution. If tuition is charged on a per-credit-hour basis, the average full-time credit hour load for an entire academic year is used to estimate average tuition. Required fees include the fixed sum charged that are required of such a large proportion of all students that the student who does not pay the charges is an exception.

Admissions & Enrollment Data 2016–2020

Table 5: Institutions by Minority Serving Institution Type in ASEE Sample for Applications and Freshman Enrollment Data.

Institution Type	ASEE Applications Sample 2016–2020	ASEE Enrollment Sample 2016-2020	Total EAC ABET Institutions (2020)
Historical Black College or University (HBCU)	2	2	15
Hispanic Serving Institution (HSI)	20	23	36
Asian American, Native American, Pacific Islander Serving Institution (AANAPISI)	13	15	23
Minority Science and Engineering Improvement Program (MSEIP)	9	10	22
Native American Serving, Non-Tribal Institution (NASNTI)	0	0	1
Non-Minority Serving Institution (Non-MSI)	127	194	302

Table 7 represents sample characteristics for applications, offers and enrollments data displayed for 2016-2020. The column for total ABET institutions for 2020 are those that have at least one accredited program from ABET in an Engineering Accreditation Commission (EAC) area that awarded at least 1 engineering degree in 2020 according to IPEDS data. MSI status is based on 2020 data from the Office of Postsecondary Education (OPE) at the U.S. Department of Education. The eligibility matrix for 2020 was used (<https://www2.ed.gov/about/offices/list/ope/itudes/2020eligibilitymatrix.xlsx>). Historically Black Colleges and Universities (HBCUs) and Tribal Colleges and Universities (TCUs) are designated by statute. The other MSI programs are based on eligibility criteria. Institutions were categorized as MSIs if they either currently had a grant under that program or were eligible to apply for funding under a program without a waiver.

Profiles Data Collection and Reporting in 2020–21

The annual deadline for the Profiles survey submission has been January 31 since 2017, and in past years ASEE received 20 to 30 requests for extensions. This year, however, the ASEE received over 140 requests for extensions and worked with institutions to accept data after the deadline. The data reported in the *Profiles of Engineering & Engineering Technology* publication reflect institutional submissions to ASEE as of August 22, 2021.

Degrees awarded represent the data reported by the 282 participating institutions. Institutions that did not participate but reported at least one degree awarded in 2019-20 to the Integrated Postsecondary Education Data System (IPEDS) were reported using data for the same period reported to the federal government. Included in this were institutions that had at least one ABET accredited program at their institution. All engineering, engineering technology and computer science degrees awarded were integrated into this data. Computer Science degrees awarded at non-participating institutions were uniformly categorized as “Computer Science (outside engineering)”.

Abilene Christian University	Central Connecticut State University
Alabama A & M University	Christian Brothers University
Alfred University (private)	Christopher Newport University
Anderson University	Clarkson University
Andrews University	Coe College
Angelo State University	Colorado State University Pueblo
Arkansas State University	Cornell College
Asbury University	Dordt University
Baker College	Eastern Illinois University
Bates College	Eastern Kentucky University
Benedictine College	Eastern Washington University
Benjamin Franklin Institute of Technology	Elizabethtown College
Bethune-Cookman University	Fairfield University
Bob Jones University	Fairleigh Dickinson University-Metropolitan Campus
Bradley University	Ferris State University
California Baptist University	Florida Gulf Coast University
California State University Maritime Academy	Florida Polytechnic University
California State University-Bakersfield	Fort Lewis College
California State University-Chico	Francis Marion University
California State University-East Bay	Frostburg State University
California State University-Fresno	Gannon University
California State University-San Bernardino	Geneva College
Calvin University	Georgia Southern University
Capitol Technology University	Hampton University
Carroll College	Harding University
Cedarville University	Henderson State University

Hood College
Hope College
Howard University
Humboldt State University
Idaho State University
Indiana Institute of Technology
Jackson State University
Lake Superior State University
Lamar University
LeTourneau University
Lewis University
Lipscomb University
Loras College
Loyola University Maryland
Maine Maritime Academy
Marietta College
Marshall University
Massachusetts Maritime Academy
McNeese State University
Mercer University
Merrimack College
Messiah University
Middle Tennessee State University
Midwestern State University
Minnesota State University-Mankato
Mississippi College
Monmouth University
Montana Technological University
Mount Vernon Nazarene University
Murray State University
Muskingum University
Navajo Technical University
New Mexico Institute of Mining and Technology
Norfolk State University
Northern Arizona University
Northern Illinois University
Northwest Nazarene University
Norwich University
Oklahoma Christian University
Olivet Nazarene University
Oral Roberts University
Pace University
Point Park University

Prairie View A & M University
Purdue University Fort Wayne
Purdue University Northwest
Quinnipiac University
Regis University
Rider University
Robert Morris University
Roger Williams University
Saginaw Valley State University
Saint Francis University
Saint Louis University
Saint Martin's University
Samford University
San Francisco State University
Seattle Pacific University
South Carolina State University
South Dakota School of Mines and Technology
Southeast Missouri State University
Southern New Hampshire University
Southern Utah University
State University of New York at New Paltz
Stephen F Austin State University
Tarleton State University
Taylor University
Tennessee State University
Texas A & M International University
Texas A&M University-Texarkana
Texas Christian University
Texas State University
The University of Tennessee-Martin
The University of Texas Rio Grande Valley
The University of Virginia's College at Wise
The University of West Florida
Thomas Jefferson University
Trine University
Trinity College
Trinity University
Tuskegee University
Union University
United States Merchant Marine Academy
University of Alaska Anchorage
University of Bridgeport
University of Denver

University of Evansville
University of Houston-Clear Lake
University of Maryland Eastern Shore
University of Massachusetts-Boston
University of Michigan-Flint
University of Minnesota-Duluth
University of Mount Union
University of New Orleans
University of North Alabama
University of North Carolina at Asheville
University of North Carolina at Chapel Hill
University of North Dakota
University of North Florida
University of Pittsburgh-Johnstown
University of Scranton
University of South Carolina Aiken
University of South Dakota
University of Southern Indiana
University of Southern Maine

University of Southern Mississippi
University of St Thomas
University of Wisconsin-Eau Claire
University of Wisconsin-Platteville
University of Wisconsin-Stevens Point
Utah Valley University
Vaughn College of Aeronautics and Technology
Virginia Military Institute
Webb Institute
Weber State University
West Texas A & M University
West Virginia University Institute of Technology
Western Illinois University
Western Kentucky University
Western Washington University
Wilkes University
York College of Pennsylvania
Youngstown State University

American Society for Engineering Education

The American Society for Engineering Education is a non-profit association of more than 10,000 engineering faculty members, U.S. and Canadian colleges of engineering and engineering technology, corporations, and other organizations dedicated to promoting excellence in engineering and engineering technology education. ASEE, which celebrated its centennial in 1993, plays a key role in developing and promoting policies that will enable engineering education to work with allied branches of science and technology to meet the new challenges of global competition and changing demographics.

Mission Statement

ASEE advances innovation, excellence, and access at all levels of education for the engineering profession.

Vision Statement

Excellent and broadly accessible education empowering students and engineering professionals to create a better world.

Values

Excellence, engagement, innovation, integrity, diversity and inclusion.

Goals

ASEE recognizes the term “engineering education” to encompass the full academic spectrum of instruction, research, scholarship, practice, and service. ASEE also has an enduring

commitment to continuous improvement.

In the context of the above two statements, ASEE pursues the following goals:

Innovation - ASEE will advance the development of innovative approaches and solutions to engineering education.

Excellence - ASEE will advance excellence in all aspects of engineering education while continuously improving the member experience.

Access - ASEE will advocate for equal access to engineering educational opportunities for all.

Advocacy and Public Policy - ASEE will be the leading advocate for advancing the broad interests of engineering education.

Communities - ASEE will cultivate an inclusive community that engages all members and values the contributions of all stakeholders.

Communication - ASEE will implement a robust and transparent communication strategy effectively linking all stakeholders.

Diversity and Inclusion - ASEE will promote diversity, broadly defined, by modeling equity and inclusion through its policies and practices.

Internal Organization - ASEE will be a strategic and dynamic organization, with a knowledgeable and responsive staff, that enhances stakeholder engagement.

Financial Stability

ASEE must carefully balance opportunities for investments in activities and programs to meet future needs with our current responsibilities, developing and maintaining a robust cash reserve, and ensuring that expenditures align with the organization's mission.

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Engineering by the Numbers 2020

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1 ENGINEERING BACHELORS

1.1 ENGINEERING Bachelors DEGREES

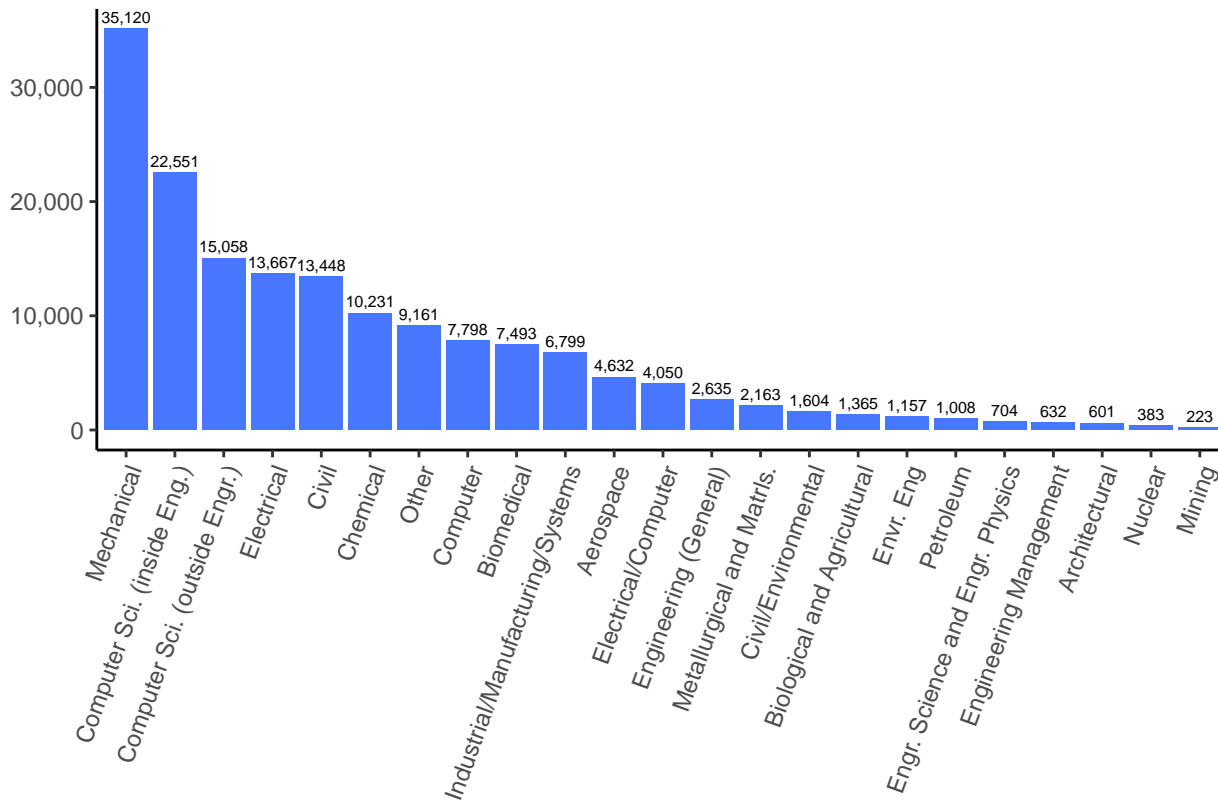
1.1.1 Total Bachelors Degrees Awarded by Engineering Discipline

Table 1: Bachelors Degrees by Discipline: 147,425*

Discipline Name	Degrees Awarded
Mechanical	35,120
Computer Sci. (inside Eng.)	22,551
Computer Sci. (outside Engr.)	15,058
Electrical	13,667
Civil	13,448
Chemical	10,231
Other	9,161
Computer	7,798
Biomedical	7,493
Industrial/Manufacturing/Systems	6,799
Aerospace	4,632
Electrical/Computer	4,050
Engineering (General)	2,635
Metallurgical and Matrils.	2,163
Civil/Environmental	1,604
Biological and Agricultural	1,365
Envr. Eng	1,157
Petroleum	1,008
Engr. Science and Engr. Physics	704
Engineering Management	632
Architectural	601
Nuclear	383
Mining	223

* Total does not include computer science (outside engineering).

Bachelors Degrees Awarded by Engineering Discipline



1.1.2 Total Bachelors Degrees Awarded to Underrepresented Minorities by Engineering Discipline

Table 2: Bachelors Degrees Awarded to Underrepresented Minorities by Engineering Discipline: 23,792

Discipline Name	Degrees Awarded
Mechanical	5,599
Computer Sci. (inside Eng.)	3,327
Civil	2,785
Electrical	2,628
Computer Sci. (outside Engr.)	1,929
Chemical	1,475
Other	1,350
Computer	1,346
Biomedical	1,150
Industrial/Manufacturing/Systems	1,131
Aerospace	736
Electrical/Computer	482
Engineering (General)	356
Metallurgical and Matrls.	257
Civil/Environmental	246
Petroleum	181
Envr. Eng	173
Biological and Agricultural	154
Architectural	117
Engineering Management	106
Engr. Science and Engr. Physics	102
Nuclear	62
Mining	29

1.1.3 Percentage of Bachelors Degrees Awarded to Underrepresented Minorities by Discipline

Table 3: Percentage of Bachelors Degrees Awarded to Underrepresented Minorities by Discipline 15.7 % of Total

Discipline Name	Degrees Awarded
Civil	20.7%
Architectural	19.5%
Electrical	19.2%
Petroleum	18%
Computer	17.3%
Engineering Management	16.8%
Industrial/Manufacturing/Systems	16.6%
Nuclear	16.2%
Aerospace	15.9%
Mechanical	15.9%
Biomedical	15.3%
Civil/Environmental	15.3%
Envr. Eng	15%
Computer Sci. (inside Eng.)	14.8%
Other	14.7%
Engr. Science and Engr. Physics	14.5%
Chemical	14.4%
Engineering (General)	13.5%
Mining	13%
Computer Sci. (outside Engr.)	12.8%
Electrical/Computer	11.9%
Metallurgical and Matrls.	11.9%
Biological and Agricultural	11.3%

1.1.4 Percentage of Bachelors Degrees Awarded to Women by Discipline

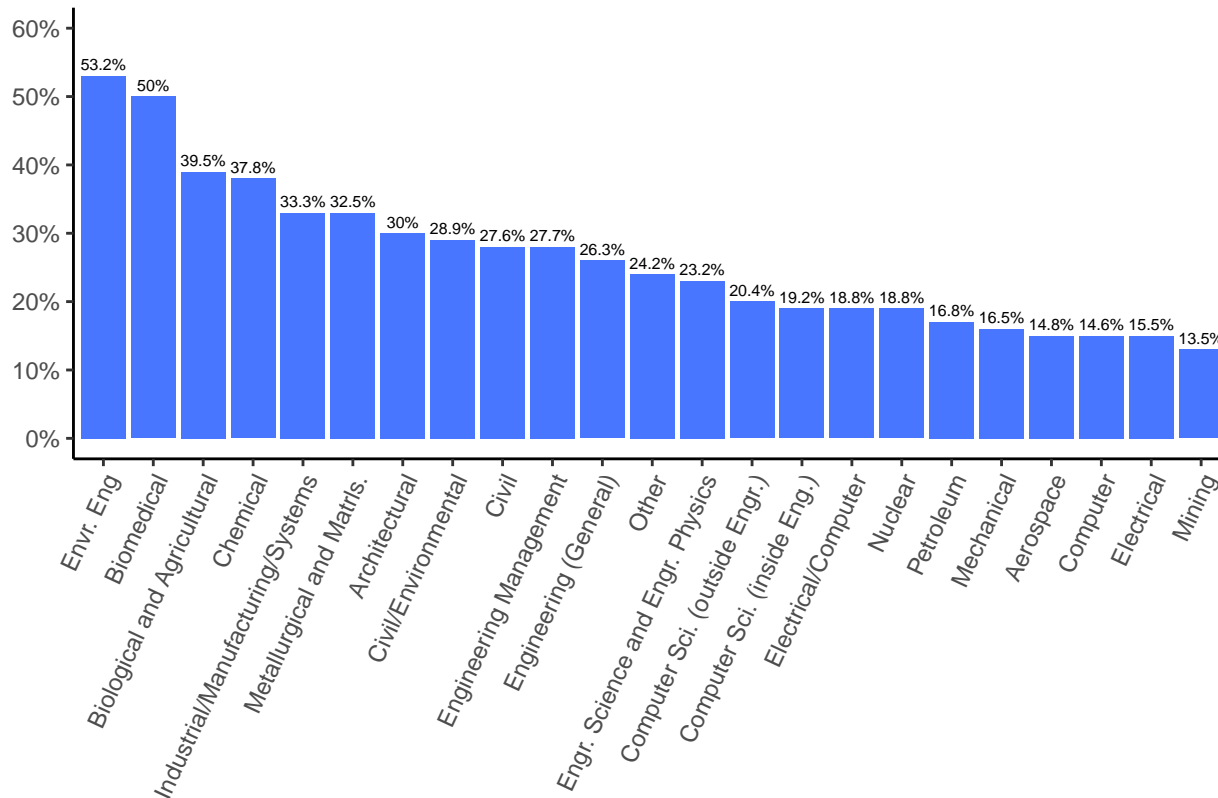
Table 4: Percentage of Bachelors Degrees Awarded to Women by Discipline 23.1 % of Total

Discipline Name	Percent Women
Envr. Eng	53.2%
Biomedical	50%
Biological and Agricultural	39.5%
Chemical	37.8%
Industrial/Manufacturing/Systems	33.3%
Metallurgical and Matrls.	32.5%
Architectural	30%
Civil/Environmental	28.9%
Engineering Management	27.7%
Civil	27.6%
Engineering (General)	26.3%

Table 4: Percentage of Bachelors Degrees Awarded to Women by Discipline 23.1 % of Total (continued)

Discipline Name	Percent Women
Other	24.2%
Engr. Science and Engr. Physics	23.2%
Computer Sci. (outside Engr.)	20.4%
Computer Sci. (inside Eng.)	19.2%
Electrical/Computer	18.8%
Nuclear	18.8%
Petroleum	16.8%
Mechanical	16.5%
Electrical	15.5%
Aerospace	14.8%
Computer	14.6%
Mining	13.5%

Percentage of Bachelors Degrees Awarded to Women by Discipline



1.1.5 Institutions Awarding the Highest Number of Engineering Bachelor's Degrees

Table 5: Institutions Awarding the Highest Number of Engineering Bachelor's Degrees

No	Institutions	Degrees Awarded
1	Georgia Institute of Technology	2,982
2	Purdue University	2,458
3	Arizona State University	2,298
4	Texas A&M University	2,294
5	University of Illinois at Urbana-Champaign	2,247
6	University of Michigan	2,172
7	University of California, Irvine	2,025
8	The Ohio State University	1,933
9	Iowa State University	1,850
10	The University of Texas at Austin	1,844
11	Virginia Polytechnic Institute and State University	1,827
12	University of Maryland, College Park	1,738
13	University of California, Berkeley	1,726
14	University of Central Florida	1,688
15	Oregon State University	1,672
16	University of Wisconsin-Madison	1,642
17	University of Florida	1,634
18	North Carolina State University	1,600
19	Rutgers, The State University of New Jersey, School of Engineering	1,560
20	California Polytechnic State University, San Luis Obispo	1,458
21	University of California, San Diego	1,401
22	University of Washington in Seattle	1,378
23	University of Colorado Boulder	1,313
24	Stony Brook University	1,248
25	Florida International University	1,238
26	Michigan State University	1,195
27	Missouri University of Science and Technology	1,179
28	The University of Texas at Dallas	1,161
29	Rensselaer Polytechnic Institute	1,160
30	University of Minnesota - Twin Cities	1,147
31	Northeastern University	1,115
32	New Jersey Institute of Technology	1,110

Table 5: Institutions Awarding the Highest Number of Engineering Bachelor's Degrees (continued)

No	Institutions	Degrees Awarded
33	University at Buffalo, SUNY	1,104
34	Clemson University	1,092
35	Auburn University	1,085
36	The University of Alabama	1,081
37	George Mason University	1,074
38	California State University, Long Beach	1,041
39	Colorado School of Mines	1,020
39	Louisiana State University	1,020
41	University of California-Santa Cruz	1,016
42	California State Polytechnic University, Pomona	1,002
43	Texas Tech University	997
44	San Jose State University	984
45	University of South Florida	979
46	University of California, Los Angeles	953
47	University of Virginia	924
48	Rochester Institute of Technology	912
49	University of Pittsburgh	887
50	Worcester Polytechnic Institute	884

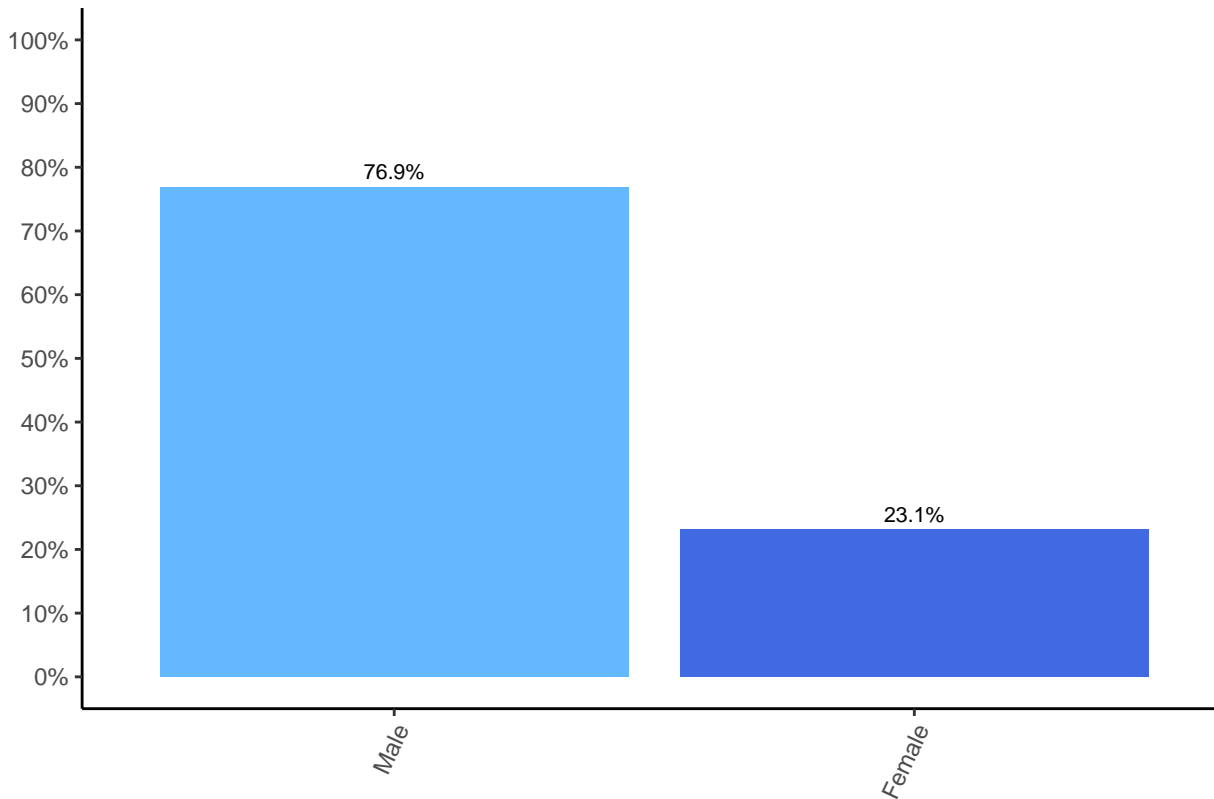
* 429 Institutions included

1.1.6 Bachelors Degrees Awarded by Gender

Table 6: Bachelors Degrees Awarded by Gender

Gender	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Female	17.80%	18.10%	18.40%	18.90%	19.10%	19.90%	20.90%	21.30%	21.90%	22.40%	23.10%
Male	82.20%	81.90%	81.60%	81.10%	80.90%	80.10%	79.10%	78.70%	78.10%	77.60%	76.90%

Bachelors Degrees Awarded by Gender



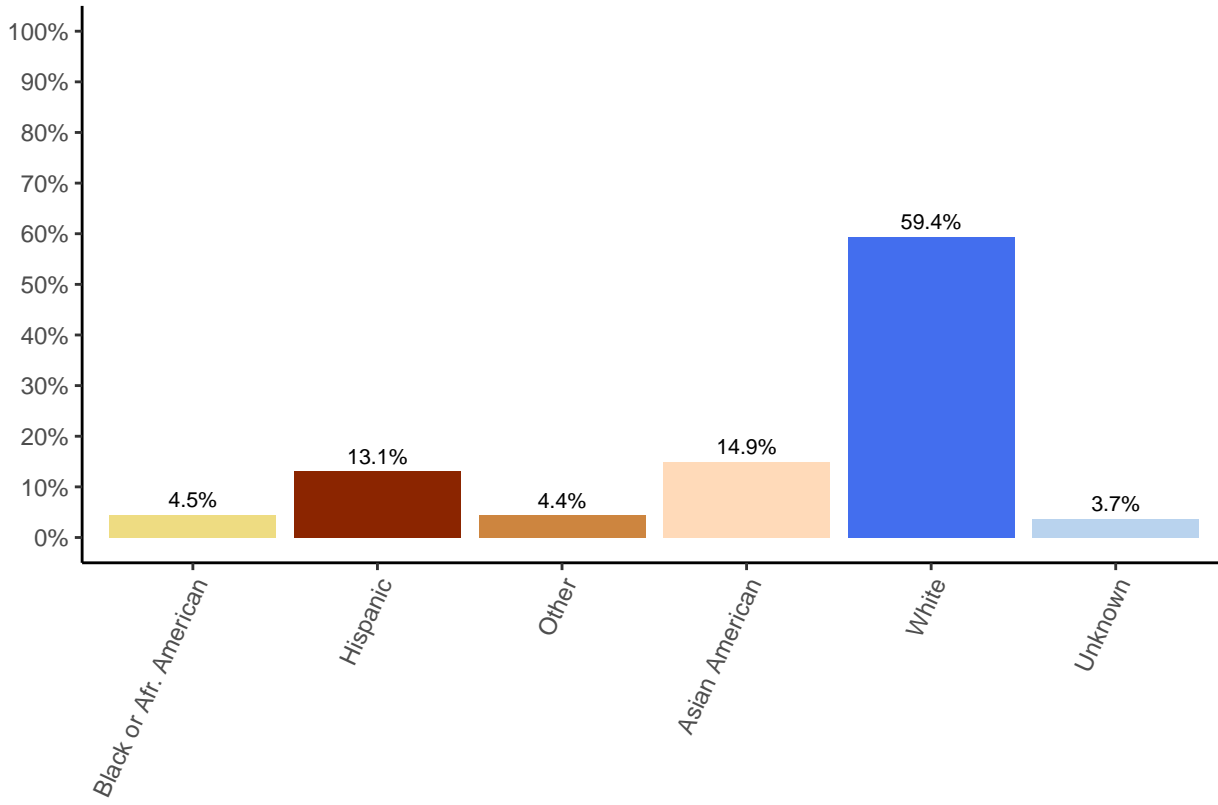
1.1.7 Bachelors Degrees Awarded by Race and Ethnicity

Table 7: Bachelors Degrees Awarded by Ethnicity

Ethnicity	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Black or Afr. American	4.5%	4.2%	4.2%	4.3%	3.5%	4.0%	3.9%	4.1%	4.2%	4.3%	4.5%
Hispanic	7.0%	8.5%	9.0%	9.3%	10.1%	10.7%	10.7%	11.1%	11.4%	12.1%	13.1%
Other	1.2%	1.6%	2.0%	2.3%	2.9%	3.1%	3.6%	3.8%	3.5%	4.3%	4.4%
Asian American	12.2%	12.2%	12.2%	12.9%	13.1%	13.4%	14.2%	14.6%	14.7%	14.7%	14.9%
White	69.8%	66.6%	66.2%	65.7%	65.9%	64.9%	63.4%	62.3%	61.5%	60.8%	59.4%
Unknown	5.3%	6.9%	6.5%	5.6%	4.5%	3.9%	4.2%	4.1%	4.2%	3.8%	3.7%

*Data on ethnicity does not include foreign nationals. American Indian/Alaska Native (0.3%), Native Hawaiian/Other Pacific Islander(0.2%) and Multiracial (3.9%) are combined under Other.

Bachelors Degrees Awarded by Race and Ethnicity

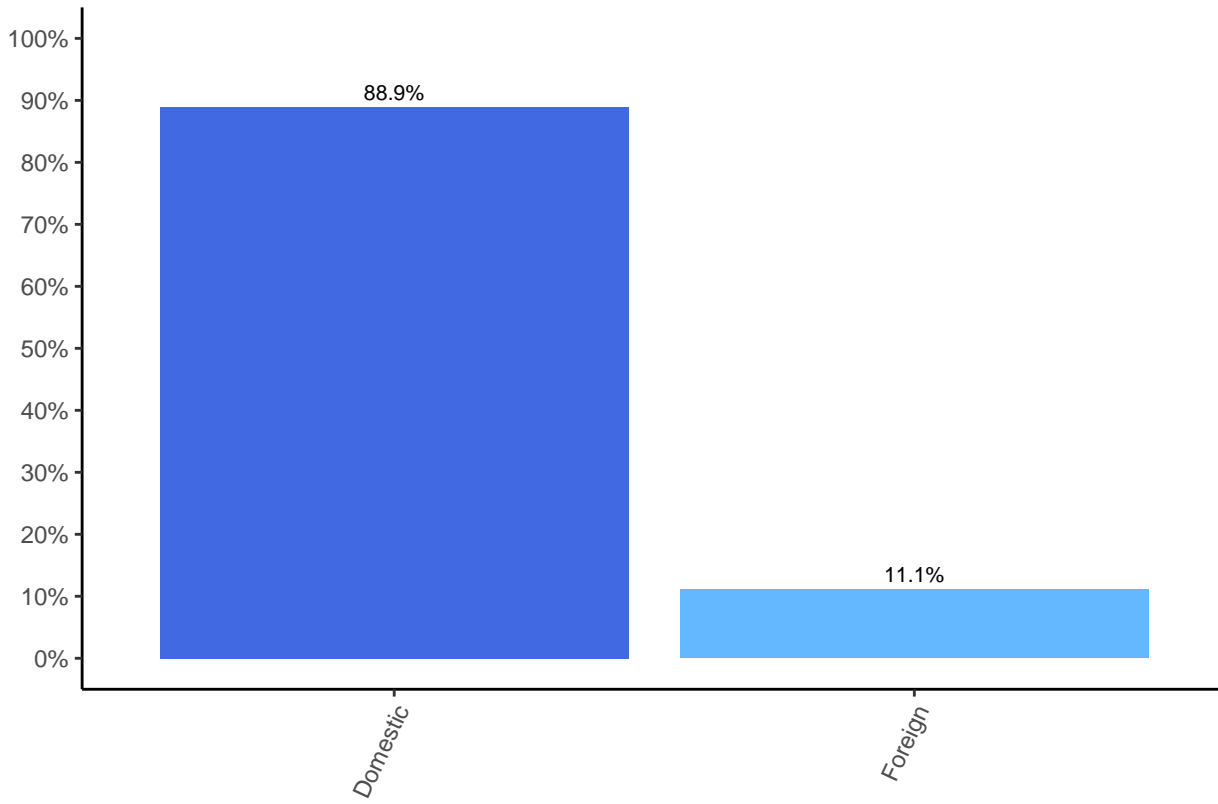


1.1.8 Bachelors Degrees Awarded by Residency

Table 8: Bachelors Degrees Awarded by Residency

Nationality	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Foreign	6.2%	6.2%	6.7%	7.5%	7.8%	8.5%	9.1%	9.6%	10.1%	11.2%	11.1%
Domestic	94.0%	93.8%	93.3%	92.5%	92.2%	91.5%	90.9%	90.4%	89.9%	88.8%	88.9%

Bachelors Degrees Awarded by Residency



1.1.9 Bachelors Degrees Awarded by Race, Ethnicity and Gender

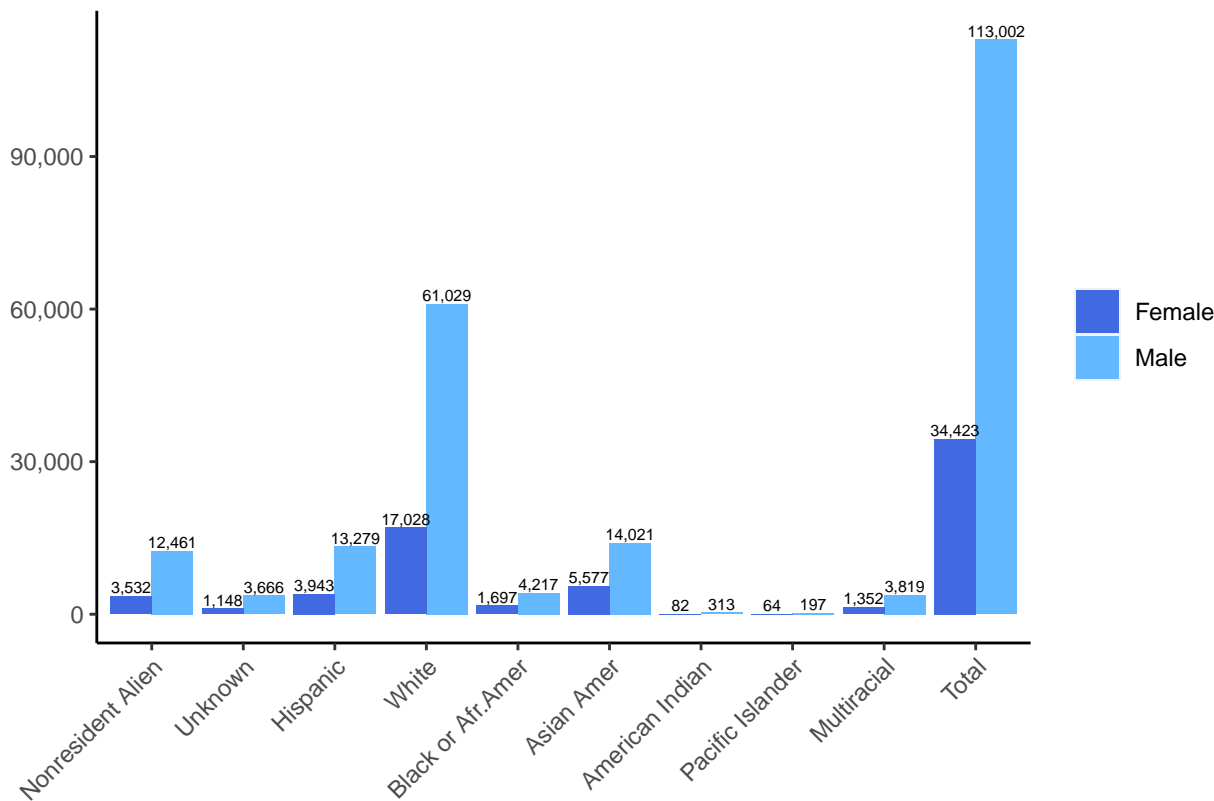
Table 9: Bachelor's Degrees Awarded by Race, Ethnicity, and Gender 147,425*

Ethnicity	Degrees Awarded
Nonresident Alien Male	12,461
Nonresident Alien Female	3,532
Unknown Male	3,666
Unknown Female	1,148
Hispanic Male	13,279
Hispanic Female	3,943
White Male	61,029
White Female	17,028
Black or Afr. American Male	4,217
Black or Afr. American Female	1,697
Asian American Male	14,021
Asian American Female	5,577
American Indian Male	313
American Indian Female	82
Native Hawaiian/Other Pacific Islander Male	197
Native Hawaiian/Other Pacific Islander Female	64
Multiracial Male	3,819
Multiracial Female	1,352
Total Male	113,002
Total Female	34,423

* Total degree includes 0 total Non binary graduates and 0 total Other Gender graduates.

* Includes 364 male and 128 female graduates from Puerto Rico.

