
International Graduate Applications and Enrollment: Fall 2019

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February 2020

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KEY TAKEAWAYS

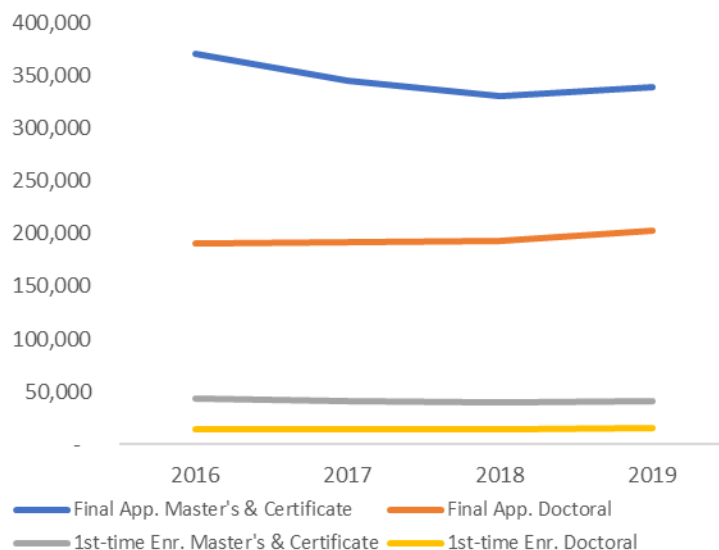
After seeing declines in international graduate applications over two consecutive admission cycles, the U.S. institutions in the CGS International Graduate Admissions Survey reported increases in both applications and first-time enrollment of international graduate students. As Figure 1 shows, applications and first-time enrollment for master's & certificate programs largely recovered to the Fall 2017 level, while doctoral applications and first-time enrollment have steadily increased over time. We offer context and additional takeaways from the Fall 2019 admission cycle data.

Overall One-year Changes. The total number of international graduate applications received by U.S. degree-granting institutions participating in the CGS International Graduate Admissions Survey (N = 210) increased by 3% between Fall 2018 and Fall 2019, and the total first-time graduate enrollment rose by 4% (Tables A1 and A2).

Changes in Applications. The overall increase in international applications between Fall 2018 and Fall 2019 appears to be driven largely by the 3% increase in master's & certificate applications. The increase in master's & certificate applications was particularly pronounced for Doctoral Universities with Highest Research Activity (N = 59, 3%) and Master's Colleges and Universities and Other Institutions (N = 93, 11%). The number of doctoral applications also increased by 3% during the same period, overall (Figure 2).

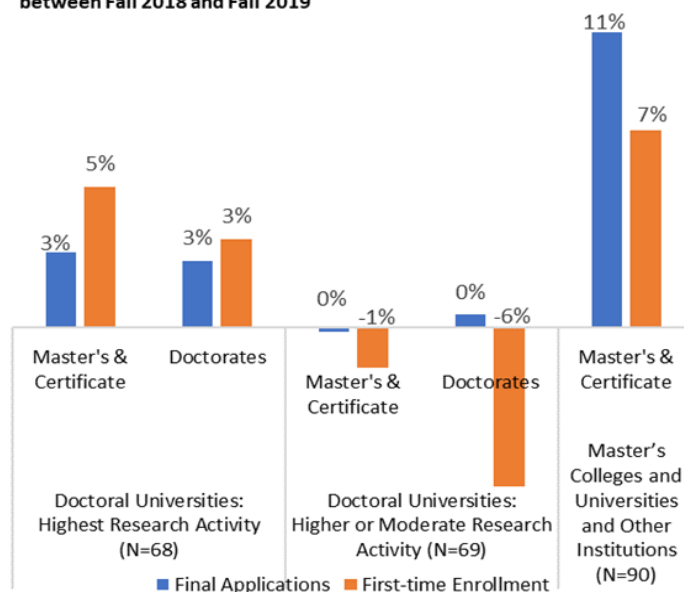
Changes in First-time Enrollment. Similar to international graduate applications, first-time graduate enrollment increased by 3% (N = 210) between Fall 2018 and Fall 2019. Both master's (5%) and doctoral (3%) first-time enrollment of international graduate students increased at Doctoral Universities with Highest Research Activity. Also, there was an increase of master's students (7%) at Master's Colleges and Universities and Other Institutions. However, first-time graduate enrollment for both master's (-1%) and doctoral (-6%) programs declined at Doctoral Universities with Higher or Moderate Research Activity (Figure 2).

Figure 1. Total International Graduate Applications and First-time Enrollment by Degree Type, Fall 2016 to Fall 2019



Data Source: Council of Graduate Schools, International Graduate Admissions Survey, Fall 2016 to Fall 2019. Note: Based on N=200 institutions that contributed data to all four survey cycles. Not all institutions reported the final application numbers.

Figure 2. One-year Change in International Graduate Applications and First-time Enrollment by Degree Objective and Institutional Type between Fall 2018 and Fall 2019



Data Source: Council of Graduate Schools, International Graduate Admissions Survey, Fall 2018 & Fall 2019.

Note: Not all institutions reported the final application numbers. Some percentages may not align due to rounding.

China. Between Fall 2018 and Fall 2019, the number of graduate applications and first-time graduate enrollment of Chinese nationals at U.S. degree-granting institutions each rose by 3%. Since Fall 2014, first-time graduate enrollment of Chinese nationals at U.S. institutions grew or remained stable every year (Figure 3 & Table A2).

India. There was no change in the number of graduate applications from Indian nationals, while their first-time enrollment increased by 1%. This is the second consecutive cycle that first-time graduate enrollment of Indian nationals was remained steady or increased modestly, following two consecutive cycles of substantial declines (Figure 3 & Table A2).

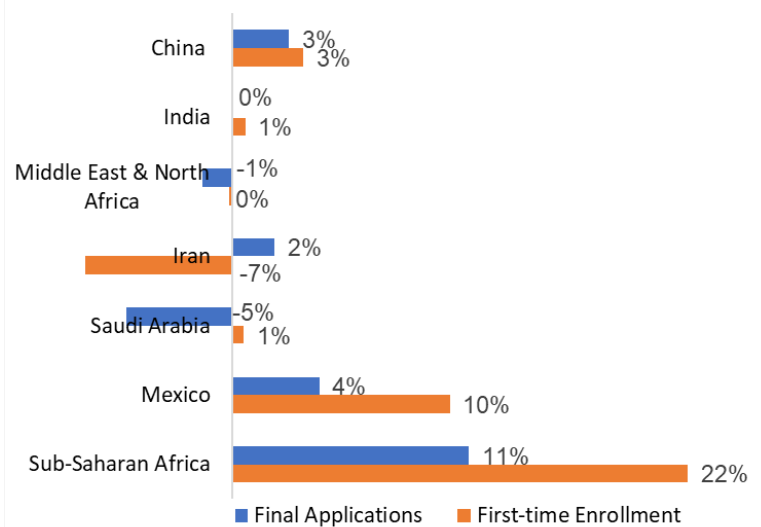
Iran. After two consecutive cycles of substantial declines in the number of graduate applications, U.S. institutions in this study saw a modest increase in the number of applications from Iranian nationals (2%). However, first-time graduate enrollment of Iranian nationals at U.S. institutions continues to decline at a rate of 7% between Fall 2018 and Fall 2019 (Figure 3 & Table A1).

Other Middle East & North African Countries. Despite the 7% decline of Iranian first-time students, overall first-time enrollment of students from the Middle East & North Africa region was unchanged between Fall 2018 and Fall 2019. With a modest gain for Saudi Arabian students, the result indicates that the U.S. institutions in this study had a robust increase in students from other countries within this region to make up the difference (Figure 3).

Mexico. Similar to Iranian nationals, the number of graduate applications from Mexican nationals rose (4%) after two consecutive cycles of declines. However, unlike Iran, first-time graduate enrollment of Mexican nationals at the U.S. institutions in this study also increased (10%) (Figure 3 & Table A1).

