National Foundation for American Policy

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New Research: Indian Graduate Students in High-Tech Fields Dropped 25% at U.S. Universities Before Covid-19

Data Show United States May Have Trouble Regaining International Students

Arlington, Va. – In a sign it may be challenging for America to recover its place in international education, U.S. government data show that prior to the Covid-19 crisis the number of international students from India enrolled in graduate-level computer science and engineering at U.S. universities declined by more than 25% between the 2016-17 and 2018-19 academic years, according to a new analysis by the National Foundation for American Policy (NFAP), an Arlington, Va.-based policy research group. To place the significance of the decline in context, note that as recently as the 2016-17 academic year, 67% of international graduate students in computer science at U.S. universities came from India.

"Many Indian students have been choosing Canada over the United States as the place to study and make their careers," said NFAP Executive Director Stuart Anderson, who served as head of policy and counselor to the Commissioner of the INS in the George W. Bush administration. "More restrictive immigration and international student policies under the Trump administration and the difficulty of obtaining green cards in the United States are two main factors. Canada also has adopted more welcoming policies than the United States toward students and high-skilled immigrants."

The number of international students from India studying at Canadian universities rose from 76,075 in 2016 to 172,625 in 2018, an increase of 127%, according to the Canadian Bureau for International Education.

In 2019, the number of Indians who became permanent residents in Canada increased from 39,340 in 2016 to 85,585 in 2019, a rise of more than 117%, according to a National Foundation for American Policy analysis of data from Immigration, Refugees and Citizenship Canada.

The report, "Analysis of International Student Data for the 2018-19 Academic Year," can be found at https://nfap.com/.

"Canada is benefiting from a diversion of young Indian tech workers from U.S. destinations, largely because of the challenges of obtaining and renewing H-1B visas and finding a reliable route to U.S. permanent residence," said Peter Rekai, founder of the Toronto-based immigration law firm Rekai LLP. Canada allows for a smooth transition from international student to work after graduation. That creates a path to permanent residence. In the United States, the Trump administration has placed on the regulatory agenda restricting or eliminating Optional Practical Training (OPT), including in STEM (science, technology, engineering and math) fields. Optional Practical Training permits international students to work in the U.S. for 12 months or an additional 24 months in a STEM-related job, usually after graduation. Trump administration officials have also proposed or implemented other restrictions on international students, including requiring new approvals for students to continue studies inside the United States.

Due to Covid-19, Canada has implemented travel restrictions, according to Immigration, Refugees and Citizenship Canada.

Under the Canadian government's Global Skills Strategy, many applications for foreign professionals in Canada are approved within two weeks. In the United States, the process for H-1B visas can take months and many applications are denied. Moreover, the annual limit on H-1B visas has been reached for the past 18 fiscal years.

Overall, between the 2016-17 and 2018-19 academic years, the number of international students enrolled at U.S. universities declined by 4.3%, from 840,160 to 804,420, according to a Department of Homeland Security special tabulation of the Student and Exchange Visitor Information System (SEVIS) published by the National Science Foundation. Undergraduate enrollment of international students fell by 3.5% and graduate enrollment dropped by 5.2% between 2016-17 and 2018-19. International student enrollment increased significantly in both Canada and Australia at the same time it decreased in the United States. The enrollment of international students in higher education increased by 47% between 2015 and 2018 in Australia.

The number of international students enrolled at the graduate-level in engineering at U.S. universities declined from 96,330 in 2016-17 to 86,070 in 2018-19, a drop of 10,260, or 10.7%. The decline was primarily the result of the enrollment of Indian graduate students in engineering falling by 10,870, or 27.5%, between the 2016-17 and 2018-19 academic years. There was a small increase in graduate students from China enrolled in engineering over this period.

The number of international students enrolled at the graduate-level in computer science at U.S. universities declined from 70,630 in 2016-17 to 64,580 in 2018-19, a drop of 6,050, or 8.5%. Similar to engineering, the decline was primarily the result of the enrollment of Indian graduate students in computer science falling by 11,080, or 23.3%, between the 2016-17 and 2018-19 academic years. The number of graduate students from China enrolled in computer science over this period increased by 3,880, or 29.5%, but not enough to overcome the steep drop in Indian graduate students in computer science.

At the undergraduate level, the number of international students enrolled at U.S. universities in engineering declined from 64,110 in the 2016-17 academic year to 56,960 in 2018-19, a drop of 7,150, or 11.2%. Undergraduates in engineering from China declined by 1,670, or 11.4%, and from Saudi Arabia by 4,140, or 37.3%. Enrollment at the undergraduate level in engineering also fell between 2016-17 and 2018-19 for students from Kuwait, South Korea, Malaysia and Nigeria. There was a small increase of students from India.

At the undergraduate level, the number of international students enrolled at U.S. universities in computer science increased from 29,140 in the 2016-17 academic year to 35,400 in 2018-19, a rise of 6,260, or 21.5%. Although enrollment in computer science between 2016-17 and 2018-19 declined from Saudi Arabia, it rose for students from China, India, Nepal, South Korea, Vietnam and Nigeria. Many more international students come to the U.S. to study computer science at the graduate level (64,580 in 2018-19) than at the undergraduate level (35,400 in 2018-19).

On May 29, 2020, Donald Trump issued a presidential proclamation aimed at restricting the entry of graduate students and researchers from China.