Bachelor...s Degrees Awarded by Race, Ethnicity, and Gender



1.1.10 Top 50 Institutions by Total Bachelors Degrees awarded to Underrepresented Minorities

Table 10: Top 50 Institutions by Total Bachelors Degrees awarded to Underrepresented Minorities

No	Institutions	Degrees Awarded
1	Florida International University	911
2	University of Central Florida	569
3	Texas A&M University	539
4	University of Puerto Rico, Mayaguez Campus	492
5	The University of Texas at El Paso	474
6	Arizona State University	447
7	University of Florida	427
8	Georgia Institute of Technology	396
9	California State Polytechnic University, Pomona	381
10	California State University, Long Beach	375
11	New Jersey Institute of Technology	371
12	The University of Texas at San Antonio	352
13	University of California, Irvine	347
14	The University of Texas Rio Grande Valley	333
15	The University of Texas at Austin	314
16	Texas Tech University	295
17	University of South Florida	251
18	California State University, Los Angeles	249
19	University of Maryland, College Park	239

Table 10: Top 50 Institutions by Total Bachelors Degrees awarded to Underrepresented Minorities (*continued*)

No	Institutions	Degrees Awarded
20	California State University, Northridge	238
21	San Jose State University	229
22	The University of Texas at Dallas	220
23	California State University, Fullerton	217
23	Texas A&M University - Kingsville	217
25	California Polytechnic State University, San Luis Obispo	214
26	George Mason University	211
26	University of Arizona	211
28	University of California, Riverside	210
29	The University of Texas at Arlington	208
30	California State University, Sacramento	206
31	North Carolina A&T State University	205
31	San Diego State University	205
33	Rutgers, The State University of New Jersey, School of Engineering	196
34	University of Illinois at Chicago	193
35	University of Illinois at Urbana-Champaign	185
36	Florida Atlantic University	184
37	FAMU-FSU College of Engineering	180
38	New Mexico State University	178
39	Massachusetts Institute of Technology	167
40	University of Colorado Boulder	165
41	University of California-Santa Cruz	164
42	University of California, Davis	163
43	Texas State University	160
44	Kennesaw State University	159
45	Stanford University	156
46	Oregon State University	155
46	University of Maryland, Baltimore County	155
46	University of Michigan	155
49	Rensselaer Polytechnic Institute	154
50	University of California, Merced	149

* 429 Institutions included

1.1.11 Top 50 Institutions by Total Bachelors Degrees awarded to Women

Table 11: Top 50 Institutions by Total Bachelors Degrees awarded to Women

No	Institutions	Degrees Awarded
1	Georgia Institute of Technology	961
2	Purdue University	583
3	University of Michigan	578
4	Texas A&M University	574
5	University of Illinois at Urbana-Champaign	508
6	University of California, Irvine	502
7	The University of Texas at Austin	498
8	University of California, Berkeley	477
9	University of Florida	459
10	The Ohio State University	431
11	Arizona State University	428
12	Virginia Polytechnic Institute and State University	422
13	California Polytechnic State University, San Luis Obispo	419
14	University of Maryland, College Park	418
15	University of Washington in Seattle	402
16	Cornell University	390
17	North Carolina State University	372
18	Massachusetts Institute of Technology	367
19	University of Wisconsin-Madison	361
20	University of California, San Diego	352
21	Oregon State University	340
22	Rensselaer Polytechnic Institute	339
23	Rutgers, The State University of New Jersey, School of Engineering	337
23	Stony Brook University	337
25	University of Colorado Boulder	324
26	Northeastern University	323
27	University of Central Florida	308
28	University of Virginia	307
29	Colorado School of Mines	301
30	University of Minnesota -Twin Cities	288
31	Iowa State University	287
32	Missouri University of Science and Technology	285
33	Clemson University	284
34	Stanford University	281
34	Worcester Polytechnic Institute	281
36	Michigan State University	280
37	University of California, Davis	270
38	University of Pittsburgh	258
39	Florida International University	251
40	Carnegie Mellon University	246
41	California State Polytechnic University, Pomona	245

Table 11: Top 50 Institutions by Total Bachelors Degrees awarded to Women (*continued*)

No	Institutions	Degrees Awarded
42	The University of Alabama	244
43	Auburn University	232
44	Boston University	230
44	New Jersey Institute of Technology	230
44	University of California, Los Angeles	230
47	Louisiana State University	228
48	George Mason University	225
49	University of Southern California	218
50	California State University, Long Beach	209

* 429 Institutions included

1.1.12 Top 50 Institutions by Percentage of Bachelors Degrees awarded to Underrepresented Minorities

Table 12: Top 50 Institutions by Percentage of Bachelors Degrees awarded to Underrepresented Minorities

No	Institutions	Percent Underrepresented Minorities
1	Navajo Technical University	100%
1	University of Puerto Rico, Mayaguez Campus	100%
3	Hampton University	96.9%
4	Texas A & M International University	94.6%
5	Alabama A & M University	93.5%
6	Central State University	91.7%
7	The University of Texas Rio Grande Valley	87.2%
8	Tuskegee University	85.7%
9	Norfolk State University	81.8%
10	South Carolina State University	80%
11	Jackson State University	75.3%
12	The University of Texas at El Paso	74.6%
13	Florida International University	73.6%
14	Prairie View A & M University	70.9%
15	North Carolina A&T State University	70.7%
16	Texas A&M University - Kingsville	60.1%
17	Howard University	59%
18	University of Texas of the Permian Basin	57.8%
19	California State University, Los Angeles	57.6%
20	The University of Texas at San Antonio	53.9%
21	New Mexico State University	52.2%
22	California State University-San Bernardino	48.3%
23	Morgan State University	48%
24	California State University-Bakersfield	47.8%
25	St. Mary's University	47.3%
26	University of California, Merced	45.2%
27	University of Houston-Clear Lake	45.1%
28	The University of New Mexico	44.6%
29	Bethune-Cookman University	42.9%
30	University of Maryland Eastern Shore	42.1%
31	New Mexico Institute of Mining and Technology	41.3%
32	Florida Atlantic University	40.9%
33	Texas State University	40.5%
34	Tennessee State University	38.9%
35	California State Polytechnic University, Pomona	38%
36	University of the District of Columbia	37.4%
37	Walla Walla University	37.3%
38	Virginia State University	37.3%
39	California State University-Fresno	37.1%
40	The University of Texas at Tyler	36.3%
41	California State University, Long Beach	36%
42	Tarleton State University	35.3%
43	West Texas A & M University	35.1%
44	California Baptist University	34.1%
45	University of Central Florida	33.7%
46	New Jersey Institute of Technology	33.4%
47	Colorado State University, Pueblo	33.3%
47	Fairleigh Dickinson University-Metropolitan Campus	33.3%
47	Fort Lewis College	33.3%
47	Lamar University	33.3%

* 429 Institutions included

1.1.13 Top 20 Institutions by Percentage of Bachelors Degrees awarded to Women

Table 13: Top 20 Institutions by Percentage of Bachelors Degrees awarded to Women

No	Institutions	Percent Women
1	Smith College	100%
1	Sweet Briar College	100%
3	Central State University	58.3%
4	Trinity College	54.5%
5	University of South Carolina-Aiken	53.3%
6	Loyola University Chicago	52.4%
7	Bates College	50%
7	Navajo Technical University	50%
9	Massachusetts Institute of Technology	46%
10	Olin College of Engineering	45.6%
11	Cornell University	44.6%
12	Carnegie Mellon University	43.2%
13	University of Portland	42.7%
14	California Institute of Technology	42.6%
15	Stanford University	42%
16	Swarthmore College	41.7%
17	The George Washington University	41.6%
18	Brown University	41.2%
19	Lafayette College	41.1%
20	U.S. Coast Guard Academy	40.2%

* 429 Institutions included

1.1.14 Top 20 Institutions by Total Bachelors Degrees awarded to African Americans

Table 14: Top 20 Institutions by Total Bachelors Degrees awarded to African Americans

No	Institutions	Degrees Awarded
1	New Jersey Institute of Technology	286
2	North Carolina A&T State University	196
3	Georgia Institute of Technology	171
4	University of Maryland, College Park	123
5	University of Central Florida	117
6	Prairie View A & M University	114
7	Kennesaw State University	103
8	University of Maryland, Baltimore County	102
9	George Mason University	96
10	Tuskegee University	95
11	Florida International University	93
11	Morgan State University	93
13	Alabama A & M University	84
14	Texas Tech University	75
15	Louisiana State University	67
16	Georgia Southern University	66
17	Florida Atlantic University	63
18	Mississippi State University	60
19	FAMU-FSU College of Engineering	59
20	Clemson University	56

* 429 Institutions included

1.1.15 Top 20 Institutions by Total Bachelors Degrees awarded to Asian Americans

Table 15: Top 20 Institutions by Total Bachelors Degrees awarded to Asian Americans

No	Institutions	Degrees Awarded
1	University of California, Berkeley	936
2	University of California, Irvine	841
3	Georgia Institute of Technology	662
4	University of Illinois at Urbana-Champaign	643
5	The University of Texas at Austin	620
6	Rutgers, The State University of New Jersey, School of Engineering	571
7	University of Michigan	474
8	University of California, San Diego	456
9	University of Maryland, College Park	419
10	Stony Brook University	412
11	University of California, Los Angeles	411
12	University of California-Santa Cruz	396
13	University of Washington in Seattle	382
14	San Jose State University	380
15	George Mason University	374
16	The University of Texas at Dallas	365
17	Purdue University	304
18	California State University, Long Beach	302
19	Texas A&M University	290
20	University of California, Davis	280

* 429 Institutions included

1.1.16 Top 20 Institutions by Total Bachelors Degrees awarded to Hispanics

Table 16: Top 20 Institutions by Total Bachelors Degrees awarded to Hispanics

No	Institutions	Degrees Awarded
1	Florida International University	818
2	University of Puerto Rico, Mayaguez Campus	492
3	Texas A&M University	474
4	The University of Texas at El Paso	470
5	University of Central Florida	450
6	Arizona State University	391
7	University of Florida	372
8	California State Polytechnic University, Pomona	354
9	California State University, Long Beach	347
10	The University of Texas Rio Grande Valley	333
11	University of California, Irvine	320
12	The University of Texas at San Antonio	315
13	The University of Texas at Austin	267
14	California State University, Los Angeles	238
15	California State University, Northridge	229
16	Georgia Institute of Technology	223
17	Texas Tech University	217
18	California State University, Fullerton	211
19	San Jose State University	210
20	Texas A&M University - Kingsville	205

* 429 Institutions included

1.1.17 Top 20 Institutions by Total Bachelors Degrees awarded in Aerospace Engineering

Table 17: Top 20 Institutions by Total Bachelors Degrees awarded in Aerospace Engineering

No	Institutions	Degrees Awarded
1	Purdue University	250
2	West Virginia University	238
3	Embry Riddle Aeronautical University-Daytona Beach	206
4	Georgia Institute of Technology	197
5	The University of Texas at Austin	189
6	University of Central Florida	184
7	Embry Riddle Aeronautical University, Prescott	150
8	Iowa State University	148
9	University of Maryland, College Park	145
10	Texas A&M University	143
11	Virginia Polytechnic Institute and State University	138
12	University of Florida	133
13	University of Michigan	132
14	University of Southern California	124
15	California Polytechnic State University, San Luis Obispo	116
16	California State Polytechnic University, Pomona	109
17	University of Illinois at Urbana-Champaign	95
18	The University of Alabama	88
18	Wichita State University	88
20	Arizona State University	87

* 63 Institutions included

1.1.18 Top 20 Institutions by Total Bachelors Degrees awarded in Biomedical Engineering

Table 18: Top 20 Institutions by Total Bachelors Degrees awarded in Biomedical Engineering

No	Institutions	Degrees Awarded
1	Georgia Institute of Technology	246
2	University of California, San Diego	151
3	Texas A&M University	149
4	Boston University	142
5	The University of Texas at Austin	131
6	The Johns Hopkins University	130
7	North Carolina State University	127
8	Arizona State University	123
9	Rutgers, The State University of New Jersey, School of Engineering	120
9	University of California, Irvine	120
11	Clemson University	117
11	University of Maryland, College Park	117
13	The University of Iowa	112
14	Rensselaer Polytechnic Institute	102
14	The University of Texas at Dallas	102
16	Drexel University	99
17	California Polytechnic State University, San Luis Obispo	98
17	University of Michigan	98
17	Worcester Polytechnic Institute	98
20	University of Connecticut	94

* 167 Institutions included

1.1.19 Top 50 Institutions by Total Bachelors Degrees awarded in Chemical Engineering

Table 19: Top 50 Institutions by Total Bachelors Degrees awarded in Chemical Engineering

No	Institutions	Degrees Awarded
1	Texas A&M University	223
2	The University of Alabama	199
3	Georgia Institute of Technology	193
4	The Ohio State University	183
5	The University of Texas at Austin	180
6	Arizona State University	164
7	Purdue University	161
8	Michigan State University	144
9	University of Illinois at Urbana-Champaign	143
10	Colorado School of Mines	140
11	Auburn University	136
12	University of South Florida	132
13	North Carolina State University	131
14	University of California, Davis	130
15	Iowa State University	128
15	Montana State University	128
15	Northeastern University	128
18	Louisiana State University	127
19	Oregon State University	118
20	University of Kentucky	117
21	University of Michigan	113
21	University of Wisconsin-Madison	113
23	University of California, Berkeley	110
23	University of Minnesota -Twin Cities	110
23	Virginia Polytechnic Institute and State University	110
26	Mississippi State University	109
26	Rensselaer Polytechnic Institute	109
28	University of California, San Diego	107
28	University of Florida	107
30	University of Cincinnati	106
31	Missouri University of Science and Technology	101
32	Texas Tech University	98
33	Brigham Young University	97
33	Colorado State University	97
33	University of Pittsburgh	97
36	University of Oklahoma, Gallogly College of Engineering	93
37	University of Massachusetts Amherst	92
38	California State University, Long Beach	91
38	West Virginia University	91
40	Michigan Technological University	90
40	University of Kansas	90
42	University of Arkansas	88
43	University of Maryland, College Park	85
44	University of Notre Dame	84
45	University of Massachusetts Lowell	83
46	NYU Tandon School of Engineering	80
46	University at Buffalo, SUNY	80
48	California State Polytechnic University, Pomona	79
49	Drexel University	77
49	Rutgers, The State University of New Jersey, School of Engineering	77

* 158 Institutions included

1.1.20 Top 50 Institutions by Total Bachelors Degrees awarded in Civil Engineering

Table 20: Top 50 Institutions by Total Bachelors Degrees awarded in Civil Engineering

No	Institutions	Degrees Awarded
1	California State Polytechnic University, Pomona	261
2	Texas A&M University	254
3	Iowa State University	197
4	San Diego State University	191
5	Purdue University	188
5	Virginia Polytechnic Institute and State University	188
7	University of Illinois at Urbana-Champaign	180
8	California State University, Long Beach	176
9	New Jersey Institute of Technology	169
10	North Carolina State University	161
11	California State University, Northridge	159
12	California Polytechnic State University, San Luis Obispo	154
13	California State University, Sacramento	146
14	University of Florida	145
15	The University of Texas at Austin	144
16	The University of Texas at Arlington	141
17	Georgia Institute of Technology	140
18	Clemson University	138
18	San Jose State University	138
20	University of Washington in Seattle	135

Table 20: Top 50 Institutions by Total Bachelors Degrees awarded in Civil Engineering (continued)

No	Institutions	Degrees Awarded
21	The University of Alabama	132
22	University of South Florida	129
23	Florida International University	128
23	Michigan State University	128
23	University at Buffalo, SUNY	128
26	Oregon State University	127
26	University of Central Florida	127
28	University of California, Davis	126
29	Auburn University	125
30	Louisiana State University	119
31	California State University, Fullerton	113
32	Kennesaw State University	112
33	University of Nebraska, Lincoln	111
34	University of Wisconsin-Madison	108
35	Manhattan College	105
36	Missouri University of Science and Technology	104
37	Colorado State University	100
37	University of California, San Diego	100
39	University of Maryland, College Park	99
40	Washington State University	97
41	University of Missouri	95
42	City College of the City University of New York	93
42	FAMU-FSU College of Engineering	93
42	University of California, Irvine	93
45	Mississippi State University	92
45	Texas A&M University - Kingsville	92
45	University of Arkansas	92
45	University of Nevada, Reno	92
45	University of Tennessee, Knoxville	92
50	Rutgers, The State University of New Jersey, School of Engineering	91

* 239 Institutions included

1.1.21 Top 50 Institutions by Total Bachelors Degrees awarded in Industrial/Manufacturing Engineering

Table 21: Top 50 Institutions by Total Bachelors Degrees awarded in Industrial/Manufacturing Engineering

No	Institutions	Degrees Awarded
1	Georgia Institute of Technology	395
2	Purdue University	278
3	Arizona State University	194
4	University of Michigan	184
4	Virginia Polytechnic Institute and State University	184
6	Texas A&M University	162
7	Clemson University	159
8	University of Central Florida	145
9	Oregon State University	132
10	Auburn University	130
11	University of Illinois at Urbana-Champaign	129
12	Lehigh University	128
13	Iowa State University	126
13	University of Virginia	126
15	The Ohio State University	122
16	University of Florida	119
17	University of Wisconsin-Madison	116
18	California Polytechnic State University, San Luis Obispo	111
18	California State Polytechnic University, Pomona	111
18	University of Arizona	111
21	West Virginia University	99
22	Cornell University	90
23	Northwestern University	89
24	North Carolina State University	84
24	University of Pittsburgh	84
24	Wichita State University	84
27	University of Minnesota - Twin Cities	81
28	University of South Florida	80
29	Stanford University	76
30	Texas State University	73
30	Texas Tech University	73
30	The State University of New York at Binghamton	73
30	The University of Texas at El Paso	73
34	Rochester Institute of Technology	70
34	Rutgers, The State University of New Jersey, School of Engineering	70
36	University of Arkansas	68
37	University of Puerto Rico, Mayaguez Campus	67
37	Washington University in St. Louis	67
39	Kansas State University	64
39	Louisiana State University	64
41	San Jose State University	61
42	University of Washington in Seattle	58

Table 21: Top 50 Institutions by Total Bachelors Degrees awarded in Industrial/Manufacturing Engineering (*continued*)

No	Institutions	Degrees Awarded
43	Rensselaer Polytechnic Institute	54
43	University of California, Berkeley	54
43	University of Southern California	54
43	University of Wisconsin, Platteville	54
47	Mississippi State University	53
48	University of Oklahoma, Gallogly College of Engineering	52
49	University at Buffalo, SUNY	51
49	University of Louisville	51

* 140 Institutions included

1.1.22 Top 50 Institutions by Total Bachelors Degrees awarded in Mechanical Engineering

Table 22: Top 50 Institutions by Total Bachelors Degrees awarded in Mechanical Engineering

No	Institutions	Degrees Awarded
1	Georgia Institute of Technology	572
2	University of Central Florida	461
3	Texas A&M University	437
4	Iowa State University	429
5	The University of Alabama	407
5	Virginia Polytechnic Institute and State University	407
7	Purdue University	375
8	Rensselaer Polytechnic Institute	364
9	Texas Tech University	356
10	University at Buffalo, SUNY	341
11	University of Maryland, College Park	336
12	University of Florida	321
13	Northeastern University	318
14	Colorado School of Mines	314
15	Michigan State University	306
16	California Polytechnic State University, San Luis Obispo	303
17	San Diego State University	302
18	Washington State University	299
19	University of Michigan	289
20	Oregon State University	284
21	North Carolina State University	283
22	Michigan Technological University	281
23	Missouri University of Science and Technology	279
24	The University of Texas at Austin	273
25	Arizona State University	264
26	University of California, Irvine	263
27	Rutgers, The State University of New Jersey, School of Engineering	258
28	Kettering University	255
29	Oklahoma State University	254
30	The Ohio State University	248
31	Auburn University	242
32	Worcester Polytechnic Institute	235
33	California State University, Fullerton	230
34	Clemson University	228
35	Kennesaw State University	225
36	California State University, Northridge	224
37	California State Polytechnic University, Pomona	221
38	Colorado State University	218
39	The University of Texas at Dallas	217
40	The University of Texas at Arlington	216
41	Kansas State University	213
42	University of South Florida	208
43	California State University, Sacramento	206
44	Mississippi State University	203
45	The University of Alabama in Huntsville	201
45	University of Illinois at Urbana-Champaign	201
47	University of Massachusetts Lowell	199
48	University of Minnesota - Twin Cities	198
48	University of North Carolina at Charlotte	198
50	Montana State University	197

* 322 Institutions included

1.1.23 Top 50 Institutions by Total Bachelors Degrees awarded in Electrical Engineering

Table 23: Top 50 Institutions by Total Bachelors Degrees awarded in Electrical Engineering

No	Institutions	Degrees Awarded
1	Arizona State University	302
2	Texas A&M University	293
3	Purdue University	216
4	University of Illinois at Urbana-Champaign	203
5	Georgia Institute of Technology	197
6	California State University, Long Beach	182
7	University of California, San Diego	158
8	University of California, Los Angeles	156
9	The University of Texas at Dallas	145
10	Missouri University of Science and Technology	138
10	Rochester Institute of Technology	138
12	California Polytechnic State University, San Luis Obispo	133
13	San Diego State University	132
13	Virginia Polytechnic Institute and State University	132
15	University at Buffalo, SUNY	129
15	University of Florida	129
17	University of Maryland, College Park	121
17	University of Wisconsin-Madison	121
19	Iowa State University	119
20	University of California, Davis	118
20	University of Cincinnati	118
22	Florida International University	117
23	California State Polytechnic University, Pomona	116
23	University of Central Florida	116
23	University of South Florida	116
26	University of Michigan-Dearborn	115
27	Washington State University	114
28	California State University, Los Angeles	110
29	The University of Texas at El Paso	106
29	University of Massachusetts Lowell	106
31	University of Illinois at Chicago	105
32	Northern Arizona University	102
32	University of Hawaii at Manoa	102
34	Michigan State University	100
34	Oakland University	100
34	University of California, Irvine	100
37	The University of Texas at San Antonio	99
37	University of Michigan	99
39	San Jose State University	96
40	Stevens Institute of Technology	93
41	California State University, Sacramento	91
41	Rensselaer Polytechnic Institute	91
43	Milwaukee School of Engineering	90
43	Northern Illinois University	90
45	Kennesaw State University	89
46	The University of Texas at Arlington	88
47	Texas State University	87
48	New Jersey Institute of Technology	86
48	Temple University	86
50	California State University, Northridge	85

* 296 Institutions included

1.1.24 Top 50 Institutions by Total Bachelors Degrees awarded in Computer Engineering

Table 24: Top 50 Institutions by Total Bachelors Degrees awarded in Computer Engineering

No	Institutions	Degrees Awarded
1	University of Illinois at Urbana-Champaign	341
2	Iowa State University	296
3	San Jose State University	277
4	Purdue University	217
5	Georgia Institute of Technology	187
6	Virginia Polytechnic Institute and State University	175
7	University of California, Irvine	118
8	Northeastern University	114
9	Florida International University	110
10	University of Central Florida	108
10	University of Florida	108
12	California State Polytechnic University, Pomona	105
13	University of Maryland, College Park	98

Table 24: Top 50 Institutions by Total Bachelors Degrees awarded in Computer Engineering (*continued*)

No	Institutions	Degrees Awarded
14	University of Michigan	97
15	University of Wisconsin-Madison	96
16	California Polytechnic State University, San Luis Obispo	95
17	University of California-Santa Cruz	94
17	Wichita State University	94
19	Kansas State University	88
19	Rochester Institute of Technology	88
21	Boston University	87
21	The University of Texas at Dallas	87
23	West Virginia University	84
24	Drexel University	83
25	University of California, San Diego	82
26	San Diego State University	81
27	Arizona State University	78
28	University of Pittsburgh	75
29	Rensselaer Polytechnic Institute	74
30	University of California, Los Angeles	73
31	New Jersey Institute of Technology	71
32	Michigan State University	70
33	Missouri University of Science and Technology	69
34	University of North Carolina at Charlotte	67
35	Clemson University	65
35	University of Maryland, Baltimore County	65
35	University of Minnesota -Twin Cities	65
35	University of South Florida	65
39	California State University, Long Beach	64
40	University of Massachusetts Amherst	61
41	California State University-San Bernardino	57
41	The University of Texas at San Antonio	57
43	Florida Gulf Coast University	56
43	The University of Alabama in Huntsville	56
45	Michigan Technological University	55
45	University of California, Santa Barbara	55
45	University of Virginia	55
48	Stony Brook University	54
49	University of Illinois at Chicago	53
50	University of Wisconsin, Platteville	51

* 228 Institutions included

1.1.25 Top 20 Institutions by Total Bachelors Degrees awarded in Electrical/Computer Engineering

Table 25: Top 20 Institutions by Total Bachelors Degrees awarded in Electrical/Computer Engineering

No	Institutions	Degrees Awarded
1	University of California, Berkeley	440
2	The University of Texas at Austin	359
3	North Carolina State University	285
4	Rutgers, The State University of New Jersey, School of Engineering	265
5	The Ohio State University	248
6	University of Washington in Seattle	224
7	Carnegie Mellon University	140
8	University of Arizona	128
9	Texas Tech University	126
10	Brigham Young University	124
11	Oregon State University	120
12	Massachusetts Institute of Technology	113
13	The University of Iowa	112
14	Cornell University	101
15	The State University of New York at Binghamton	98
16	New York Institute of Technology	97
17	Duke University	88
18	Worcester Polytechnic Institute	85
19	Colorado State University	80
20	University of Connecticut	78

* 113 Institutions included

1.1.26 Top 20 Institutions by Total Bachelors Degrees awarded in Computer Science (outside engineering)

Table 26: Top 20 Institutions by Total Bachelors Degrees awarded in Computer Science (outside engineering)

No	Institutions	Degrees Awarded
1	University of California, Irvine	1,142
2	University of California, Berkeley	713
3	Georgia Institute of Technology	706
4	University of Maryland, College Park	661
5	University of Wisconsin-Madison	635
6	Rutgers, The State University of New Jersey, School of Engineering	572
7	Purdue University	453
8	The University of Texas at Austin	445
9	New Jersey Institute of Technology	407
10	University of Michigan	399
11	University of North Carolina at Chapel Hill	379
12	University of Massachusetts Amherst	337
13	Northeastern University	330
14	San Francisco State University	265
15	Rensselaer Polytechnic Institute	255
16	University of Virginia	250
17	FAMU-FSU College of Engineering	238
18	Texas State University	232
19	Duke University	216
20	University of Pittsburgh	203

* 156 Institutions included

1.1.27 Top 50 Institutions by Total Bachelors Degrees awarded in Computer Science (inside engineering)

Table 27: Top 50 Institutions by Total Bachelors Degrees awarded in Computer Science (inside engineering)

No	Institutions	Degrees Awarded
1	Oregon State University	651
2	Arizona State University	623
3	The University of Texas at Dallas	610
4	University of Michigan	568
5	University of California-Santa Cruz	550
6	Florida International University	523
7	University of Central Florida	519
8	University of Illinois at Urbana-Champaign	508
9	University of California, San Diego	472
10	The Ohio State University	421
11	University of Washington in Seattle	375
12	Stony Brook University	348
13	Texas A&M University	336
14	Massachusetts Institute of Technology	332
15	University of Minnesota -Twin Cities	329
16	Virginia Polytechnic Institute and State University	310
17	Stanford University	307
18	George Mason University	304
19	University of California, Los Angeles	282
20	University at Buffalo, SUNY	279
21	Michigan State University	275
22	University of Southern California	273
23	Cornell University	262
24	California State University, Fullerton	259
25	University of Illinois at Chicago	258
26	The University of Texas at Arlington	249
26	University of Maryland, Baltimore County	249
28	California Polytechnic State University, San Luis Obispo	245
29	California State University, Northridge	233
30	North Carolina State University	232
31	University of Pennsylvania	231
32	University of North Texas	224
33	California State University, Long Beach	220
34	California State University, Sacramento	217
35	Auburn University	216
36	University of Utah	208

Table 27: Top 50 Institutions by Total Bachelors Degrees awarded in Computer Science (inside engineering) (*continued*)

No	Institutions	Degrees Awarded
37	University of Florida	196
38	Harvard University	191
39	University of California, Riverside	185
40	University of Virginia	184
41	Portland State University	179
41	Washington University in St. Louis	179
43	Washington State University	177
44	University of Arizona	167
45	NYU Tandon School of Engineering	158
45	Princeton University	158
47	Clemson University	157
47	University of Washington-Tacoma	157
49	Oakland University	155
50	Florida Atlantic University	150

* 157 Institutions included

1.1.28 Top 50 Institutions by Total Bachelors Degrees awarded in Engineering (General)

Table 28: Top 50 Institutions by Total Bachelors Degrees awarded in Engineering (General)

No	Institutions	Degrees Awarded
1	Dartmouth College	226
2	Arizona State University	190
3	Mercer University	146
4	East Carolina University	134
5	University of Wisconsin - Stout	114
6	McNeese State University	94
7	Stanford University	92
8	Calvin College	83
9	Olivet Nazarene University	79
10	James Madison University	78
11	Geneva College	72
12	Harvey Mudd College	68
13	Messiah College	61
14	Walla Walla University	59
15	Hope College	57
15	Montana Technological University	57
17	Texas Christian University	55
17	Vanderbilt University	55
19	Wentworth Institute of Technology	50
20	Smith College	48
21	Loyola University Maryland	39
21	Minnesota State University-Mankato	39
23	Frostburg State University	38
23	North Carolina State University	38
23	University of North Carolina at Asheville	38
26	The University of Tennessee-Martin	37
27	Olin College of Engineering	35
28	Western Carolina University	34
29	Oral Roberts University	33
30	University of Detroit Mercy	28
31	University of Southern Indiana	27
32	Elizabethtown College	24
32	Fort Lewis College	24
32	Swarthmore College	24
35	Marshall University	23
36	Trinity College	22
37	Loyola University Chicago	21
38	Bob Jones University	19
38	Seattle Pacific University	19
38	University of Maryland Eastern Shore	19
41	Abilene Christian University	17
41	California Polytechnic State University, San Luis Obispo	17
41	The University of Mississippi	17
44	Andrews University	16
45	University of Rochester	13
46	Brown University	12
46	Northwest Nazarene University	12
48	Hampton University	10
48	Oklahoma State University	10
48	Western Illinois University	10

* 123 Institutions included

1.2 ENGINEERING UNDERGRADUATE ENROLLMENT, FALL 2020

1.2.1 Undergraduate Enrollment by Race, Ethnicity, and Gender

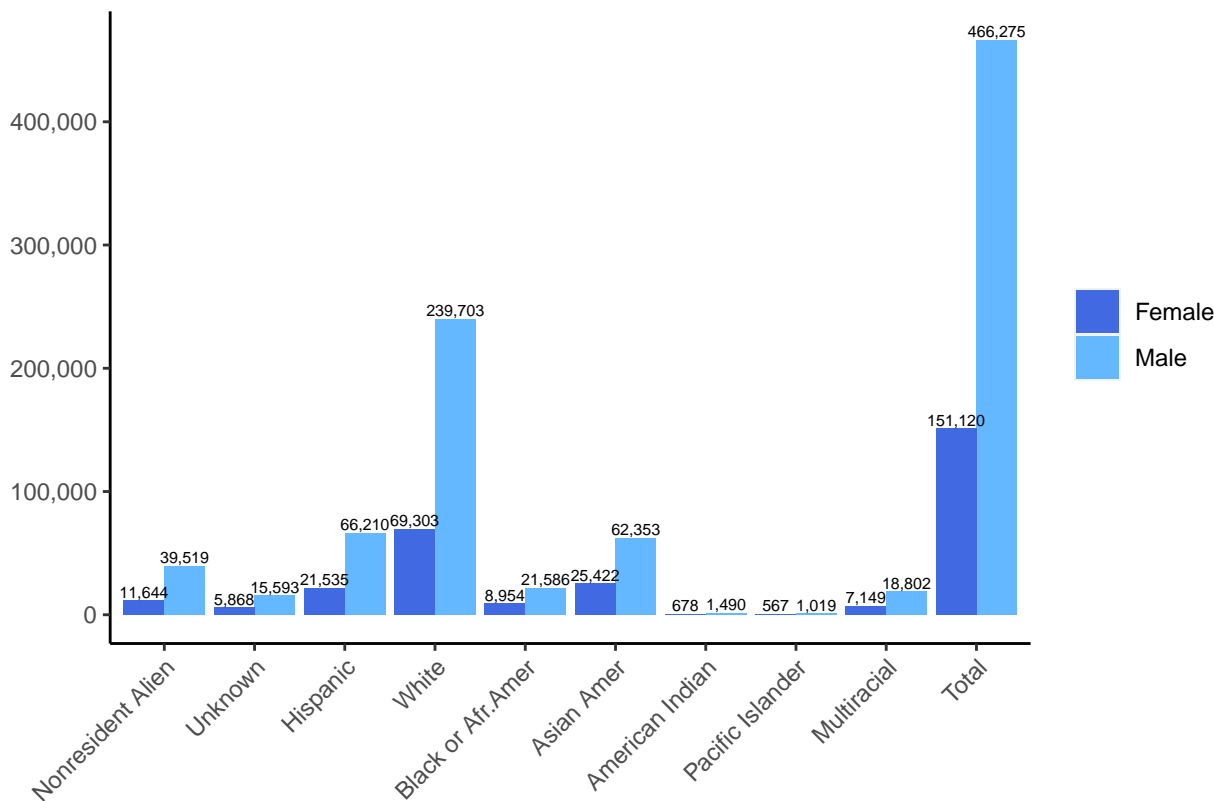
Table 29: Undergraduate Enrollment Awarded by Race, Ethnicity, and Gender 617,395*

Ethnicity	Enrollments
Nonresident Alien Male	39,519
Nonresident Alien Female	11,644
Unknown Male	15,593
Unknown Female	5,868
Hispanic Male	66,210
Hispanic Female	21,535
White Male	239,703
White Female	69,303
Black or Afr. American Male	21,586
Black or Afr. American Female	8,954
Asian American Male	62,353
Asian American Female	25,422
American Indian Male	1,490
American Indian Female	678
Native Hawaiian/Other Pacific Islander Male	1,019
Native Hawaiian/Other Pacific Islander Female	567
Multiracial Male	18,802
Multiracial Female	7,149
Total Male	466,275
Total Female	151,120

* Total Enrollment includes is for full time students

* Includes 3,245 male and 1,267 female.

Undergraduate Enrollment by Race, Ethnicity, and Gender



1.2.2 Engineering Undergraduate Enrollment by Institutions

Table 30: Top 50 Engineering Undergraduate Enrollment by Institutions

No	Institutions	Enrollment
1	Texas A&M University	14,808
2	Arizona State University	14,443
3	University of Central Florida	11,296
4	Purdue University	10,046
5	Virginia Polytechnic Institute and State University	9,326
6	University of Illinois at Urbana-Champaign	9,052
7	Oregon State University	8,322
8	Georgia Institute of Technology	8,275
9	The Pennsylvania State University	7,982
10	Iowa State University	7,814
11	The Ohio State University	7,717
12	North Carolina State University	7,193
13	University of Michigan	6,843
14	George Mason University	6,692
15	Florida International University	6,479
16	The University of Texas at Dallas	6,442

Table 30: Top 50 Engineering Undergraduate Enrollment by Institutions (continued)

No	Institutions	Enrollment
17	California Polytechnic State University, San Luis Obispo	6,344
18	University of California, San Diego	6,229
19	Michigan State University	6,157
20	The University of Texas at Austin	5,939
21	University of Arizona	5,706
22	California State Polytechnic University, Pomona	5,635
23	Clemson University	5,442
24	Louisiana State University	5,398
25	Auburn University	5,386
26	University of Colorado Boulder	5,349
27	Missouri University of Science and Technology	5,177
28	University of South Florida	5,148
29	The University of Texas at Arlington	5,144
30	University of Washington in Seattle	5,131
31	The University of Alabama	5,073
32	University of Florida	5,008
33	University of Puerto Rico, Mayaguez Campus	4,976
34	Colorado School of Mines	4,870
35	California State University, Long Beach	4,854
36	University of Cincinnati	4,695
37	University of Wisconsin-Madison	4,556
38	Texas Tech University	4,522
39	University of Minnesota -Twin Cities	4,459
40	California State University, Northridge	4,418
41	University of Utah	4,354
42	California State University, Sacramento	4,346
43	University of California, Berkeley	4,314
44	University of Maryland, College Park	4,186
45	Clarkson University	4,176
45	Mississippi State University	4,176
47	University of Illinois at Chicago	4,174
48	University at Buffalo, SUNY	4,119
49	Washington State University	4,050
50	Kennesaw State University	4,001

* Enrollment is full time plus part time students.

* Some Institutions do not permit formal enrollment in their engineering colleges until the second or third year.

1.2.3 Undergraduate Enrollment by Engineering Discipline

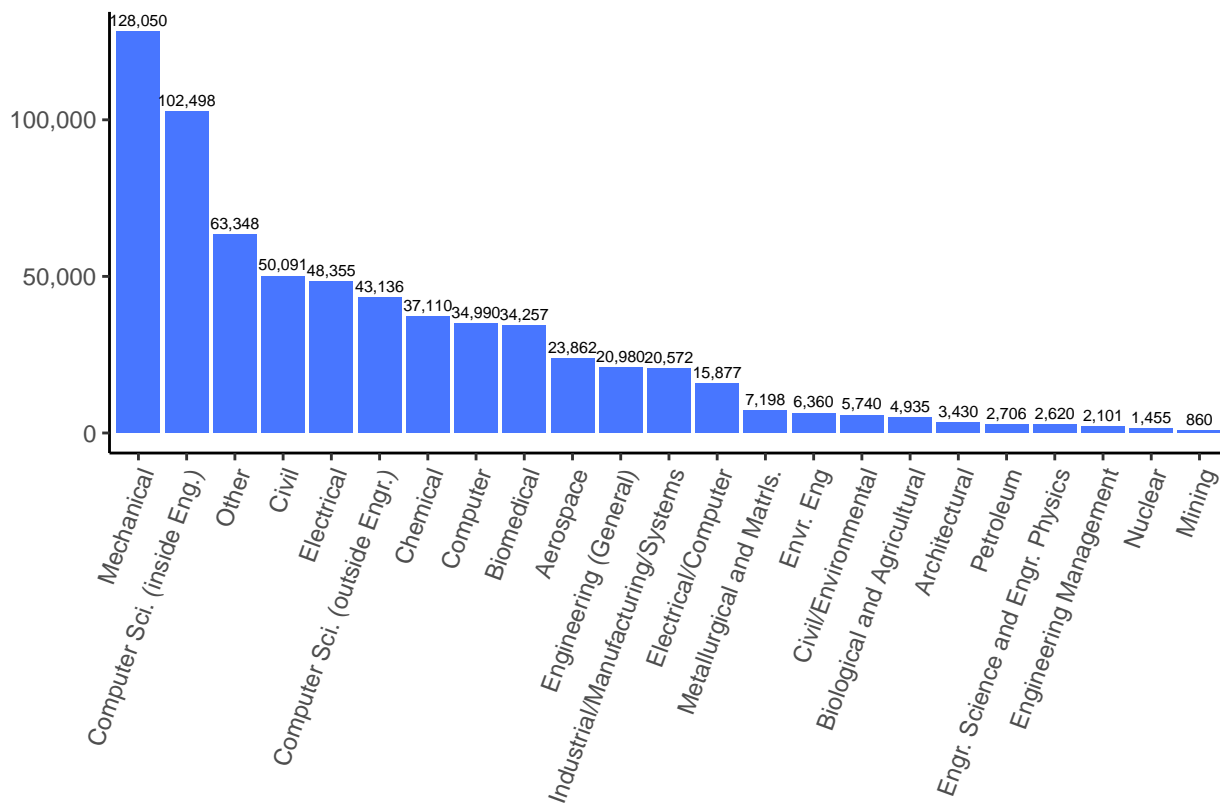
Table 31: Undergraduate Enrollment by Engineering Discipline: 617,395

Discipline Name	Enrollments
Mechanical	128,050
Computer Sci. (inside Eng.)	102,498
Other	63,348
Civil	50,091
Electrical	48,355
Computer Sci. (outside Engr.)	43,136
Chemical	37,110
Computer	34,990
Biomedical	34,257
Aerospace	23,862
Engineering (General)	20,980
Industrial/Manufacturing/Systems	20,572
Electrical/Computer	15,877
Metallurgical and Matrls.	7,198
Envr. Eng	6,360
Civil/Environmental	5,740
Biological and Agricultural	4,935
Architectural	3,430
Petroleum	2,706
Engr. Science and Engr. Physics	2,620
Engineering Management	2,101
Nuclear	1,455
Mining	860

* Total does not include Computer Science (outside engineering)

* Enrollment is for full time bachelor's degree candidates in engineering.