Sub-Saharan African Countries. Graduate applications and first-time graduate enrollment of students from countries in the Sub-Saharan Africa region continue to increase, by 11% and 22%, respectively between Fall 2018 and Fall 2019 (Figure 3).

Figure 3. One-year Change in International Graduate Applications & First-time Enrollment by Selected Country & Region of Origin between Fall 2018 and Fall 2019

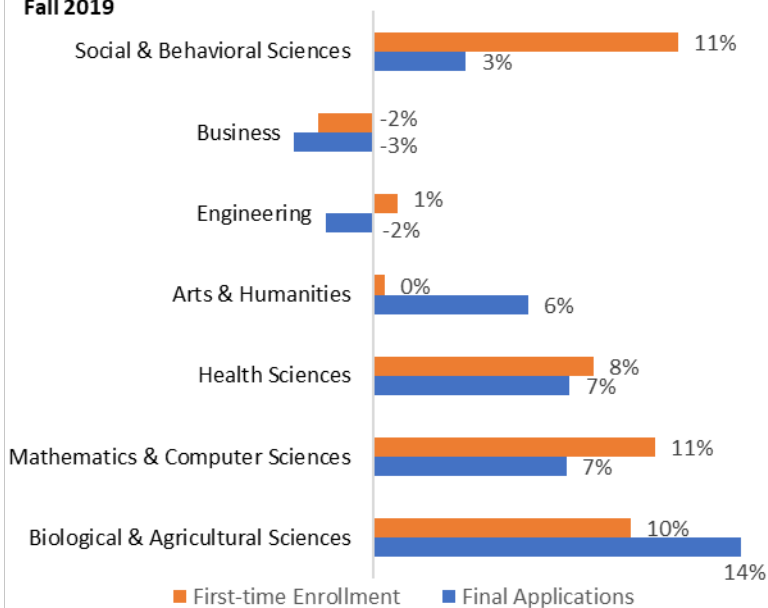


Data Source: Council of Graduate Schools, International Graduate Applications and Enrollment, Fall 2019, Tables A1 & A2.

Applications by Field. Graduate applications from prospective international graduate students in Biological & Agricultural Sciences (14%), Mathematics & Computer Sciences (7%), Health Sciences (7%), and Arts & Humanities (6%) increased between Fall 2018 and Fall 2019. By contrast, Engineering (-2%) and Business (-3%), two of the three largest broad fields for international graduate students, experienced decreases in international graduate applications during this period (Figure 4).

First-time Enrollment by Field. Between Fall 2018 and Fall 2019, the largest one-year increases in first-time international graduate enrollment by broad field of study were in Mathematics & Computer Sciences (11%), Social & Behavioral Sciences (11%), and Biological & Agricultural Sciences (10%). Despite the decline in applications over the past year, first-time graduate enrollment in Engineering increased by 1% (Figure 4).

Figure 4. One-year Change in International Graduate Applications and First-time Enrollment by Selected Field of Study between Fall 2018 and Fall 2019



Data Source: Council of Graduate Schools, *International Graduate Applications and Enrollment, Fall 2019, Tables A3 & A4.*

Discussion. The overall increase both in terms of applications and first-time enrollment of international graduate students at U.S. institutions is an encouraging sign, particularly given what seems to be a rebound for master’s & certificate programs. However, there are nuances that are obscured in aggregated figures. First, international graduate applications and first-time enrollment remain stagnant at Doctoral Universities with Higher or Moderate Research Activity, both for doctoral and master’s & certificate programs. Second, according to the most recent report by the U.S. Department of Homeland Security (2020), the U.S. still hosts a smaller number of international master’s students than in 2017, due to fewer incoming students in the last two admission cycles.

Also, according to CGS’s recent flash survey, 123 U.S. member institutions reported that in the past 24 months, they have seen an increased number of incoming and returning international visitors, including international graduate students experiencing delays in U.S. visa processes, and 84 reported an increased number of delays or denial of entry into the U.S. at their ports of entry.

Visa denials described by 28 institutions centered on ties to home country and finances (even in cases of funded students). An additional 21 institutions described denials at the port of entry due to former employment, social media posts, electronic device searches, or no reason given with an emphasis on Iran, Saudi Arabia, China, and Libya.

A number of factors both internal and external to the United States can influence the flow of international graduate students to the U.S. (Sanger & Baer, 2019). For the last three years, universities have been concerned about the influence of nativist and xenophobic rhetoric with respect to how welcoming campuses are perceived to be by international students (Fisher, 2019). These concerns about the adverse impact of the current policy and political climate on international enrollment trends are not unfounded. One challenge is that the manifestation of these concerns is not always systematic or apparent in aggregated data points. For example, focus groups suggest that despite an increase in students from sub-Saharan Africa, institutions are challenged with racial tension not only on campus but within the larger community. Other institutions reported increased visa scrutiny and tightening of post-completion work opportunities as deterrents for some prospective graduate students given their other opportunities globally.

The national, aggregate data in this report provide important benchmarks for recruitment strategies and other decision making at institutions, offering some conversation starters in this area (Okahana & West, 2019). However, these data points are most useful when augmented and interpreted with appropriate institutional contexts. Given the number of institutions engaged in concerted efforts to recruit and support international graduate students, there may be approaches and initiatives that work particularly well. We encourage institutions to look to those promising practices in addition to national trends.

REGIONAL ANALYSIS:

SUB-SAHARAN AFRICA

Given the stagnating enrollment of international students from traditional feeder countries (Institute of International Education, 2019), universities are looking for opportunities in new countries. Our data show that first-time graduate enrollments from sub-Saharan Africa, including countries like Nigeria, Ghana, and Kenya, increased by 22% between Fall 2018 and Fall 2019. All of this is occurring while sub-Saharan Africa is experiencing economic and demographic growth, spurring its students to look abroad for graduate education (Leke, Chironga, & Desvaux, 2018). In Fall 2019, the Council of Graduate Schools conducted focus groups of graduate education administrators and faculty, as well as international education professionals and student leaders at eight member institutions to ascertain the push and pull factors related to the recruitment of graduate students from this diverse region. Several opportunities and challenges emerged from our conversation that pertained to establishing connections with countries in the Sub-Saharan Africa region.

Opportunities. First, it is important to acknowledge the heterogeneity across nearly 50 countries and over one billion people. Although students from Nigeria, Ghana, and Kenya comprise the majority of African students attending U.S. colleges and universities, institutions can and have established robust connections with most other African countries. We found that these connections are best formed through faculty research in the region, as well as through social networks of proud alumni who return to their home countries and serve as ambassadors for the program throughout their communities. Also, while much of the early attraction of U.S. graduate programs was focused in development fields, such as engineering, agriculture, and public health, we found that students from the sub-Saharan Africa region today are also interested in fields such as business law, anthropology, history, and theology. Furthermore, as alumni remain the best ambassadors to represent U.S. graduate institutions in the region, maintaining an inclusive environment remains one of the best ways of ensuring student success and promoting our institutions abroad.

Challenges. Economic and demographic growth in sub-Saharan Africa has led to the creation of new universities across the region from which students are applying to U.S. graduate programs. Transcripts and letters of recommendations from these newer and lesser known institutions can make admissions decisions more difficult. Further, age-old challenges such as U.S.-style academic writing and use of American colloquialisms persist. More importantly, the racial climate and microaggressions, from faculty, fellow students, and the broader community, can adversely impact their educational experiences and can be a deterrent to future students coming to the U.S.

There is global competition for students from the region coming from China, the U.K., and South Africa. At the same time, the high cost of U.S. graduate education in tuition, standardized preparation and test taking, and application fees in conjunction with difficulty in obtaining credit cards to pay these costs and currency fluctuation create major barriers. Moreover, immigration regulations have tightened through restrictions on Optional Practical Training (OPT) and H-1B visas making post-graduation planning even more uncertain.