Table 1
Indian Students in U.S. Graduate-Level Programs

INDIAN STUDENTS GRADUATE-LEVEL	2016-17 Academic Year	2017-18 Academic Year	2018-19 Academic Year	Decline 2016-17 to 2018-19
Computer Science	47,430	36,200	36,350	-11,080 (-23.3%)
Engineering	39,470	32,110	28,600	-10,870 (-27.5%)
TOTAL	**86,900**	**68,310**	**64,950**	**-21,950 (-25.3%)**

Source: National Foundation for American Policy, U.S. Department of Homeland Security, U.S. Immigration and Customs Enforcement, special tabulations (2018) of the Student and Exchange Visitor Information System (SEVIS) database. The data reflect fall enrollment in a given year and include students with "active" status as of November 15 of that year.

Table 2
Indian International Students in Canada: 2016 to 2018

Country	2016	2017	2018	Increase 2016 to 2018
Indian International Students in Canada	76,075	123,940	172,625	+127%

Source: Canadian Bureau for International Education, National Foundation for American Policy.

Table 3
Increase in Indian Immigration to Canada: 2016 to 2019

Country	2016	2017	2018	2019	Increase FY 2016 to FY 2019
Indians Admitted as Permanent Residents to Canada	39,705	51,590	69,980	85,585	+117%

Source: Immigration, Refugees and Citizenship Canada, National Foundation for American Policy.

Table 4
International Student Enrollment at U.S. Universities

All Countries	2016-17 Academic Year	2017-18 Academic Year	2018-19 Academic Year	Decline 2016-17 to 2018-19
Undergraduate	450,850	440,720	435,260	-15,590 (-3.5%)
Graduate	389,310	367,920	369,150	-20,160 (-5.2%)
TOTAL	**840,160**	**808,640**	**804,420***	**-35,740 (-4.3%)**

Source: National Foundation for American Policy, U.S. Department of Homeland Security, U.S. Immigration and Customs Enforcement, special tabulations (2018) of the Student and Exchange Visitor Information System (SEVIS) database. The data reflect fall enrollment in a given year and include students with "active" status as of November 15 of that year. *Numbers are rounded to the nearest ten, which means details may not add to the total due to rounding.

Table 5
Engineering – Graduate-Level: International Students at U.S. Universities

Country of Origin	2016-17 Academic Year	2017-18 Academic Year	2018-19 Academic Year
All Countries	96,330	88,960	86,070
India	39,470	32,110	28,600
China	30,840	30,840	31,450
Iran	5,020	4,910	4,540
South Korea	2,450	2,360	2,290
Saudi Arabia	1,930	1,750	1,680
Taiwan	1,840	1,870	1,910
Bangladesh	1,810	1,930	2,220

Source: National Foundation for American Policy, U.S. Department of Homeland Security, U.S. Immigration and Customs Enforcement, special tabulations (2018) of the Student and Exchange Visitor Information System (SEVIS) database. The data reflect fall enrollment in a given year and include students with "active" status as of November 15 of that year.

Table 6
Computer Science – Graduate-Level: International Students at U.S. Universities

Country of Origin	2016-17 Academic Year	2017-18 Academic Year	2018-19 Academic Year
All Countries	70,630	61,460	64,580
India	47,430	36,200	36,350
China	13,110	14,680	16,990
Saudi Arabia	1,480	1,270	1,050
Iran	970	1,010	990
Nepal	930	850	730
Taiwan	750	930	1,120
Bangladesh	650	670	780
South Korea	630	650	720

Source: National Foundation for American Policy, U.S. Department of Homeland Security, U.S. Immigration and Customs Enforcement, special tabulations (2018) of the Student and Exchange Visitor Information System (SEVIS) database. The data reflect fall enrollment in a given year and include students with "active" status as of November 15 of that year.

Table 7
Engineering – Undergraduate: International Students at U.S. Universities

Country of Origin	2016-17 Academic Year	2017-18 Academic Year	2018-19 Academic Year
All Countries	64,110	61,100	56,960
China	14,560	13,730	12,890
Saudi Arabia	11,110	9,040	6,970
Kuwait	5,510	5,700	5,430
India	4,460	4,650	4,620
South Korea	2,750	2,560	2,300
Malaysia	1,620	1,530	1,350
Nigeria	1,250	1,190	1,200

Source: National Foundation for American Policy, U.S. Department of Homeland Security, U.S. Immigration and Customs Enforcement, special tabulations (2018) of the Student and Exchange Visitor Information System (SEVIS) database. The data reflect fall enrollment in a given year and include students with "active" status as of November 15 of that year.

Table 8
Computer Science – Undergraduate: International Students at U.S. Universities

Country of Origin	2016-17 Academic Year	2017-18 Academic Year	2018-19 Academic Year
All Countries	29,140	32,460	35,400
China	8,420	10,080	11,710
Saudi Arabia	3,050	2,500	1,880
India	2,920	3,470	3,940
Nepal	2,130	2,350	2,390
South Korea	1,710	1,870	2,010
Vietnam	1,410	1,680	1,960
Nigeria	630	680	700

Source: National Foundation for American Policy, U.S. Department of Homeland Security, U.S. Immigration and Customs Enforcement, special tabulations (2018) of the Student and Exchange Visitor Information System (SEVIS) database. The data reflect fall enrollment in a given year and include students with "active" status as of November 15 of that year.

About the National Foundation for American Policy

Established in 2003, the National Foundation for American Policy (NFAP) is a 501(c)(3) non-profit, non-partisan public policy research organization based in Arlington, Virginia focusing on trade, immigration and related issues. The Advisory Board members include Columbia University economist Jagdish Bhagwati, Ohio University economist Richard Vedder, Cornell Law School professor Stephen W. Yale-Loehr and former INS Commissioner James W. Ziglar. Over the past 24 months, NFAP's research has been written about in the *Wall Street Journal*, the *New York Times*, the *Washington Post*, and other major media outlets. The organization's reports can be found at www.nfap.com. Twitter: **@NFAPResearch**

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