Undergraduate Enrollment by Engineering Discipline



1.2.4 Undergraduate Enrollment by Engineering Discipline:(Full time and Part time)

Table 32: Undergraduate Enrollment by Engineering Discipline:(Full time and Part time)

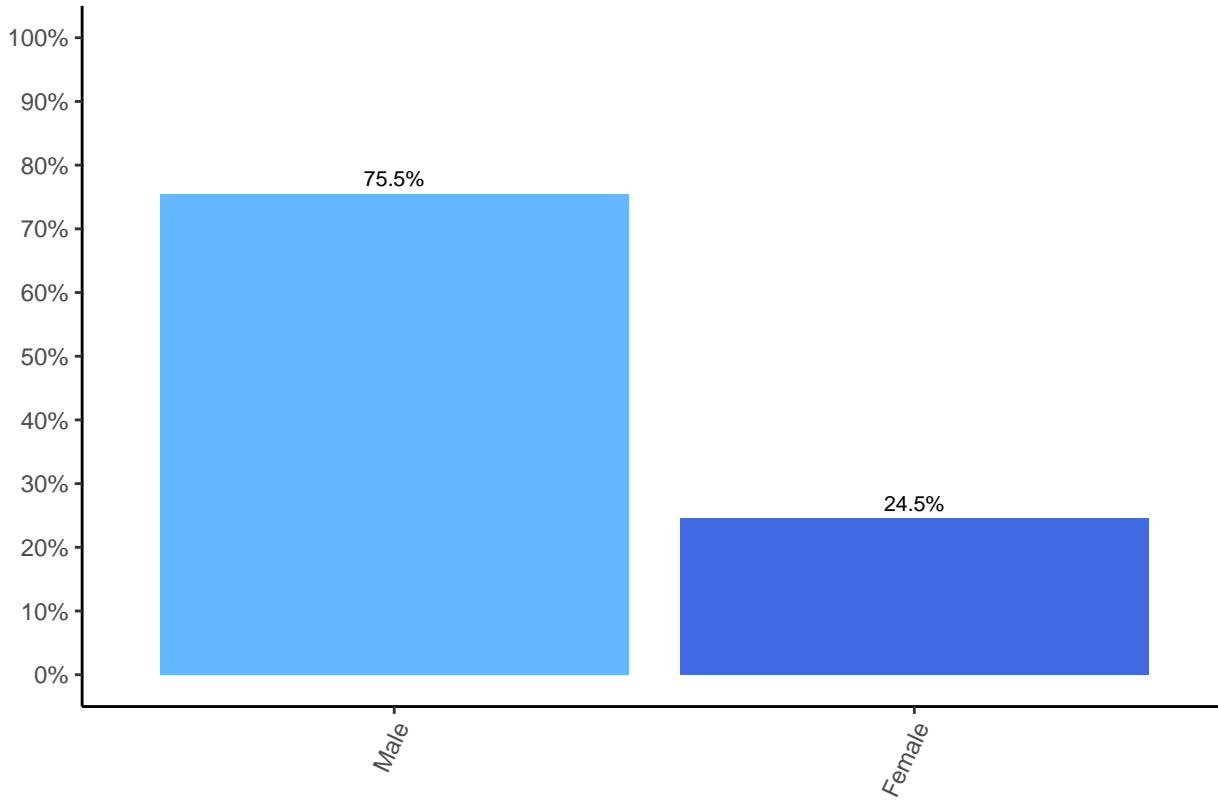
Discipline Name	Full Time	Part Time
Aerospace	23,862	1,456
Architectural	3,430	154
Biological and Agricultural	4,935	232
Biomedical	34,257	1,514
Chemical	37,110	2,560
Civil	50,091	5,683
Civil/Environmental	5,740	745
Computer	34,990	3,877
Computer Sci. (inside Eng.)	102,498	16,879
Electrical	48,355	9,051
Electrical/Computer	15,877	1,683
Engineering (General)	20,980	1,548
Engineering Management	2,101	327
Engr. Science and Engr. Physics	2,620	250
Envr. Eng	6,360	884
Industrial/Manufacturing/Systems	20,572	2,144
Mechanical	128,050	15,099
Metallurgical and Matrls.	7,198	683
Mining	860	297
Nuclear	1,455	84
Other	63,348	6,652
Petroleum	2,706	472

1.2.5 Undergraduate Enrollment by Gender

Table 33: Undergraduate Enrollment by Gender

Gender	Percentage
Female	24.5%
Male	75.5%

Undergraduate Enrollment by Gender

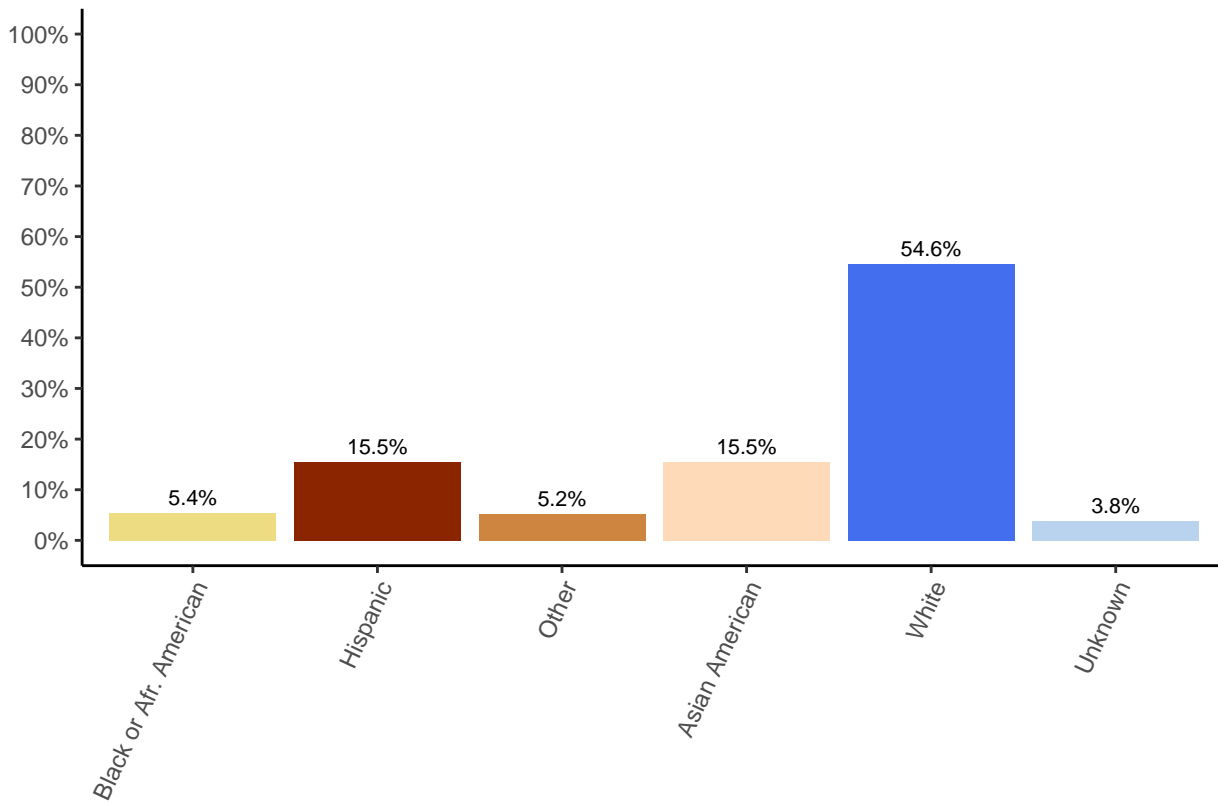


1.2.6 Undergraduate Enrollment by Race and Ethnicity

Table 34: Undergraduate Enrollment by Race and Ethnicity*

Ethnicity	Percentage
Black or Afr. American	5.4%
Hispanic	15.5%
Other	5.2%
Asian American	15.5%
White	54.6%
Unknown	3.8%

Undergraduate Enrollment by Race and Ethnicity

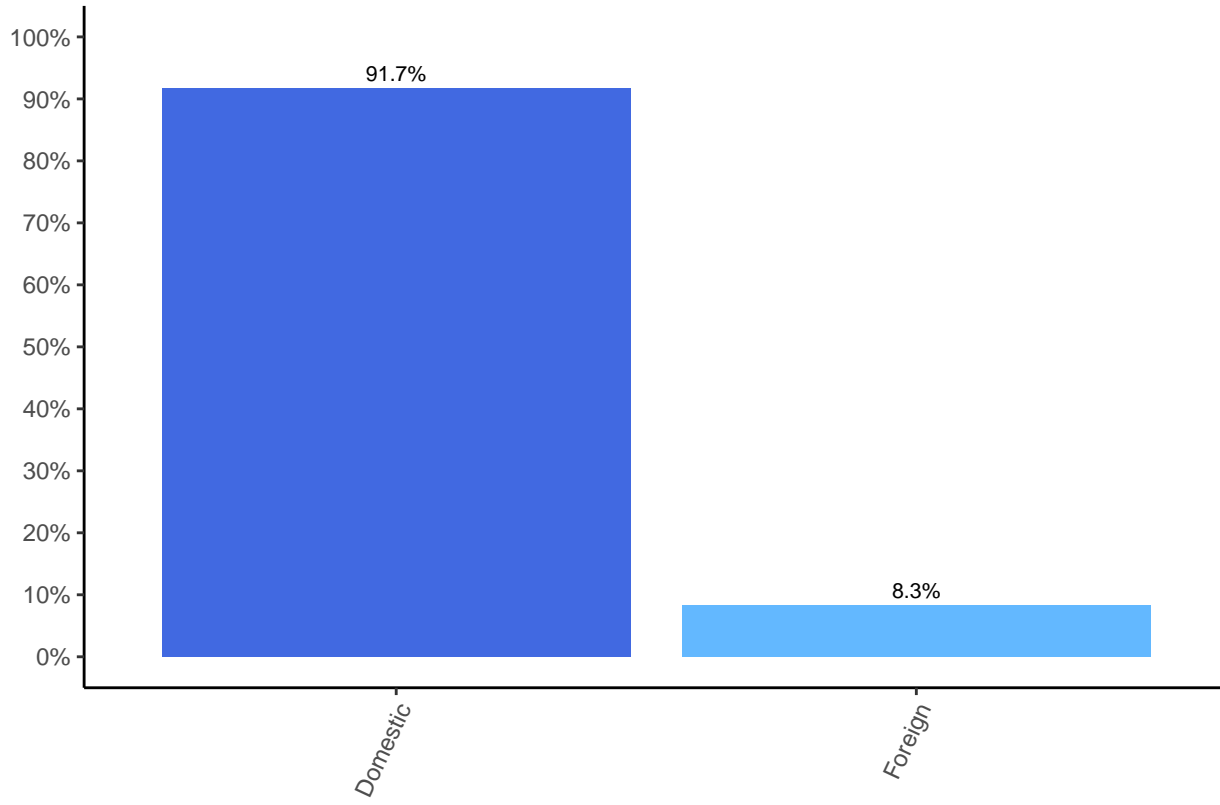


1.2.7 Undergraduate Enrollment by Residency

Table 35: Undergraduate Enrollment by Residency

Nationality	Percentage
Foreign	91.7%
Domestic	8.3%

Undergraduate Enrollment by Residency



2 ENGINEERING MASTERS

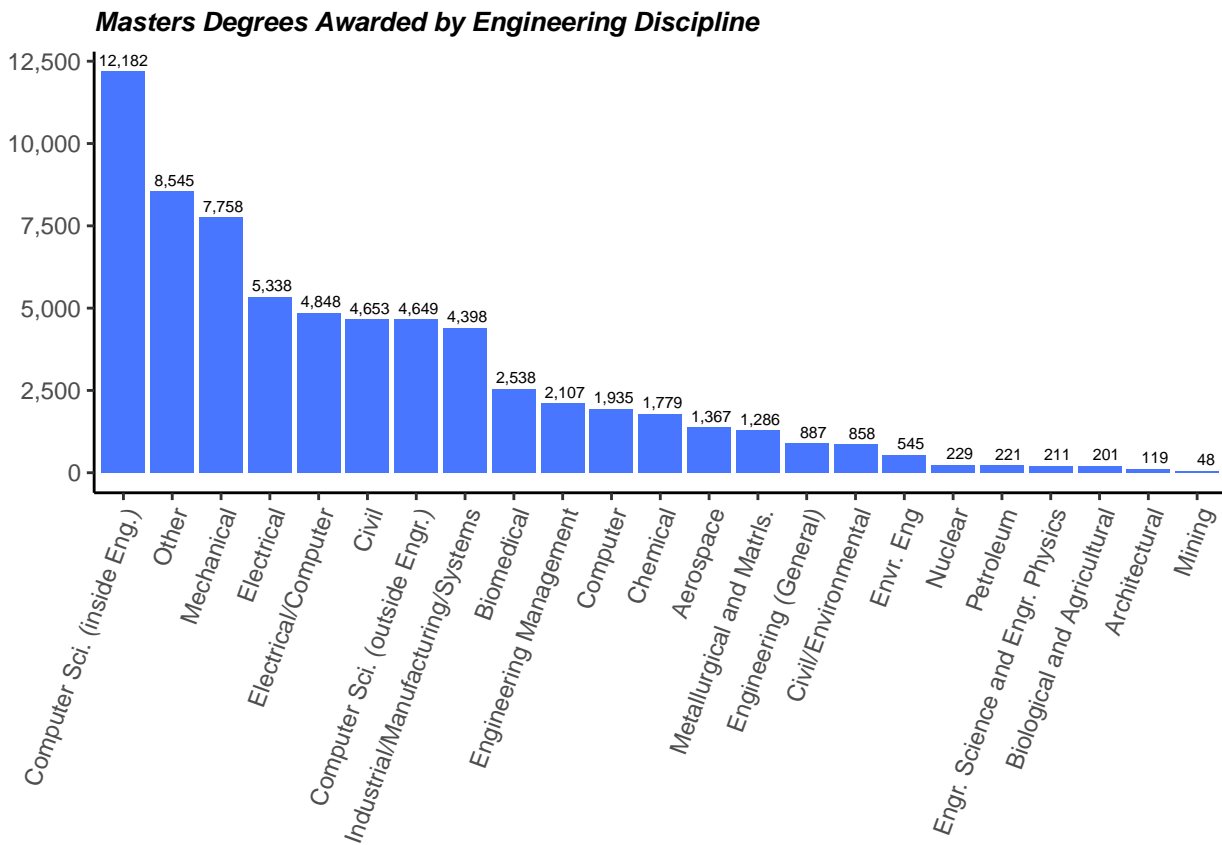
2.1 ENGINEERING MASTERS DEGREE

2.1.1 Masters Degrees Awarded by Engineering Discipline

Table 36: Masters Degrees by discipline: 62,053

Discipline Name	Degrees Awarded
Computer Sci. (inside Eng.)	12,182
Other	8,545
Mechanical	7,758
Electrical	5,338
Electrical/Computer	4,848
Civil	4,653
Computer Sci. (outside Engr.)	4,649
Industrial/Manufacturing/Systems	4,398
Biomedical	2,538
Engineering Management	2,107
Computer	1,935
Chemical	1,779
Aerospace	1,367
Metallurgical and Matrls.	1,286
Engineering (General)	887
Civil/Environmental	858
Envr. Eng	545
Nuclear	229
Petroleum	221
Engr. Science and Engr. Physics	211
Biological and Agricultural	201
Architectural	119
Mining	48

* Total does not include computer science (outside engineering).



2.1.2 Total Masters Degrees Awarded to Underrepresented Minorities by Engineering Discipline

Table 37: Masters Degrees Awarded to Underrepresented Minorities by Engineering Discipline: 4,403

Discipline Name	Degrees Awarded
Other	628
Mechanical	615
Computer Sci. (inside Eng.)	598
Civil	488
Industrial/Manufacturing/Systems	308
Electrical	270
Engineering Management	257
Electrical/Computer	255
Biomedical	249
Computer Sci. (outside Engr.)	244
Chemical	115
Engineering (General)	115
Civil/Environmental	102
Aerospace	97
Computer	96
Metallurgical and Matrls.	95
Envr. Eng	45
Nuclear	21
Biological and Agricultural	14
Petroleum	14
Engr. Science and Engr. Physics	12
Mining	6
Architectural	3

* Total does not include computer science (outside engineering).

2.1.3 Percentage of Masters Degrees Awarded to Underrepresented Minorities by Discipline

Table 38: Percentage of Masters Degrees Awarded to Underrepresented Minorities by Discipline 6.9 % of Total

Discipline Name	Percent Women
Engineering (General)	13%
Mining	12.5%
Engineering Management	12.2%
Civil/Environmental	11.9%
Civil	10.5%
Biomedical	9.8%
Nuclear	9.2%
Envr. Eng	8.3%
Mechanical	7.9%
Metallurgical and Matrls.	7.4%
Other	7.3%
Aerospace	7.1%
Biological and Agricultural	7%
Industrial/Manufacturing/Systems	7%
Chemical	6.5%
Petroleum	6.3%
Engr. Science and Engr. Physics	5.7%
Electrical/Computer	5.3%
Computer Sci. (outside Engr.)	5.2%
Electrical	5.1%
Computer	5%
Computer Sci. (inside Eng.)	4.9%
Architectural	2.5%

2.1.4 Percentage of Masters Degrees Awarded to Women by Discipline

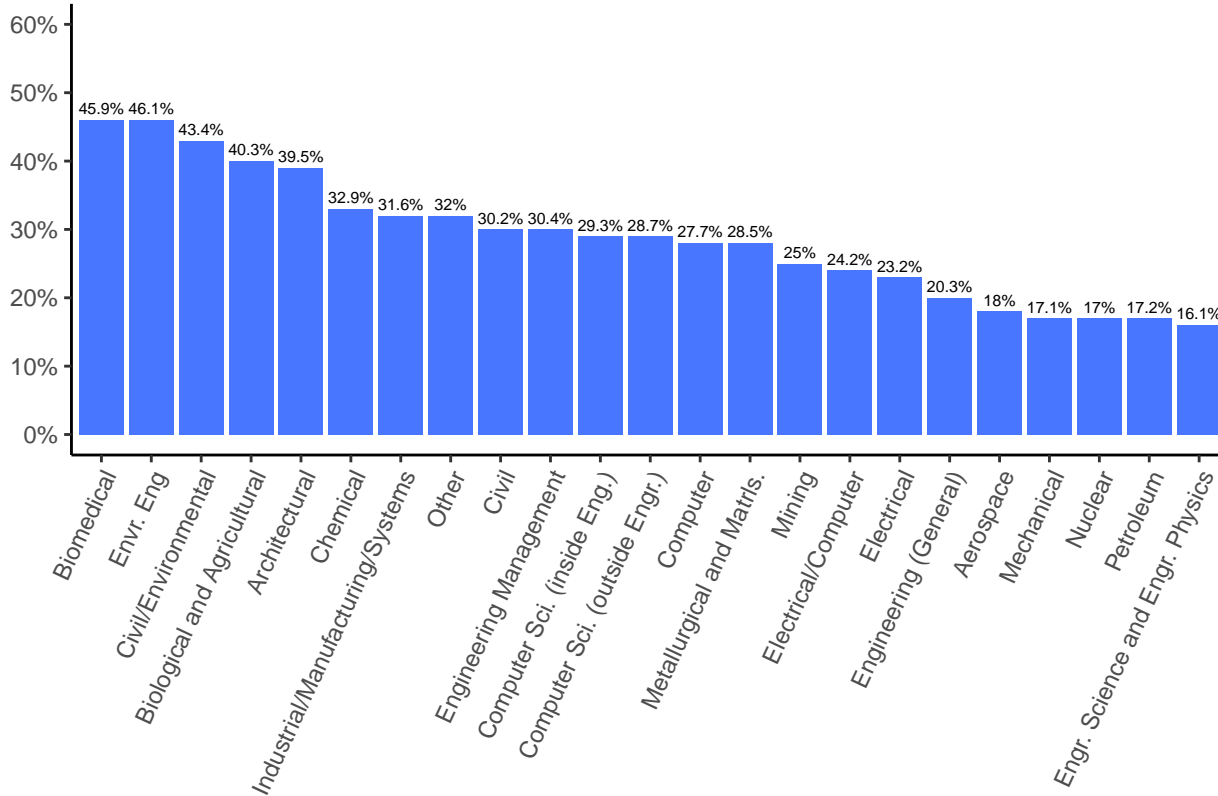
Table 39: Percentage of Masters Degrees Awarded to Women by Discipline 28.1 % of Total

Discipline Name	Percent Women
Envr. Eng	46.1%
Biomedical	45.9%
Civil/Environmental	43.4%
Biological and Agricultural	40.3%
Architectural	39.5%
Chemical	32.9%
Other	32%
Industrial/Manufacturing/Systems	31.6%
Engineering Management	30.4%
Civil	30.2%

Table 39: Percentage of Masters Degrees Awarded to Women by Discipline 28.1 % of Total (continued)

Discipline Name	Percent Women
Computer Sci. (inside Eng.)	29.3%
Computer Sci. (outside Engr.)	28.7%
Metallurgical and Matrls.	28.5%
Computer	27.7%
Mining	25%
Electrical/Computer	24.2%
Electrical	23.2%
Engineering (General)	20.3%
Aerospace	18%
Petroleum	17.2%
Mechanical	17.1%
Nuclear	17%
Engr. Science and Engr. Physics	16.1%

Percentage of Masters Degrees Awarded to Women by Discipline

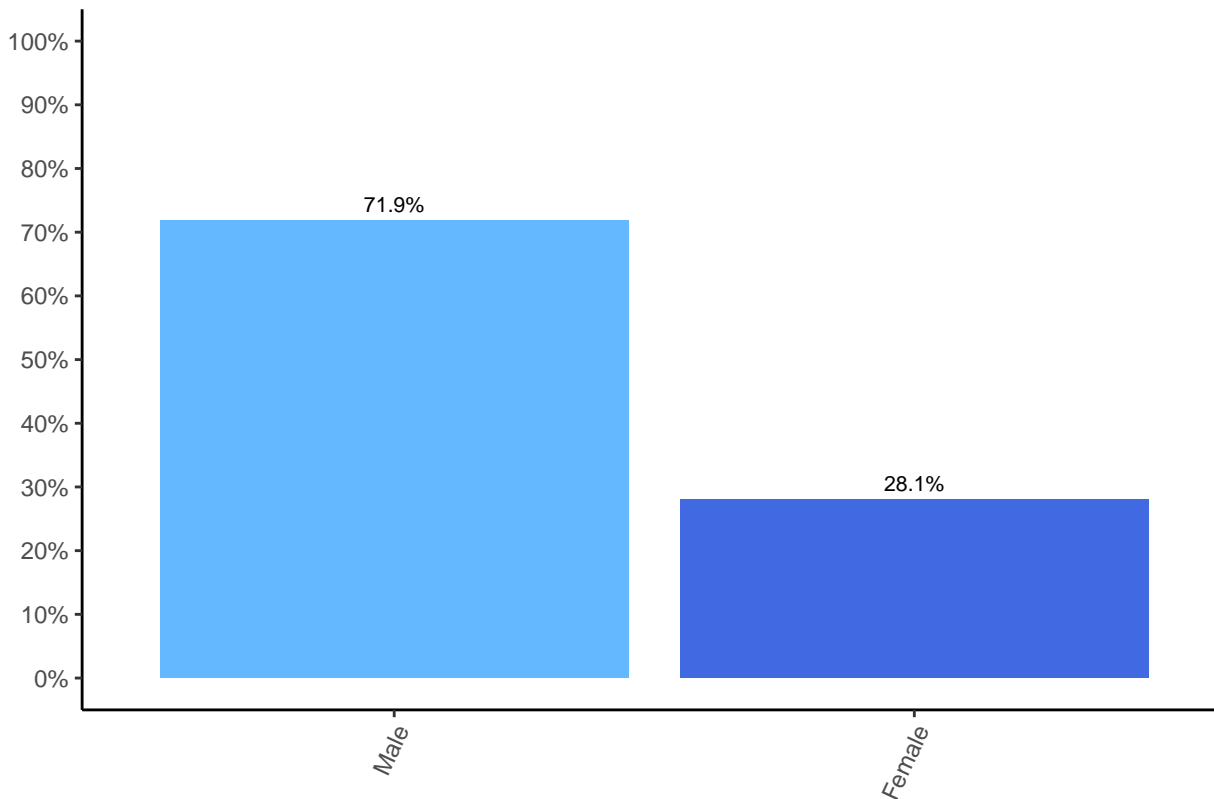


2.1.5 Masters Degrees Awarded by Gender

Table 40: Masters Degrees Awarded by Gender

Gender	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Female	23.00%	22.60%	22.60%	23.10%	23.90%	24.20%	25.40%	25.70%	26.70%	27.30%	28.10%
Male	77.00%	77.40%	81.60%	76.90%	76.10%	75.80%	74.60%	74.30%	73.30%	72.70%	71.90%

Masters Degrees Awarded by Gender



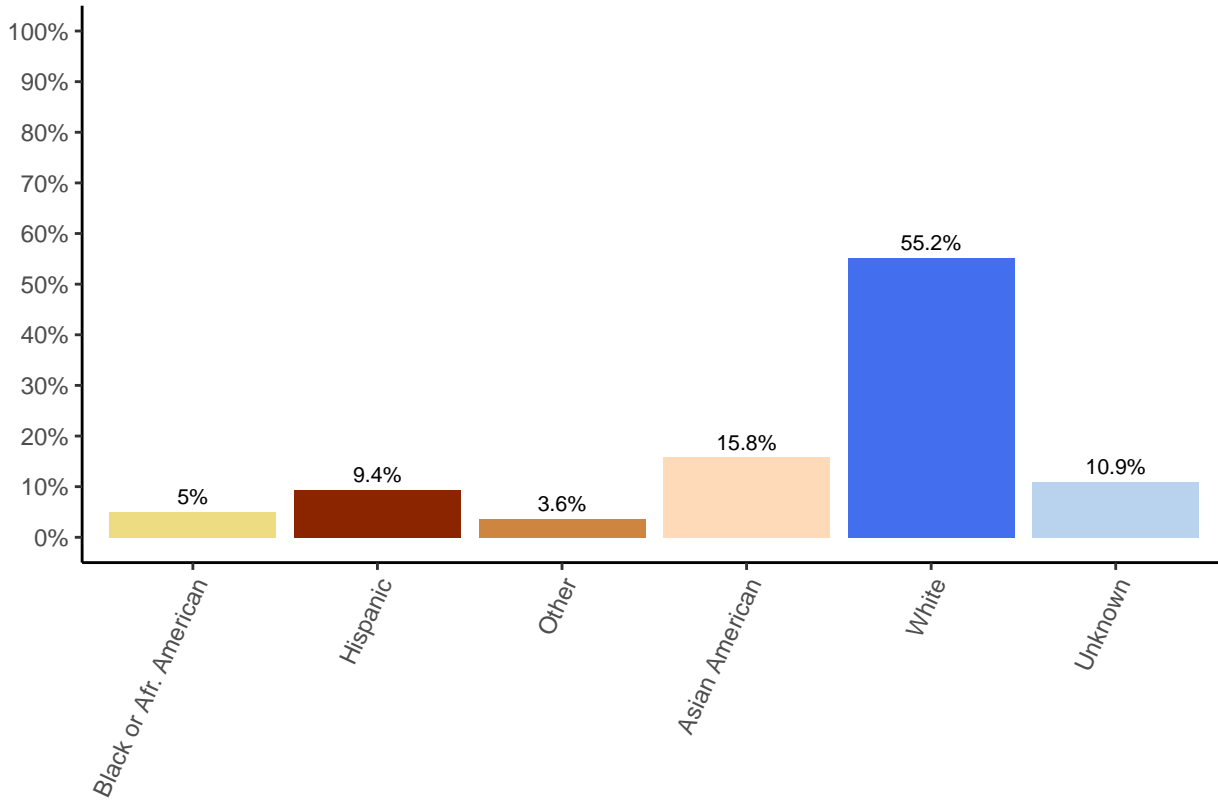
2.1.6 Masters Degrees Awarded by Race and Ethnicity

Table 41: Masters Degrees Awarded by Ethnicity

Ethnicity	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Black or Afr. American	4.7%	5.1%	4.9%	4.7%	4.7%	4.4%	4.7%	4.7%	4.8%	4.8%	5.0%
Hispanic	5.3%	6.0%	6.3%	7.3%	7.6%	7.7%	8.3%	8.5%	8.8%	9.2%	9.4%
Other	17.4%	1.4%	1.5%	2.0%	2.2%	2.6%	3.0%	3.1%	3.8%	3.9%	3.6%
Asian American	15.1%	14.9%	15.5%	14.5%	15.0%	14.5%	15.1%	15.1%	15.8%	16.3%	15.8%
White	57.5%	60.9%	58.2%	59.7%	59.5%	60.2%	59.5%	60.1%	58.2%	55.4%	55.2%
Unknown	0%	11.7%	13.6%	11.8%	11.0%	10.6%	9.4%	8.4%	8.6%	10.4%	10.9%

*Data on ethnicity does not include foreign nationals. American Indian/Alaska Native (0.2%), Native Hawaiian/Other Pacific Islander(0.2%) and Multiracial (3.3%) are combined under Other.

Masters Degrees Awarded by Race and Ethnicity

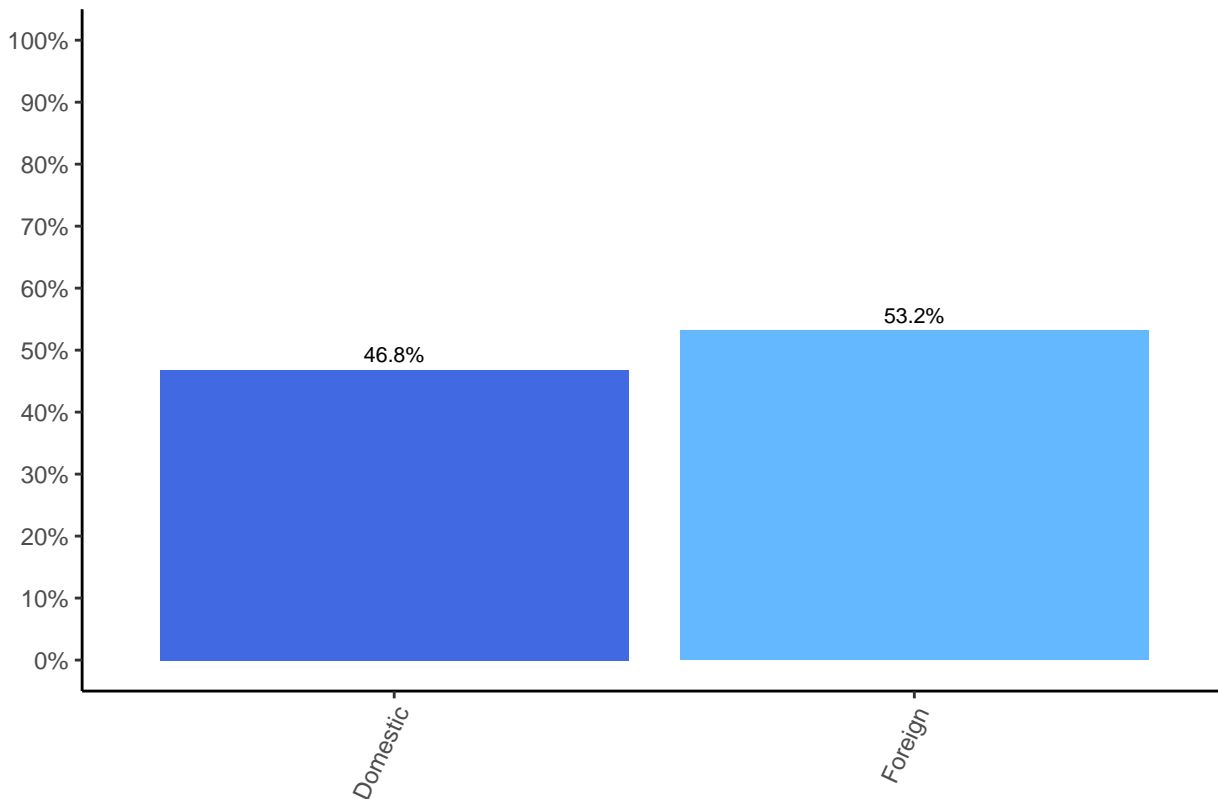


2.1.7 Masters Degrees Awarded by Residency

Table 42: Masters Degrees Awarded by Residency

Nationality	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Foreign	46.1%	44.4%	43.3%	45.3%	47.5%	52.6%	58.1%	59.2%	57.1%	53.6%	53.2%
Domestic	53.9%	55.6%	56.7%	54.7%	52.5%	47.4%	41.9%	40.8%	42.9%	46.4%	46.8%

Masters Degrees Awarded by Residency



2.1.8 Masters Degrees Awarded by Race, Ethnicity, and Gender

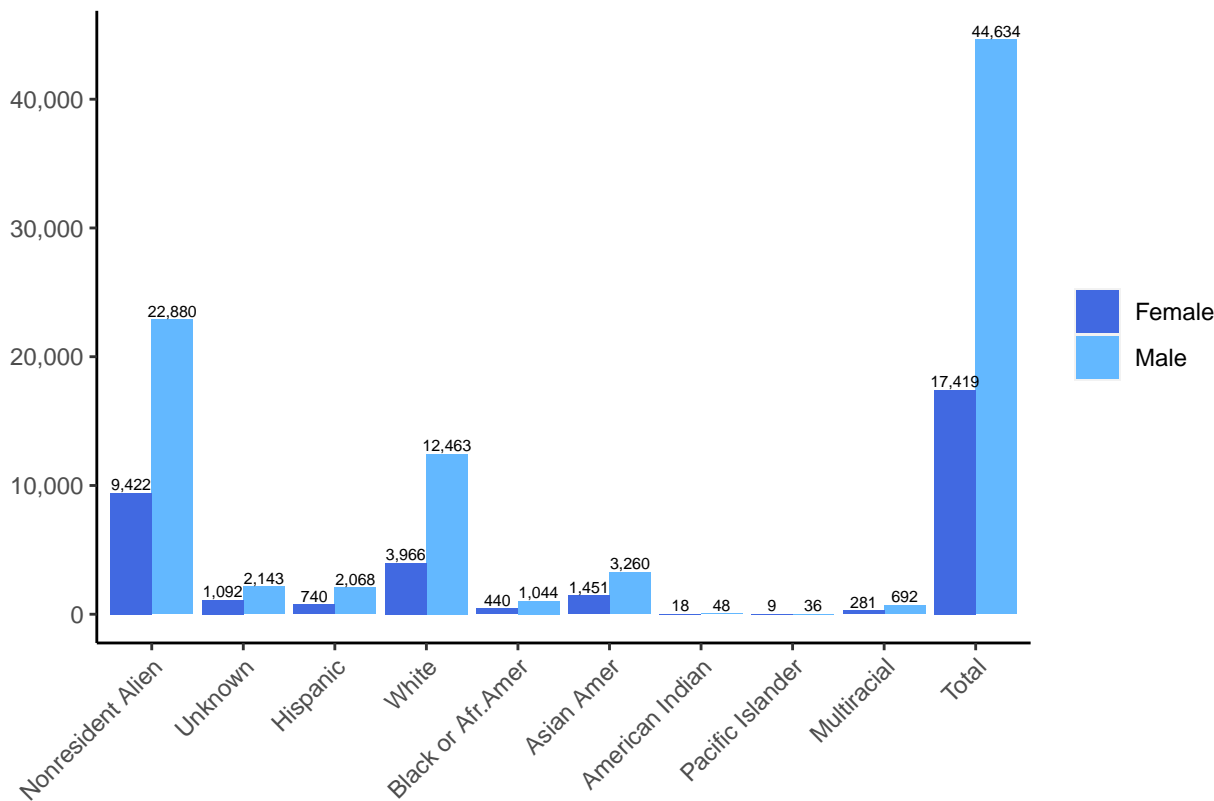
Table 43: Masters Degrees Awarded by Race, Ethnicity, and Gender 62,053*

Ethnicity	Degrees Awarded
Nonresident Alien Male	22,880
Nonresident Alien Female	9,422
Unknown Male	2,143
Unknown Female	1,092
Hispanic Male	2,068
Hispanic Female	740
White Male	12,463
White Female	3,966
Black or Afr. American Male	1,044
Black or Afr. American Female	440
Asian American Male	3,260
Asian American Female	1,451
American Indian Male	48
American Indian Female	18
Native Hawaiian/Other Pacific Islander Male	36
Native Hawaiian/Other Pacific Islander Female	9
Multiracial Male	692
Multiracial Female	281
Total Male	44,634
Total Female	17,419

* Total degree includes 0 total Non binary graduates and 0 total Other Gender graduates.

* Includes 44 male and 13 female graduates from Puerto Rico.

Master...s Degrees Awarded by Race, Ethnicity, and Gender



2.1.9 Top 50 Institutions Awarding Engineering Masters Degrees

Table 44: Top 50 Institutions Awarding Engineering Masters Degrees

No	Institutions	Degrees Awarded
1	University of Southern California	2,602
2	Northeastern University	2,337
3	Carnegie Mellon University	1,783
4	Fu Foundation School of Engineering and Applied Science - Columbia University	1,716
5	Georgia Institute of Technology	1,469
6	Arizona State University	1,308
7	Cornell University	1,189
8	University of Michigan	1,150
9	Stanford University	1,143
10	University of Illinois at Urbana-Champaign	1,053
11	North Carolina State University	1,017
12	University of California, San Diego	1,011
13	The University of Texas at Arlington	928
14	NYU Tandon School of Engineering	926
15	University of California, Berkeley	910

Table 44: Top 50 Institutions Awarding Engineering Masters Degr
(continued)

No	Institutions	Degrees Awarded
16	University at Buffalo, SUNY	887
17	San Jose State University	859
18	Texas A&M University	854
19	The George Washington University	835
20	University of Washington in Seattle	829
21	New Jersey Institute of Technology	826
22	The University of Texas at Dallas	801
23	Massachusetts Institute of Technology	768
24	University of Florida	733
25	Northwestern University	726
26	University of Pennsylvania	706
27	University of Colorado Boulder	657
28	Purdue University	632
29	The Johns Hopkins University	622
30	George Mason University	594
31	University of California, Los Angeles	582
32	Illinois Institute of Technology	519
33	University of Maryland, College Park	514
34	University of California, Irvine	508
35	Stony Brook University	480
36	Duke University	475
37	Washington University in St. Louis	473
38	University of Wisconsin-Madison	469
39	Syracuse University	463
40	Boston University	452
40	University of Michigan-Dearborn	452
42	The University of Texas at Austin	450
43	University of Central Florida	442
44	Virginia Polytechnic Institute and State University	440
45	Rochester Institute of Technology	434
46	Clemson University	429
47	University of Cincinnati	420
48	The Ohio State University	411
49	The State University of New York at Binghamton	410
50	University of Maryland, Baltimore County	384

* 429 Institutions included

2.1.10 Top 20 Institutions by Total Masters Degrees awarded to Underrepresented Minorities

Table 45: Top 20 Institutions by Total Masters Degrees awarded to Underrepresented Minorities

No	Institutions	Degrees Awarded
1	New Jersey Institute of Technology	181
2	Florida International University	155
3	The University of Texas at El Paso	143
4	The George Washington University	99
5	University of Central Florida	97
6	University of Southern California	88
7	Stanford University	87
8	Arizona State University	71
8	Georgia Institute of Technology	71
10	Massachusetts Institute of Technology	70
11	Carnegie Mellon University	67
11	Cornell University	67
13	University of Florida	64
14	George Mason University	60
14	University of Washington in Seattle	60
16	Southern Methodist University	57
16	University of Puerto Rico, Mayaguez Campus	57
18	University of Maryland, Baltimore County	55
19	The University of Texas at Arlington	54
20	Texas A&M University	53

* 429 Institutions included

2.1.11 Top 50 Institutions by Percentage of Masters Degrees awarded to Underrepresented Minorities

Table 46: Top 50 Institutions by Percentage of Masters Degrees awarded to Underrepresented Minorities

No	Institutions	Percent Underrepresented Minorities
1	Hampton University	100%
1	University of Puerto Rico, Mayaguez Campus	100%
3	Alabama A & M University	86.7%
4	The University of Texas Rio Grande Valley	81.4%
5	The University of Texas at El Paso	66.8%
6	North Carolina A&T State University	56.5%
7	Virginia State University	52.9%
8	Prairie View A & M University	51.5%

Table 46: Top 50 Institutions by Percentage of Masters Degrees awarded to Underrepresented Minorities (*continued*)

No	Institutions	Percent Underrepresented Minorities
9	Morgan State University	50%
9	Tuskegee University	50%
9	West Texas A & M University	50%
12	Florida International University	44.3%
13	Thomas Jefferson University	42.9%
14	Christian Brothers University	36.4%
15	New Mexico State University	35.3%
16	East Carolina University	33.3%
16	Florida Polytechnic University	33.3%
16	Howard University	33.3%
16	University of the District of Columbia	33.3%
16	Wentworth Institute of Technology	33.3%
21	St. Mary's University	31.8%
22	Norwich University	31%
23	University of Nevada, Las Vegas	30.6%
24	Florida Atlantic University	29.3%
25	Tennessee State University	28%
26	California State University, Los Angeles	27.1%
27	Kennesaw State University	27%
28	Loyola Marymount University	26.5%
29	The University of Texas at Tyler	26.3%
30	University of Tennessee, Chattanooga	26.1%
31	The University of New Mexico	25.8%
32	Jackson State University	25%
32	New Mexico Institute of Mining and Technology	25%
34	University of Hartford	22.5%
35	California State University, Long Beach	22.2%
35	Princeton University	22.2%
37	University of Central Florida	21.9%
38	New Jersey Institute of Technology	21.9%
39	Idaho State University	21.4%
40	The University of Texas at San Antonio	21.2%
41	Arkansas State University	20%
41	Florida Gulf Coast University	20%
41	University of Hawaii at Manoa	20%
41	Western Kentucky University	20%
45	University of the Pacific	19.6%
46	Georgia Southern University	19.2%
47	Manhattan College	19%
48	University of Miami	19%
49	University of St. Thomas	18.3%
50	Oregon Institute of Technology	18.2%

* 429 Institutions included

2.1.12 Top 20 Institutions Awarding Highest Percentage of Masters Degrees to Women

Table 47: Top 20 Highest Percentage of Masters Degrees to Women

No	Institutions	Percent Women
1	Thomas Jefferson University	71.4%
2	University of South Dakota	66.7%
2	Wentworth Institute of Technology	66.7%
4	Tulane University	54.8%
5	University of Washington-Tacoma	52.2%
6	Fairleigh Dickinson University-Metropolitan Campus	50%
6	Frostburg State University	50%
6	University of Southern Mississippi	50%
9	Virginia State University	49%
10	Princeton University	48.1%
11	Alabama A & M University	46.7%
12	State University of New York at New Paltz	46.2%
13	Fairfield University	46%
14	California State University-East Bay	45.7%
15	North Carolina A&T State University	45.2%
16	Texas State University	42.9%
17	University of Houston-Clear Lake	40.5%
18	The Catholic University of America	40.3%
19	Bucknell University	40%
20	Fu Foundation School of Engineering and Applied Science - Columbia University	39.6%

* 429 included

2.1.13 Top 20 Institutions by Total Masters Degrees awarded in Engineering (General)

Table 48: Top 20 Institutions by Total Masters Degrees awarded in Engineering (General)

No	Institutions	Degrees Awarded
1	Arizona State University	96
2	Lamar University	73
3	University of Arkansas	61
4	University at Buffalo, SUNY	60
5	University of Wisconsin, Platteville	59
6	University of the Pacific	46
7	Oklahoma Christian University	39
8	University of Massachusetts Lowell	37
9	San Francisco State University	29
10	Saint Louis University	27
11	Eastern Michigan University	24
12	University of Wisconsin - Stout	23
13	California State University-Fresno	22
14	Texas State University	21
15	Prairie View A & M University	20
16	Marshall University	19
17	Case Western Reserve University	18
17	Purdue University Fort Wayne	18
19	North Carolina State University	16
20	Georgia Southern University	15

* 123 Institutions included

2.2 ENGINEERING MASTERS ENROLLMENT

2.2.1 Masters Enrollment by Race, Ethnicity, and Gender

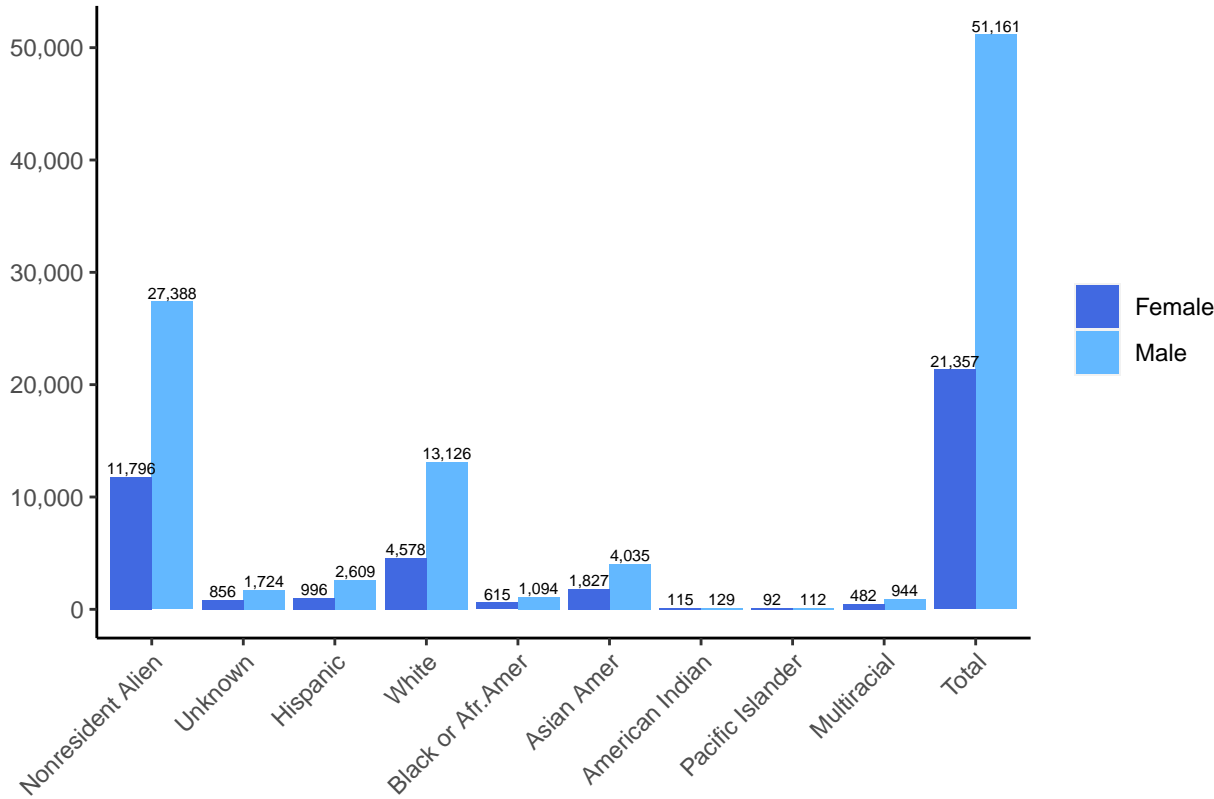
Table 49: Masters Enrollment Awarded by Race, Ethnicity, and Gender 72,518*

Ethnicity	Enrollments
Nonresident Alien Male	27,388
Nonresident Alien Female	11,796
Unknown Male	1,724
Unknown Female	856
Hispanic Male	2,609
Hispanic Female	996
White Male	13,126
White Female	4,578
Black or Afr. American Male	1,094
Black or Afr. American Female	615
Asian American Male	4,035
Asian American Female	1,827
American Indian Male	129
American Indian Female	115
Native Hawaiian/Other Pacific Islander Male	112
Native Hawaiian/Other Pacific Islander Female	92
Multiracial Male	944
Multiracial Female	482
Total Male	51,161
Total Female	21,357

* Total Enrollment includes is for full time students

* Includes 90 male and 39 female.