Discussion. With the need to diversify international enrollments both for reasons of reducing reliance on a small number of countries and to create an educational environment with international perspectives reflecting a globalized world, the world's second largest continent (and fastest growing both in terms of economy and demography) presents several opportunities and challenges for graduate institutions. The data from the focus groups demonstrate that institutions are having internal discussions with key campus stakeholders and considering both domestic (immigration regulations and campus climate) and global (foreign higher education systems and international competition) challenges when planning for the future.

DATA TABLES

Table A1. Annual Changes in Final International Graduate Applications by Region/Country of Origin, Fall 2012 to Fall 2019 Admission Cycles

	Fall 2012 to Fall 2013	Fall 2013 to Fall 2014	Fall 2014 to Fall 2015	Fall 2015 to Fall 2016	Fall 2016 to Fall 2017	Fall 2017 to Fall 2018	Fall 2018 to Fall 2019
Total	2%	10%	3%	1%	-3%	-4%	3%
Asia	-	-	2%	2%	-5%	-3%	3%
China	-3%	-1%	0%	4%	-1%	0%	3%
India	22%	33%	10%	-1%	-15%	-12%	0%
Japan	-	-	-	-	-11%	-6%	13%
South Korea	-15%	-5%	4%	-5%	-8%	0%	-6%
Taiwan	-13%	0%	-1%	1%	0%	0%	3%
Europe	-2%	3%	-5%	0%	18%	-13%	0%
Latin America & Caribbean	-	-	-1%	-3%	-4%	4%	-3%
Brazil	25%	61%	-13%	-11%	9%	1%	-2%
Mexico	-8%	1%	9%	2%	-14%	-4%	4%
Middle East & North Africa	-	-	2%	-5%	-17%	-14%	-1%
Iran	-	-	-	-	-18%	-27%	2%
Saudi Arabia	-	-	8%	-20%	-21%	-6%	-5%
North America (Canada only)	-5%	1%	3%	-12%	-9%	0%	3%
Oceania	-	-	4%	-11%	-7%	-3%	3%
Sub-Saharan Africa	-	-	7%	-9%	12%	28%	11%

Data Source: Council of Graduate Schools, International Graduate Admissions Survey

Note: Not all responding institutions provided valid data for country/region of origin, field of study, or degree objectives.

Table A2. Annual Changes in First-time International Graduate Enrollment by Region/Country of Origin, Fall 2012 to Fall 2019 Admission Cycles

	Fall 2012 to Fall 2013	Fall 2013 to Fall 2014	Fall 2014 to Fall 2015	Fall 2015 to Fall 2016	Fall 2016 to Fall 2017	Fall 2017 to Fall 2018	Fall 2018 to Fall 2019
Total	10%	8%	5%	5%	-1%	1%	4%
Asia	-	-	7%	8%	-2%	1%	6%
China	5%	-1%	12%	0%	5%	1%	3%
India	40%	27%	12%	-7%	-13%	0%	1%
Japan	-	-	-	-	3%	-17%	8%
South Korea	-12%	-7%	5%	10%	-12%	-4%	1%
Taiwan	-8%	-8%	2%	14%	10%	1%	5%
Europe	3%	1%	-4%	8%	1%	-3%	-3%
Latin America & Caribbean	-	-	-6%	5%	-10%	4%	0%
Brazil	17%	91%	-30%	-9%	18%	-2%	-7%
Mexico	-2%	8%	6%	12%	-10%	-5%	10%
Middle East & North Africa	-	-	1%	-11%	-5%	-12%	0%
Iran	-	-	-	-	-16%	-10%	-7%
Saudi Arabia	-	-	5%	-13%	-2%	-18%	1%
North America (Canada only)	3%	-1%	1%	-3%	-7%	3%	6%
Oceania	-	-	-9%	7%	-6%	-9%	7%
Sub-Saharan Africa	-	-	9%	3%	27%	19%	22%

Data Source: Council of Graduate Schools, International Graduate Admissions Survey

Note: Not all responding institutions provided valid data for country/region of origin, field of study, or degree objectives.

Between the Fall 2018 and Fall 2019 admission cycles, total applications from prospective international graduate students at responding institutions increased by 3%. Applications from prospective graduate students in South Korea (-6%), Latin America & Caribbean (-3%), and the Middle Eastern & North African region (-1%) all declined. Additionally, graduate applications from Saudi Arabian students continued to decline (-5%), while Chinese nationals had increased applications for admission to U.S. institutions between Fall 2018 and Fall 2019, after no change in counts between the Fall 2017 and Fall 2018 admission cycles (Table A1).

Compared to Fall 2018, first-time international graduate enrollment in Fall 2019 increased by 4%. After recent decreases in first-time graduate enrollment between the Fall 2015 and Fall 2017 admission cycles, the number of Indian first-time graduate students increased by 1% this past year. There was a 3% increase in first-time graduate enrollment for Chinese nationals. Sub-Saharan African (22%) first-time graduate enrollments grew robustly. In addition, Mexico (10%), Japan (8%), Canada (6%), and Taiwan (5%) reported growth in first-time graduate enrollment. Another notable finding is that first-time graduate enrollment for students hailing from Brazil dropped by 7%, and Iranian first-time graduate enrollment decreased by 7% between Fall 2018 and Fall 2019 (Tables A2).

Table A3. Annual Changes in Final International Graduate Applications by Field of Study, Fall 2012 to Fall 2019 Admission Cycles

	Fall 2012 to Fall 2013	Fall 2013 to Fall 2014	Fall 2014 to Fall 2015	Fall 2015 to Fall 2016	Fall 2016 to Fall 2017	Fall 2017 to Fall 2018	Fall 2018 to Fall 2019
Total	2%	10%	3%	1%	-3%	-4%	3%
Arts & Humanities	1%	5%	1%	2%	-9%	1%	6%
Biological & Agricultural Sciences	-	-	2%	-5%	-5%	3%	14%
Business	1%	7%	2%	8%	-3%	-8%	-3%
Education	-2%	4%	4%	0%	-11%	4%	2%
Engineering	5%	12%	2%	-3%	-10%	-16%	-2%
Health Sciences	-	-	2%	-17%	-11%	5%	7%
Mathematics & Computer Sciences	-	-	9%	5%	-2%	6%	7%
Physical & Earth Sciences	-	-	-1%	6%	-6%	-9%	2%
Public Administration & Services	-	-	-5%	-7%	-15%	-1%	1%
Social & Behavioral Sciences	-	-	-4%	-3%	-1%	3%	3%
Other Fields	5%	4%	5%	14%	-2%	8%	23%

Data Source: Council of Graduate Schools, International Graduate Admissions Survey

Note: Not all responding institutions provided valid data for country/region of origin, field of study, or degree objectives.

Table A4. Annual Changes in First-time International Graduate Enrollment by Field of Study, Fall 2012 to Fall 2019 Admission Cycles

	Fall 2012 to Fall 2013	Fall 2013 to Fall 2014	Fall 2014 to Fall 2015	Fall 2015 to Fall 2016	Fall 2016 to Fall 2017	Fall 2017 to Fall 2018	Fall 2018 to Fall 2019
Total	10%	8%	5%	5%	-1%	1%	4%
Arts & Humanities	9%	3%	5%	6%	-12%	-7%	0%
Biological & Agricultural Sciences	-	-	1%	2%	-1%	-4%	10%
Business	6%	2%	2%	7%	-11%	-7%	-2%
Education	3%	-1%	0%	7%	-16%	-31%	9%
Engineering	17%	11%	1%	-3%	-10%	-17%	1%
Health Sciences	-	-	-5%	-14%	3%	-16%	8%
Mathematics & Computer Sciences	-	-	11%	4%	2%	1%	11%
Physical & Earth Sciences	-	-	6%	-3%	-1%	-15%	6%
Public Administration & Services	-	-	4%	7%	4%	-49%	8%
Social & Behavioral Sciences	-	-	1%	9%	0%	-6%	11%
Other Fields	7%	2%	7%	11%	4%	-2%	9%

Data Source: Council of Graduate Schools, International Graduate Admissions Survey

Note: Not all responding institutions provided valid data for country/region of origin, field of study, or degree objectives.