Masters Enrollment by Race, Ethnicity, and Gender



2.2.2 Top 50 Institutions with Highest Graduate Enrollment

Table 50: Top 50 Institutions with Highest Graduate Enrollment*

No	Institutions	Enrollment
1	University of Southern California	5,487
2	University of Illinois at Urbana-Champaign	4,814
3	Arizona State University	4,374
4	Fu Foundation School of Engineering and Applied Science - Columbia University	4,079
5	Georgia Institute of Technology	3,946
6	Northeastern University	3,916
7	University of Michigan	3,436
8	Texas A&M University	3,326
9	Stanford University	3,307
10	Massachusetts Institute of Technology	3,168
11	University of Pennsylvania	3,063
12	NYU Tandon School of Engineering	3,061
13	Purdue University	2,926
14	University of California, San Diego	2,879
15	North Carolina State University	2,874
16	University of Washington in Seattle	2,864
17	University of Arizona	2,687
18	Cornell University	2,568
19	University of Florida	2,455
20	Carnegie Mellon University	2,345
21	The Pennsylvania State University	2,209
22	Northwestern University	2,205
23	University of California, Los Angeles	2,186
24	Virginia Polytechnic Institute and State University	2,168
25	The University of Texas at Arlington	2,143
26	University of California, Berkeley	2,117
27	Clarkson University	2,088
28	University of Colorado Boulder	2,070
29	The University of Texas at Austin	2,002
30	University at Buffalo, SUNY	1,953
31	The Johns Hopkins University	1,914
32	University of Central Florida	1,845
33	The University of Texas at Dallas	1,806
34	George Mason University	1,774
35	University of Minnesota - Twin Cities	1,711
36	The Ohio State University	1,702
37	San Jose State University	1,663
38	Indiana University-Purdue University Fort Wayne	1,512
38	Montana Tech of the University of Montana	1,512
40	The George Washington University	1,506
41	University of Maryland, College Park	1,489
42	University of Wisconsin-Madison	1,463
43	Washington University in St. Louis	1,409
44	Stony Brook University	1,401
45	Colorado School of Mines	1,335
46	Clemson University	1,332
47	University of Utah	1,299

Table 50: Top 50 Institutions with Highest Graduate Enrollment*
(continued)

No	Institutions	Enrollment
48	University of California, Davis	1,251
49	University of Maryland, Baltimore County	1,240
50	Oregon State University	1,218

* 50 Institutions reported. Includes both part time and full time.

2.2.3 Masters Enrollment by Engineering Discipline:(Full time and Part time)

Table 51: Masters Enrollment by Engineering Discipline:(Full time and Part time)

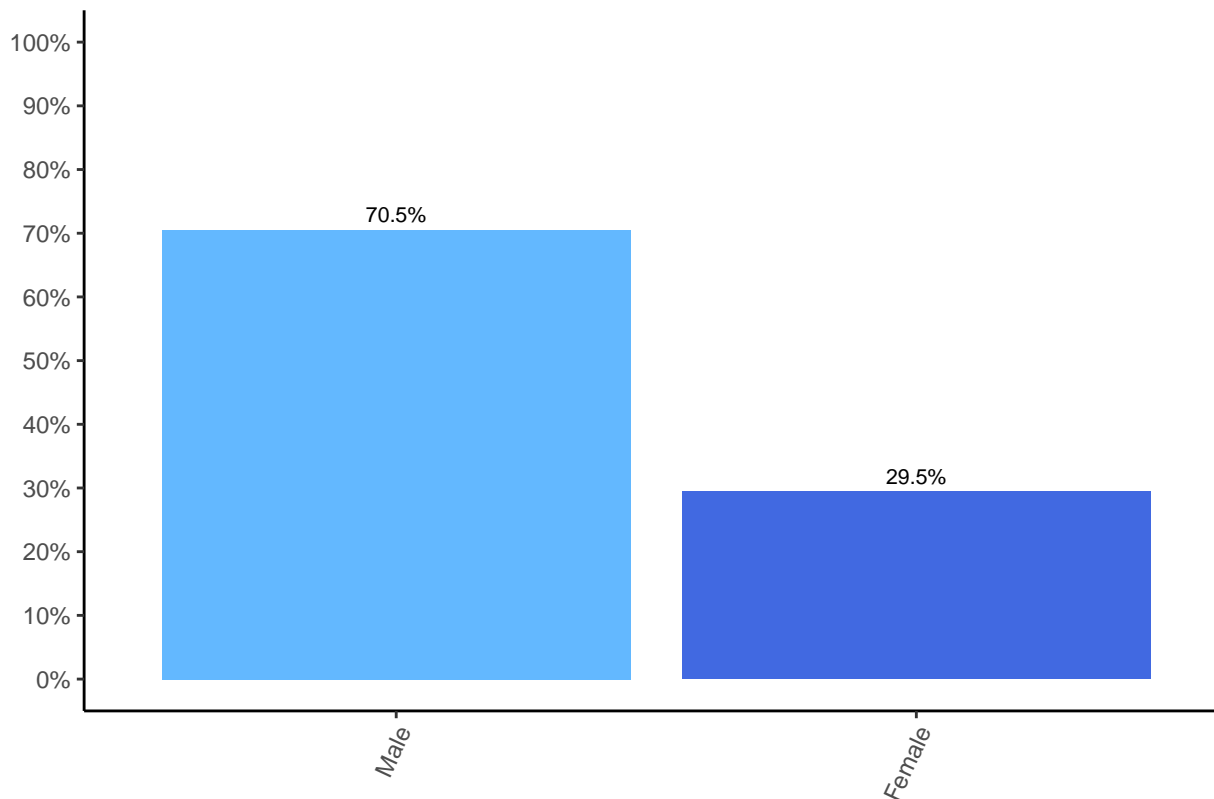
Discipline Name	Full Time	Part Time
Aerospace	2,021	1,124
Architectural	125	16
Biological and Agricultural	336	85
Biomedical	3,390	925
Chemical	1,976	669
Civil	4,852	3,249
Civil/Environmental	1,187	453
Computer	2,637	1,176
Computer Sci. (inside Eng.)	14,881	9,930
Electrical	5,519	3,840
Electrical/Computer	5,525	2,275
Engineering (General)	763	1,187
Engineering Management	2,187	3,059
Engr. Science and Engr. Physics	169	127
Envr. Eng	782	508
Industrial/Manufacturing/Systems	4,072	4,219
Mechanical	9,126	4,973
Metallurgical and Matrls.	1,393	630
Mining	155	122
Nuclear	307	102
Other	10,798	6,324
Petroleum	317	175

2.2.4 Masters Enrollment by Gender

Table 52: Masters Enrollment by Gender

Gender	Percentage
Female	29.5%
Male	70.5%

Masters Enrollment Degrees Awarded by Gender

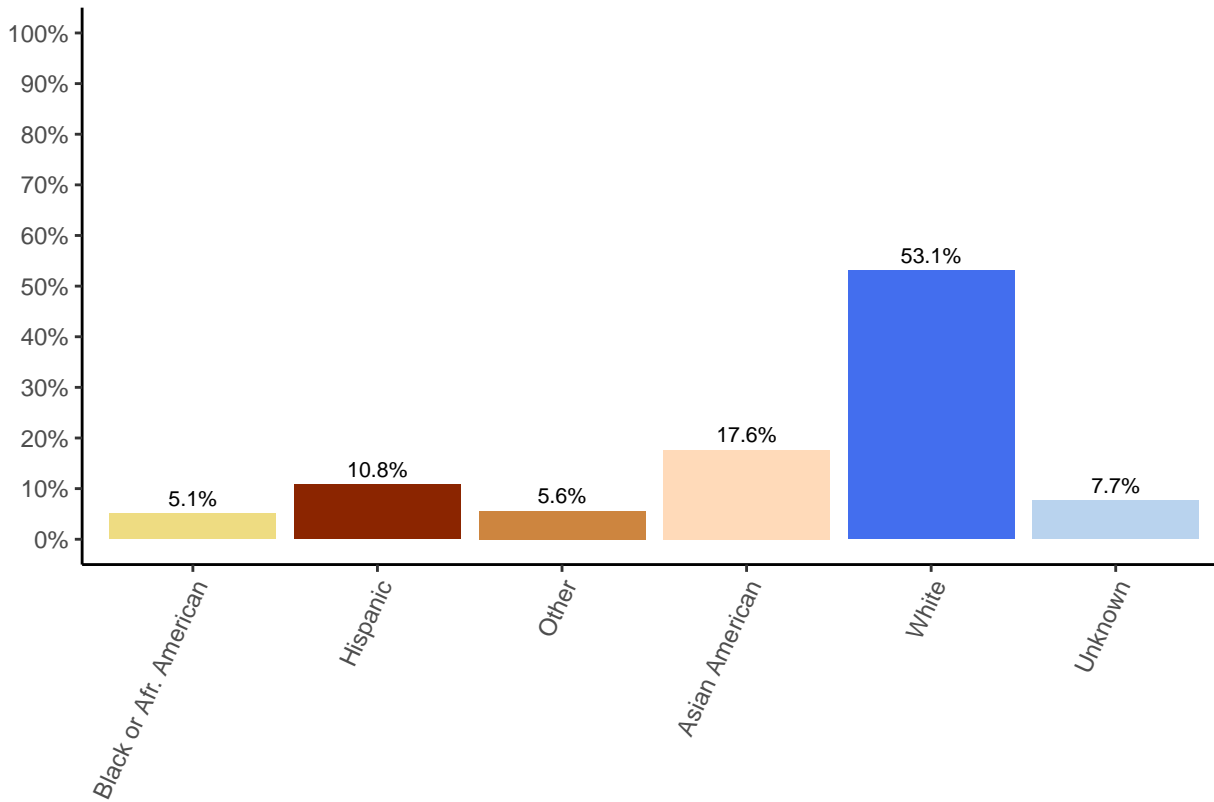


2.2.5 Masters Enrollment by Race and Ethnicity

Table 53: Masters Enrollment by Race and Ethnicity*

Ethnicity	Percentage
Black or Afr. American	5.1%
Hispanic	10.8%
Other	5.6%
Asian American	17.6%
White	53.1%
Unknown	7.7%

Masters Enrollment by Race and Ethnicity

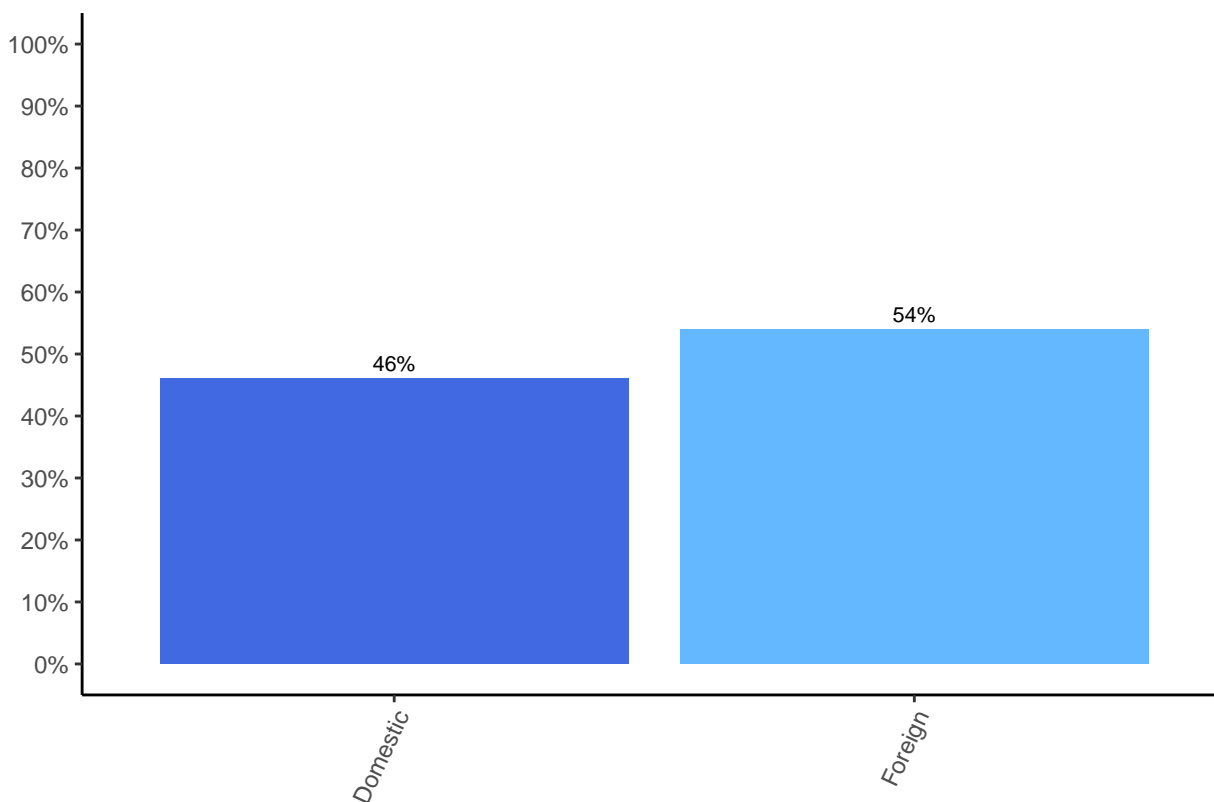


2.2.6 Masters Enrollment by Residency

Table 54: Masters Enrollment by Residency

Nationality	Percentage
Foreign	54%
Domestic	46%

Masters Enrollment by Residency



3 ENGINEERING DOCTORAL

3.1 ENGINEERING DOCTORAL DEGREES

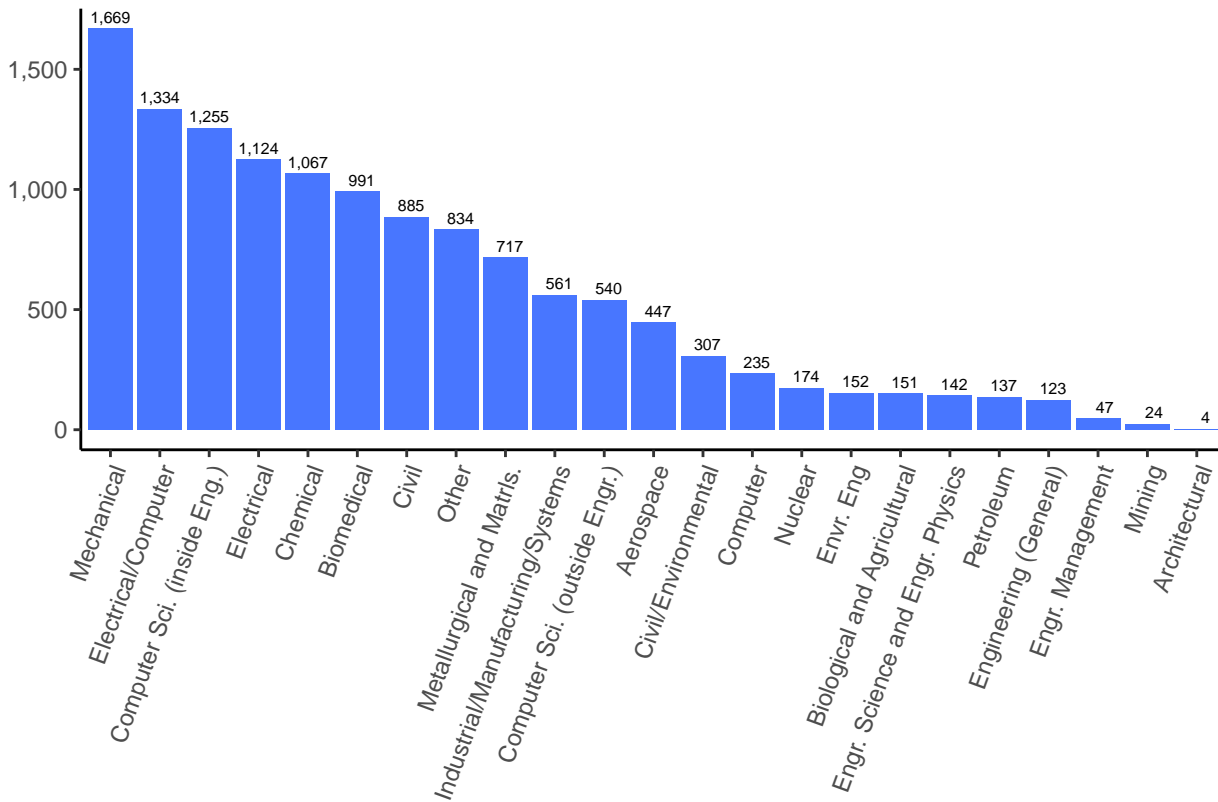
3.1.1 Doctoral Degrees Awarded by Engineering Discipline

Table 55: Doctoral Degrees by discipline: 12,380

Discipline Name	Degrees Awarded
Mechanical	1,669
Electrical/Computer	1,334
Computer Sci. (inside Eng.)	1,255
Electrical	1,124
Chemical	1,067
Biomedical	991
Civil	885
Other	834
Metallurgical and Matrls.	717
Industrial/Manufacturing/Systems	561
Computer Sci. (outside Engr.)	540
Aerospace	447
Civil/Environmental	307
Computer	235
Nuclear	174
Envr. Eng	152
Biological and Agricultural	151
Engr. Science and Engr. Physics	142
Petroleum	137
Engineering (General)	123
Engr. Management	47
Mining	24
Architectural	4

* Total does not include computer science (outside engineering).

Doctoral Degrees Awarded by Engineering Discipline



3.1.2 Total Doctoral Degrees Awarded to Underrepresented Minorities by Engineering Discipline

Table 56: Doctoral Degrees Awarded to Underrepresented Minorities by Engineering Discipline: 561

Discipline Name	Degrees Awarded
Biomedical	86
Mechanical	59
Other	55
Chemical	48
Electrical/Computer	47
Metallurgical and Matrls.	42
Computer Sci. (inside Eng.)	39
Electrical	35
Civil	34
Industrial/Manufacturing/Systems	34
Aerospace	18
Envr. Eng	15
Civil/Environmental	10
Computer Sci. (outside Engr.)	9
Nuclear	9
Engineering (General)	6
Biological and Agricultural	5
Computer	5
Engr. Management	5
Engr. Science and Engr. Physics	5
Petroleum	4
Architectural	0
Mining	0

* Total does not include computer science (outside engineering).

3.1.3 Percentage of Doctoral Degrees Awarded to Underrepresented Minorities by Discipline

Table 57: Percentage of Doctoral Degrees Awarded to Underrepresented Minorities by Discipline 4.4 % of Total

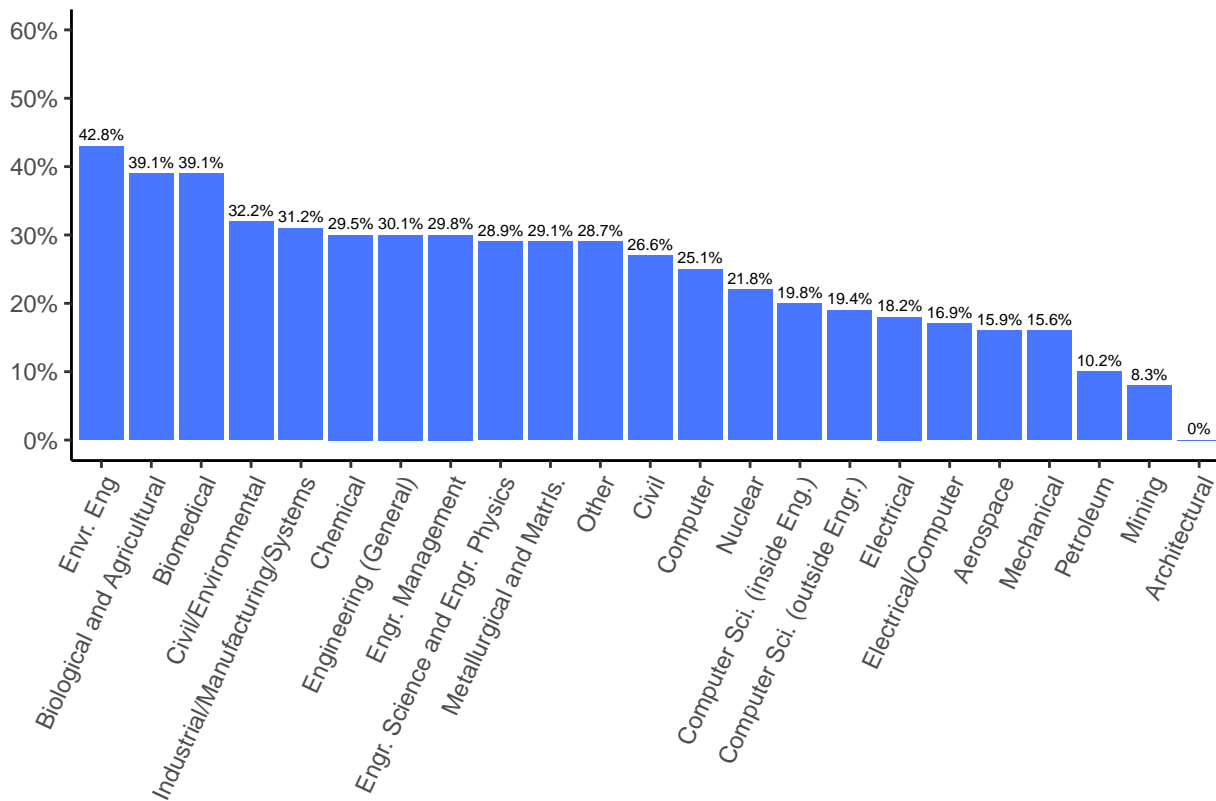
Discipline Name	Percent Women
Engr. Management	10.6%
Envr. Eng	9.9%
Biomedical	8.7%
Other	6.6%
Industrial/Manufacturing/Systems	6.1%
Metallurgical and Matrls.	5.9%
Nuclear	5.2%
Engineering (General)	4.9%
Chemical	4.5%
Aerospace	4%
Civil	3.8%
Electrical/Computer	3.5%
Engr. Science and Engr. Physics	3.5%
Mechanical	3.5%
Biological and Agricultural	3.3%
Civil/Environmental	3.3%
Computer Sci. (inside Eng.)	3.1%
Electrical	3.1%
Petroleum	2.9%
Computer	2.1%
Computer Sci. (outside Engr.)	1.7%
Architectural	0%
Mining	0%

3.1.4 Percentage of Doctoral Degrees Awarded to Women by Discipline

Table 58: Percentage of Doctoral Degrees Awarded to Women by Discipline 24 % of Total

Discipline Name	Percent Women
Envr. Eng	42.8%
Biological and Agricultural	39.1%
Biomedical	39.1%
Civil/Environmental	32.2%
Industrial/Manufacturing/Systems	31.2%
Engineering (General)	30.1%
Engr. Management	29.8%
Chemical	29.5%
Metallurgical and Matrls.	29.1%
Engr. Science and Engr. Physics	28.9%
Other	28.7%
Civil	26.6%
Computer	25.1%
Nuclear	21.8%
Computer Sci. (inside Eng.)	19.8%
Computer Sci. (outside Engr.)	19.4%
Electrical	18.2%
Electrical/Computer	16.9%
Aerospace	15.9%
Mechanical	15.6%
Petroleum	10.2%
Mining	8.3%
Architectural	0%

Percentage of Doctoral Degrees Awarded to Women by Discipline

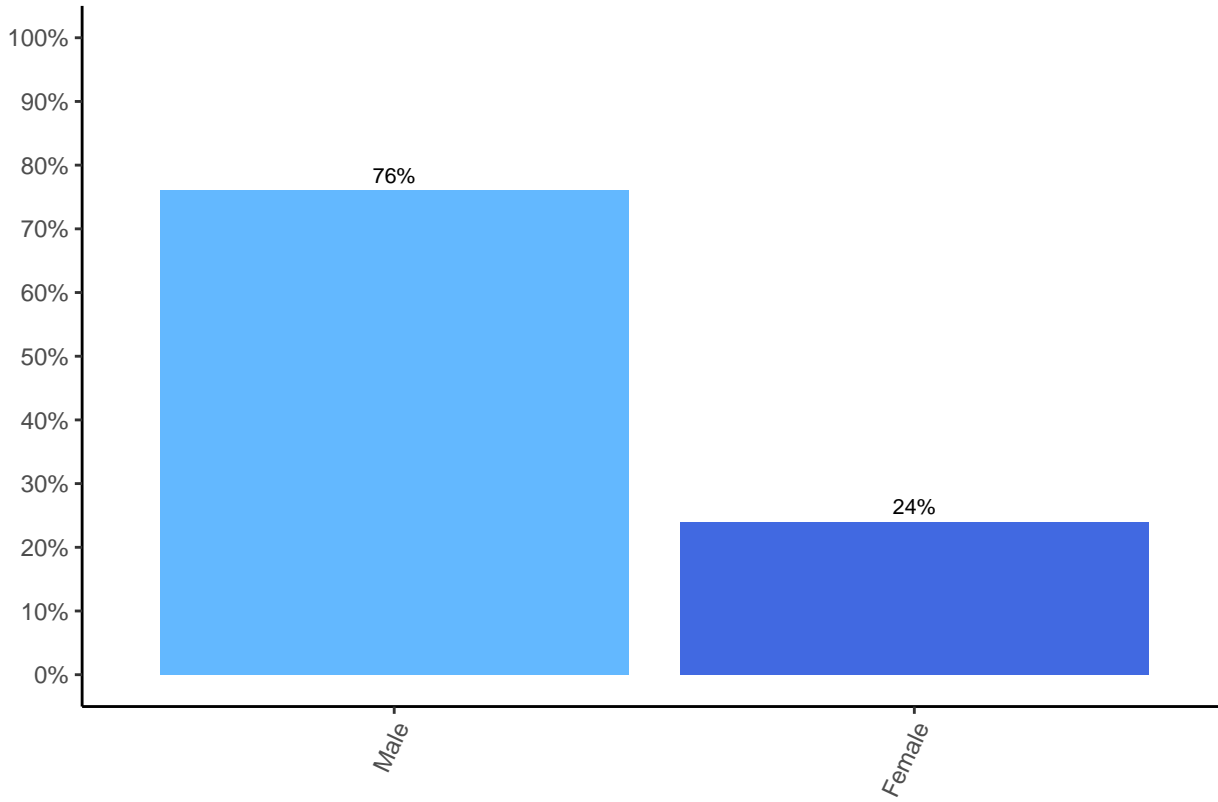


3.1.5 Doctoral Degrees Awarded by Gender

Table 59: Doctoral Degrees Awarded by Gender

Gender	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Female	21.20%	22.90%	21.80%	22.20%	22.40%	22.20%	23.30%	23.50%	23.60%	24.10%	26.00%
Male	78.80%	77.10%	78.20%	77.80%	77.60%	77.80%	76.70%	76.50%	76.40%	75.90%	74.00%

Doctoral Degrees Awarded by Gender

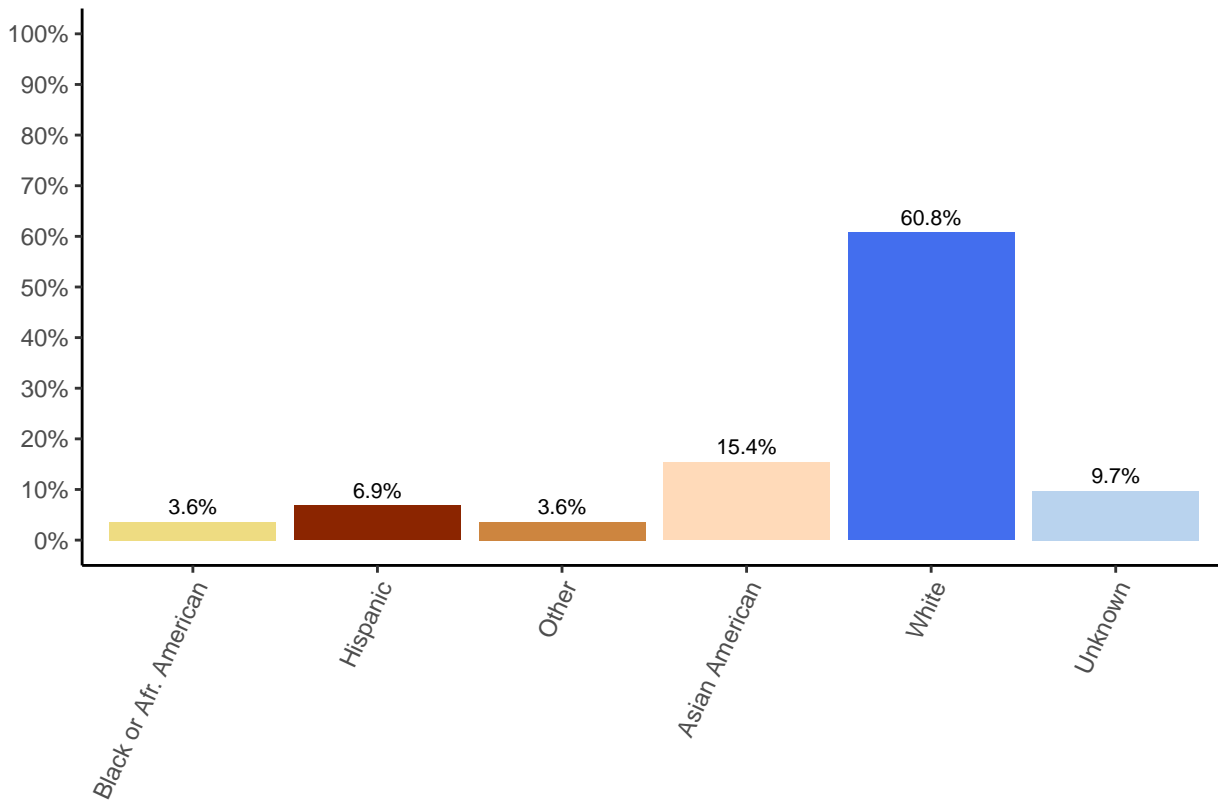


3.1.6 Doctoral Degrees Awarded by Race and Ethnicity

Table 60: Doctoral Degrees Awarded by Ethnicity

Ethnicity	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Black or Afr. American	4.4%	3.5%	4.1%	4.1%	3.6%	3.2%	4.4%	3.8%	4.2%	3.9%	3.6%
Hispanic	5.2%	4.2%	4.1%	4.7%	5.1%	6.1%	5.7%	6.3%	6.0%	6.1%	6.9%
Other	1.0%	1.6%	1.7%	1.7%	1.6%	2.2%	3.1%	2.9%	2.9%	2.8%	3.6%
Asian American	14.0%	15.1%	14.1%	13.5%	10.4%	14.1%	14.9%	14.8%	13.9%	15.3%	15.4%
White	65.7%	60.3%	61.1%	61.8%	65.1%	62.9%	62.0%	62.2%	62.0%	61.1%	60.8%
Unknown	9.7%	15.3%	14.9%	14.2%	14.2%	11.5%	9.9%	10.0%	11.1%	10.8%	9.7%

Doctoral Degrees Awarded by Race and Ethnicity

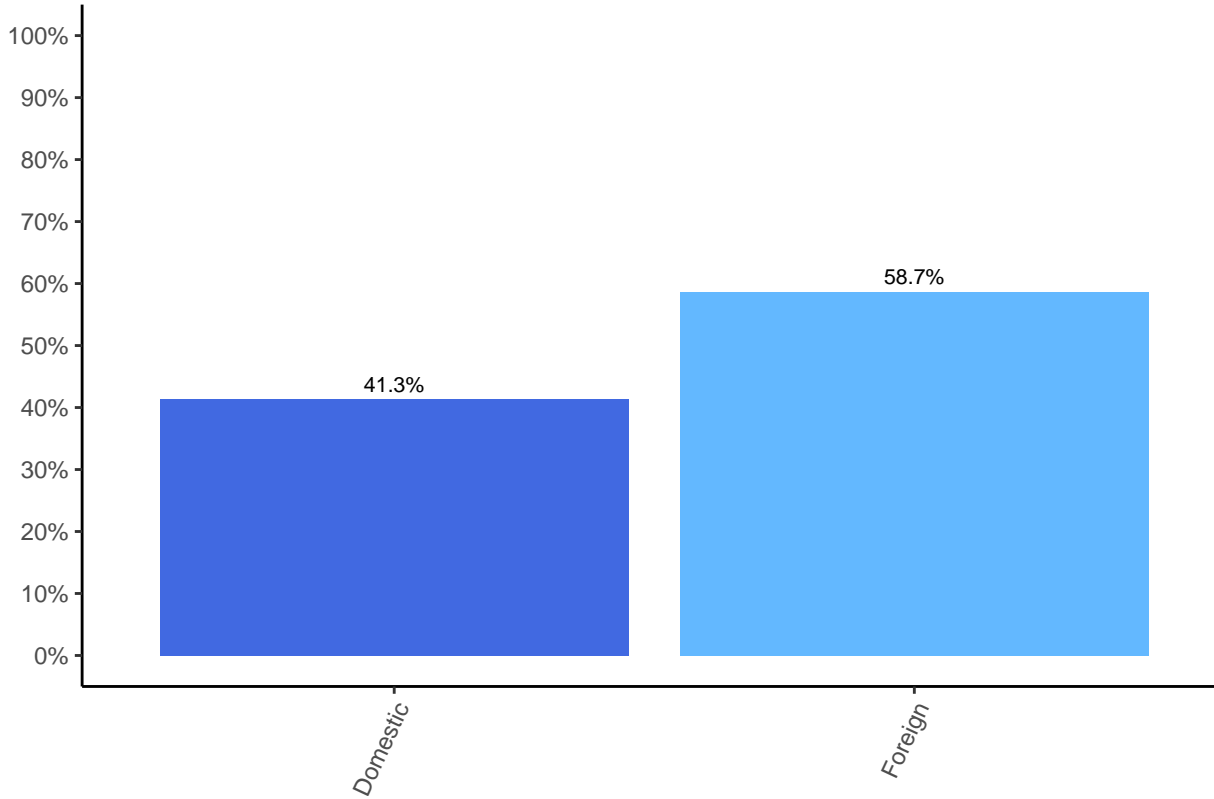


3.1.7 Doctoral Degrees Awarded by Residency

Table 61: Doctoral Degrees Awarded by Residency

Nationality	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Foreign	54.2%	54.2%	53.3%	55.1%	54.8%	54.7%	54.8%	55.7%	56.3%	56.5%	58.7%
Domestic	45.8%	45.8%	46.7%	44.9%	45.2%	45.3%	45.2%	44.3%	43.7%	43.5%	41.3%

Doctoral Degrees Awarded by Residency



3.1.8 Doctoral Degrees Awarded by Race, Ethnicity, and Gender

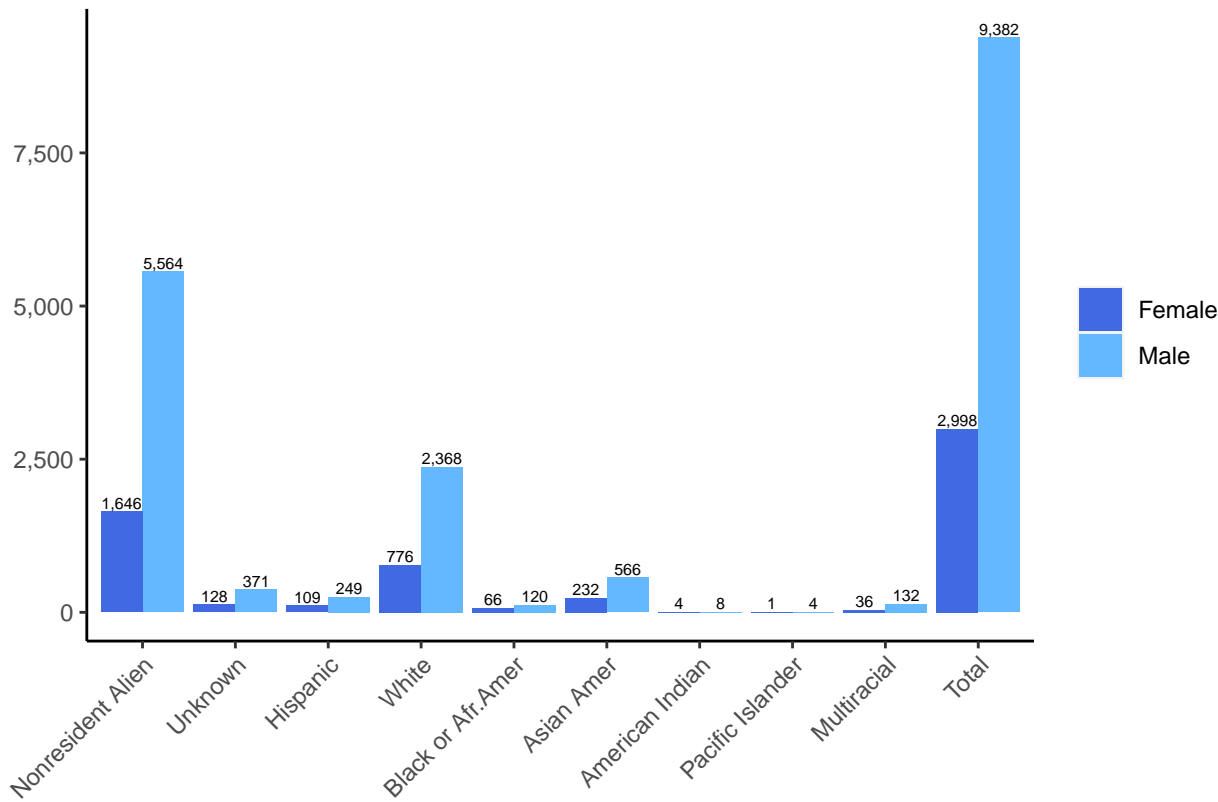
Table 62: Doctoral Degrees Awarded by Race, Ethnicity, and Gender 12,380*

Ethnicity	Degrees
Nonresident Alien Male	5,564
Nonresident Alien Female	1,646
Unknown Male	371
Unknown Female	128
Hispanic Male	249
Hispanic Female	109
White Male	2,368
White Female	776
Black or Afr. American Male	120
Black or Afr. American Female	66
Asian American Male	566
Asian American Female	232
American Indian Male	8
American Indian Female	4
Native Hawaiian/Other Pacific Islander Male	4
Native Hawaiian/Other Pacific Islander Female	1
Multiracial Male	132
Multiracial Female	36
Total Male	9,382
Total Female	2,998

* Total degree includes 0 total Non binary graduates and 0 total Other Gender graduates.

* Includes 7 male and 2 female graduates from Puerto Rico.

Doctoral Degrees Awarded by Race, Ethnicity, and Gender



3.1.9 Top 50 Institutions Awarding Engineering Doctoral Degrees

Table 63: Top 50 Institutions Awarding Engineering Doctoral Degrees

No	Institutions	Degrees Awarded
1	Georgia Institute of Technology	397
2	Purdue University	380
3	University of Illinois at Urbana-Champaign	343
4	Stanford University	326
5	University of Michigan	316
6	Massachusetts Institute of Technology	288
7	Texas A&M University	283
8	Virginia Polytechnic Institute and State University	243
9	University of California, Berkeley	238
10	The University of Texas at Austin	236
11	North Carolina State University	223
12	University of California, San Diego	220
13	Carnegie Mellon University	211
14	Cornell University	178
15	The Ohio State University	177
16	Arizona State University	174
17	University of Washington in Seattle	168
18	University of Maryland, College Park	163
18	University of Southern California	163
20	University of California, Los Angeles	161
21	Missouri University of Science and Technology	153
22	Iowa State University	152
23	Northwestern University	148
24	University of Florida	147
25	University of Minnesota -Twin Cities	145
26	University of Idaho	143
27	University of Wisconsin-Madison	140
28	University of Central Florida	129
29	The Johns Hopkins University	121
30	Colorado School of Mines	120
31	University of Colorado Boulder	116
32	University of California, Irvine	115
33	University of California, Davis	111
34	The University of Texas at Arlington	108
35	Stony Brook University	107
35	The University of Texas at Dallas	107
37	Washington State University	104
38	Boston University	98
39	Oregon State University	93
40	University at Buffalo, SUNY	92
40	University of California, Santa Barbara	92
42	University of Illinois at Chicago	90

Table 63: Top 50 Institutions Awarding Engineering Doctoral Degrees (continued)

No	Institutions	Degrees Awarded
42	William Marsh Rice University	90
44	The George Washington University	89
44	University of Massachusetts Amherst	89
44	University of Tennessee, Knoxville	89
47	Clemson University	87
48	Rutgers, The State University of New Jersey, School of Engineering	85
48	University of Arizona	85
48	University of Utah	85

* 429 Institutions reported. Includes both part time and full time

3.1.10 Top 20 Institutions by Total Doctoral Degrees awarded to Underrepresented Minorities

Table 64: Top 20 Institutions by Total Doctoral Degrees awarded to Underrepresented Minorities

No	Institutions	Degrees Awarded
1	University of Michigan	27
2	Georgia Institute of Technology	21
3	The University of Texas at El Paso	18
4	University of California, Berkeley	16
4	Virginia Polytechnic Institute and State University	16
6	Stanford University	15
6	University of Florida	15
8	Arizona State University	14
8	Purdue University	14
10	University of California, Davis	11
11	Northwestern University	10
11	Texas A&M University	10
11	University of Arizona	10
14	Massachusetts Institute of Technology	9
14	University of California, San Diego	9
14	University of Puerto Rico, Mayaguez Campus	9
17	The Johns Hopkins University	8
17	The University of Texas at Dallas	8
17	University of California, Riverside	8
17	University of Colorado Boulder	8

* 429 Institutions included

3.1.11 Top 50 Institutions by Percentage of Doctoral Degrees awarded to Underrepresented Minorities

Table 65: Top 50 Institutions by Percentage of Doctoral Degrees awarded to Underrepresented Minorities

No	Institutions	Percent Underrepresented Minorities
1	University of Puerto Rico, Mayaguez Campus	100%
2	University of Tennessee, Chattanooga	50%
3	The University of Texas at El Paso	42.9%
4	Rowan University	40%
5	Tennessee State University	33.3%
6	Prairie View A & M University	28.6%
7	Morgan State University	23.1%
8	Marquette University	20%
8	University of Bridgeport	20%
10	Temple University	16.7%
11	Boise State University	15.4%
11	University of Rhode Island	15.4%
13	Old Dominion University	14.7%
14	Texas State University	14.3%
14	University of North Dakota	14.3%
16	North Carolina A&T State University	13.8%
17	Florida Institute of Technology	12.8%
18	Baylor University	12.5%
18	California State University, Long Beach	12.5%
18	Louisiana Tech University	12.5%
21	University of Arizona	11.8%
22	New Mexico Institute of Mining and Technology	11.1%
22	Portland State University	11.1%
22	University of Maine	11.1%
25	University of Miami	10.7%
26	University of California, Merced	10.5%
27	University of Florida	10.2%
28	Jackson State University	10%
29	University of California, Davis	9.9%

Table 65: Top 50 Institutions by Percentage of Doctoral Degrees awarded to Underrepresented Minorities (*continued*)

No	Institutions	Percent Underrepresented Minorities
30	University of California, Riverside	9.9%
31	FAMU-FSU College of Engineering	9.8%
31	Mississippi State University	9.8%
33	Florida International University	9.3%
34	Ohio University	9.1%
35	Brown University	8.7%
36	University of Michigan	8.5%
37	University of Virginia	8.5%
38	Arizona State University	8%
39	The George Washington University	7.9%
40	Texas A&M University - Kingsville	7.7%
40	University of Massachusetts Dartmouth	7.7%
40	University of Nevada, Las Vegas	7.7%
43	The University of Texas at Dallas	7.5%
44	Clarkson University	7.1%
44	Embry Riddle Aeronautical University-Daytona Beach	7.1%
46	The University of Texas at San Antonio	6.9%
46	University of Colorado Boulder	6.9%
48	Northwestern University	6.8%
49	University of California, Berkeley	6.7%
50	Southern Illinois University Carbondale	6.7%

* 429 Institutions included

3.1.12 Top 20 Institutions Awarding Highest Percentage of Doctoral Degrees to Women

Table 66: Top 20 Highest Percentage of Doctoral Degrees to Women

No	Institutions	Percent Women
1	Alfred University	100%
1	Alfred University, NY State College of Ceramics	100%
1	Central Michigan University	100%
1	Lawrence Technological University	100%
5	Rowan University	80%
6	University of Massachusetts Dartmouth	61.5%
7	Idaho State University	60%
8	The Catholic University of America	58.3%
9	SUNY Polytechnic Institute	50%
9	University of Colorado Denver	50%
11	South Dakota School of Mines and Technology	45.5%
11	University of New Hampshire	45.5%
13	Texas State University	42.9%
13	University of Massachusetts-Boston	42.9%
15	Jackson State University	40%
15	Southern Illinois University Carbondale	40%
17	Boston University	38.8%
18	New Jersey Institute of Technology	37.8%
19	Louisiana Tech University	37.5%
19	South Dakota State University	37.5%

* 429 Institutions included

3.1.13 Top 50 Institutions Awarding Doctoral Degrees to Foreign Nationals

Table 67: Top 50 Institutions Awarding Doctoral Degrees to Foreign Nationals

No	Institutions	Degrees Awarded
1	Purdue University	277
2	University of Illinois at Urbana-Champaign	220
3	Georgia Institute of Technology	217
4	Texas A&M University	207
5	University of Michigan	159
6	The University of Texas at Austin	153
7	Massachusetts Institute of Technology	149
8	North Carolina State University	142
8	Virginia Polytechnic Institute and State University	142
10	Carnegie Mellon University	137
10	Stanford University	137
12	University of California, San Diego	122
12	University of Southern California	122
14	The Ohio State University	121
15	Arizona State University	109
15	Iowa State University	109
17	University of California, Los Angeles	104
18	University of California, Berkeley	97
19	University of Minnesota - Twin Cities	94
20	Cornell University	90

Table 67: Top 50 Institutions Awarding Doctoral Degrees to Foreign Nationals (*continued*)

No	Institutions	Degrees Awarded
21	University of Central Florida	89
21	University of Maryland, College Park	89
23	The University of Texas at Arlington	85
24	University of California, Irvine	83
24	University of Wisconsin-Madison	83
26	Stony Brook University	82
27	Washington State University	79
28	University of Idaho	78
29	The University of Texas at Dallas	74
30	University of Florida	73
31	Northwestern University	72
32	Michigan State University	71
33	University at Buffalo, SUNY	70
34	Missouri University of Science and Technology	69
35	University of Washington in Seattle	66
36	University of Massachusetts Amherst	64
37	Rutgers, The State University of New Jersey, School of Engineering	62
38	University of Illinois at Chicago	61
39	Northeastern University	57
39	The Johns Hopkins University	57
41	Boston University	55
42	Clemson University	54
43	Auburn University	53
43	University of Pittsburgh	53
45	Rensselaer Polytechnic Institute	51
45	Texas Tech University	51
45	University of Nebraska, Lincoln	51
48	Duke University	50
48	University of South Florida	50
50	University of California, Santa Barbara	49

* 429 Institutions included

3.1.14 Top 50 Institutions Awarding Bachelors Degrees (excluding computer science both inside and outside Engineering)

Table 68: Top 50 Institutions Awarding Bachelors Degrees (excluding computer science)

No	Institutions	Degrees Awarded
1	Georgia Institute of Technology	2,276
2	Purdue University	2,005
3	Texas A&M University	1,958
4	University of Illinois at Urbana-Champaign	1,739
5	Iowa State University	1,726
6	Arizona State University	1,675
7	Virginia Polytechnic Institute and State University	1,517
8	The University of Texas at Austin	1,399
9	The Ohio State University	1,397
10	North Carolina State University	1,368
11	University of Colorado Boulder	1,313
12	University of Florida	1,305
13	California Polytechnic State University, San Luis Obispo	1,213
14	University of Michigan	1,205
15	University of Central Florida	1,169
16	University of Maryland, College Park	1,077
17	Missouri University of Science and Technology	1,058
18	Oregon State University	1,021
19	University of California, Berkeley	1,013
20	University of Wisconsin-Madison	1,007
21	University of Washington in Seattle	1,003
22	California State Polytechnic University, Pomona	1,002
23	Rutgers, The State University of New Jersey, School of Engineering	988
24	San Jose State University	984
25	The University of Alabama	976
26	Clemson University	935
27	University of California, San Diego	929
28	Michigan State University	920
29	Rensselaer Polytechnic Institute	905
30	Stony Brook University	900
31	Louisiana State University	898
32	Colorado School of Mines	895
33	University of California, Irvine	883

Table 68: Top 50 Institutions Awarding Bachelors Degrees (excluding computer science) (*continued*)

No	Institutions	Degrees Awarded
34	Texas Tech University	877
35	Auburn University	869
36	University of South Florida	845
37	San Diego State University	827
38	University at Buffalo, SUNY	825
39	California State University, Long Beach	821
40	University of Minnesota -Twin Cities	818
41	Northeastern University	785
42	University of California, Davis	776
43	George Mason University	770
43	West Virginia University	770
45	Michigan Technological University	732
46	Rochester Institute of Technology	724
47	Worcester Polytechnic Institute	716
48	Florida International University	715
49	University of North Carolina at Charlotte	707
50	New Jersey Institute of Technology	703

* 424 Institutions included

3.1.15 Top 50 Institutions Awarding Masters Degrees (excluding computer science both inside and outside Engineering)

Table 69: Top 50 Institutions Awarding Masters Degrees (excluding computer science)

No	Institutions	Degrees Awarded
1	Northeastern University	1,737
2	University of Southern California	1,365
3	Fu Foundation School of Engineering and Applied Science - Columbia University	1,274
4	Carnegie Mellon University	1,221
5	Georgia Institute of Technology	1,143
6	University of Michigan	1,007
7	University of California, Berkeley	892
8	Cornell University	862
9	San Jose State University	859
10	Arizona State University	855
11	Stanford University	837
12	University of Washington in Seattle	829
13	Massachusetts Institute of Technology	767
14	Texas A&M University	741
15	North Carolina State University	728
16	University of Illinois at Urbana-Champaign	667
17	University of California, San Diego	665
18	University of Colorado Boulder	657
19	Northwestern University	646
20	NYU Tandon School of Engineering	612
21	Purdue University	577
22	University of Florida	544
23	The University of Texas at Arlington	540
24	University of Pennsylvania	505
25	University at Buffalo, SUNY	485
26	The Johns Hopkins University	471
27	University of Maryland, College Park	453
28	Duke University	452
29	University of California, Los Angeles	450
30	The George Washington University	448
31	George Mason University	439
32	New Jersey Institute of Technology	412
33	Virginia Polytechnic Institute and State University	391
34	The University of Texas at Austin	383
35	University of Michigan-Dearborn	378
36	Clemson University	370
37	University of Wisconsin-Madison	363
38	Boston University	356
39	The Ohio State University	353
40	Santa Clara University	351
41	Washington University in St. Louis	347
42	The Pennsylvania State University	346
43	Missouri University of Science and Technology	343
44	Worcester Polytechnic Institute	324
45	University of South Florida	320
46	Wayne State University	314
47	Colorado School of Mines	306
48	University of Central Florida	302
49	Drexel University	299
50	Illinois Institute of Technology	293

* 424 Institutions included

3.1.16 Top 50 Institutions Awarding Doctoral Degrees (excluding computer science both inside and outside Engineering)

Table 70: Top 50 Institutions Awarding Doctoral Degrees (excluding computer science)

No	Institutions	Degrees Awarded
1	Georgia Institute of Technology	355
2	Purdue University	352
3	University of Illinois at Urbana-Champaign	295
4	Stanford University	294
5	Massachusetts Institute of Technology	288
6	University of Michigan	284
7	Texas A&M University	262
8	The University of Texas at Austin	220
9	Virginia Polytechnic Institute and State University	215
10	University of California, Berkeley	198
11	North Carolina State University	194
12	University of California, San Diego	182
13	University of Washington in Seattle	168
14	Cornell University	151
15	Missouri University of Science and Technology	149
16	The Ohio State University	146
17	Iowa State University	143
17	University of California, Los Angeles	143
19	Arizona State University	141
19	University of Idaho	141

Table 70: Top 50 Institutions Awarding Doctoral Degrees (excluding computer science) (continued)

No	Institutions	Degrees Awarded
21	University of Florida	136
22	Northwestern University	134
23	University of Southern California	132
24	University of Maryland, College Park	131
25	Carnegie Mellon University	129
26	University of Minnesota - Twin Cities	123
27	Colorado School of Mines	118
27	University of Wisconsin-Madison	118
29	University of Colorado Boulder	116
30	The Johns Hopkins University	103
31	University of Central Florida	100
32	Washington State University	92
33	University of California, Davis	90
34	Boston University	88
35	The University of Texas at Arlington	85
36	University of Tennessee, Knoxville	84
37	University of Arizona	82
38	Clemson University	80
38	University of California, Irvine	80
38	William Marsh Rice University	80
41	Oregon State University	76
42	Stony Brook University	75
42	University of Illinois at Chicago	75
42	University of Pittsburgh	75
45	Duke University	74
46	Michigan State University	72
46	University at Buffalo, SUNY	72
48	Rutgers, The State University of New Jersey, School of Engineering	71
48	The University of Texas at Dallas	71
48	University of South Florida	71

* 424 Institutions included

3.1.17 Institutions with the Highest Percentage of Doctoral Degrees to Foreign Nationals

Table 71: Highest Percentage of Doctoral Degrees to Foreign Nationals (min 25 awarded)

No	Institutions	Percentage
1	Howard University	100%
1	Lamar University	100%
1	San Diego State University	100%
1	The University of Mississippi	100%
1	University of Michigan-Dearborn	100%
6	Embry Riddle Aeronautical University-Daytona Beach	92.9%
7	University of North Texas	90.3%
8	University of Georgia	88.2%
9	South Dakota State University	87.5%
9	The University of Toledo	87.5%
11	Pace University	85.7%
11	University of Massachusetts-Boston	85.7%
13	Illinois Institute of Technology	85%
14	Oakland University	84.6%
14	Texas A&M University - Kingsville	84.6%
16	Michigan State University	84.5%
17	The State University of New York at Binghamton	81.4%
18	New Jersey Institute of Technology	81.1%
19	University of Nebraska, Lincoln	81%
20	University of Louisville	80%
21	University of Missouri	79.3%
22	Florida Atlantic University	79.2%
23	Oklahoma State University	78.8%
24	The University of Texas at Arlington	78.7%
25	The University of Tulsa	78.3%
26	Florida International University	77.8%
26	New Mexico Institute of Mining and Technology	77.8%
26	Villanova University	77.8%
29	Ohio University	77.3%
29	Texas Tech University	77.3%
31	Western Michigan University	76.9%
32	Stony Brook University	76.6%
33	NYU Tandon School of Engineering	76.3%
34	University at Buffalo, SUNY	76.1%
35	Washington State University	76%
36	University of Oklahoma, Gallogly College of Engineering	75.6%
37	Syracuse University	75%
37	The Catholic University of America	75%

Table 71: Highest Percentage of Doctoral Degrees to Foreign Nationals (min 25 awarded) (continued)

No	Institutions	Percentage
37	University of Colorado Colorado Springs	75%
37	University of Connecticut	75%
37	University of Hawaii at Manoa	75%
37	University of Miami	75%
37	Wichita State University	75%
44	University of Southern California	74.8%
45	Auburn University	74.6%
46	University of Arkansas at Little Rock	73.7%
47	Southern Illinois University Carbondale	73.3%
48	Texas A&M University	73.1%
49	Purdue University	72.9%
49	Rutgers, The State University of New Jersey, School of Engineering	72.9%

* 429 Institutions included

3.1.18 Institutions with the Lowest Percentage of Doctoral Degrees to Foreign Nationals

Table 72: Institutions with the Lowest Percentage of Doctoral Degrees to Foreign Nationals (min 25 awarded)

No	Institutions	Percentage
1	University of Washington in Seattle	39.3%
2	University of California-Santa Cruz	40%
2	University of New Orleans	40%
4	The University of Alabama in Huntsville	40.5%
4	University of California, Davis	40.5%
6	University of California, Berkeley	40.8%
7	The George Washington University	41.6%
8	Stanford University	42%
9	Vanderbilt University	43.9%
10	University of Maine	44.4%
11	The University of New Mexico	44.7%
12	Missouri University of Science and Technology	45.1%
13	The University of Memphis	45.5%
14	University of Rhode Island	46.2%
15	Tulane University	46.7%
16	New Mexico State University	47.1%
16	Old Dominion University	47.1%
16	The Johns Hopkins University	47.1%
19	Oregon State University	47.3%
20	University of Pennsylvania	47.4%
21	Brown University	47.8%
22	University of Delaware	47.9%
22	University of Virginia	47.9%
24	George Mason University	48.5%
25	Northwestern University	48.6%

* 429 Institutions included

3.1.19 Top 10 Institutions by Total Doctoral Degrees awarded in Engineering (General)

Table 73: Top 10 Institutions by Total Doctoral Degrees awarded in Engineering (General)

No	Institutions	Degrees Awarded
1	Dartmouth College	23
1	University of Nebraska, Lincoln	23
3	Villanova University	18
4	Morgan State University	13
5	Arizona State University	9
6	Lamar University	7
7	Wright State University	6
8	Rochester Institute of Technology	5
9	Saint Louis University	4
10	Jackson State University	3

* 123 Institutions included

3.2 ENGINEERING DOCTORAL ENROLLMENT

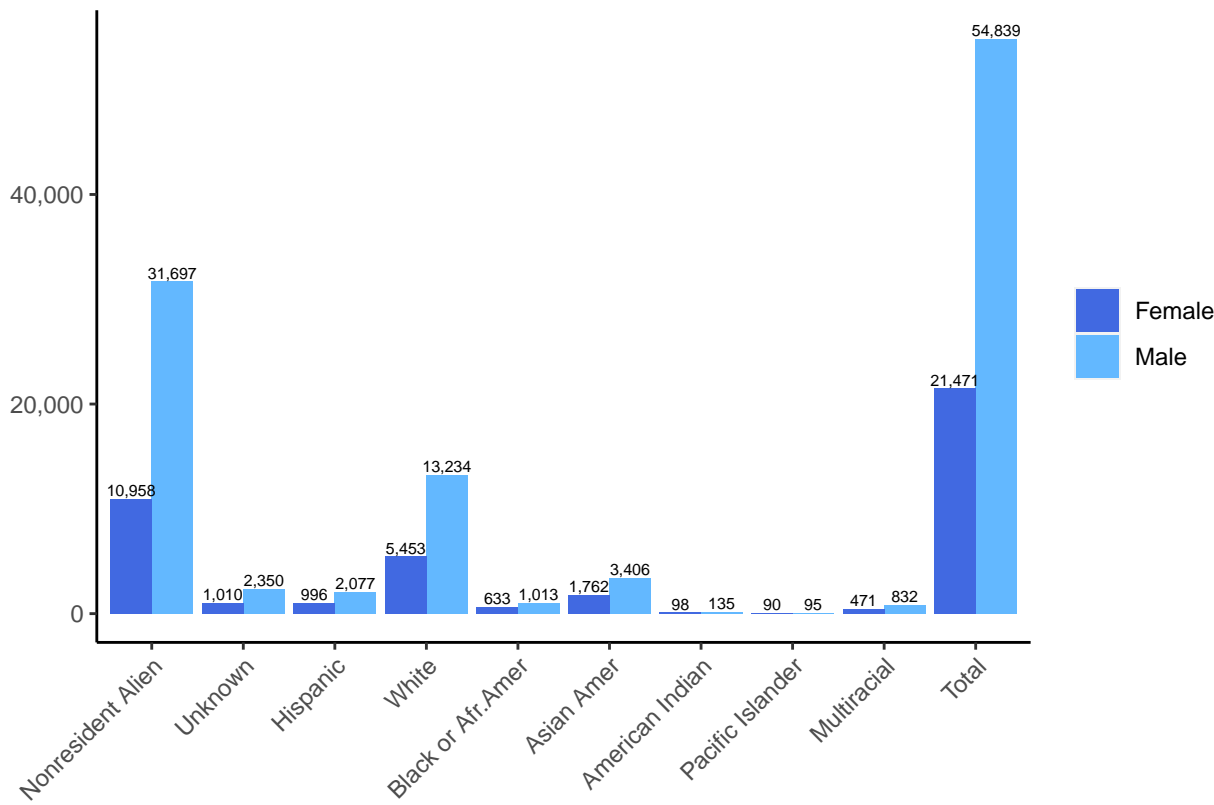
3.2.1 Doctoral Enrollment by Race, Ethnicity, and Gender

Table 74: Doctoral Enrollment by Race, Ethnicity, and Gender 76,310*

Ethnicity	Enrollments
Nonresident Alien Male	31,697
Nonresident Alien Female	10,958
Unknown Male	2,350
Unknown Female	1,010
Hispanic Male	2,077
Hispanic Female	996
White Male	13,234
White Female	5,453
Black or Afr. American Male	1,013
Black or Afr. American Female	633
Asian American Male	3,406
Asian American Female	1,762
American Indian Male	135
American Indian Female	98
Native Hawaiian/Other Pacific Islander Male	95
Native Hawaiian/Other Pacific Islander Female	90
Multiracial Male	832
Multiracial Female	471
Total Male	54,839
Total Female	21,471

* Includes 73 male and 37 female enrolled students from Institutions in Puerto Rico.

Doctoral Enrollment by Race, Ethnicity, and Gender



3.2.2 Doctoral Enrollment by Engineering Discipline:(Full time and Part time)

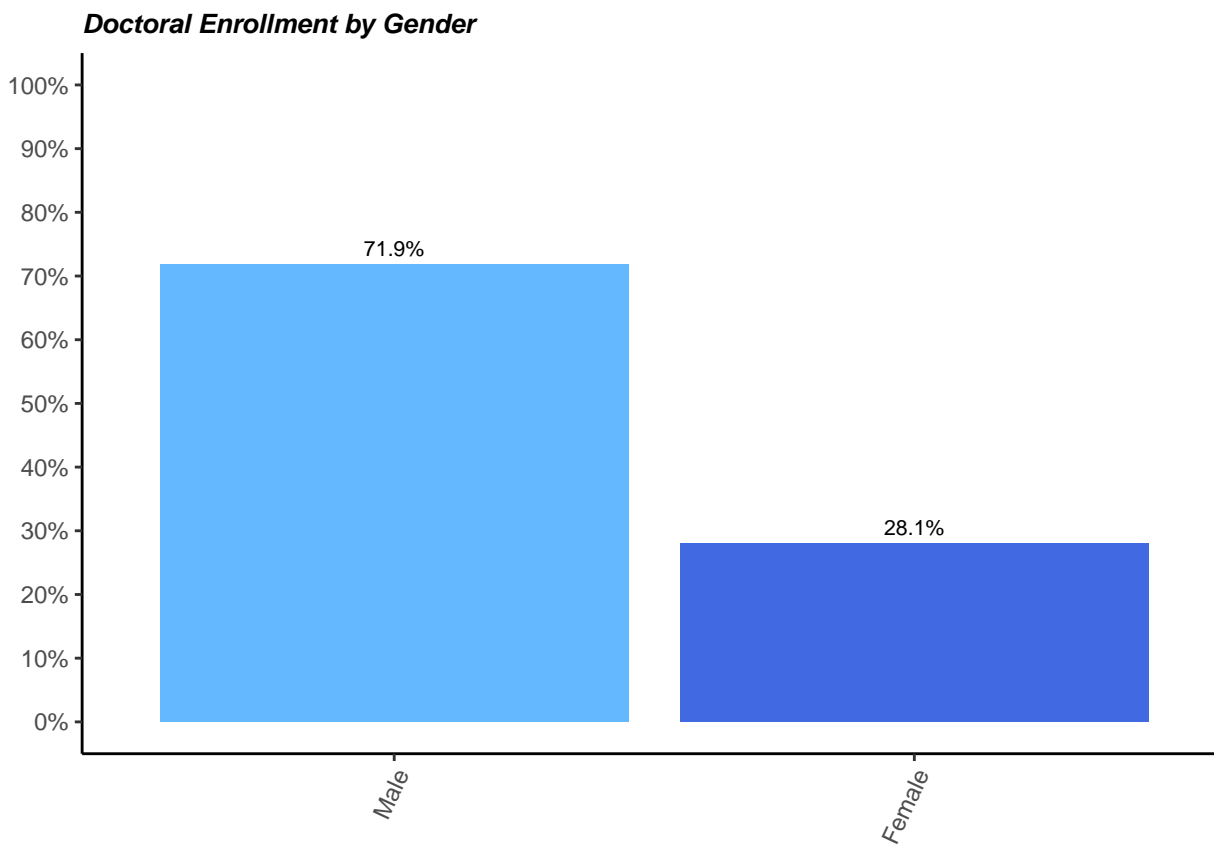
Table 75: Doctoral Enrollment by Engineering Discipline:(Full time and Part time)

Discipline Name	Full Time	Part Time
Aerospace	2,506	240
Architectural	82	1
Biological and Agricultural	651	90
Biomedical	7,407	498
Chemical	6,461	321
Civil	4,446	684
Civil/Environmental	1,688	242
Computer	1,683	328
Computer Sci. (inside Eng.)	9,380	1,192
Computer Sci. (outside Engr.)	3,986	425
Electrical	6,194	838
Electrical/Computer	8,019	952
Engineering (General)	710	224
Engineering Management	170	191
Engr. Science and Engr. Physics	915	82
Envr. Eng	943	197
Industrial/Manufacturing/Systems	3,101	731
Mechanical	10,133	1,120
Metallurgical and Matrls.	4,778	260
Mining	151	71
Nuclear	824	79
Other	5,577	1,047
Petroleum	491	103

3.2.3 Doctoral Enrollment by Gender

Table 76: Doctoral Enrollment by Gender

Gender	Percentage
Female	28.1%
Male	71.9%

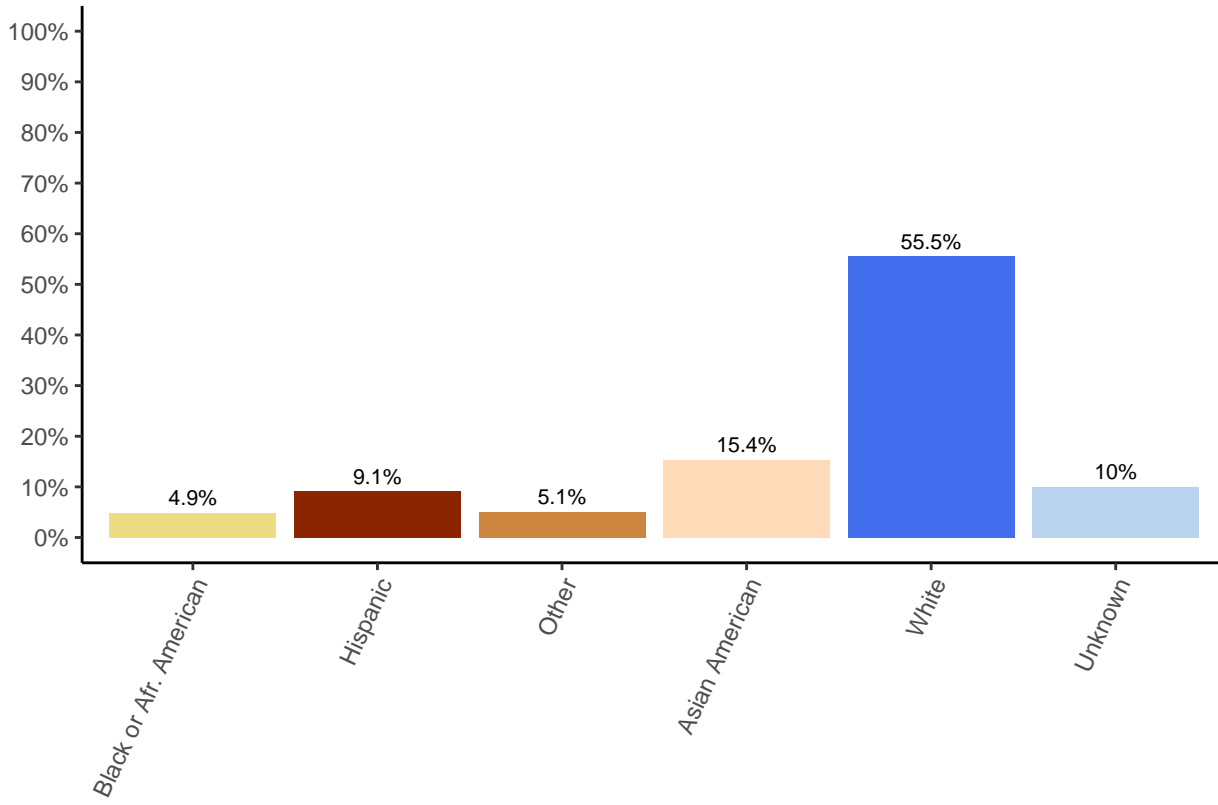


3.2.4 Doctoral Enrollment by Race and Ethnicity

Table 77: Doctoral Enrollment by Race and Ethnicity*

Ethnicity	Percentage
Black or Afr. American	4.9%
Hispanic	9.1%
Other	5.1%
Asian American	15.4%
White	55.5%
Unknown	10%

Doctoral Enrollment by Race and Ethnicity

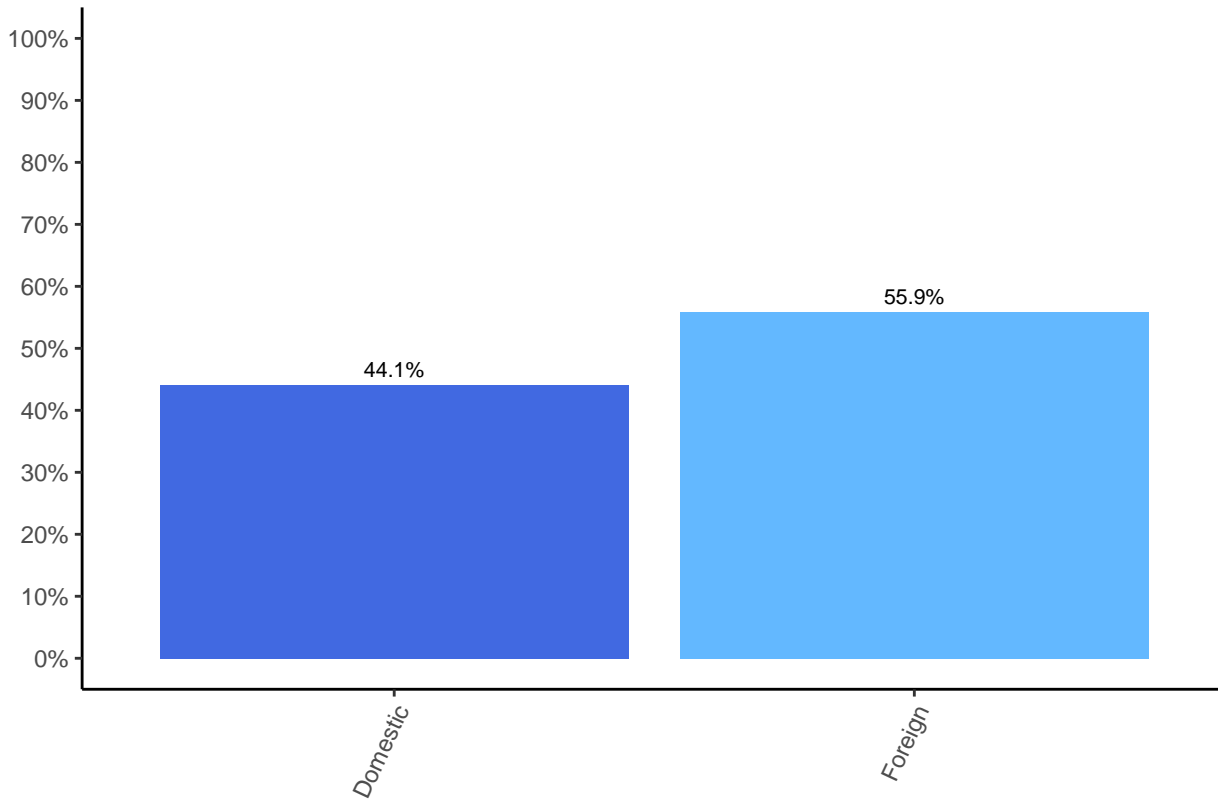


3.2.5 Doctoral Enrollment by Residency

Table 78: Doctoral Enrollment by Residency

Nationality	Percentage
Foreign	55.9%
Domestic	44.1%

Doctoral Enrollment by Residency



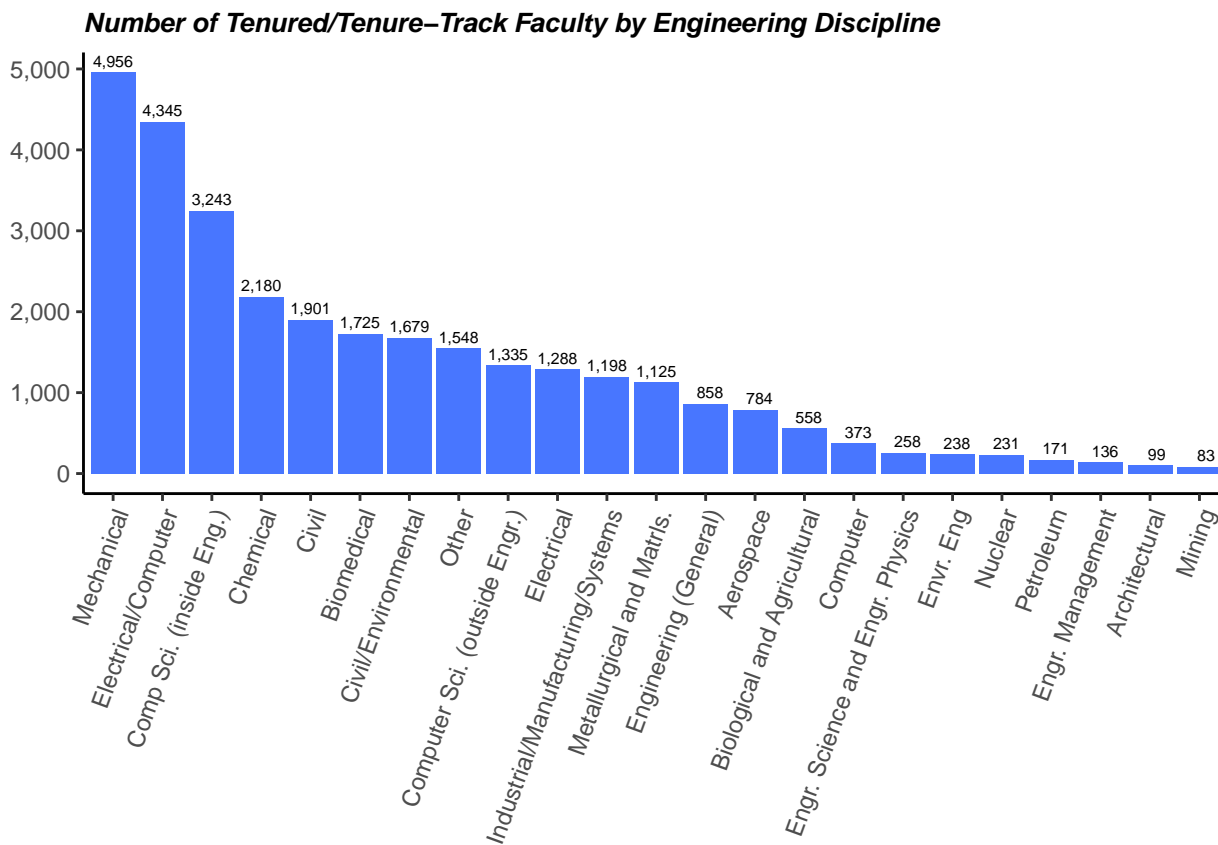
4 ENGINEERING FACULTY , FALL 2020

4.1 Number of Tenured/Tenure-Track Faculty by Engineering Discipline

Table 79: Number of Tenured/Tenure-Track Faculty by Engineering Discipline: 28,977

Discipline Name	Number of Faculty
Mechanical	4,956
Electrical/Computer	4,345
Comp Sci. (inside Eng.)	3,243
Chemical	2,180
Civil	1,901
Biomedical	1,725
Civil/Environmental	1,679
Other	1,548
Computer Sci. (outside Engr.)	1,335
Electrical	1,288
Industrial/Manufacturing/Systems	1,198
Metallurgical and Matrils.	1,125
Engineering (General)	858
Aerospace	784
Biological and Agricultural	558
Computer	373
Engr. Science and Engr. Physics	258
Envr. Eng	238
Nuclear	231
Petroleum	171
Engr. Management	136
Architectural	99
Mining	83

* Total does not include computer science (outside engineering).