Driven by the drop in master's and certificate applications, both Engineering (-2%) and Business (-3%) saw declines in the total number of applications by international students (Table A3). Patterns of first-time graduate enrollment across fields of study generally mirror those of final application counts. Compared to the past three admission cycles, first-time graduate enrollment in Engineering fields increased by 1% between Fall 2018 and Fall 2019 (Table A4).

Table B1. Final International Graduate Applications by Region/Country of Origin, Fall 2019 Admission Cycle

	% Shares by Region/Country of Origin			% Shares by Degree Objective	
	Total	Master's & Certificate	Doctorates	Master's & Certificate	Doctorates
Total	819,426	532,440	286,986	65%	35%
Asia	81%	86%	71%	70%	30%
<i>China</i>	43%	46%	39%	69%	31%
<i>India</i>	25%	31%	13%	82%	18%
<i>Japan</i>	1%	0%	1%	59%	41%
<i>South Korea</i>	3%	2%	7%	29%	71%
<i>Taiwan</i>	3%	2%	3%	63%	37%
Europe	5%	3%	9%	41%	59%
Latin America & Caribbean	3%	2%	4%	53%	47%
<i>Brazil</i>	1%	0%	1%	47%	53%
<i>Mexico</i>	1%	0%	1%	52%	48%
Middle East & North Africa	5%	3%	9%	38%	62%
<i>Iran</i>	2%	1%	5%	20%	80%
<i>Saudi Arabia</i>	2%	1%	2%	55%	45%
North America (Canada only)	1%	1%	2%	49%	51%
Oceania	0%	0%	0%	52%	48%
Sub-Saharan Africa	4%	4%	4%	66%	34%

Data Source: Council of Graduate Schools, International Graduate Admissions Survey 2019

Note: Not all responding institutions provided valid data for country/region of origin, field of study, or degree objectives.

Prospective Chinese and Indian students accounted for 68% of the more than 819,000 international graduate applications received by institutions responding to the 2019 CGS International Graduate Admissions Survey, with graduate applications submitted by Indian nationals accounting for 25% of all international applications. Chinese nationals (46%) decreased their share of master's and certificate applications by one percentage point last year; similarly, the share of Indian nationals' (31%) master's and certificate applications declined by three percentage points. Prospective Chinese graduate students sent more than one third of the total international doctoral applications (39%) during the Fall 2019 admission cycle, topping India by more than 26 percentage points. Iranian nationals accounted for 5% of international applications for doctoral programs, which did not change from the 2018 admission cycle.

For those applicants whose degree levels were reported, overall, about two thirds (65%) submitted applications for master’s and certificate programs and 35% submitted applications for doctoral degree programs. The vast majority of graduate applications from Indian nationals (82%) continue to be for master’s and certificate programs. In contrast, a large majority of applications from Iran (80%) and the Republic of Korea (South Korea, 71%) were for doctoral programs. Similarly, 62% of applications from Middle East & North Africa and 60% of applications from Europe were also for doctoral programs (Table B1).

Table B2. Offers of Admission to International Graduate Applicants by Region/Country of Origin, Fall 2019 Admission Cycle

	% Shares by Region/Country of Origin			% Shares by Degree Objective	
	Total	Master's & Certificate	Doctorates	Master's & Certificate	Doctorates
Total	261,331	209,742	51,589	80%	20%
Asia	82%	85%	68%	85%	15%
<i>China</i>	42%	44%	36%	85%	15%
<i>India</i>	27%	30%	13%	91%	9%
<i>Japan</i>	1%	1%	1%	78%	22%
<i>South Korea</i>	2%	2%	6%	56%	44%
<i>Taiwan</i>	2%	2%	2%	83%	17%
Europe	5%	4%	9%	63%	37%
Latin America & Caribbean	4%	3%	6%	71%	29%
<i>Brazil</i>	1%	1%	1%	64%	36%
<i>Mexico</i>	1%	1%	1%	71%	29%
Middle East & North Africa	4%	3%	9%	57%	43%
<i>Iran</i>	1%	1%	5%	37%	63%
<i>Saudi Arabia</i>	1%	1%	2%	69%	31%
North America (Canada only)	1%	1%	2%	68%	32%
Oceania	0%	0%	0%	73%	27%
Sub-Saharan Africa	4%	4%	4%	82%	18%

Data Source: Council of Graduate Schools, International Graduate Admissions Survey 2019

Note: Not all responding institutions provided valid data for country/region of origin, field of study, or degree objectives.

Over eight in ten (80%) offers of admission made to prospective international graduate students during the Fall 2019 admission cycle were for master’s and certificate programs. Regions/countries of origin with higher concentrations of doctoral applications did not necessarily receive offers of admission in the same proportion. For example, 59% of graduate applications from European nationals were made in doctoral programs, but only 37% of offers of admission were for doctoral programs. Similarly, more than two thirds (71%) of graduate applications from South Korean nationals were for doctoral programs, but only 44% of admission offers were for doctoral programs (Table B2).

Table B3. First-time International Graduate Enrollment by Region/Country of Origin, Fall 2019 Admission Cycle

	% Shares by Region/Country of Origin			% Shares by Degree Objective	
	Total	Master's & Certificate	Doctorates	Master's & Certificate	Doctorates
Total	88,353	66,431	21,922	75%	25%
Asia	78%	81%	68%	79%	21%
<i>China</i>	39%	41%	33%	79%	21%
<i>India</i>	24%	28%	14%	86%	14%
<i>Japan</i>	1%	1%	1%	76%	24%
<i>South Korea</i>	3%	2%	5%	56%	44%
<i>Taiwan</i>	2%	2%	2%	77%	23%
Europe	6%	5%	10%	61%	39%
Latin America & Caribbean	5%	5%	7%	69%	31%
<i>Brazil</i>	1%	1%	1%	65%	35%
<i>Mexico</i>	1%	1%	1%	70%	30%
Middle East & North Africa	4%	3%	8%	54%	46%
<i>Iran</i>	1%	0%	4%	27%	73%
<i>Saudi Arabia</i>	2%	1%	2%	70%	30%
North America (Canada only)	2%	2%	2%	72%	28%
Oceania	0%	0%	0%	74%	26%
Sub-Saharan Africa	4%	3%	5%	70%	30%

Data Source: Council of Graduate Schools, International Graduate Admissions Survey 2019

Note: Not all responding institutions provided valid data for country/region of origin, field of study, or degree objectives.

Of the over 88,000 first-time international graduate students enrolled in U.S. institutions in the Fall of 2019, approximately three quarters (78%) were from Asia, including Chinese nationals (39%), Indian nationals (24%), South Korean nationals (3%), Taiwanese nationals (2%), and Japanese nationals (1%). The shares of both Chinese nationals and Indian nationals decreased from the Fall 2018 figure. However, the representation of Asian international students remains substantial in master's and certificate programs, accounting for 81% of all first-time students, with China (41%) and India (28%) claiming the largest shares. China's share of first-time doctoral students (33%) is larger than that of India (14%), the Middle East & North Africa region (8%), and Europe (10%).

In terms of degree objectives of international graduate students, first-time Indian graduate students were predominantly (86%) in master's and certificate programs. Similar to the international graduate applications data, three quarters (73%) of first-time graduate enrollment of Iranian nationals were in doctoral programs. In contrast, 70% of first-time Saudi Arabian graduate students in Fall 2019 were enrolled in master's and certificate programs (Table B3).