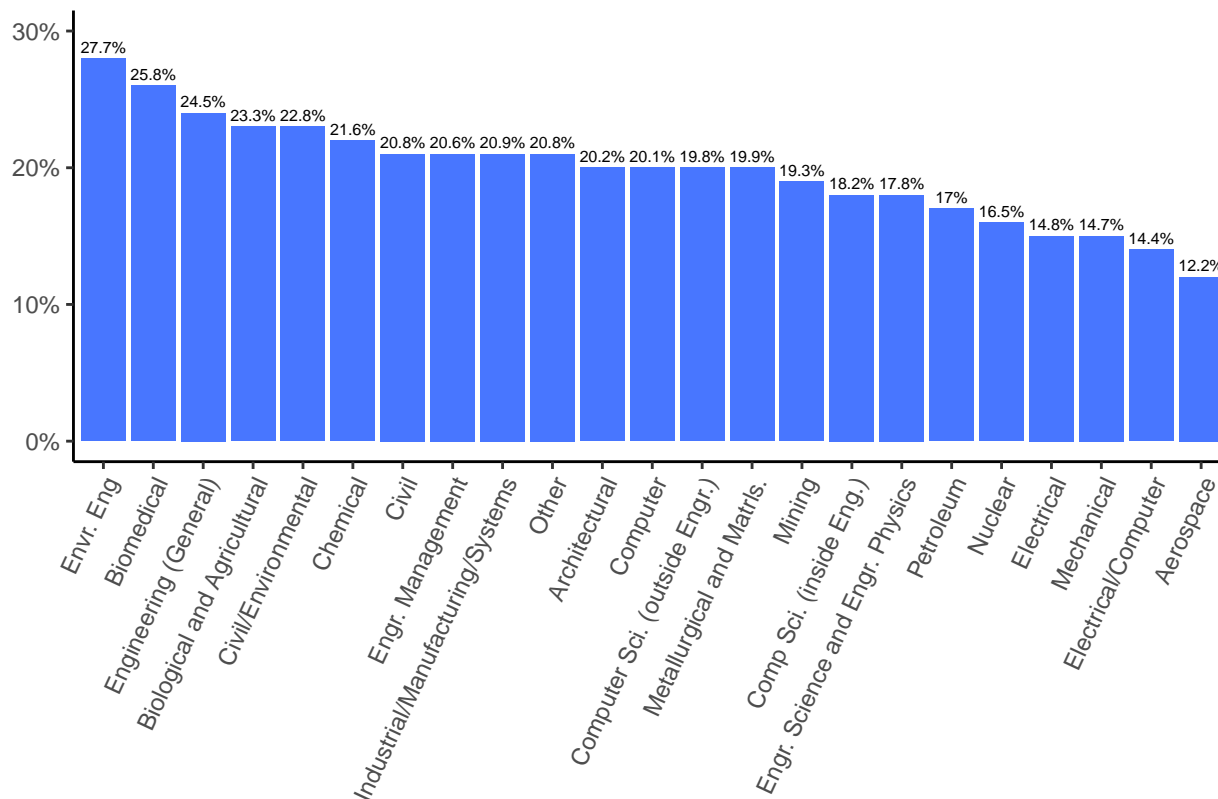


4.2 Percentage of Female Tenured/Tenure-Track Faculty by Discipline

Table 80: Percentage of Female Tenured/Tenure-Track Faculty by Discipline: 18.6 % of Total

Discipline Name	Percent Women
Envr. Eng	27.7%
Biomedical	25.8%
Engineering (General)	24.5%
Biological and Agricultural	23.3%
Civil/Environmental	22.8%
Chemical	21.6%
Industrial/Manufacturing/Systems	20.9%
Civil	20.8%
Other	20.8%
Engr. Management	20.6%
Architectural	20.2%
Computer	20.1%
Metallurgical and Matrls.	19.9%
Computer Sci. (outside Engr.)	19.8%
Mining	19.3%
Comp Sci. (inside Eng.)	18.2%
Engr. Science and Engr. Physics	17.8%
Petroleum	17%
Nuclear	16.5%
Electrical	14.8%
Mechanical	14.7%
Electrical/Computer	14.4%
Aerospace	12.2%

Percentage of Female Tenured/Tenure-Track Faculty by Discipline



4.3 Top 50 Institutions by Number of Tenured/Tenure-Track Faculty

Table 81: Top 50 Institutions by Number of Tenured/Tenure-Track Faculty

No	Institutions	Number of Faculty
1	Georgia Institute of Technology	583
2	University of Illinois at Urbana-Champaign	474
3	Texas A&M University	448
4	University of Michigan	429
5	The Pennsylvania State University	400
6	Purdue University	394
7	Massachusetts Institute of Technology	393
8	Virginia Polytechnic Institute and State University	389
9	North Carolina State University	377
10	Arizona State University	326
11	The University of Texas at Austin	317
12	Florida Atlantic University	316
12	University of Florida	316
14	Carnegie Mellon University	301
15	Rensselaer Polytechnic Institute	295
16	The Ohio State University	294
17	Stanford University	286

Table 81: Top 50 Institutions by Number of Tenured/Tenure-Track Faculty (*continued*)

No	Institutions	Number of Faculty
18	University of Washington in Seattle	283
19	Cornell University	275
20	University of Wisconsin-Madison	264
21	University of Maryland, College Park	263
22	Iowa State University	259
23	University of California, Berkeley	257
24	Clemson University	244
24	University of California, San Diego	244
26	University of Notre Dame	240
27	University of Minnesota -Twin Cities	238
28	Michigan State University	235
29	University of Colorado Boulder	234
30	University of California, Irvine	233
31	University of Utah	223
32	The Johns Hopkins University	222
33	Northeastern University	220
34	Northwestern University	207
35	University of California, Davis	206
36	Fu Foundation School of Engineering and Applied Science - Columbia University	205
36	Oregon State University	205
38	University of Pittsburgh	198
39	University of Nebraska, Lincoln	196
40	University of Massachusetts Amherst	192
41	Colorado School of Mines	189
41	University of Southern California	189
43	University of California, Los Angeles	187
44	University of Tennessee, Knoxville	183
45	Duke University	178
46	University at Buffalo, SUNY	176
47	University of Central Florida	175
48	Auburn University	174
49	The University of Texas at Arlington	172
50	Stony Brook University	171

* 310 Institutions included

4.4 Top 20 Institutions by Number of Underrepresented Minorities Tenured/Tenure-Track Faculty

Table 82: Top 20 Institutions by Number of Underrepresented Minorities Tenured/Tenure-Track Faculty

No	Institutions	Number of Faculty
1	University of Puerto Rico, Mayaguez Campus	138
2	Texas A&M University	47
3	Florida Atlantic University	45
4	University of Florida	37
5	Georgia Institute of Technology	35
6	Massachusetts Institute of Technology	34
7	The University of Texas at El Paso	31
8	Virginia Polytechnic Institute and State University	30
9	Purdue University	29
10	University of Illinois at Urbana-Champaign	28
10	University of Miami	28
12	Howard University	26
13	North Carolina State University	24
14	University of California, San Diego	22
15	Morgan State University	21
15	North Carolina A&T State University	21
15	Rensselaer Polytechnic Institute	21
15	The Pennsylvania State University	21
15	University of Michigan	21
20	Arizona State University	20

* 310 Institutions included

4.5 Top 20 Institutions by Percentage of Underrepresented Minorities Tenured/Tenure-Track Faculty

Table 83: Top 20 Institutions by Percentage of Underrepresented Minorities Tenured/Tenure-Track Faculty

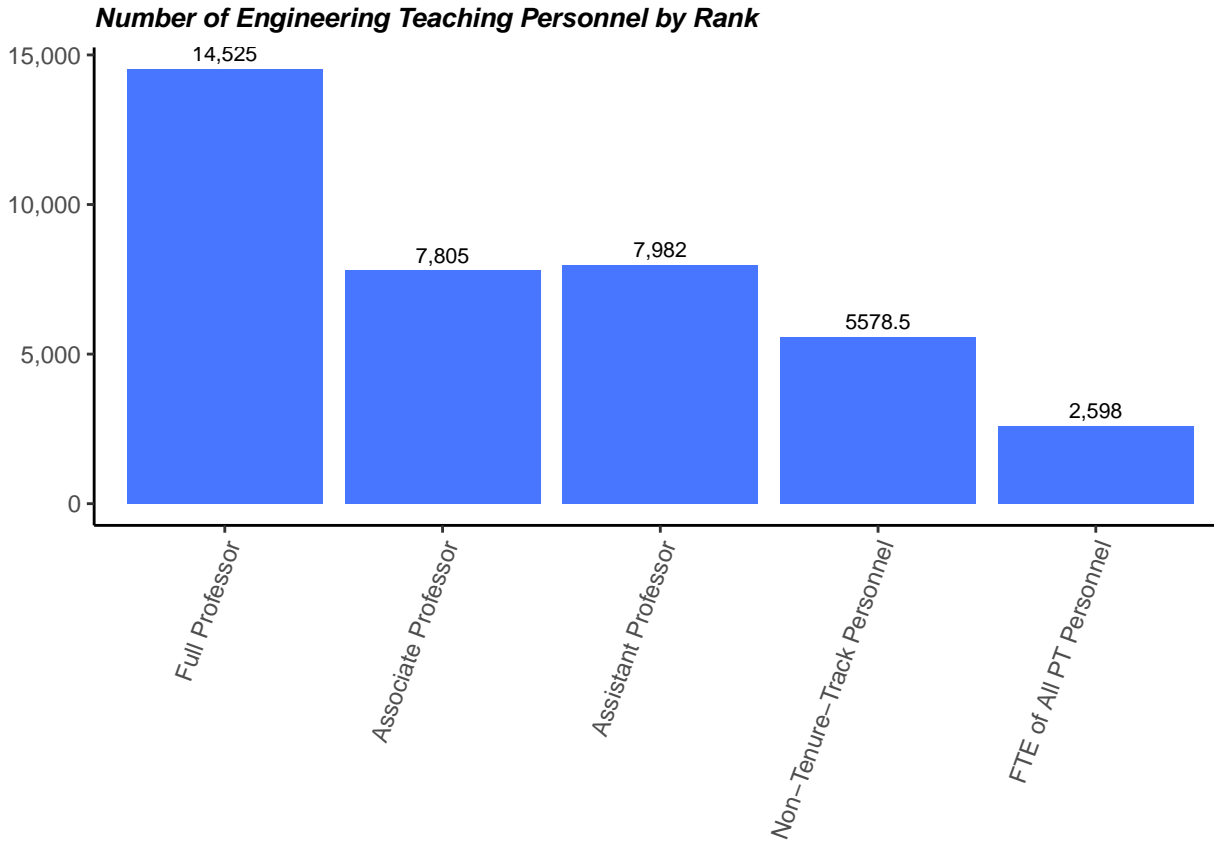
No	Institutions	Percent Underrepresented Minorities
1	University of Puerto Rico, Mayaguez Campus	93.2%
2	Virginia State University	60%
3	Howard University	57.8%
4	Morgan State University	51.2%
5	The University of Texas at El Paso	35.6%
6	Jackson State University	31.2%
7	Central State University	30.8%
8	University of Tennessee, Chattanooga	29.9%
9	North Carolina A&T State University	27.6%
10	University of Miami	26.2%
11	Tuskegee University	25.8%
12	Loyola University Chicago	25%
13	St. Mary's University	23.1%
14	University of Tennessee-Chattanooga	22.7%
15	Texas State University	22.2%
16	Kennesaw State University	22%
17	John Brown University	20%
17	Winona State University	20%
19	Florida Institute of Technology	19.6%
20	The University of Texas Rio Grande Valley	19%

* 310 Institutions included

4.6 Number of Engineering Teaching Personnel by Rank

Table 84: Number of Engineering Teaching Personnel by Rank 38,488

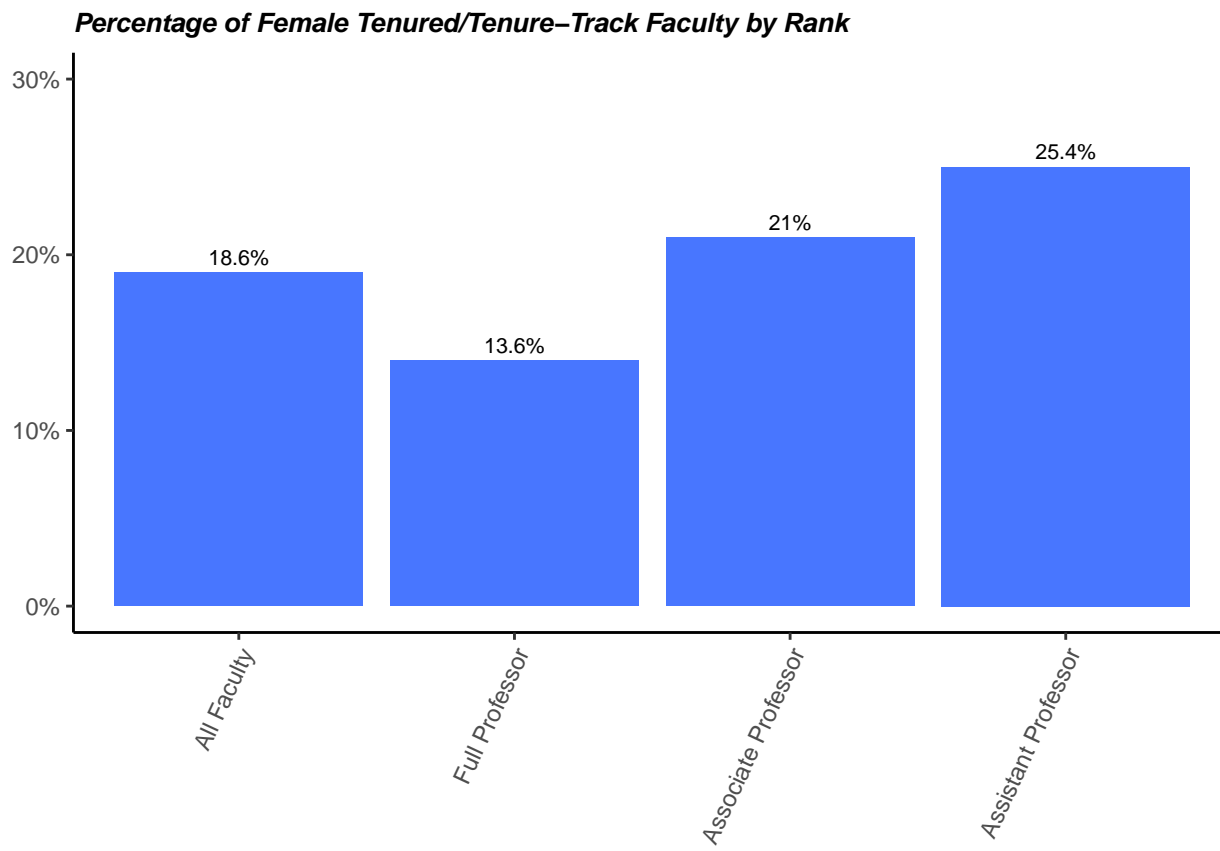
Rank	Number of Faculty
Full Professor	14,525
Associate Professor	7,805
Assistant Professor	7,982
Non-Tenure-Track Personnel	5,578.5
FTE of All PT Personnel	2,598



4.7 Percentage of Female Tenured/Tenure-Track Faculty by Rank

Table 85: Percentage of Female Tenured/Tenure-Track Faculty by Rank

Rank	Percent
All Faculty	18.6%
Full Professor	13.6%
Associate Professor	21%
Assistant Professor	25.4%



4.8 Top 50 Institutions with Highest Percentage of Female Tenured/Tenure Track Faculty

Table 86: Top 50 Institutions with Highest Percentage of Female Tenured Tenure Track Faculty

No	Institutions	Percent Women
1	Smith College	70%
2	Sweet Briar College	66.7%
3	Humboldt State University	62.5%
4	Cameron University	60%
4	Campbell University	60%
4	Saint Ambrose University	60%
7	Olin College of Engineering	47.6%
8	Seattle University	42.9%
9	University of Bridgeport	38.9%
10	U.S. Coast Guard Academy	35.3%
11	University of Portland	35%
12	Middle Tennessee State University	33.3%
12	Santa Clara University	33.3%
12	Swarthmore College	33.3%
12	University of San Diego	33.3%
16	San Jose State University	32.6%
17	Lafayette College	32.6%
18	Mercer University	32.4%
19	California State University, Long Beach	31.6%
20	University of St. Thomas	31.4%
21	California Baptist University	31%
22	Loyola Marymount University	30%
22	Union College	30%
24	Roger Williams University	29.4%
25	University of Massachusetts Lowell	29.3%
26	Texas Christian University	28.6%
27	University of Wisconsin, Platteville	28.3%
28	University of California, Merced	28.3%
29	University of Hartford	28%
30	University of New Haven	27.8%
31	Wentworth Institute of Technology	27.5%
32	Fairfield University	27.3%
33	University of Puerto Rico, Mayaguez Campus	27%
34	Gannon University	26.9%
34	Trine University	26.9%
36	Gonzaga University	26.7%
36	New York Institute of Technology	26.7%
38	University of Washington in Seattle	26.5%
39	Rowan University	26.5%
40	Harvey Mudd College	26.3%
41	Tufts University	26.1%
42	Valparaiso University	25.9%
43	Oregon State University	25.9%
44	University of Maryland, Baltimore County	25.8%
45	Bucknell University	25.8%
46	University of California, Irvine	25.8%
47	Stevens Institute of Technology	25.7%
48	Carnegie Mellon University	25.2%
49	Abilene Christian University	25%
49	Baker College	25%

* 310 Institutions included

4.9 Top 20 Institutions with Highest Number of Female Tenured/Tenure-Track Faculty

Table 87: Top 20 Institutions with Highest Number of Female Tenured/Tenure-Track Faculty

No	Institutions	Number of Faculty
1	Georgia Institute of Technology	115
2	University of Illinois at Urbana-Champaign	94
3	University of Michigan	90
4	Massachusetts Institute of Technology	79
4	Purdue University	79
6	University of Florida	77
7	Carnegie Mellon University	76
7	The Pennsylvania State University	76
9	University of Washington in Seattle	75
10	Virginia Polytechnic Institute and State University	73
11	Arizona State University	72
12	Texas A&M University	71
13	North Carolina State University	69
14	Cornell University	65
14	The University of Texas at Austin	65
16	The Ohio State University	63
17	University of California, Irvine	60
18	Stanford University	59
18	University of California, Berkeley	59
20	University of Colorado Boulder	58

* 310 Institutions included

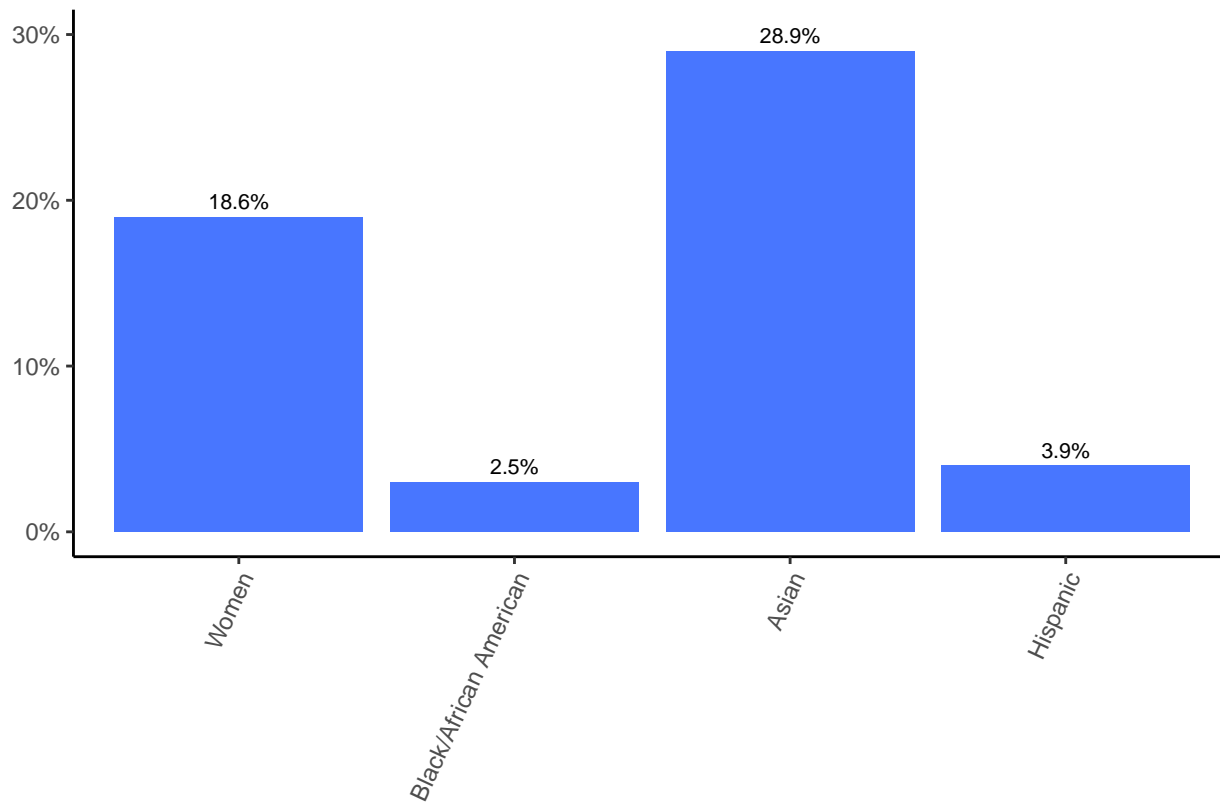
4.10 Percentage of Women and Minority Faculty Members

Table 88: Percentage of Women and Minority Faculty Members

Ethnicity	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Women	13.2%	13.8%	14.0%	14.5%	15.2%	15.7%	16.3%	17.0%	17.6%	18.1%	18.6%
Black or Afr. American	2.5%	2.5%	2.7%	2.6%	2.5%	2.5%	2.3%	3.1%	2.4%	2.5%	2.5%
Asian	23.9%	24.1%	24.6%	25.2%	25.6%	26.9%	27.6%	26.0%	28.3%	28.7%	28.9%
Hispanic	3.6%	3.7%	3.9%	3.6%	3.9%	3.9%	3.7%	5.1%	3.8%	3.7%	3.9%

* Includes faculty data from University of Puerto Rico, Mayaguez.

Percentage of Women and Minority Faculty Members 2010–2020*



4.11 Number of Full Professors by Race/Ethnicity

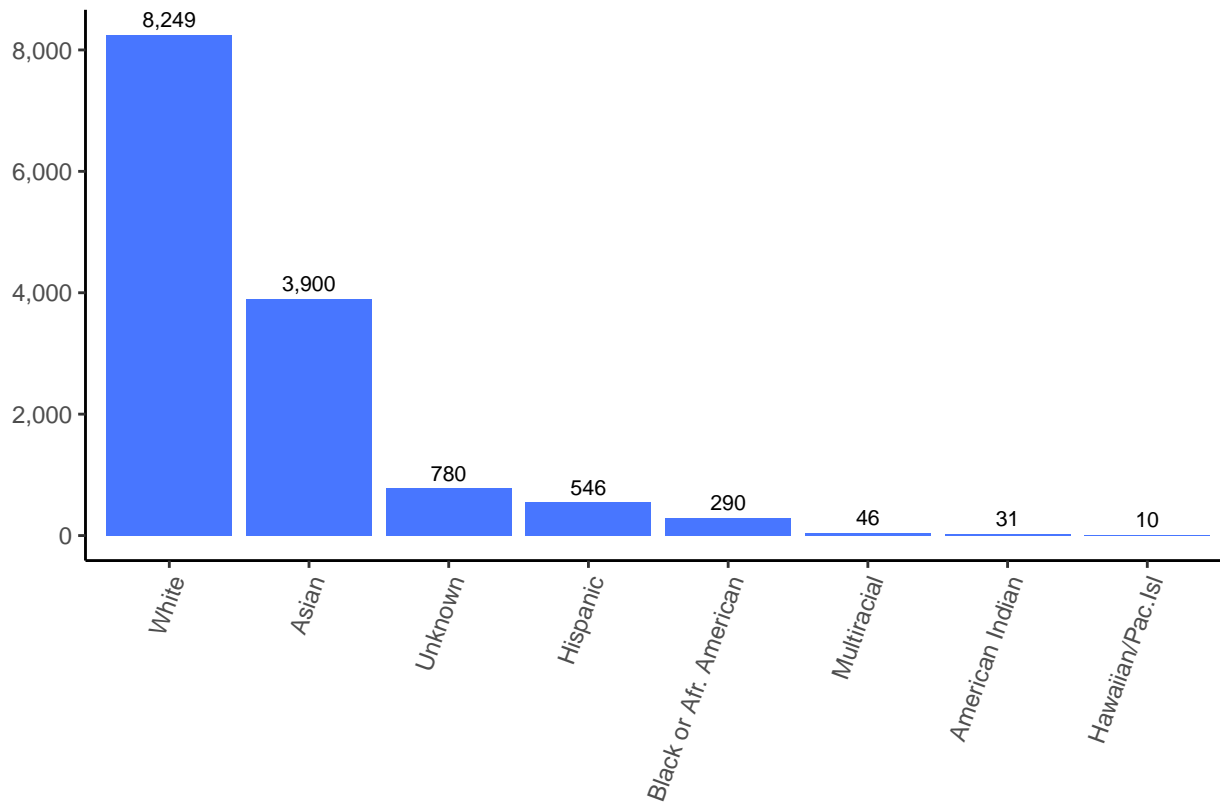
Table 89: Number of Full Professors by Race/Ethnicity: 13,852

Ethnicity	Number of Faculty
White	8,249
Asian	3,900
Unknown	780
Hispanic	546
Black or Afr. American	290
Multiracial	46
American Indian	31
Hawaiian/Pac.Isl	10

* Includes 124 Faculty from Institutions in Puerto Rico.

* Computer Science(Outside Engineering) has been removed

Number of Full Professors by Race/Ethnicity (teaching)



4.12 Number of Assistant Professors by Race/Ethnicity

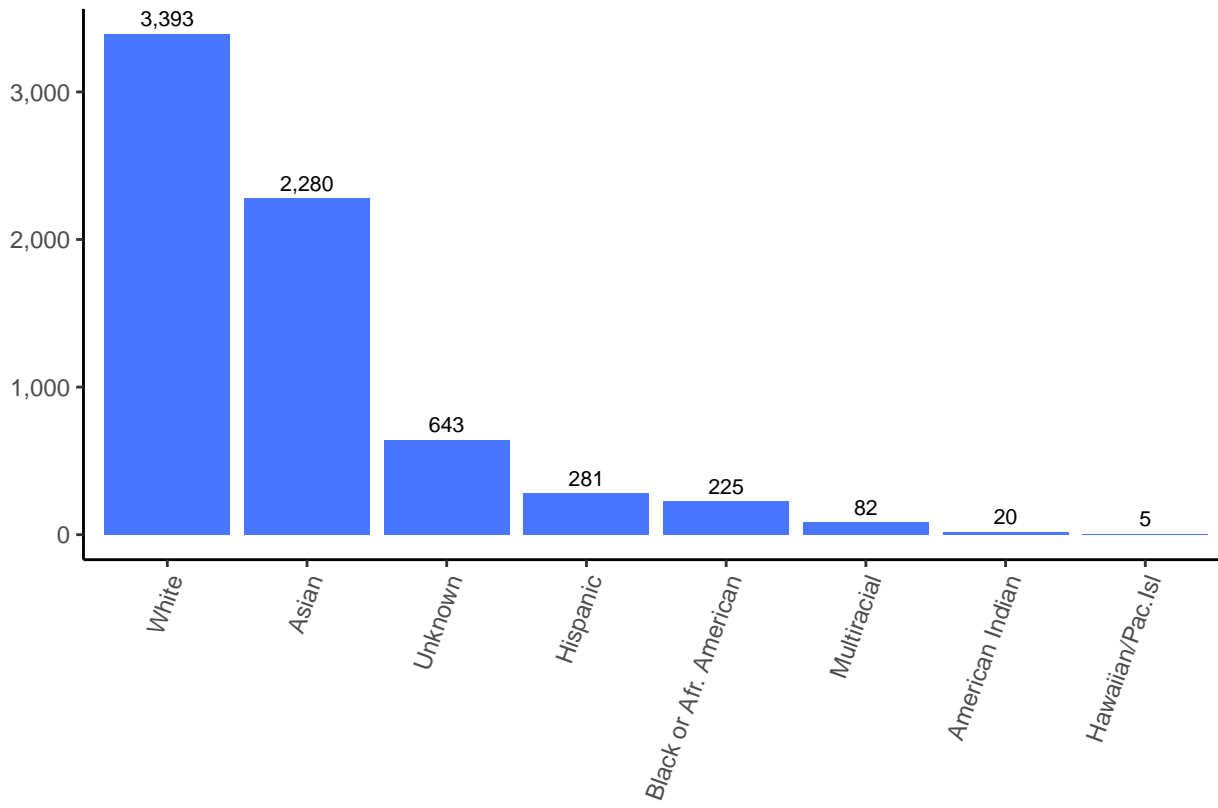
Table 90: Number of Assistant Professors by Race/Ethnicity: 6,929

Ethnicity	Number of Faculty
White	3,393
Asian	2,280
Unknown	643
Hispanic	281
Black or Afr. American	225
Multiracial	82
American Indian	20
Hawaiian/Pac.Isl	5

* Includes 4 Faculty from Institutions in Puerto Rico.

* Computer Science(Outside Engineering) has been removed

Number of Assistant Professors by Race/Ethnicity (teaching)



4.13 Number of Associate Professors by Race/Ethnicity

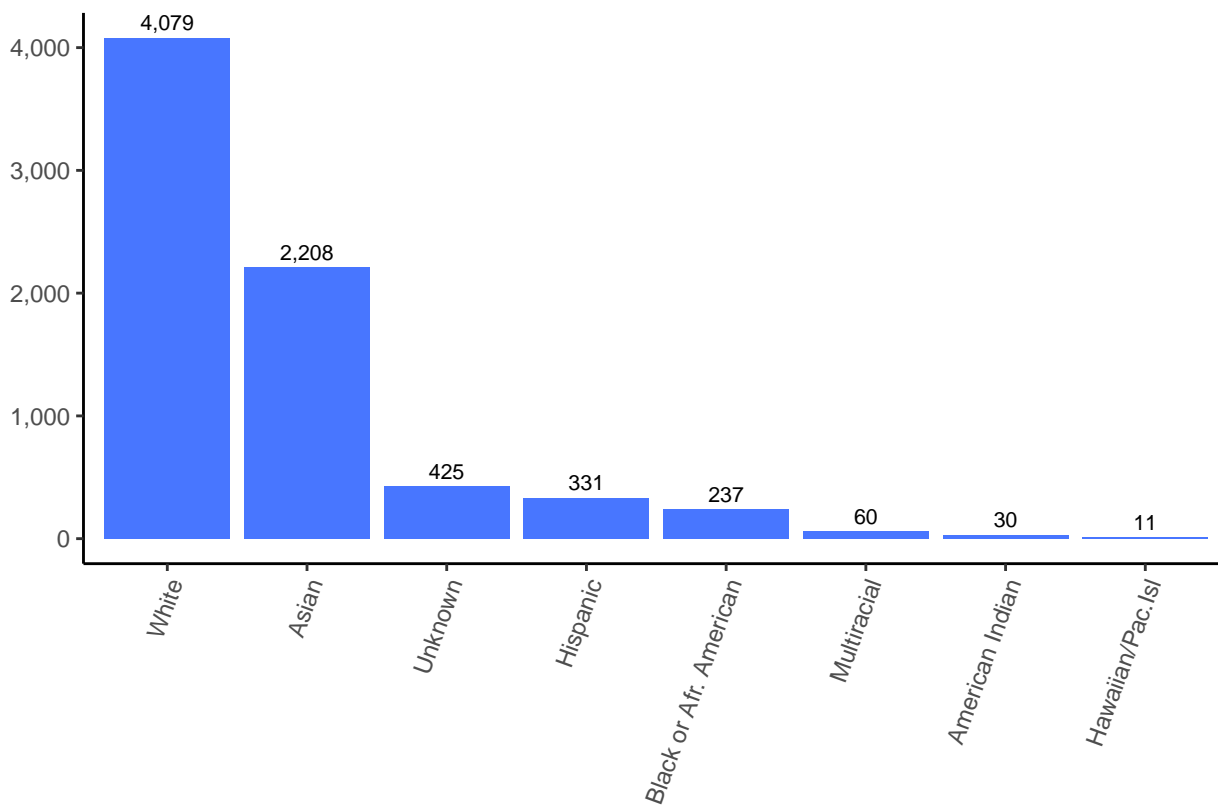
Table 91: Number of Associate Professors by Race/Ethnicity: 7,381

Ethnicity	Number of Faculty
White	4,079
Asian	2,208
Unknown	425
Hispanic	331
Black or Afr. American	237
Multiracial	60
American Indian	30
Hawaiian/Pac. Isl	11

* Includes 20 Faculty from Institutions in Puerto Rico.

* Computer Science(Outside Engineering) has been removed

Number of Associate Professors by Race/Ethnicity (teaching)

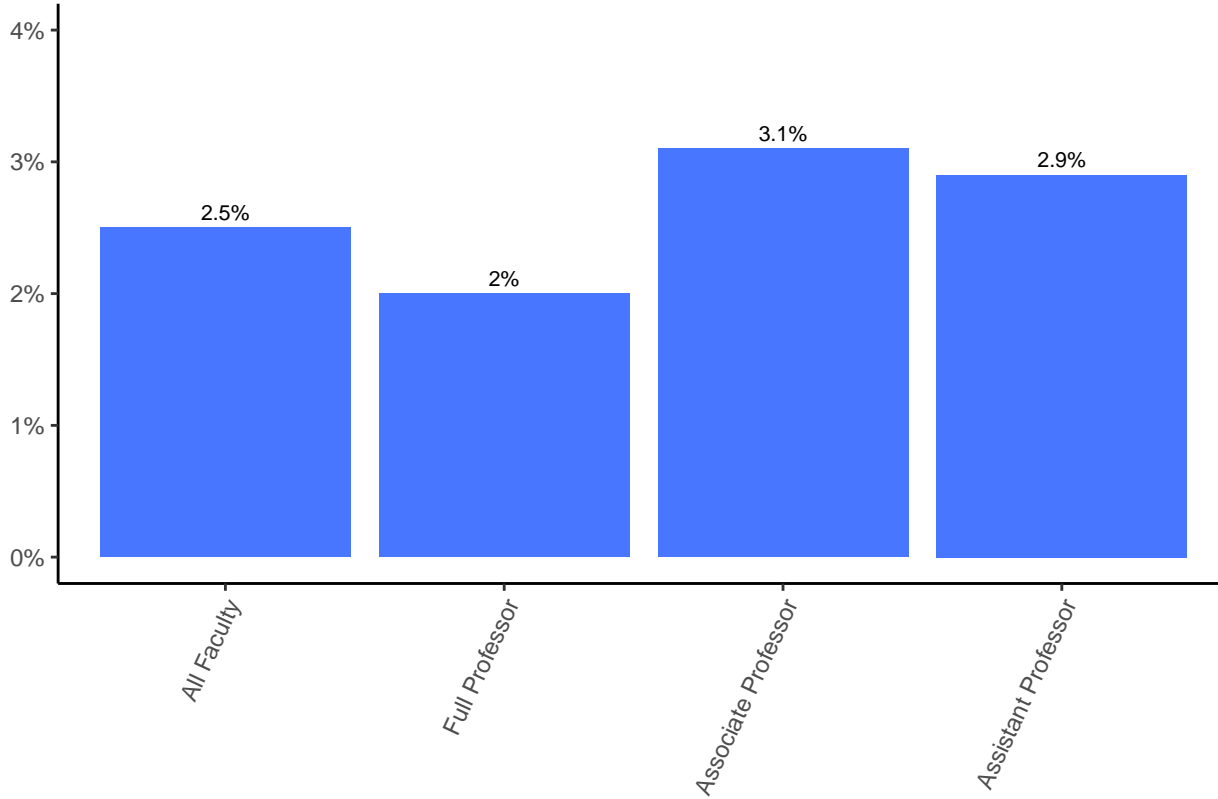


4.14 Percentage of Black/African American Tenured/Tenure-Track Faculty by Rank

Table 92: Percentage of Black/African American Tenured/Tenure-Track Faculty by Rank

Rank	Percent
All Faculty	2.5%
Full Professor	2%
Associate Professor	3.1%
Assistant Professor	2.9%

Percentage of African American Tenured/Tenure-Track Faculty by Rank

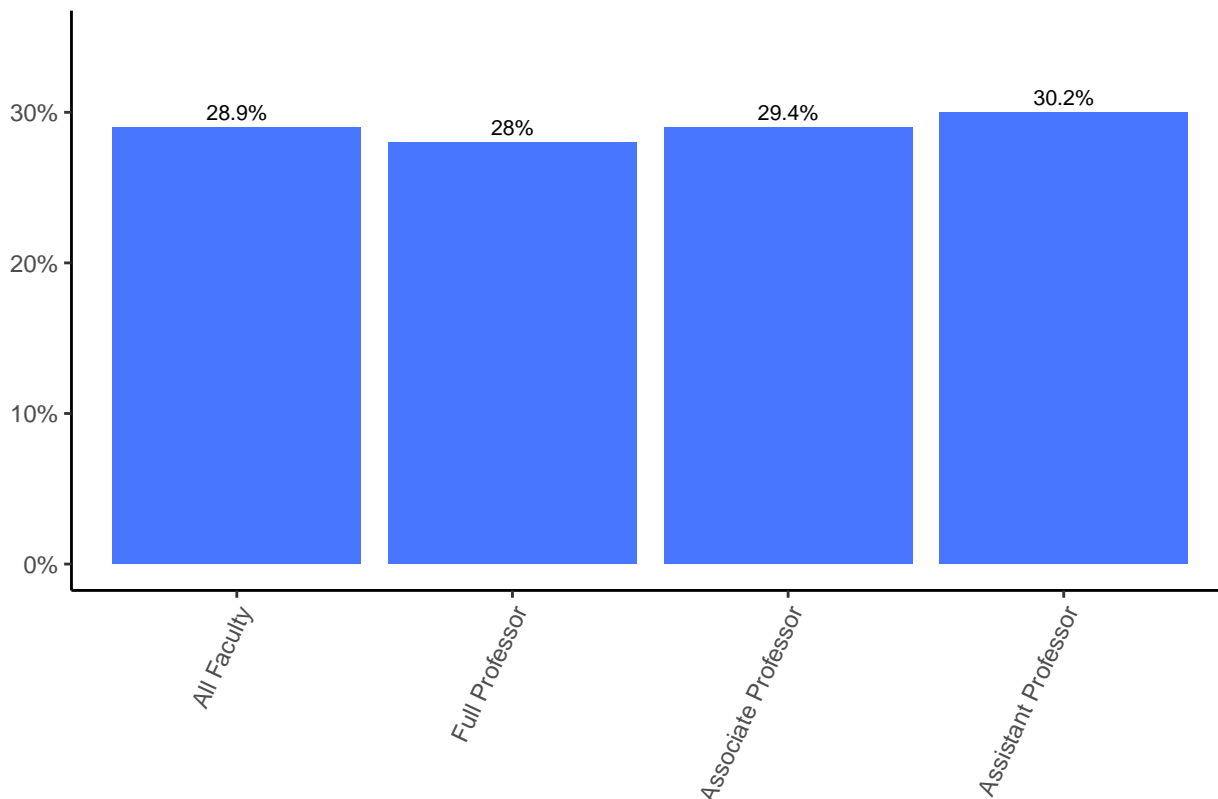


4.15 Percentage of Asian Tenured/Tenure-Track Faculty by Rank

Table 93: Percentage of Asian Tenured/Tenure-Track Faculty by Rank

Rank	Percent
All Faculty	28.9%
Full Professor	28%
Associate Professor	29.4%
Assistant Professor	30.2%

Percentage of Asian Tenured/Tenure-Track Faculty by Rank

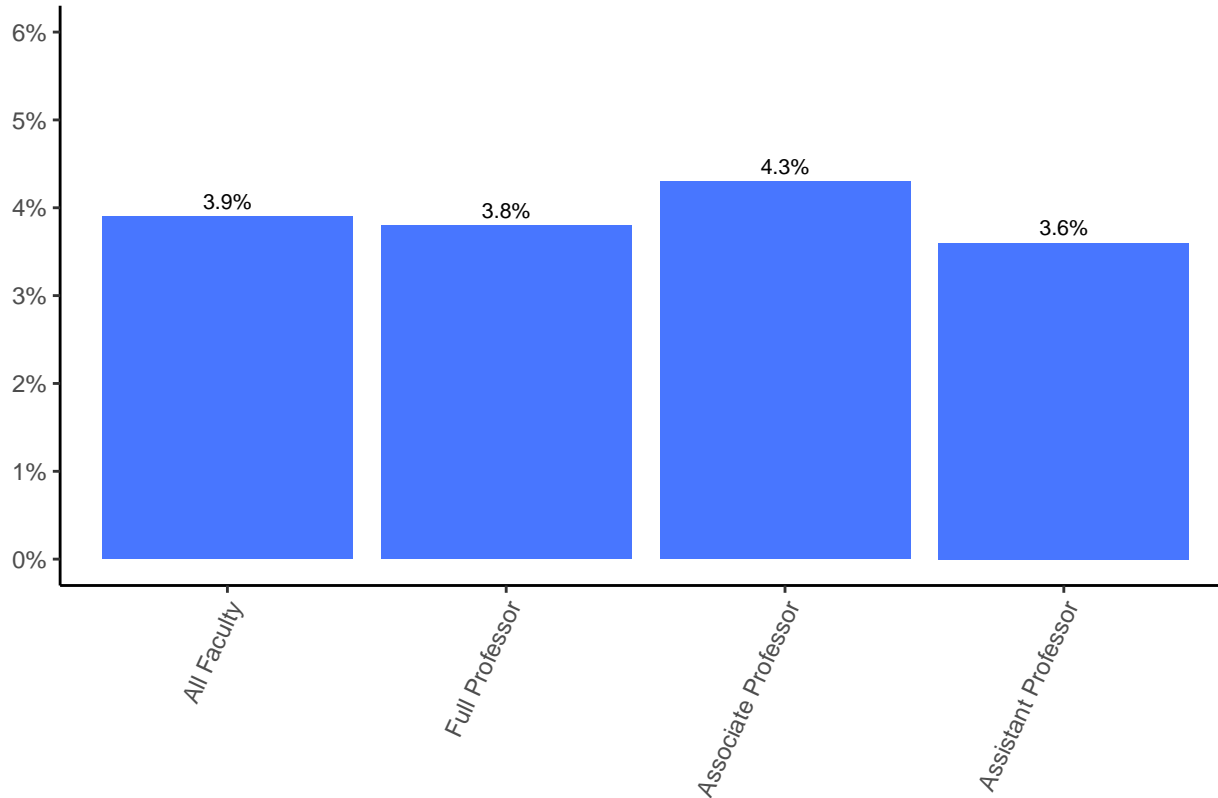


4.16 Percentage of Hispanic Tenured/Tenure-Track Faculty by Rank

Table 94: Percentage of Hispanic Tenured/Tenure-Track Faculty by Rank

Rank	Percent
All Faculty	3.9%
Full Professor	3.8%
Associate Professor	4.3%
Assistant Professor	3.6%

Percentage of Hispanic Tenured/Tenure-Track Faculty by Rank



4.17 African American Tenured/Tenure Track Faculty by Institutions

Table 95: African American Tenured/Tenure Track Faculty by Institutions

No	Institutions	Number of Faculty
1	Howard University	24
2	North Carolina A&T State University	20
2	University of Florida	20
4	Georgia Institute of Technology	19
4	Morgan State University	19
6	FAMU-FSU College of Engineering	16
7	University of Tennessee-Chattanooga	15
8	University of Tennessee, Chattanooga	14
9	Massachusetts Institute of Technology	13
9	University of Michigan	13
11	Virginia Polytechnic Institute and State University	12
12	Rensselaer Polytechnic Institute	11
12	Texas A&M University	11
12	The Johns Hopkins University	11
15	Florida Atlantic University	10
15	University of Illinois at Urbana-Champaign	10
15	University of Maryland, College Park	10
18	Clemson University	9
18	Cornell University	9
18	University of California, Irvine	9

* 310 Institutions included

4.18 Asian Tenured/Tenure Track Faculty by Institutions

Table 96: Asian Tenured/Tenure Track Faculty by Institutions

No	Institutions	Number of Faculty
1	Georgia Institute of Technology	194
2	Texas A&M University	151
3	Florida Atlantic University	147
4	Purdue University	138
5	University of Illinois at Urbana-Champaign	126
6	Rensselaer Polytechnic Institute	117
7	Arizona State University	113
8	University of Michigan	106
9	Iowa State University	105
10	North Carolina State University	103
11	The Ohio State University	101
12	Michigan State University	98
12	University of California, Los Angeles	98
14	Virginia Polytechnic Institute and State University	94
15	University of Central Florida	90
16	The University of Texas at Arlington	89
16	University of California, San Diego	89
18	University at Buffalo, SUNY	88
19	The Pennsylvania State University	84
19	The University of Texas at Austin	84

* 310 Institutions included

4.19 Hispanic Tenured/Tenure Track Faculty by Institutions

Table 97: Hispanic Tenured/Tenure Track Faculty by Institutions

No	Institutions	Number of Faculty
1	University of Puerto Rico, Mayaguez Campus	137
2	Florida Atlantic University	35
2	Texas A&M University	35
4	The University of Texas at El Paso	27
5	Massachusetts Institute of Technology	21
5	Purdue University	21
5	University of Miami	21
8	The University of Texas at San Antonio	18
8	University of California, San Diego	18
8	University of Illinois at Urbana-Champaign	18
11	North Carolina State University	17
11	University of Florida	17
13	Arizona State University	16
13	Georgia Institute of Technology	16
15	Virginia Polytechnic Institute and State University	15
16	The University of Texas at Austin	14
17	The Pennsylvania State University	13
17	University of Arizona	13
17	University of California, Berkeley	13
20	Stanford University	12

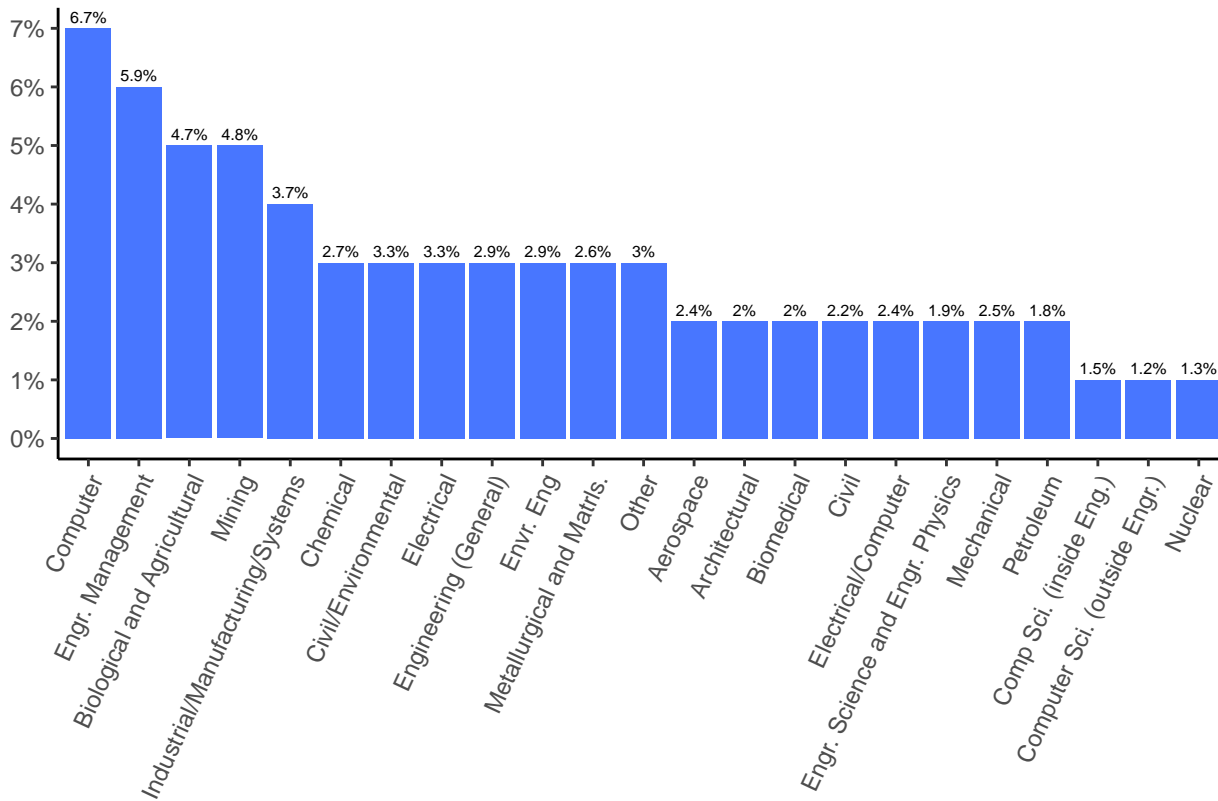
* 310 Institutions included

4.20 Percentage of African American Tenured/Tenure-Track Faculty by Discipline

Table 98: Percentage of African American Tenured/Tenure-Track Faculty by Discipline: 2.5 % of Total

Discipline Name	Percentage
Computer	6.7%
Engr. Management	5.9%
Mining	4.8%
Biological and Agricultural	4.7%
Industrial/Manufacturing/Systems	3.7%
Civil/Environmental	3.3%
Electrical	3.3%
Other	3%
Engineering (General)	2.9%
Envr. Eng	2.9%
Chemical	2.7%
Metallurgical and Matrls.	2.6%
Mechanical	2.5%
Aerospace	2.4%
Electrical/Computer	2.4%
Civil	2.2%
Architectural	2%
Biomedical	2%
Engr. Science and Engr. Physics	1.9%
Petroleum	1.8%
Comp Sci. (inside Eng.)	1.5%
Nuclear	1.3%
Computer Sci. (outside Engr.)	1.2%

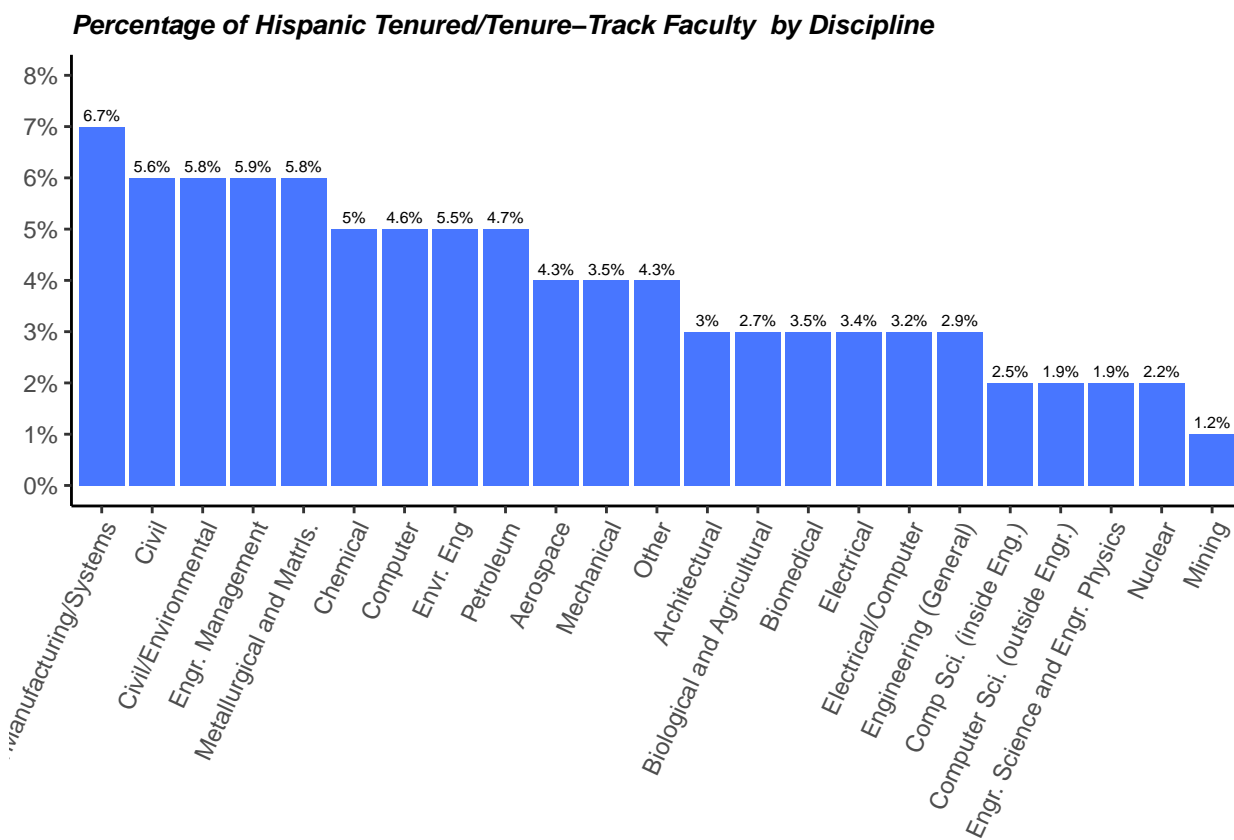
Percentage of African American Tenured/Tenure-Track Faculty by Discipline



4.21 Percentage of Hispanic Tenured/Tenure-Track Faculty by Discipline

Table 99: Percentage of Hispanic Tenured/Tenure-Track Faculty by Discipline: 3.9 % of Total

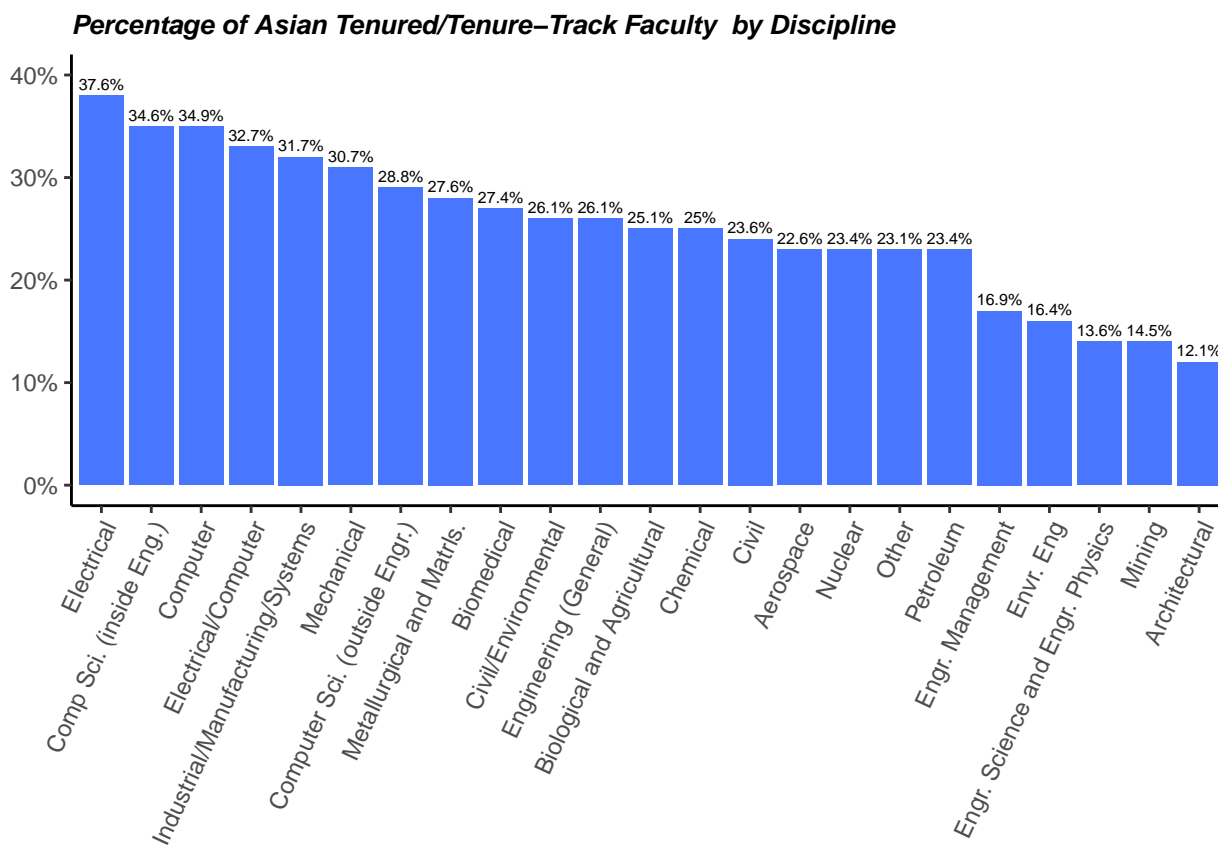
Discipline Name	Percentage
Industrial/Manufacturing/Systems	6.7%
Engr. Management	5.9%
Civil/Environmental	5.8%
Metallurgical and Matrils.	5.8%
Civil	5.6%
Envr. Eng	5.5%
Chemical	5%
Petroleum	4.7%
Computer	4.6%
Aerospace	4.3%
Other	4.3%
Biomedical	3.5%
Mechanical	3.5%
Electrical	3.4%
Electrical/Computer	3.2%
Architectural	3%
Engineering (General)	2.9%
Biological and Agricultural	2.7%
Comp Sci. (inside Eng.)	2.5%
Nuclear	2.2%
Computer Sci. (outside Engr.)	1.9%
Engr. Science and Engr. Physics	1.9%
Mining	1.2%



4.22 Percentage of Asian Tenured/Tenure-Track Faculty by Discipline

Table 100: Percentage of Asian Tenured/Tenure-Track Faculty by Discipline: 28.9 % of Total

Discipline Name	Percentage
Electrical	37.6%
Computer	34.9%
Comp Sci. (inside Eng.)	34.6%
Electrical/Computer	32.7%
Industrial/Manufacturing/Systems	31.7%
Mechanical	30.7%
Computer Sci. (outside Engr.)	28.8%
Metallurgical and Matrls.	27.6%
Biomedical	27.4%
Civil/Environmental	26.1%
Engineering (General)	26.1%
Biological and Agricultural	25.1%
Chemical	25%
Civil	23.6%
Nuclear	23.4%
Petroleum	23.4%
Other	23.1%
Aerospace	22.6%
Engr. Management	16.9%
Envr. Eng	16.4%
Mining	14.5%
Engr. Science and Engr. Physics	13.6%
Architectural	12.1%



5 ENGINEERING RESEARCH EXPENDITURES, FISCAL YEAR 2020

5.1 Top 50 Research Expenditure By Institutions

Table 101: Top 50 Research Expenditure By Institutions

No	Institution	Expenditure(IN MILLIONS)
1	Massachusetts Institute of Technology	\$467
2	Texas A&M University	\$333.6
3	Purdue University	\$325.8
4	University of Michigan	\$309
5	Georgia Institute of Technology	\$279.7
6	Carnegie Mellon University	\$269.7
7	Stanford University	\$256.5
8	University of California, Berkeley	\$240.7
9	The University of Texas at Austin	\$232.3
10	University of Illinois at Urbana-Champaign	\$229.4
11	University of California, San Diego	\$222.5
12	University of Southern California	\$211.6
13	The Johns Hopkins University	\$194.1
14	University of Washington in Seattle	\$191.9
15	University of Maryland, College Park	\$181.2
16	Cornell University	\$160.5
17	University of Dayton	\$159.9
18	University of Colorado Boulder	\$152.8
19	Virginia Polytechnic Institute and State University	\$140.6
20	The Ohio State University	\$137.7
21	Northwestern University	\$136.9
22	Duke University	\$131.6
23	Arizona State University	\$131
24	University of Wisconsin-Madison	\$130.5
25	Wichita State University	\$126.4
26	The Pennsylvania State University	\$122.1
27	University of Pennsylvania	\$119
28	Boston University	\$112.1
29	University of Rochester	\$110.6
30	California Institute of Technology	\$109.5
31	University of Pittsburgh	\$106.4
32	University of Notre Dame	\$103.5
33	University of California, Los Angeles	\$99.8
34	University of California, Irvine	\$98.1
35	University of Minnesota -Twin Cities	\$97.1
36	University of California, Davis	\$93
37	Iowa State University	\$90.2
38	University at Buffalo, SUNY	\$86.3
39	Colorado State University	\$82.4
40	University of Florida	\$82.1
41	University of Virginia	\$81.9
42	University of Utah	\$78.2
43	University of Tennessee, Knoxville	\$74.9
44	University of Delaware	\$74.7
45	Auburn University	\$72.9
46	Princeton University	\$72
47	Rensselaer Polytechnic Institute	\$71.8
48	William Marsh Rice University	\$70.6
49	New Jersey Institute of Technology	\$67.4
50	Vanderbilt University	\$67.4

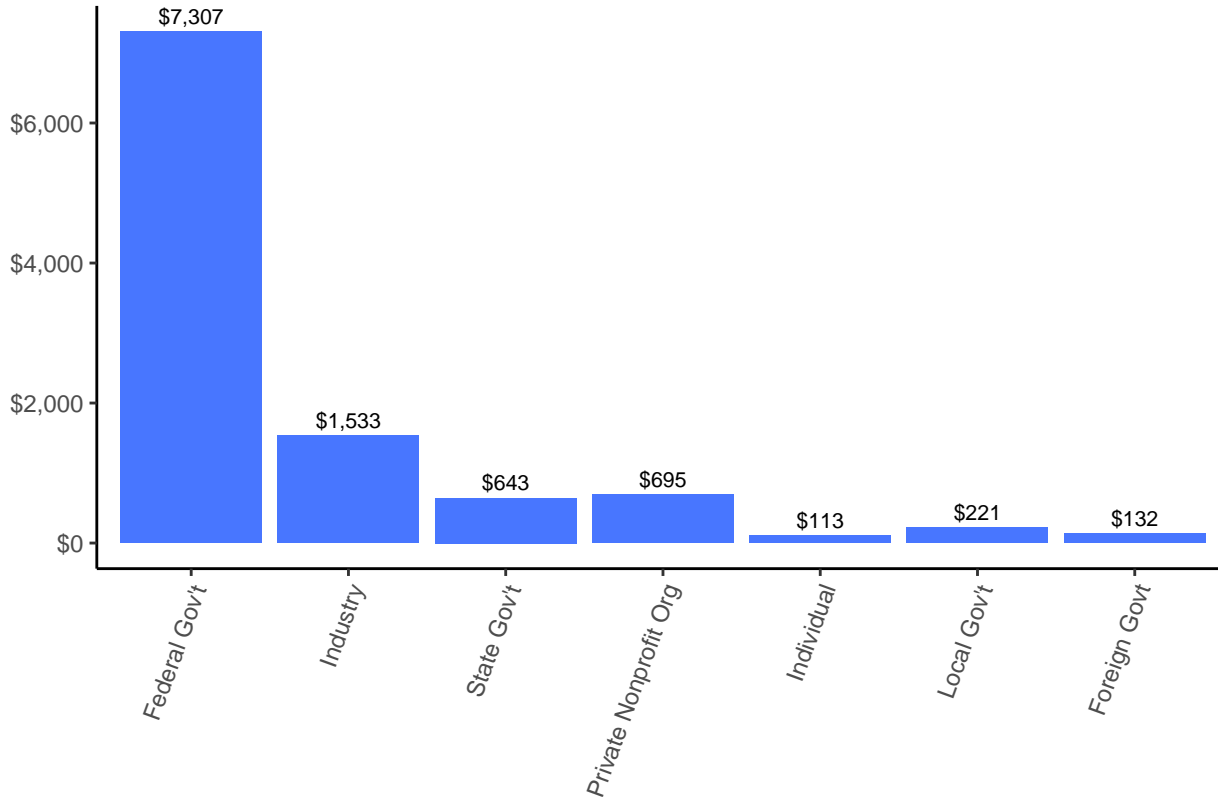
* 215 Institutions included

5.2 Research Expenditures By Source in Millions of Dollars

Table 102: Research Expenditures By Source in Millions of Dollars: \$10,644

Expenditure	Amount
Federal Gov't	\$7,307
Industry	\$1,533
State Gov't	\$643
Private Nonprofit Org	\$695
Individual	\$113
Local Gov't	\$221
Foreign Govt	\$132

Research Expenditures By Source in Millions of Dollars:



5.3 Computer Science Research Expenditures Located Outside of Engineering By Institutions

Table 103: Computer Science Research Expenditures Located Outside of Engineering By Institution

No	Institution	Expenditure(IN MILLIONS)
1	Carnegie Mellon University	\$143.2
2	Georgia Institute of Technology	\$39.9
3	The University of Texas at Austin	\$33.2
4	University of Maryland, College Park	\$26.2
5	University of California, Irvine	\$25.5
6	University of Massachusetts Amherst	\$21
7	Purdue University	\$19.3
8	The University of Alabama in Huntsville	\$19.1
9	University of Wisconsin-Madison	\$19.1
10	Northeastern University	\$17.6
11	University of Colorado Boulder	\$15.1
12	Rutgers, The State University of New Jersey, School of Engineering	\$10.6
13	Rensselaer Polytechnic Institute	\$10
14	Worcester Polytechnic Institute	\$8.6
15	Brown University	\$8.2
16	New Jersey Institute of Technology	\$6.8
17	Dartmouth College	\$6.4
18	University of Arizona	\$4.2
19	The University of Memphis	\$3.9
20	Colorado State University	\$3.7

* 38 Institutions included

6 CANADIAN ENGINEERING

6.1 Engineering Bachelors Degree by Canadian Institutions

Table 104: Engineering Bachelors Degree by Canadian Institutions

No	Institutions	Degrees Awarded
1	University of Waterloo	1,348
2	University of Toronto	1,080
3	University of British Columbia	922
4	Concordia University, Montreal	849
5	University of Alberta	797
6	McMaster University	752
7	University of Calgary	595
8	The University of Western Ontario	500

6.2 Engineering Masters Degree by Canadian Institutions

Table 105: Engineering Masters Degree by Canadian Institutions

No	Institutions	Degrees Awarded
1	Concordia University, Montreal	1,224
2	University of Toronto	791
3	University of Waterloo	553
4	The University of Western Ontario	437
5	University of Alberta	314
6	University of British Columbia	310
7	University of Calgary	296
8	McMaster University	155

6.3 Engineering Doctoral Degree by Canadian Institutions

Table 106: Engineering Doctoral Degree by Canadian Institutions

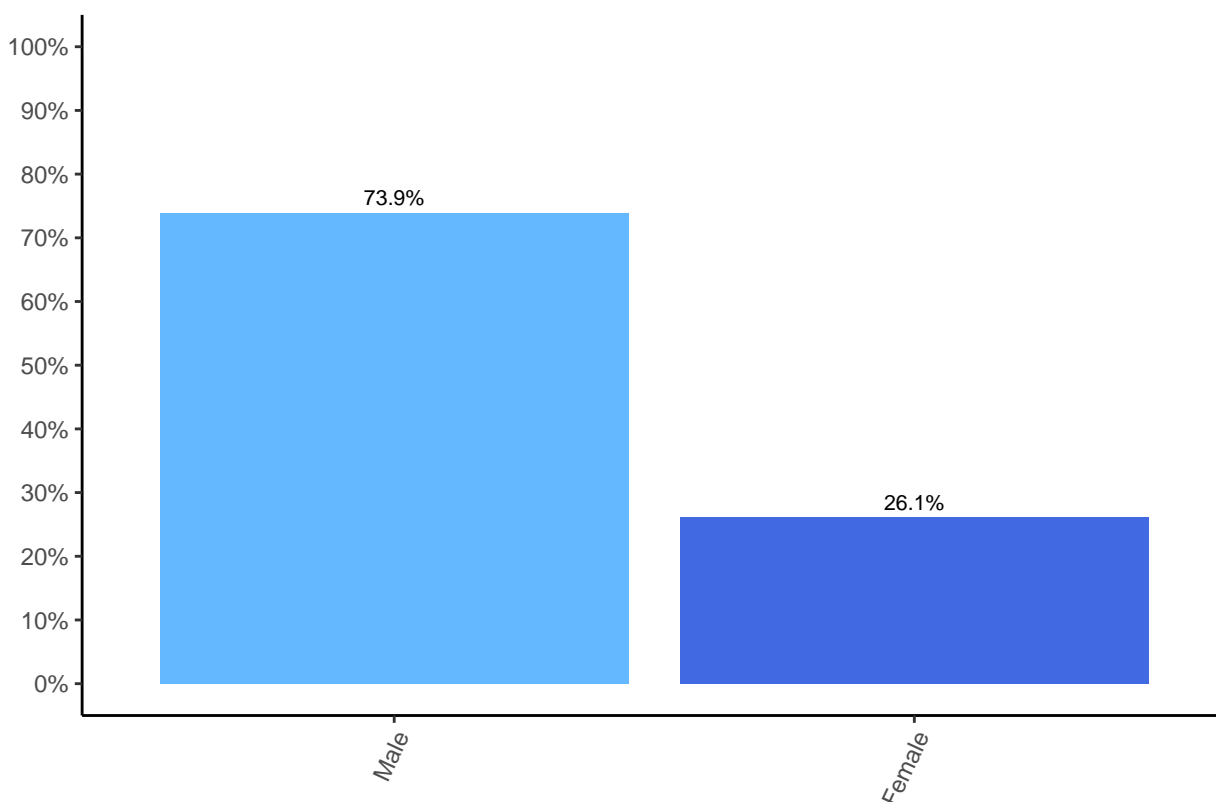
No	Institutions	Degrees Awarded
1	University of Waterloo	157
2	University of Toronto	133
3	University of Alberta	96
4	Concordia University, Montreal	80
5	University of Calgary	76
6	University of British Columbia	74
7	The University of Western Ontario	65
8	McMaster University	42

6.4 Bachelors Degrees Awarded by Gender- Canadian Institutions

Table 107: Bachelors Degrees Awarded by Gender- Canadian Institutions

Gender	Percentage
Female	26.1%
Male	73.9%

Bachelors Degrees Awarded by Gender- Canadian Institutions

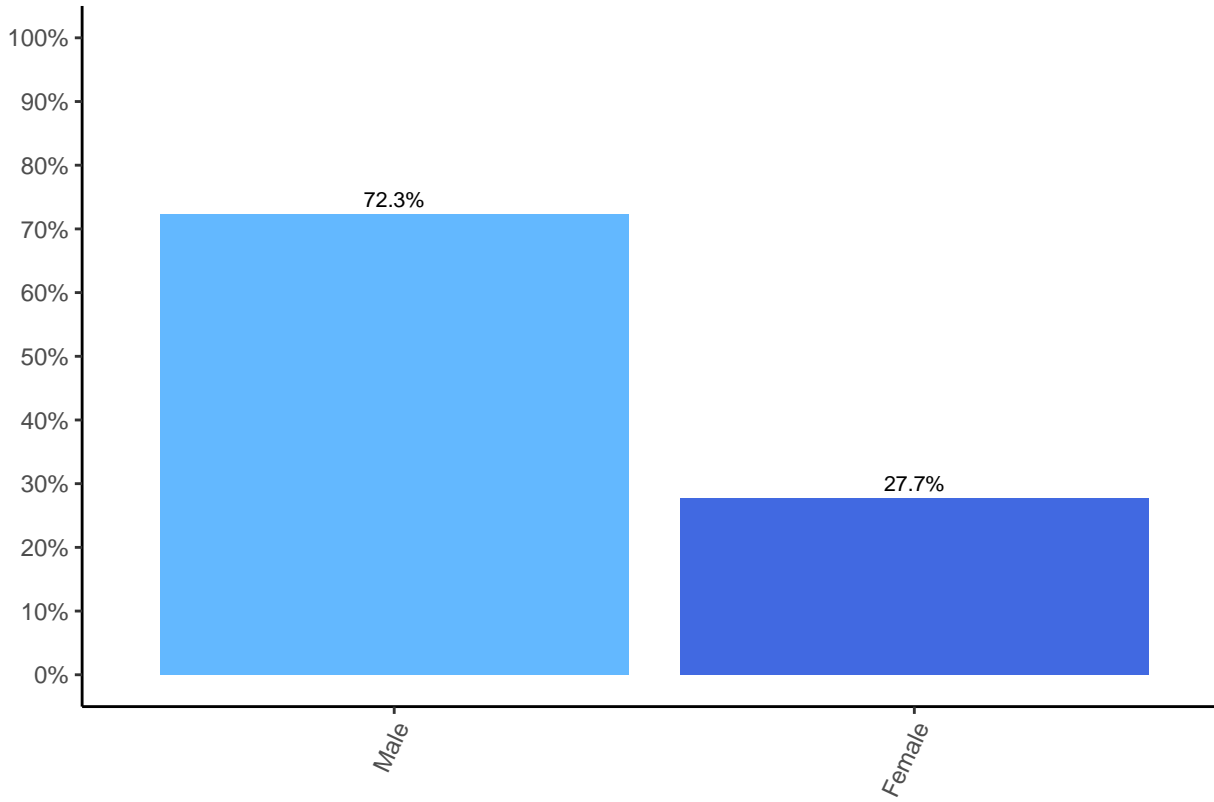


6.5 Masters Degrees Awarded by Gender- Canadian

Table 108: Masters Degrees Awarded by Gender- Canadian Institutions

Gender	Percentage
Female	27.7%
Male	72.3%

Masters Degrees Awarded by Gender– Canadian Institutions

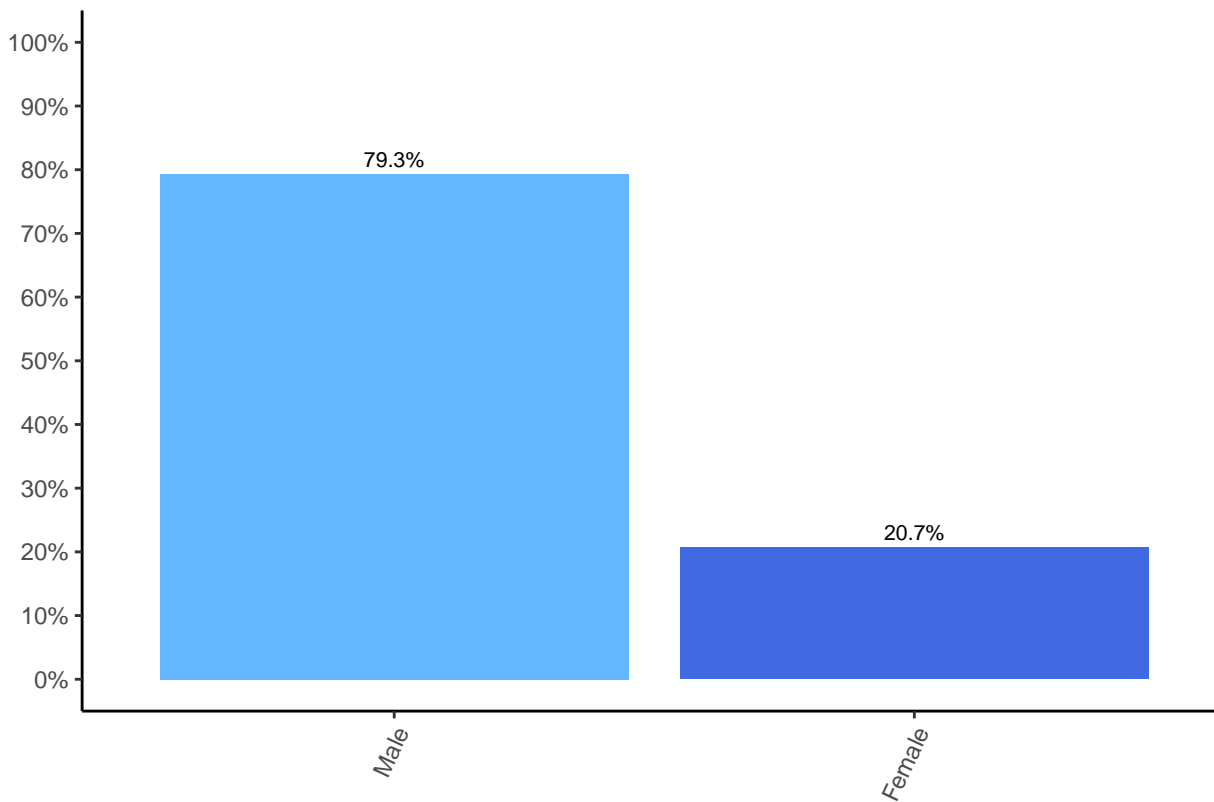


6.6 Doctoral Degrees Awarded by Gender- Canadian Institutions

Table 109: Doctoral Degrees Awarded by Gender- Canadian Institutions

Gender	Percentage
Female	20.7%
Male	79.3%

Doctoral Degrees Awarded by Gender– Canadian Institutions



6.7 Tenured/Tenure-Track Faculty Members by Institutions

Table 110: Tenured/Tenure-Track Faculty Members by Institutions

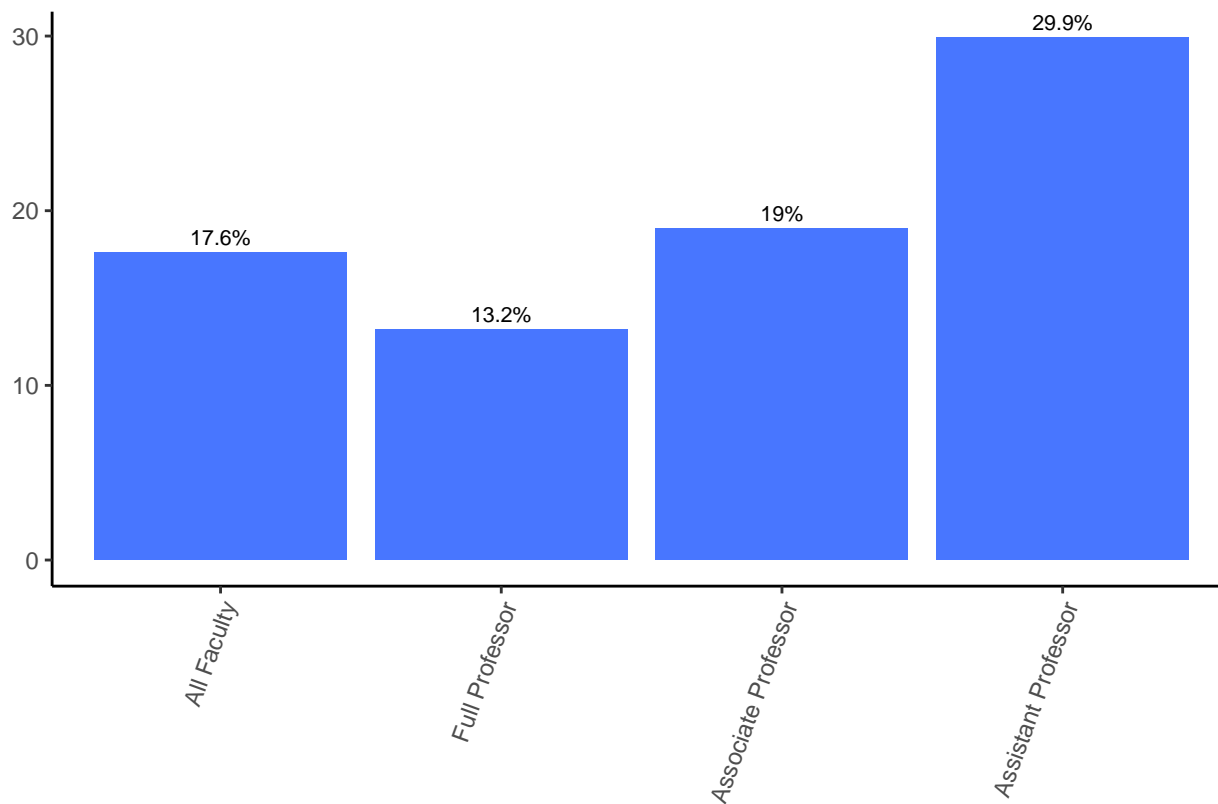
No	Institutions	Degrees Awarded
1	University of Waterloo	281
2	Concordia University, Montreal	275
3	University of Toronto	247
4	University of Alberta	224
5	University of British Columbia	175
6	University of Calgary	149
7	McMaster University	147
8	The University of Western Ontario	100