Table B4. Total International Graduate Enrollment by Region/Country of Origin, Fall 2019 Admission Cycle

	% Shares by Region/Country of Origin			% Shares by Degree Objective	
	Total	Master's & Certificate	Doctorates	Master's & Certificate	Doctorates
Total	271,619	159,542	112,077	59%	41%
Asia	75%	81%	66%	65%	35%
<i>China</i>	37%	40%	34%	64%	36%
<i>India</i>	22%	29%	13%	78%	22%
<i>Japan</i>	1%	1%	1%	58%	42%
<i>South Korea</i>	4%	3%	6%	38%	62%
<i>Taiwan</i>	2%	2%	2%	61%	39%
Europe	7%	5%	10%	43%	57%
Latin America & Caribbean	6%	5%	7%	52%	48%
<i>Brazil</i>	1%	1%	2%	49%	51%
<i>Mexico</i>	1%	1%	1%	56%	44%
Middle East & North Africa	6%	4%	10%	34%	66%
<i>Iran</i>	2%	1%	5%	16%	84%
<i>Saudi Arabia</i>	2%	2%	2%	50%	50%
North America (Canada only)	2%	2%	2%	56%	44%
Oceania	0%	0%	1%	55%	45%
Sub-Saharan Africa	3%	3%	3%	59%	41%

Data Source: Council of Graduate Schools, International Graduate Admissions Survey 2019

Note: Not all responding institutions provided valid data for country/region of origin, field of study, or degree objectives.

Chinese nationals constituted the largest share (37%) of international graduate students with more than 271,000 graduate students enrolled in Fall 2019 at institutions participating in this survey. In addition, Chinese graduate students make up the largest percentage (40%) of international master's and certificate students (Table B4).

Table C1. Final International Graduate Applications by Field of Study, Fall 2019 Admission Cycle

	% Shares by Field of Study			% Shares by Degree Objective	
	Total	Master's & Certificate	Doctorates	Master's & Certificate	Doctorates
Total	819,426	532,440	286,986	65%	35%
Arts & Humanities	5%	4%	7%	51%	49%
Biological & Agricultural Sciences	6%	3%	13%	28%	72%
Business	13%	17%	6%	83%	17%
Education	2%	2%	2%	61%	39%
Engineering	24%	25%	24%	66%	34%
Health Sciences	3%	3%	4%	58%	42%
Mathematics & Computer Sciences	26%	32%	16%	78%	22%
Physical & Earth Sciences	5%	1%	11%	14%	86%
Public Administration & Services	1%	1%	1%	77%	23%
Social & Behavioral Sciences	8%	5%	14%	40%	60%
Other Fields	7%	8%	4%	80%	20%

Data Source: Council of Graduate Schools, International Graduate Admissions Survey 2019

Note: Not all responding institutions provided valid data for country/region of origin, field of study, or degree objectives.

By fields of study, Mathematics & Computer Sciences received the most international graduate applications for master's and certificate programs (32%), while Engineering received the most applications from international students for doctoral programs (24%). The percentage share of Mathematics & Computer Sciences applications among all international applications increased for both types of degrees from the last admission cycle. However, the share of Engineering applications decreased among all international applications at the master's and certificate level by one percentage point compared to Fall 2018.

While master's applications were concentrated in three specific fields – Engineering, Mathematics & Computer Science, and Business – the pattern for doctoral applications was somewhat more distributed. After Engineering, the top four fields of study for international doctoral applicants were Mathematics & Computer Sciences (16%), Social & Behavioral Sciences (14%), Biological & Agricultural Sciences (13%), and Physical & Earth Sciences (11%).

For those applicants whose degree objective levels were reported, the vast majority of applicants in the fields of Business (83%), Mathematics & Computer Sciences (78%), Public Administration & Services (77%), and Engineering (66%) applied for master's and certificate programs. By contrast, applications for basic science fields, such as Physical & Earth Sciences (86%), Biological & Agricultural Sciences (72%), and Social & Behavioral Sciences (60%), were more likely for doctoral programs (Table C1).

Table C2. Offers of Admission to International Graduate Applicants by Field of Study, Fall 2019 Admission Cycle

	% Shares by Field of Study			% Shares by Degree Objective	
	Total	Master's & Certificate	Doctorates	Master's & Certificate	Doctorates
Total	261,331	209,742	51,589	80%	20%
Arts & Humanities	4%	3%	6%	66%	34%
Biological & Agricultural Sciences	4%	3%	9%	57%	43%
Business	15%	18%	4%	95%	5%
Education	2%	2%	3%	73%	27%
Engineering	28%	28%	28%	80%	20%
Health Sciences	3%	3%	4%	76%	24%
Mathematics & Computer Sciences	25%	26%	20%	84%	16%
Physical & Earth Sciences	3%	1%	12%	25%	75%
Public Administration & Services	1%	1%	1%	87%	13%
Social & Behavioral Sciences	7%	6%	10%	71%	29%
Other Fields	8%	9%	4%	90%	10%

Data Source: Council of Graduate Schools, International Graduate Admissions Survey 2019

Note: Not all responding institutions provided valid data for country/region of origin, field of study, or degree objectives.

Table C3. First-time International Graduate Enrollment by Field of Study, Fall 2019 Admission Cycle

	% Shares by Field of Study			% Shares by Degree Objective	
	Total	Master's & Certificate	Doctorates	Master's & Certificate	Doctorates
Total	88,353	66,431	21,922	75%	25%
Arts & Humanities	5%	4%	7%	63%	37%
Biological & Agricultural Sciences	5%	3%	12%	45%	55%
Business	17%	22%	4%	94%	6%
Education	3%	3%	4%	67%	33%
Engineering	23%	22%	26%	71%	29%
Health Sciences	4%	4%	5%	68%	32%
Mathematics & Computer Sciences	23%	26%	16%	83%	17%
Physical & Earth Sciences	4%	1%	12%	21%	79%
Public Administration & Services	1%	1%	1%	81%	19%
Social & Behavioral Sciences	7%	6%	9%	64%	36%
Other Fields	8%	9%	4%	87%	13%

Data Source: Council of Graduate Schools, International Graduate Admissions Survey 2019

Note: Not all responding institutions provided valid data for country/region of origin, field of study, or degree objectives.

Not surprisingly, the fields of Business (94%), Other Fields (87%), Public Administration & Services (81%), and Mathematics & Computer Sciences (83%) had high concentrations of first-time international students in master's and certificate programs in Fall 2019. By contrast, doctoral first-time students accounted for 79% of international graduate students in Physical & Earth Sciences and 55% in Biological & Agricultural Sciences. This pattern largely mirrors what was found for all first-time graduate students, including U.S. citizens & permanent residents, in the Fall 2016 version of this report (Okahana, 2017).

While nearly three quarters of first-time master's and certificate students were in the fields of Engineering (22%), Mathematics & Computer Sciences (26%), and Business (22%), doctoral student enrollment was spread across a more diverse range of disciplines. Engineering (26%) continues to be the field of choice for first-time doctoral enrollment; however, four fields, Mathematics & Computer Sciences (16%), Biological & Agricultural Sciences (12%), Physical & Earth Sciences (12%), and Social & Behavioral Sciences (9%), also have sizeable numbers of first-time doctoral students (Table C3).

Table C4. Total International Graduate Enrollment by Field of Study, Fall 2019 Admission Cycle

	% Shares by Field of Study			% Shares by Degree Objective	
	Total	Master's & Certificate	Doctorates	Master's & Certificate	Doctorates
Total	271,619	159,542	112,077	59%	41%
Arts & Humanities	6%	4%	7%	45%	55%
Biological & Agricultural Sciences	7%	3%	12%	28%	72%
Business	12%	19%	3%	89%	11%
Education	3%	2%	4%	49%	51%
Engineering	28%	25%	31%	53%	47%
Health Sciences	4%	3%	4%	53%	47%
Mathematics & Computer Sciences	22%	28%	13%	75%	25%
Physical & Earth Sciences	6%	1%	13%	12%	88%
Public Administration & Services	1%	1%	1%	74%	26%
Social & Behavioral Sciences	7%	4%	10%	39%	61%
Other Fields	6%	8%	3%	75%	25%

Data Source: Council of Graduate Schools, International Graduate Admissions Survey 2019

Note: Not all responding institutions provided valid data for country/region of origin, field of study, or degree objectives.

Engineering fields lead all other fields of study by a substantial margin with respect to total enrollment, consistent with application counts, offers of admission, and first-time enrollment. Approximately three out of ten international graduate students—both master’s and certificate students (25%) and doctoral students (31%)—enrolled in an Engineering field (Table C4).

NOTES AND DEFINITIONS

About the CGS International Graduate Admissions Survey

In 2004, the Council of Graduate Schools (CGS) launched an annual empirical examination of international graduate application, admission, and enrollment trends in response to member institutions' interest in changes in the enrollment of students from abroad seeking master's and doctoral degrees from U.S. colleges and universities. Broadly speaking, the survey is designed to capture information about application counts and offers of admission, as well as first-time and total graduate enrollment of international students for each fall admission cycle. For the purpose of this survey, an international student is defined as a person who was not a citizen, national, or permanent resident of the United States and was in this country on a student visa, or on a temporary basis, and does not have the legal right to remain indefinitely. Undocumented students, individuals with deferred action status, and refugees are not included in this definition of international students.

Beginning in the Fall 2016 admission cycle, the survey was redesigned to collect data by degree objective (master's and graduate certificate vs. doctorate), and for all seven regions of origin, eight countries of origin, and all eleven broad fields of study. Additionally, beginning this survey cycle, the respondent pool was expanded to include institutions that were not CGS members but were members of the Conference of Southern Graduate Schools (CSGS), the Midwestern Association of Graduate Schools (MAGS), the Northeastern Association of Graduate Schools (NAGS), or the Western Association of Graduate Schools (WAGS). These changes were made to make the results more comprehensive, and to make them consistent with the CGS/GRE Survey of Graduate Enrollment & Degrees.

Data Collection

The 2019 CGS International Graduate Admissions Survey was sent to 775 U.S. colleges and universities, which were CGS members as of January 2019 and other institutions which were members of CSGS, MAGS, NAGS, or WAGS. Institutions were asked to report the number of final applications from and offers of admission to prospective international graduate students, as well as first-time and total international graduate enrollment for Fall 2019. The 2019 survey was administered between September 30 and November 22, 2019. A total of 403 institutions, or 52%, responded to the survey. While the response rate is less than years in the past, largely due to expanding the survey population this year to include CGS regional affiliates (e.g., CSGS, MAGS, NAGS, and WAGS members), it nevertheless reflects the largest number of institutions responding to this survey since it was launched in 2004. The data collection instrument and survey instructions are available on the [project website](#). Each completed data collection instrument submitted by participating institutions was then exported into four databases: final applications, offers of admission, first-time enrollment, and total enrollment.

Data Analysis Methods

Valid respondents for data analysis

Institutions providing data for the overall total count for international graduate students (i.e., sums of master's and certificate international students and doctoral international students) in the respective section of the survey (i.e., final applications, offers of admission, first-time enrollment, and total enrollment) were included in data analysis. This equated to 383 institutions for the final applications section with the reported total of 819,426 applications, 379 institutions for the offers of admission section with the reported total of 261,331 offers of admission, 375 institutions for the first-time enrollment section with the reported total of 88,353 first-time enrollments, and 382 institutions for the total enrollment section with the reported total of 271,619 total enrollments.

The summary of institutional controls and Carnegie classifications of institutions with valid responses for the first-time enrollment section (N=375) is shown in Table D1. Overall, two thirds (66%) of responding institutions were public universities. Over one third (35%) were master's colleges and universities, while the majority (56%) were research universities.

Additional data exclusion rules were applied for computations of percentage distributions of international students by regions/countries of origin and by fields of study, as well as by degree levels within specific regions/countries of origin or fields of study.

Table D1. Characteristics of Institutions with Valid Responses for the First-time Enrollment Fall 2019

	Total	Public	Private, not-for-profit	Private, for-profit
All Institutions	100% 375	66%	34%	0%
<i>Doctoral Universities: Highest Research Activity</i>	27% 100	71%	29%	0%
<i>Doctoral Universities: Higher Research Activity</i>	19% 73	78%	22%	0%
<i>Doctoral Universities: Moderate Research Activity</i>	10% 37	68%	32%	0%
<i>Master's Colleges & Universities: Larger Programs</i>	25% 94	66%	34%	0%
<i>Other Master's Colleges and Universities</i>	10% 39	46%	54%	0%
<i>All Other Institutions</i>	9% 32	50%	50%	0%

Data Source: Council of Graduate Schools, International Graduate Admissions Survey 2019

Aggregated international graduate application acceptance rates and yield rates

The computations of the international graduate application acceptance rates were based on the aggregated international graduate offers of admission divided by the aggregated final international applications of all institutions reporting data in a particular year. The computations of the international graduate yield rates were based on the aggregated first-time international enrollment divided by the aggregated offers of admission of all institutions reporting data in a particular year. Fall 2018 and Fall 2017 data were drawn from the CGS International Graduate Admissions Survey, Fall 2018 and Fall 2017. The number of participating institutions may be different in each year.

Percentage distributions of international students by regions/countries of origin

For each section of the survey, percentage distributions of master's degree & certificate students, doctoral students, and all students by regions/countries of origin were reported. The computations were based on the disaggregated data reported in regions/countries of origin sections of the data collection instrument, and only those institutions reporting complete data for the respective section were included in the computation. The sum of all six regions and Canada in this section served as the denominator, or 100%. Only institutions with the reported total counts in master's & certificates and doctorates columns matched with calculated totals of all six regions and Canada respectively were included in this calculation. Due to missing values, these sums may be smaller than the total counts reported as the totals of valid respondents noted earlier.

Percentage distributions of international students by fields of study

For each section of the survey, percentage distributions of master's degree & certificate students, doctoral students, and all students by fields of study were reported. The computations were based on the disaggregated data reported in the fields of study section of the data collection instrument, and only those institutions reported complete data for the respective section was included in the computation. The sum of all 11 fields of study in this section served as the denominator, or 100%. Only institutions with the reported total counts in master's & certificates and doctorates columns matched with calculated totals of all eleven fields of study respectively were included in this calculation. Due to missing values, these sums may be smaller than the total counts reported as the totals of valid respondents noted earlier.

Percentage distributions of international students by degree-levels within particular regions/countries of origin

Percentage distributions of international students by degree-levels (i.e., master's and certificate students v. doctoral students) were computed for each region/country of origin. Calculated sums for master's and certificate students and doctoral students to each category (e.g., Asia, India, etc.) served as the denominator, or 100%. Due to missing values, these sums may be smaller than the total counts reported as the totals of valid respondents noted earlier.

Percentage distributions of international students by degree-levels within particular fields of study

Percentage distributions of international students by degree-levels (i.e., master's and certificate students v. doctoral students) were computed for each field of study. Calculated sums for master's and certificate students and doctoral students for each category (e.g., business, engineering, etc.) served as the denominator, or 100%. Due to missing values, these sums may be smaller than the total counts reported as the totals of valid respondents noted earlier.

Changes between Fall 2018 and Fall 2019

Changes between Fall 2018 and Fall 2019 are expressed as percentage differences, and only those institutions reporting valid data for both admission cycles were included in the computation. Fall 2018 data was drawn from the CGS International Graduate Admissions Survey, Fall 2018.