6.8 Percentage of Female Tenured/Tenure-Track Faculty by Rank- Canadian Institutions

Table 111: Doctoral Enrollment by Race and Ethnicity*

Rank	Percent
All Faculty	17.6%
Full Professor	13.2%
Associate Professor	19%
Assistant Professor	29.9%

Percentage of Female Tenured/Tenure-Track Faculty by Rank- Canadian Institutions



7 ENGINEERING TECHNOLOGY

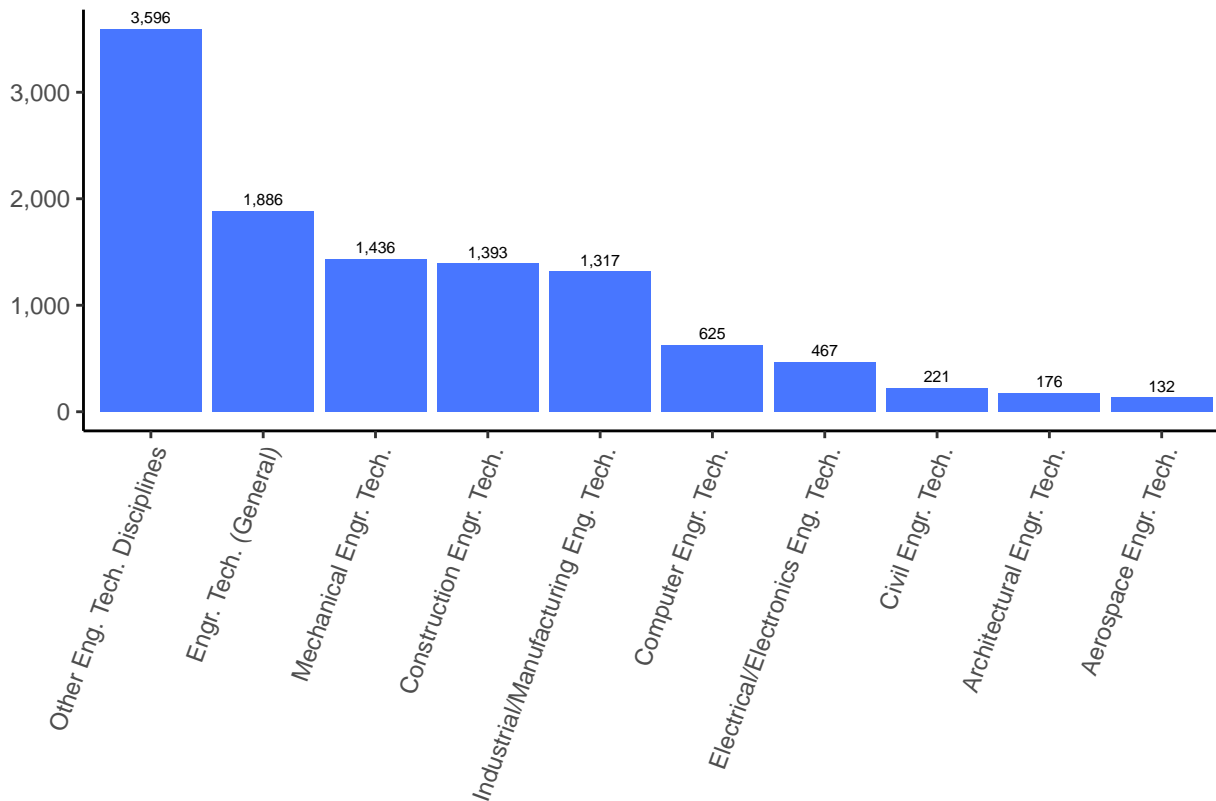
7.1 ENGINEERING TECHNOLOGY DEGREES

7.1.1 Engineering Technology Degrees Awarded by Discipline

Table 112: Engineering Technology Degrees Awarded by Discipline : 11,249

Discipline Name	Degrees Awarded
Other Eng. Tech. Disciplines	3,596
Engr. Tech. (General)	1,886
Mechanical Engr. Tech.	1,436
Construction Engr. Tech.	1,393
Industrial/Manufacturing Eng. Tech.	1,317
Computer Engr. Tech.	625
Electrical/Electronics Eng. Tech.	467
Civil Engr. Tech.	221
Architectural Engr. Tech.	176
Aerospace Engr. Tech.	132

Engineering Technology Degrees Awarded by Discipline



7.1.2 Engineering Technology Degrees Awarded to Underrepresented Minorities by Discipline

Table 113: Engineering Technology Degrees Awarded to Underrepresented Minorities by Engineering Discipline: 2,432

Discipline Name	Degrees Awarded
Other Eng. Tech. Disciplines	841
Engr. Tech. (General)	515
Construction Engr. Tech.	320
Industrial/Manufacturing Eng. Tech.	222
Mechanical Engr. Tech.	211
Computer Engr. Tech.	132
Electrical/Electronics Eng. Tech.	96
Civil Engr. Tech.	39
Architectural Engr. Tech.	36
Aerospace Engr. Tech.	20

* Total does not include computer science (outside engineering).

7.1.3 Percentage of Engineering Technology Degrees Awarded to Underrepresented Minorities by Discipline

Table 114: Percentage of Engineering Technology Degrees Awarded to Underrepresented Minorities by Discipline 21.4 % of Total

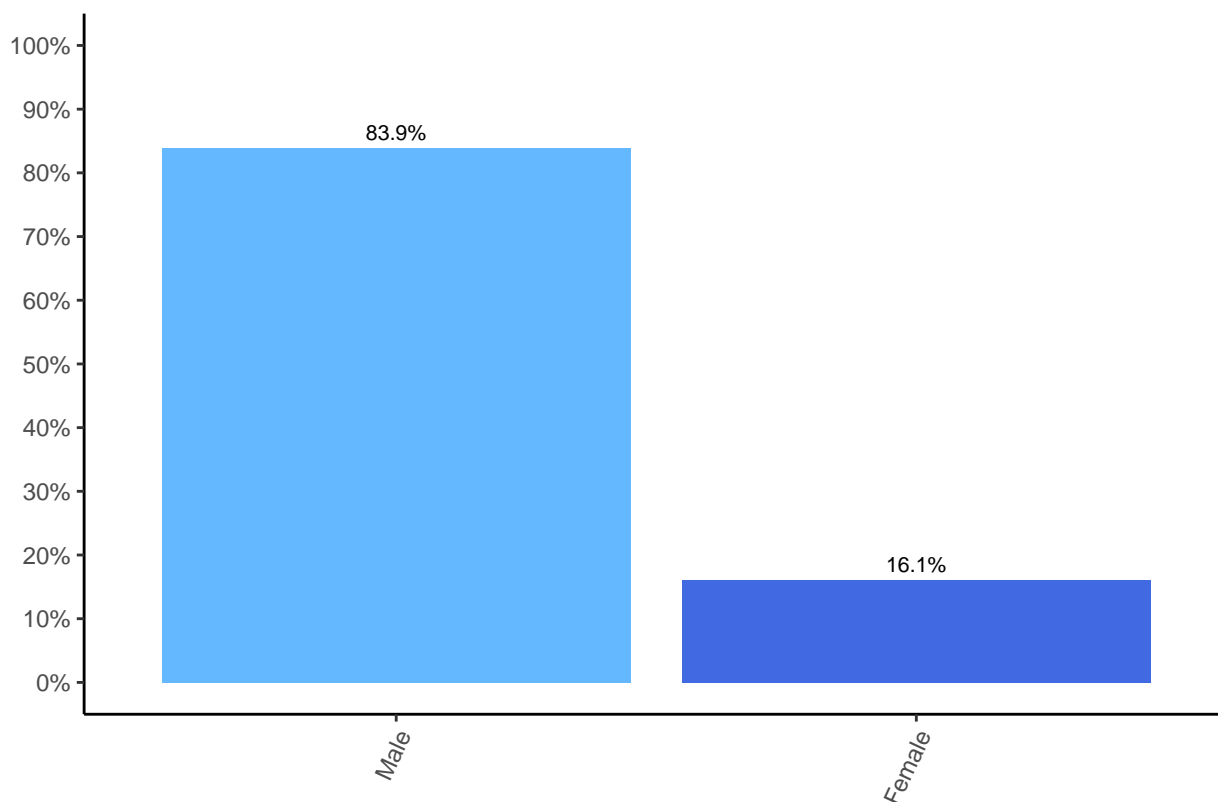
Discipline Name	Percent Women
Engr. Tech. (General)	27.3%
Other Eng. Tech. Disciplines	23.4%
Construction Engr. Tech.	23%
Computer Engr. Tech.	21.1%
Electrical/Electronics Eng. Tech.	20.6%
Architectural Engr. Tech.	20.5%
Civil Engr. Tech.	17.6%
Industrial/Manufacturing Eng. Tech.	16.9%
Aerospace Engr. Tech.	15.2%
Mechanical Engr. Tech.	14.7%

7.1.4 Engineering Technology Bachelors Degrees Awarded by Gender

Table 115: Engineering Technology Bachelors Degrees Awarded by Gender

Gender	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Female	9.4%	9.5%	9.4%	10.2%	10.6%	12.8%	13.3%	14.5%	14.2%	13.6%	16.1%
Male	90.6%	90.5%	90.6%	89.8%	89.4%	87.2%	86.7%	85.5%	85.8%	86.4%	83.9%

Engineering Technology Bachelor...s Degrees Awarded by Gender



7.1.5 Engineering Technology Bachelors Degrees Awarded by Race and Ethnicity

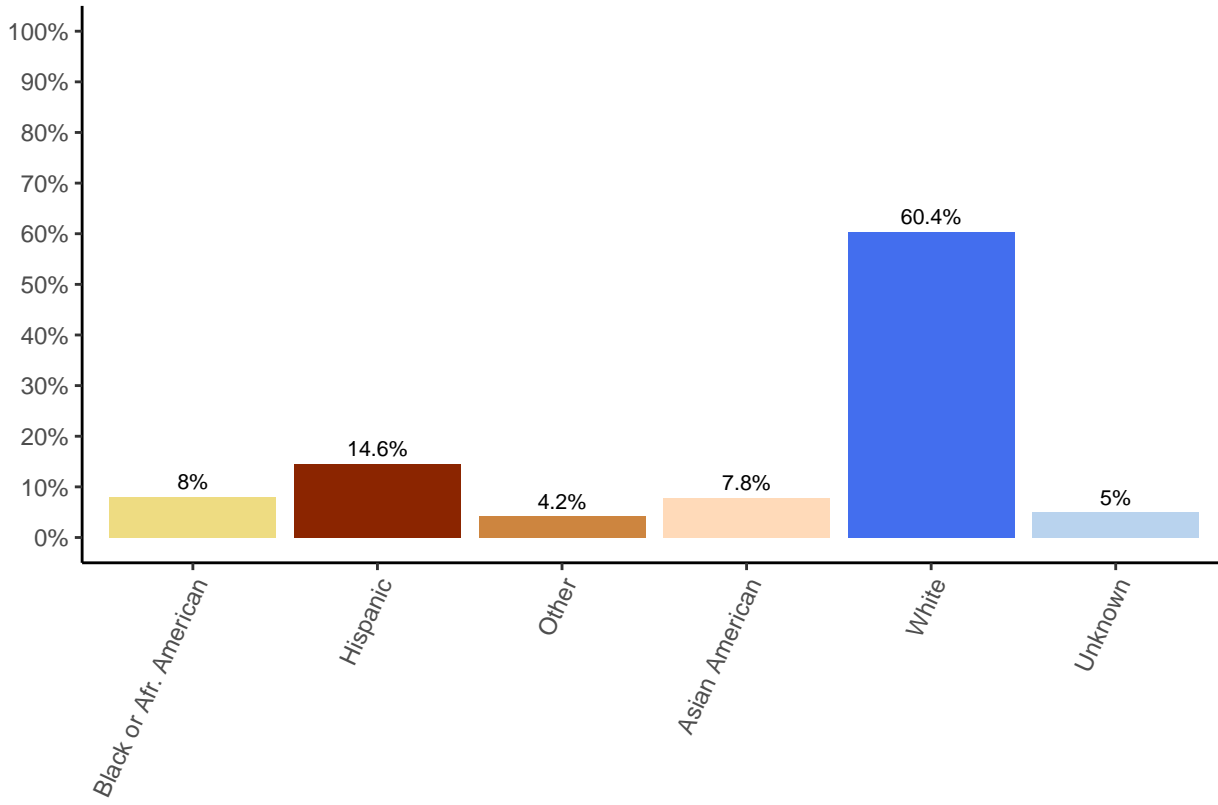
Table 116: Engineering Technology Bachelors Degrees Awarded by Race and Ethnicity*

Ethnicity	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Black or Afr. American	8.5%	9.2%	8.8%	8.8%	8.9%	8.5%	8.6%	6.9%	8.0%	7.5%	7.5%
Hispanic	7.1%	7.6%	6.5%	7.8%	7.1%	9.2%	12.9%	10.6%	11.4%	11.6%	11.6%
Other	1.0%	1.7%	1.5%	1.9%	1.7%	3.0%	4.1%	3.3%	3.5%	3.6%	3.6%
Asian American	5.1%	5.3%	5.0%	4.9%	5.1%	5.8%	6.8%	6.4%	14.7%	5.4%	5.4%
White	73.2%	70.4%	73.8%	72.4%	72.7%	68.7%	63.8%	68.4%	61.5%	67.3%	67.3%
Unknown	5.1%	5.8%	4.5%	4.3%	4.5%	4.8%	3.8%	4.4%	4.2%	4.6%	4.6%

* American Indian/Alaska Native 0.5% Native Hawaiian/Other Pacific Islander 0.2% and Multiracial 3.5% are combined under other

* Data on ethnicity does not include foreign nationals.

Engineering Technology Bachelor...s Degrees Awarded by Race and Ethnicity

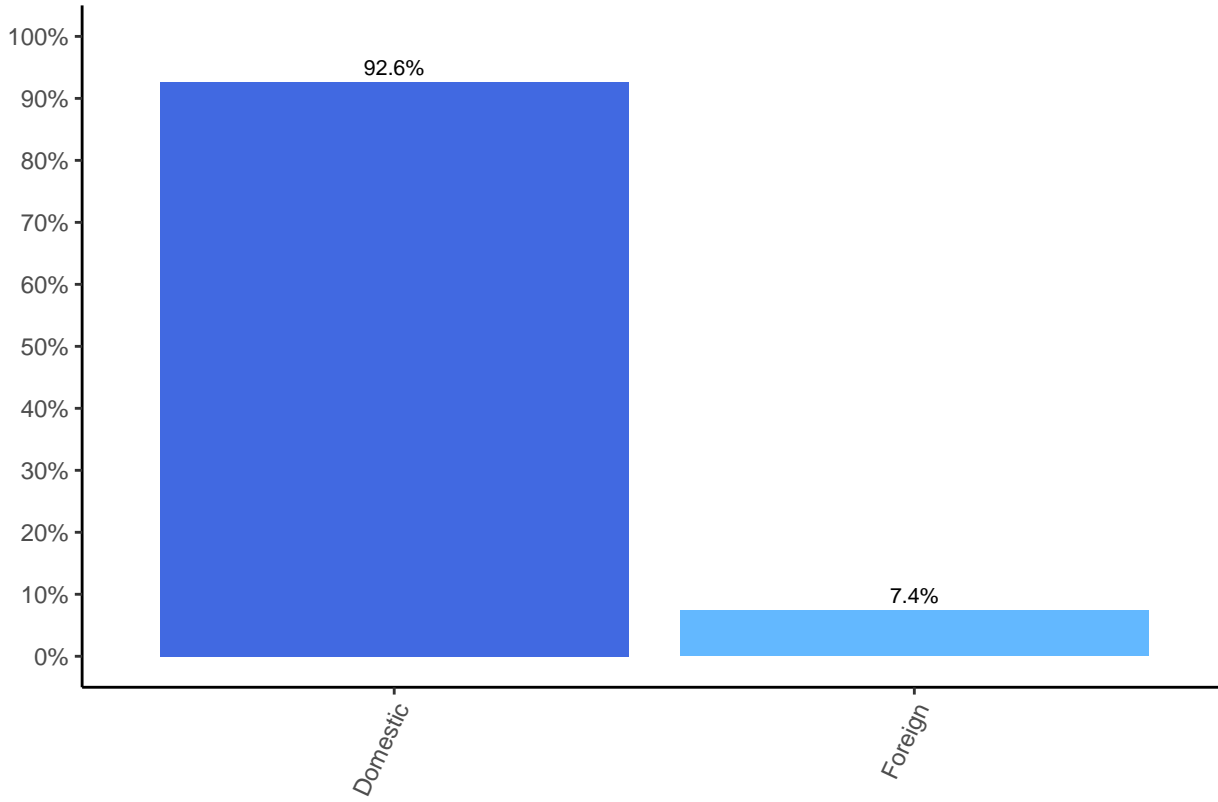


7.1.6 Engineering Technology Bachelors Degrees Awarded by Residency

Table 117: Engineering Technology Bachelors Degrees Awarded by Residency

Nationality	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Foreign	5.2%	5.0%	7.4%	10.2%	7.1%	4.9%	6.8%	6.0%	6.8%	8.2%	7.4%
Domestic	94.8%	95.0%	92.6%	89.8%	92.9%	95.1%	93.2%	94.0%	93.2%	91.8%	92.6%

Engineering Technology Bachelor...s Degrees Awarded by Residency



7.1.7 Top 50 Institutions Awarding Highest Number of ET Degrees

Table 118: Top 50 Institutions Awarding Highest Number of ET Degrees

No	Institutions	Degrees Awarded
1	University of Houston	903
2	Arizona State University	687
3	Fu Foundation School of Engineering and Applied Science - Columbia University	627
4	Farmingdale State College (SUNY)	543
5	Texas A&M University	541
6	East Carolina University	500
7	Indiana University-Purdue University Indianapolis	337
8	Ferris State University	253
9	Eastern Michigan University	233
10	Rochester Institute of Technology	223
11	University of North Carolina at Charlotte	222
12	New Jersey Institute of Technology	217
13	Purdue University Northwest, Technology	193
14	Texas State University	187
15	The University of Toledo	171
16	University of Wisconsin, Platteville	168
17	Oklahoma State University	163
18	Old Dominion University	162
19	Kennesaw State University	149
20	University of Cincinnati	143
21	Murray State University	136
22	Eastern Kentucky University	131
23	University of Southern Mississippi	128
24	Purdue University Northwest, Engineering	126
25	California State University-Chico	115
26	Georgia Southern University	108
27	Northern Illinois University	101
27	Penn State Erie, The Behrend College	101
29	Tarleton State University	98
30	University of Dayton	97
30	University of North Texas	97
32	University of Louisiana at Lafayette	92
32	University of Maine	92
32	Western Carolina University	92
35	California State University-Fresno	90
36	University of Wisconsin - Stout	89
37	Montana State University	87
38	SUNY Polytechnic Institute	85
39	New Mexico State University	84
39	Weber State University	84
41	Central Connecticut State University	83
42	California State Polytechnic University, Pomona	81
42	Western Michigan University	81
44	Eastern Washington University	79
45	Miami University	78
46	University of Central Oklahoma	74
47	Oregon Institute of Technology	73
47	Purdue University Fort Wayne	73
47	Southeast Missouri State University	73
50	Ohio University	71

* 120 Institutions included

7.1.8 Top 50 Institutions by Engineering Technology Degrees awarded to Underrepresented Minorities

Table 119: Top 50 Institutions by Engineering Technology Degrees awarded to Underrepresented Minorities

No	Institutions	Degrees Awarded
1	University of Houston	444
2	Farmingdale State College (SUNY)	186
3	Arizona State University	172
4	Texas A&M University	136
5	Fu Foundation School of Engineering and Applied Science - Columbia University	104
6	East Carolina University	90
7	Texas State University	69
8	Indiana University-Purdue University Indianapolis	63
9	New Jersey Institute of Technology	58
10	New Mexico State University	52
11	Kennesaw State University	51
12	California State University-Chico	41
12	Eastern Michigan University	41
12	Rochester Institute of Technology	41
15	California State University-Fresno	38

Table 119: Top 50 Institutions by Engineering Technology Degrees awarded to Underrepresented Minorities (*continued*)

No	Institutions	Degrees Awarded
16	California State Polytechnic University, Pomona	35
17	University of North Carolina at Charlotte	34
18	University of North Texas	32
19	Prairie View A & M University	31
20	Old Dominion University	27
21	University of Southern Mississippi	26
22	Central Connecticut State University	25
22	Northern Illinois University	25
24	Purdue University Northwest, Engineering	24
25	Jackson State University	23
25	University of Hartford	23
27	Ferris State University	22
28	Lamar University	19
29	Georgia Southern University	18
29	Tarleton State University	18
29	Vaughn College of Aeronautics and Technology	18
32	University of Louisiana at Lafayette	16
33	Norfolk State University	15
33	Oklahoma State University	15
33	South Carolina State University	15
36	Murray State University	14
36	Virginia State University	14
38	University of Maryland Eastern Shore	13
39	Miami University	12
39	University of Cincinnati	12
41	Eastern Kentucky University	11
41	Western Michigan University	11
43	Purdue University Northwest, Technology	10
43	The University of Memphis	10
43	Western Carolina University	10
43	Western Illinois University	10
47	Alabama A & M University	9
47	Eastern Washington University	9
47	Middle Tennessee State University	9
47	SUNY Polytechnic Institute	9

* 120 Institutions included

7.1.9 Top 50 Institutions by Percentage of Engineering Technology Degrees awarded to Underrepresented Minorities

Table 120: Top 50 Institutions by Percentage of Engineering Technology Degrees awarded to Underrepresented Minorities

No	Institutions	Percent Underrepresented Minorities
1	Alabama A & M University	100%
1	Benjamin Franklin Institute of Technology	100%
1	Jackson State University	100%
1	Prairie View A & M University	100%
5	South Carolina State University	93.8%
6	Norfolk State University	83.3%
7	University of Maryland Eastern Shore	72.2%
8	New Mexico State University	61.9%
9	The University of Texas Rio Grande Valley	60%
10	Vaughn College of Aeronautics and Technology	54.5%
11	Pace University	50%
11	Wright State University	50%
13	University of Houston	49.2%
14	Western Illinois University	43.5%
15	California State Polytechnic University, Pomona	43.2%
16	California State University-Fresno	42.2%
17	Lamar University	38.8%
18	Colorado State University, Pueblo	38.1%
19	Texas State University	36.9%
20	California State University-Chico	35.7%
21	Farmingdale State College (SUNY)	34.3%
22	Kennesaw State University	34.2%
23	Drexel University	33.3%
23	University of Hartford	33.3%
25	University of North Texas	33%
26	Central Connecticut State University	30.1%
27	Fairleigh Dickinson University-Metropolitan Campus	30%
27	West Texas A & M University	30%
29	The University of Memphis	28.6%
30	Virginia State University	26.9%
31	New Jersey Institute of Technology	26.7%
32	Texas A&M University	25.1%
33	Arizona State University	25%
34	Northern Illinois University	24.8%
35	Tennessee State University	23.8%
36	Eastern Illinois University	22.7%
37	The University of West Florida	21.9%

Table 120: Top 50 Institutions by Percentage of Engineering Technology Degrees awarded to Underrepresented Minorities (*continued*)

No	Institutions	Percent Underrepresented Minorities
38	University of Southern Mississippi	20.3%
39	Purdue University Northwest, Engineering	19%
40	Indiana University-Purdue University Indianapolis	18.7%
41	Rochester Institute of Technology	18.4%
42	Tarleton State University	18.4%
43	East Carolina University	18%
44	Eastern Michigan University	17.6%
45	University of Louisiana at Lafayette	17.4%
46	Georgia Southern University	16.7%
46	Old Dominion University	16.7%
48	Fu Foundation School of Engineering and Applied Science - Columbia University	16.6%
49	Miami University	15.4%
49	Thomas Jefferson University	15.4%

* 120 Institutions included

7.1.10 Top 50 Institutions Awarding Engineering Technology Degrees to Women

Table 121: Top 50 Institutions Awarding Engineering Technology Degrees to Women

No	Institutions	Degrees Awarded
1	Fu Foundation School of Engineering and Applied Science - Columbia University	222
2	University of Houston	213
3	Arizona State University	189
4	Farmingdale State College (SUNY)	144
5	Texas A&M University	102
6	Indiana University-Purdue University Indianapolis	101
7	Eastern Michigan University	62
8	East Carolina University	43
9	Ferris State University	35
10	Eastern Kentucky University	33
11	Rochester Institute of Technology	32
12	Texas State University	26
13	Murray State University	25
14	Kennesaw State University	24
15	New Jersey Institute of Technology	22
15	Purdue University Northwest, Technology	22
17	University of Southern Mississippi	21
18	University of Dayton	19
19	The University of Toledo	18
19	University of North Carolina at Charlotte	18
21	Old Dominion University	16
22	New Mexico State University	15
23	George Fox University	13
23	University of Hartford	13
23	University of North Texas	13
23	University of Wisconsin - Stout	13
23	University of Wisconsin, Platteville	13
28	California State University-Chico	12
28	Tarleton State University	12
30	University of Central Oklahoma	11
31	Prairie View A & M University	10
31	Southeast Missouri State University	10
33	California State Polytechnic University, Pomona	9
33	Jackson State University	9
33	Purdue University Northwest, Engineering	9
33	University of North Florida	9
37	Central Michigan University	8
37	Miami University	8
37	University of Portland	8
37	Western Michigan University	8
41	California State University-Fresno	7
41	Lamar University	7
41	Louisiana Tech University	7
41	Middle Tennessee State University	7
41	Oregon Institute of Technology	7
41	Penn State Erie, The Behrend College	7
41	University of Maryland Eastern Shore	7
41	Virginia State University	7
49	Central Connecticut State University	6
49	Montana State University	6

* 120 Institutions included

7.2 ENGINEERING TECHNOLOGY ENROLLMENT, FALL 2019

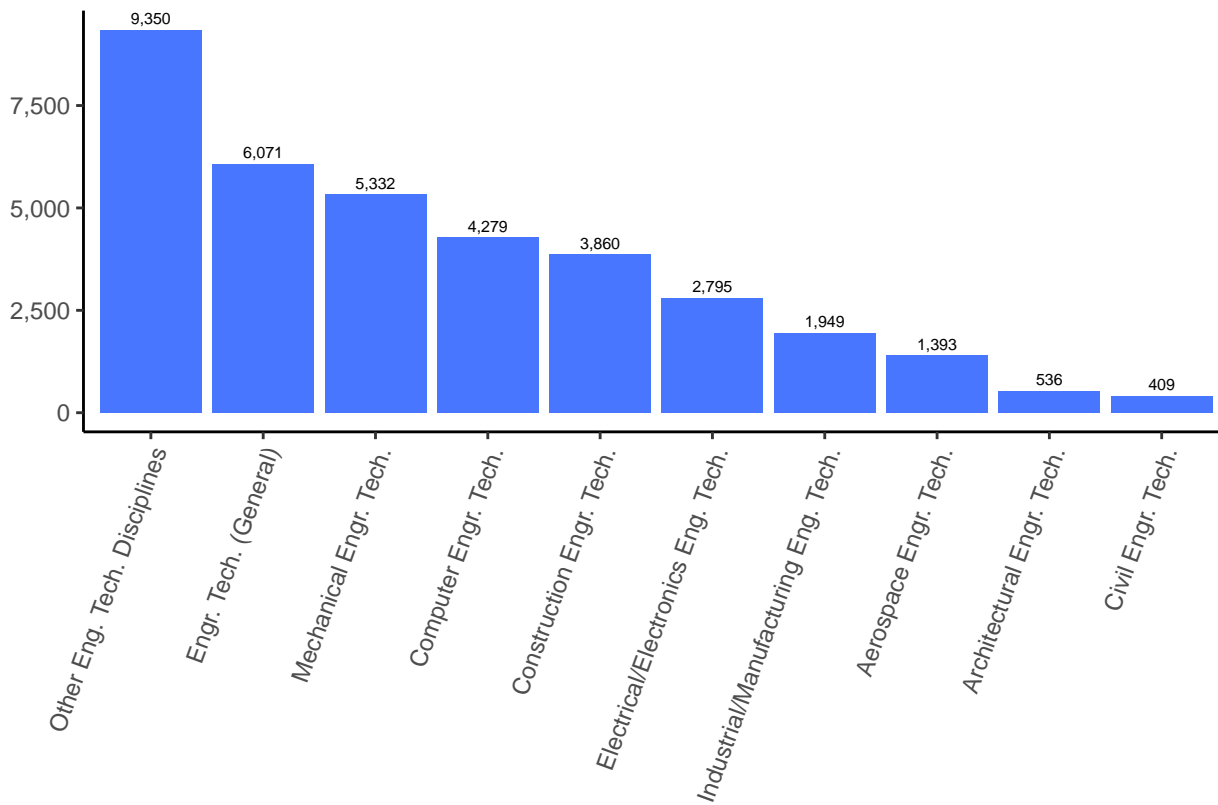
7.2.1 Full time Engineering Technology Enrollment by Discipline

Table 122: Full time Engineering Technology Enrollment by Discipline: 35,974

Discipline Name	Degrees Awarded
Other Eng. Tech. Disciplines	9,350
Engr. Tech. (General)	6,071
Mechanical Engr. Tech.	5,332
Computer Engr. Tech.	4,279
Construction Engr. Tech.	3,860
Electrical/Electronics Eng. Tech.	2,795
Industrial/Manufacturing Eng. Tech.	1,949
Aerospace Engr. Tech.	1,393
Architectural Engr. Tech.	536
Civil Engr. Tech.	409

* Enrollment is for full time Bachelors degree candidates in Engineering Technology

full time Engineering Technology Enrollment by Discipline



7.2.2 Top 50 Institutions by Engineering Technology Enrollment

Table 123: Top 50 Institutions by Engineering Technology Enrollment

No	Institutions	Enrollments
1	Arizona State University	5,257
2	Purdue University Polytechnic Institute	4,754
3	University of Houston	4,748
4	Indiana University-Purdue University Fort Wayne	3,024
5	Farmingdale State College (SUNY)	2,286
6	Texas A&M University	2,247
7	East Carolina University	2,241
8	Ferris State University	2,039
9	Eastern Michigan University	1,772
10	University of Houston, College of Technology	1,584
11	Rochester Institute of Technology	1,222
12	Indiana University-Purdue University Indianapolis	1,206
13	New Jersey Institute of Technology	996
14	Purdue University Northwest, Technology	776
15	Kennesaw State University	758
16	The University of Toledo	756
17	University of North Carolina at Charlotte	736
18	Old Dominion University	716
19	University of Cincinnati	659
20	University of Maine	599
21	Oklahoma State University	562
22	California State Polytechnic University, Pomona	524
23	Purdue University Fort Wayne	508
24	University of North Texas	463
25	New Mexico State University	411

Table 123: Top 50 Institutions by Engineering Technology Enrollment (continued)

No	Institutions	Enrollments
26	The Pennsylvania State University	410
27	Montana State University	379
27	SUNY Polytechnic Institute	379
29	University of Wisconsin - Stout	378
30	Western Carolina University	374
31	Oregon Institute of Technology	339
32	Buffalo State	336
33	Brigham Young University - Idaho	318
34	Northern Illinois University	315
35	Minnesota State University-Mankato	295
36	University of Hartford	293
37	Miami University	288
38	University of Dayton	278
39	Wayne State University	268
40	Penn State Erie, The Behrend College	245
41	The University of Memphis	240
42	Ohio University	237
43	Louisiana Tech University	236
43	South Dakota State University	236
45	Abilene Christian University	234
46	Tennessee Technological University	217
47	University of Tennessee, Chattanooga	215
48	California State University Maritime Academy	207
49	Virginia State University	206
50	Western Michigan University	205

* 120 Institutions reported.

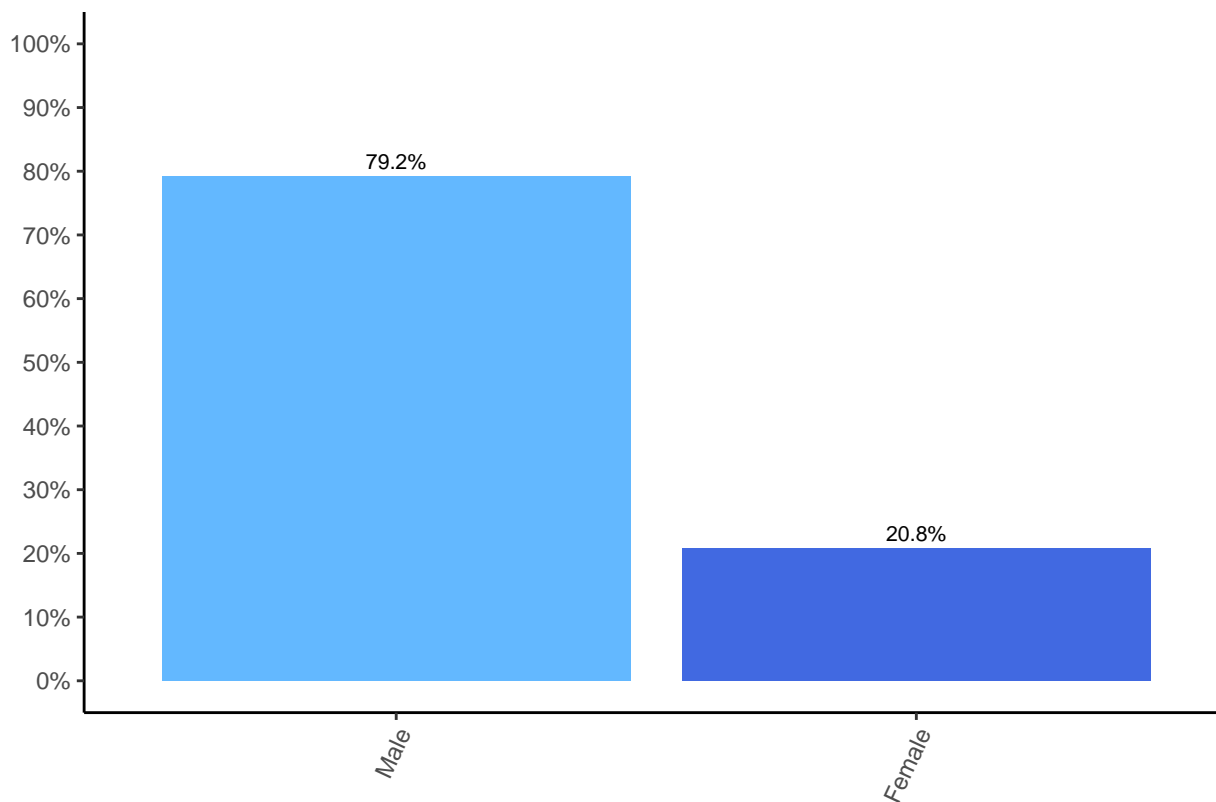
* Enrollment is for full time and part-time Bachelors degree candidates in engineering technology.

7.2.3 Engineering Technology Enrollment by Gender

Table 124: Engineering Technology Enrollment by Gender

Gender	Percentage
Female	20.8%
Male	79.2%

Engineering Technology Bachelor...s Enrollment by Gender



7.2.4 Engineering Technology Enrollment by Race and Ethnicity

Table 125: Engineering Technology Enrollment by Race and Ethnicity*

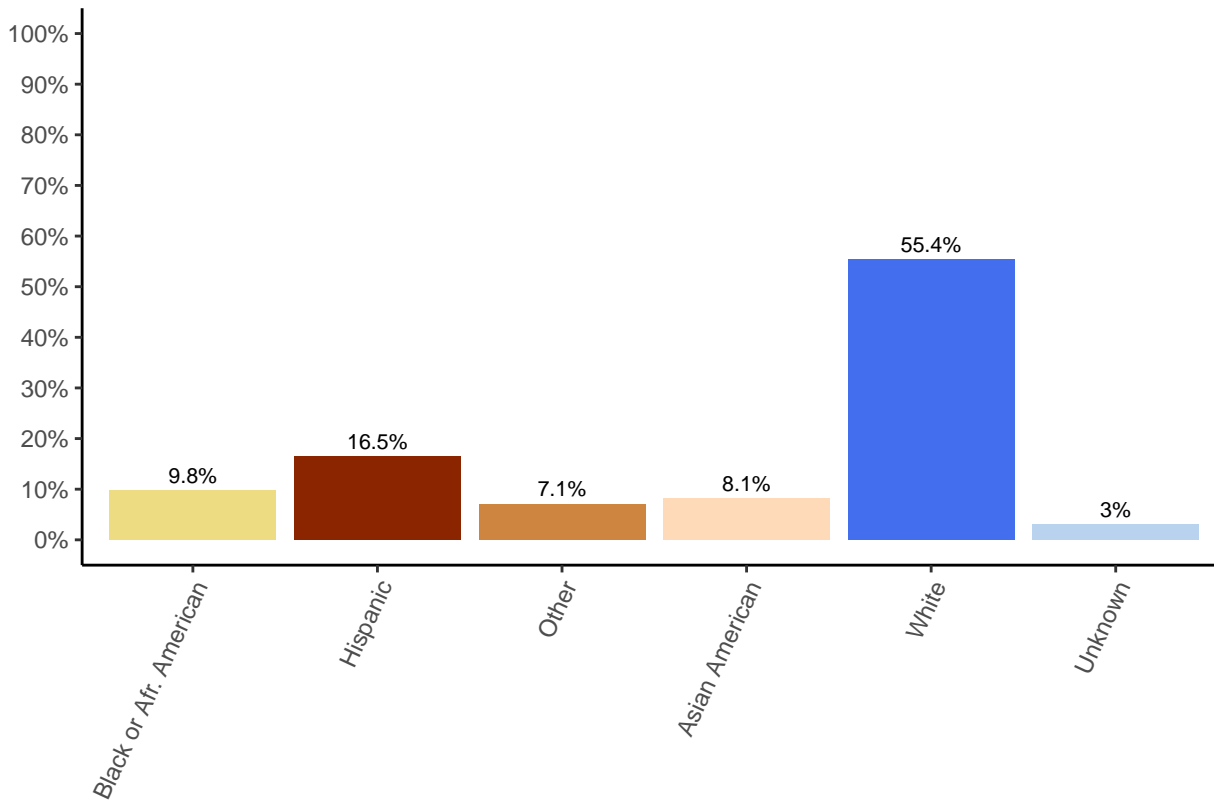
Ethnicity	Percentage
Black or Afr. American	9.8%
Hispanic	16.5%
Other	7.1%
Asian American	8.1%
White	55.4%
Unknown	3%

* American Indian/Alaska Native 1.6% Native Hawaiian/Other Pacific Islander 1.2%

* and Multiracial 4.4% are combined under other

* Data on ethnicity does not include foreign nationals.

Engineering Technology Enrollment by Race and Ethnicity



7.2.5 Engineering Technology Enrollment by Residency

Table 126: Engineering Technology Enrollment Awarded by Residency

Nationality	Percentage
Foreign	4.3%
Domestic	95.7%

* Enrollment is for full time and part-time Bachelors degree candidates in engineering technology
* 69 Institutions reported.

Engineering Technology Enrollment Awarded by Residency