Focus Group Methodology

Virtual focus groups were conducted in Fall 2019 with eight CGS member institutions. Members with substantial international graduate populations from sub-Saharan Africa in Fall 2018 were invited to take part. Member deans extended invitations to key campus stakeholders, including the international office, enrollment management, faculty, and department administrators who work with prospective and enrolled graduate students. The focus groups used a semi-structured protocol with questions related to current recruitment and research activities in sub-Saharan Africa, admissions, student life, and post-graduate school activities. The participating institutions were Boston University, Howard University, North Carolina A&T University, Purdue University, Texas A&M University, University of Arkansas, University of Minnesota, and University of Notre Dame.

Flash Survey Methodology

CGS fielded a short questionnaire that asks its members institutions if they have seen, over the last 24 months, a greater than usual number of cases involving delay or denial of U.S. visas, entry/re-entry into the U.S., and Optional Practical Training (OPT) applications, as well as further insights into patterns of delays and denials. For the purpose of this survey, international visitors included incoming or returning international graduate students, postdoctoral researchers, faculty members, visiting scholars, invited speakers, etc. The survey was sent out via e-mails to primary contacts (i.e., graduate deans or equivalent) at the 469 CGS regular member institutions located in the United States on January 16, 2020, and remained open until February 5, 2020. We received 174 valid responses.

Definitions

Countries and Regions of Origin

The survey collected data on eight countries of origin, including: Brazil, Canada, China, India, Mexico, Saudi Arabia, Republic of Korea (South Korea), and Taiwan. These eight countries were selected because they represent the top countries of origin for international graduate students in the United States, or for other geopolitical reasons. The survey also collected data from all seven regions of the world: Asia, Europe, Latin America & Caribbean, Middle East & North Africa, North America (for the purpose of this study, North America includes only Canada), Oceania, and Sub-Saharan Africa. Specific definitions are listed below:

Asia includes: Afghanistan, Bangladesh, Bhutan, Brunei, Burma (Myanmar), Cambodia, China, East Timor, Hong Kong, India, Indonesia, Japan, Kazakhstan, Kyrgyzstan, Laos, Macau, Malaysia, Maldives, Mongolia, Nepal, Pakistan, People's Democratic Republic of Korea (North Korea), Philippines, Republic of Korea (South Korea), Singapore, Sri Lanka, Taiwan, Tajikistan, Thailand, Turkmenistan, Uzbekistan, and Vietnam.

For the purpose of this survey, China refers to the People's Republic of China and excludes Hong Kong, Macau, Taiwan, etc.

Europe includes: Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Gibraltar, Greece, Hungary, Iceland, Ireland, Italy, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, and Vatican City (Holy See).

Latin America & Caribbean includes: Anguilla, Antigua and Barbuda, Argentina, Aruba, Bahamas, Barbados, Belize, Bermuda, Bolivia, Brazil, British Virgin Islands, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Curacao, Dominica, Dominican Republic, Ecuador, El Salvador, Falkland Islands, French Guiana, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Montserrat, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Sint Maarten, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad & Tobago, Turks and Caicos Islands, Uruguay, and Venezuela.

Middle East & North Africa includes: Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestinian Territories, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, and Yemen.

Oceania includes: Australia, Cook Islands, Fiji, French Polynesia, Kiribati, Marshall Islands, Micronesia, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu, and Wallis & Futuna.

Sub-Saharan Africa includes: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Cote d'Ivoire (Ivory Coast), Democratic Republic of Congo (Kinshasa, Republic of Congo), Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Republic of the Congo (Brazzaville), Rwanda, Saint Helena, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, and Zimbabwe.

Carnegie Classification

Institutions were coded according to their 2015 Carnegie basic classification. In the analysis of applications by Carnegie classification, the responding institutions classified as doctoral universities: highest research activity, doctoral universities: higher research activity, or doctoral universities: moderate research activity were grouped as doctoral institutions. The responding institutions classified as master's colleges & universities: larger programs, master's colleges & universities: medium programs, or master's colleges & universities: small programs were grouped as master's institutions. Responding institutions classified as specialized or baccalaureate institutions were excluded from many analyses due the small number of applications reported by these institutions.

Taxonomy

The survey collected data for all 11 broad fields of study, including: arts & humanities, biological & agricultural sciences, business, education, engineering, health sciences, mathematics & computer sciences, physical & earth sciences, public administration & services, social & behavioral sciences, and other fields. These are the same fields of study as used by the CGS/GRE Survey of Graduate Enrollment & Degrees. The detailed taxonomy is available on the [project website](#).

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List of Institutions Contributing Fall 2019 Data

Adelphi University
Alfred University
Angelo State University
Appalachian State University
Arizona State University
Arkansas State University
Arkansas Tech University
Auburn University
Auburn University at
Montgomery
Augusta University
Ball State University
Baylor College of Medicine,
Graduate School of
Biomedical Sciences
Benedictine University
Bentley University
Berry College
Boise State University
Boston University
Bradley University
Brandeis University
Brenau University
Bridgewater State University
Brigham Young University
Brown University
Bryant University
Bryn Mawr College
California Institute of Integral
Studies
California Institute of
Technology
California Lutheran University
California Polytechnic State
University
California State Polytechnic
University, Pomona
California State University,
Bakersfield
California State University,
Fresno
California State University,
Fullerton
California State University, Los
Angeles
California State University, San
Bernardino
California State University, San
Marcos
Calwell University
Cameron University
Carlow University
Carson-Newman University
Case Western Reserve
University
Central Connecticut State
University
Central Michigan University
Champlain College
Chapman University
Chatham University
Christopher Newport
University
Claremont Graduate
University
Clemson University
Cleveland State University
College of Saint Rose
Colorado State University
Columbia College
Columbia College Chicago
Columbia University
Concordia University Chicago
Cornell University
Creighton University
CSU East Bay
CSU Sacramento
CUNY- City College
Delta State University
Drew University
Drexel University
Duke University
D'Youville College
East Carolina University
East Tennessee State
University
Eastern Illinois University
Eastern Michigan University
Eastern Washington University
Embry-Riddle Aeronautical
University
Emerson College
Emory University Graduate
School
Fielding Graduate University
Florida Atlantic University
Florida Institute of
Technology
Florida International
University
Florida State University
Fordham University
Gallaudet University
Geneva College
George Mason University
George Washington University
Georgia Institute of
Technology
Georgia Southern University
Georgia Southwestern State
University
Georgia State University
Gonzaga University
Grand Valley State University
Hampton University
Hardin-Simmons University
Harvard University
Hofstra University
Holy Family University
Holy Names University
Hood College
Humboldt State University
Illinois State University
Indiana State University
Indiana University
Indiana University of
Pennsylvania
Indiana University- Purdue
University Indianapolis
Iona College
Iowa State University
James Madison University
John Brown University
John Carroll University
Kansas State University
Kennesaw State University
Kent State University
Kutztown University of
Pennsylvania
La Sierra University
Lamar University
Lehigh University
Lewis University
Lincoln Memorial University

Longwood University
Louisiana State University-
Baton Rouge
Louisiana Tech University
Loyola University Chicago
Loyola University Maryland
LSUHSC-New Orleans
Madonna University
Marquette University
Marshall University
Marymount University
Massachusetts Institute of
Technology
McNeese State University
Medical College of Wisconsin
Mercy College
Metropolitan State College of
Denver
Metropolitan State University
of Denver
Miami University
Michigan State University
Michigan Technological
University
MidAmerica Nazarene
University
Mississippi State University
Missouri State University
Missouri Western State
University
Montana State University
Montana Technological
University
Morgan State University
Mount St. Joseph University
New Jersey Institute of
Technology
New Mexico State University
New York Institute of
Technology
New York Medical College
New York University
Graduate School of Arts and
Science
New York University
Polytechnic School of
Engineering
Newman University
Nicholls State University
North Carolina A&T State
University
North Carolina Central
University

North Carolina State
University
North Central College
Northeastern Illinois
University
Northeastern University
Northern State University
Northwestern University
Nova Southeastern University
Ohio University
Oklahoma State University
Old Dominion University
Oregon State University
Pacific Lutheran University
Pennsylvania State University
Piedmont College
Portland State University
Prairie View A & M University
Princeton University
Purdue University West
Lafayette
Quinnipiac University
Radford University
Rhode Island School of
Design
Rice University
Rivier College
Rochester Institute of
Technology
Rockefeller University
Rose-Hulman Institute of
Technology
Rowan University
Rush University
Rutgers University - Camden
Rutgers University-New
Brunswick
Sacred Heart Seminary and
School of Theology
Sacred Heart University
Salem State University
Salisbury University
San Jose State University
Savannah College of Art and
Design
Seattle University
Shenandoah University
Siena Heights University
Simmons University
Slippery Rock University
South Carolina State
University

South Dakota School of Mines
and Technology
South Dakota State University
Southeast Missouri State
University
Southeastern Louisiana
University
Southern Arkansas University
Southern Illinois University
Carbondale
Southern Illinois University
Edwardsville
St. Ambrose University
St. Bonaventure University
St. John Fisher College
St. John's University
St. Mary's University
Stanford University
State University of New York
at Binghamton
State University of New York
at New Paltz
Stetson University
Stevens Institute of
Technology
Stockton University
Stony Brook University
Suffolk University
Sul Ross State University
SUNY College of
Environmental Science and
Forestry
SUNY Fredonia
SUNY Polytechnic Institute
SUNY Upstate Medical
University
Syracuse University
Tarleton State University-
Stephenville
Temple University
Tennessee State University
Tennessee State University
Tennessee Technological
University
Texas A&M Corpus Christi
Texas A&M College of
Dentistry
Texas A&M University-Central
Texas
Texas A&M University-
Commerce
Texas A&M-Kingsville
Texas Christian University
Texas State University

Texas Tech University
Texas Woman's University
The Catholic University of America
The Chicago School of Professional Psychology
The College at Brockport
The New School
The University at Albany, State University of New York
The University of Alabama in Huntsville
The University of Montana
The University of North Carolina at Greensboro
The University of North Carolina at Pembroke
The University of North Carolina at Pembroke
The University of Southern Mississippi
The University of Texas at Austin
The University of Texas at Dallas
The University of Texas at San Antonio
The University of Texas Medical Branch at Galveston
The University of Toledo
Towson University
Trevecca Nazarene University
Troy University
Truman State University
Tufts University
Tulane University
Univ of Nebraska Medical Center
Univ. of Arkansas for Medical Sciences
University at Buffalo, SUNY
University of Akron
University of Alabama
University of Alabama at Birmingham
University of Arizona
University of Arkansas
University of California, Berkeley
University of California, Davis
University of California, Irvine
University of California, Los Angeles
University of California, Merced

University of California, San Diego
University of California, San Francisco
University of California, Santa Barbara
University of California, Santa Cruz
University of Central Florida
University of Central Missouri
University of Central Oklahoma
University of Chicago
University of Colorado, Colorado Springs
University of Colorado Denver
University of Connecticut
University of Dallas
University of Dayton
University of Delaware
University of Denver
University of Florida
University of Georgia
University of Hawaii at Manoa
University of Houston
University of Houston- Clear Lake City
University of Idaho
University of Illinois at Chicago
University of Illinois Springfield
University of Illinois Urbana-Champaign
University of Iowa
University of Kansas
University of Kentucky
University of Louisiana at Lafayette
University of Louisiana Monroe
University of Louisville
University of Maine
University of Maine
University of Maryland Baltimore County
University of Maryland Eastern Shore
University of Maryland, College Park
University of Massachusetts Boston
University of Massachusetts Dartmouth

University of Massachusetts Medical School
University of Memphis
University of Miami
University of Michigan - Ann Arbor
University of Michigan-Flint
University of Minnesota
University of Mississippi Medical Center
University of Missouri
University of Missouri- St Louis
University of Missouri-Kansas City
University of Nebraska at Omaha
University of Nebraska-Kearney
University of Nebraska-Lincoln
University of Nevada, Las Vegas
University of Nevada, Reno
University of New Hampshire
University of New Hampshire
University of New Haven
University of New Mexico
University of North Alabama
University of North Carolina at Chapel Hill
University of North Carolina at Charlotte
University of North Carolina at Wilmington
University of North Florida
University of North Georgia
University of North Texas
University of Northern Colorado
University of Northern Iowa
University of Notre Dame
University of Oklahoma
University of Oklahoma Health Sciences Center
University of Oregon
University of Pennsylvania
University of Pittsburgh
University of Rochester
University of San Diego
University of San Francisco
University of South Carolina - Columbia
University of South Dakota

University of South Dakota,
Vermillion
University of South Florida -
St. Petersburg
University of South Florida -
Tampa
University of Southern
California
University of St. Thomas -
Houston
University of Tennessee at
Martin
University of Tennessee
Chattanooga
University of Tennessee
Health Sciences Center
University of Tennessee,
Knoxville
University of Texas at El Paso
University of Texas Health
Science Center San Antonio
University of Texas Permian
Basin
University of Texas Rio
Grande Valley
University of the Incarnate
Word
University of Utah
University of Vermont

University of Virginia
University of Washington
University of West Alabama
University of West Georgia
University of Wisconsin-
Stevens Point
University of Wisconsin-
Madison
University of Wisconsin-
Milwaukee
University of Wisconsin-River
Falls
University of Wyoming
University of the Pacific
Ursuline College
UT MDACC UTHealth GSBS
UT Southwestern Medical
Center
Utah State University
Valparaiso University
Virginia Commonwealth
University
Virginia Polytechnic Institute
& State University
Wagner College
Wake Forest University
Graduate School of Arts &
Sciences

Washington State University
Washington University in St.
Louis
Watson School of Biological
Sciences, Cold Spring Harbor
Laboratory
Wayland Baptist University
Wayne State University
Wesleyan University
West Chester University of
Pennsylvania
West Virginia University
Western Carolina University
Western Illinois University
Western Kentucky University
Western Michigan University
Western Washington
University
Westfield State University
Wheaton College
Wichita State University
William & Mary
William Paterson University
Worcester Polytechnic
Institute
Wright State University
Yale University

Note: Not all responding institutions provided valid data for all the sections of the survey (i.e., final applications, offers of admission, first-time enrollment, and total enrollment). This list comprises all institutions that submitted at least one section of the survey. The number of institutions listed above does not necessarily match with the numbers of institutions providing complete and valid data to various sections.

End Note

Author Contributions and Acknowledgments

This report was prepared by Enyu Zhou, Radomir Ray Mitic, Christian P.L. West, and Hironao Okahana. EZ played the principal role in data collection, analysis, and preparation of data tables and figures. RM played the principal role in preparing the Regional Analysis section. CW played a role in data collection and analysis. HO served as the project director, prepared the Key Takeaway section, and designed the flash survey. The authors thank Janet Gao for her contribution in data cleaning and help coordinating focus group interviews and Katherine C. Hazelrigg for copyediting and media relations for the release of this report. The authors also thank Suzanne T. Ortega for feedback on earlier drafts. The authors thank the CGS Committee on Research and Information Services for their ongoing interest in and support of the survey. The authors thank NAFSA: Association of International Educators and Charles Ambler for their contribution to the sub-Saharan Africa focus group protocols. The authors also thank Lauren Inouye and members of CGS Advisory Committee on Advocacy and Public Policy for feedback on the flash survey. Finally, and most importantly, the authors express much gratitude and appreciation to the graduate deans, institutional researchers, and other staff at the colleges and universities who completed the CGS International Graduate Admissions Survey this and every year.

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Suggested Citation

Zhou, E., Mitic, R.R., West, C.P.L., & Okahana, H. (2020). *International graduate applications and enrollment: Fall 2019*. Washington, DC: Council of Graduate Schools.

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