

ANALYSIS OF INTERNATIONAL STUDENT DATA FOR THE 2018-19 ACADEMIC YEAR

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 an analysis by the National Foundation for American Policy. The evidence indicates in recent years many Indian students have been choosing Canada over the United States as the place to study and make their careers. More restrictive immigration and international student policies under the Trump administration and the difficulty of obtaining green cards in the United States are key factors. To place the significance of the decline in context, note that as recently as the 2016-17 academic year, 67% of graduate students in computer science at U.S. universities came from India.

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.

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](#).

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.

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.

“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

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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.¹

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.

Due to Covid-19, Canada has implemented travel restrictions. “If you’re an international student who has a valid study permit or were approved for a study permit on or before March 18, 2020, you are exempt from the travel restrictions,” according to [Immigration, Refugees and Citizenship Canada](#). “If you’re travelling by air, you need to pass a health check conducted by airlines before you’re allowed to board your flight. Anyone who shows symptoms of Covid-19 will not be allowed to enter Canada by air. When you arrive in Canada we’ll assess your health before you leave the port of entry. You must isolate for 14 days even if you have no symptoms. This is mandatory.”

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.

¹ Stuart Anderson, “Indians Immigrating to Canada at an Astonishing Rate,” *Forbes*, February 3, 2020; <https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=201910&RIN=1653-AA78>.

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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%, or 35,720, from 840,160 to 804,440, 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.²

Table 5
Engineering – Graduate-Level: International Students at U.S. Universities, 2016-17 to 2018-19

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.

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.

² *Science and Engineering Indicators*, the National Science Foundation, 2020.
<https://nces.nsf.gov/pubs/nsb20197/international-s-e-higher-education>. For Australia see:
https://internationaleducation.gov.au/research/International-Student-Data/Pages/InternationalStudentData2018.aspx#Annual_Series.

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Table 6
Computer Science – Graduate-Level: International Students at U.S. Universities, 2016-17 to 2018-19

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.

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.

Table 7
Engineering – Undergraduate: International Students at U.S. Universities, 2016-17 to 2018-19

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.

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

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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.

Table 8
Computer Science – Undergraduate: International Students at U.S. Universities, 2016-17 to 2018-19

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.

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).

NEW RESTRICTIONS ON CHINESE GRADUATE STUDENTS

On May 29, 2020, Donald Trump issued a [presidential proclamation](#) aimed at restricting the entry of graduate students and researchers from China. The proclamation bars the entry of or the issuance of visas to Chinese students to the United States who are in “F” or “J” status in graduate-level programs and who are or had been associated with PRC (People’s Republic of China) entities involved with the PRC’s “military-civil fusion strategy,” note Jeffrey Gorsky, senior counsel at Berry Appleman & Leiden LLP and former Chief of the Legal Advisory Opinion section of the Visa Office in the U.S. Department of State. The proclamation defines that strategy as “actions by or at the behest of the PRC to acquire and divert foreign technologies, specifically critical and emerging technologies, to incorporate into and advance the PRC’s military capabilities.”³

³ Stuart Anderson, “Inside Trump’s Immigration Order To Restrict Chinese Students,” *Forbes*, June 1, 2020.

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“The State Department has not issued guidance on how it will implement the new restrictions,” said Gorsky. “It is likely consular officers will deny at the time of the interview those applications they determine meet the criteria cited in the proclamation and put any other questionable but not clearly deniable case into ‘administrative processing’ while the case is sent for interagency clearance. This will likely result in a significantly higher denial rate as well as more processing delays as the additional cases sent in for clearance clog up the interagency clearance system. Given the strict time frames of academic semesters, even delays in processing could effectively preclude students from beginning (or continuing) an academic program.”⁴

During a June 2, 2020, briefing, a State Department official said, “It is impossible to say because we don’t know how many individuals will seek to apply in all of these fields, but based on research that we’ve done, we expect the percentage to be low.”

“And regarding the fields, I’m reluctant to prejudice the implementation of this rule, and so I don’t think it would be appropriate to discuss which specific fields,” said another official. “However, I would want to provide a view of the technology areas that we’re concerned about, and there’s things like quantum technology; for example, artificial intelligence, advanced manufacturing, advanced materials. These are the broad areas that the U.S. Government has routinely been concerned with in the context of military-civil fusion, and so I would refer you to those kinds of documents such as the Export Control Reform Act that list a range of technology areas that the U.S. Government is trying to wrap our arms about in how to better control these technologies and these researches.”

Another senior State Department official said, “The one thing I would add there is, again, without prejudice to any particular case, clearly we’re not looking for anyone engaged in these fields; we’re looking for folks that we have reasonable – reasonable suspicion to believe have been either co-opted or coerced into basically acquiring these technologies for the purposes of PLA [People’s Liberation Army] modernization.”⁵

“There is already a longstanding program in place to vet potential students based on concerns over the transfer of sensitive technologies,” said Jeffrey Gorsky. “This proclamation will exclude persons from the United States based on past or minor associations with PRC entities even if the individuals pass the interagency clearance process. The proclamation will damage the exchange of knowledge and talent. It may inhibit the ability of the PRC to access some technology that may have military implications but the Chinese military will have other sources in other countries. America will lose out on a valuable talent pool and the financial and scientific contributions these students make to U.S. universities and the United States.”⁶

⁴ Ibid.

⁵ <https://www.state.gov/briefing-with-senior-state-department-officials-on-u-s-limiting-the-peoples-liberation-armys-ability-to-use-nonimmigrant-visa-programs-to-illicitly-acquire-u-s-technologies-an/>.

⁶ Anderson, “Inside Trump’s Immigration Order To Restrict Chinese Students.”

CONCLUSION

The crisis generated by Covid-19 will end someday and international students will remain important to America. The data show that Indian graduate students (and other foreign nationals) have been a major source of talent for companies in the United States, and many international students have gone on to create highly successful businesses.

As a source of research assistants, graduate students help [professors conduct research and retain top faculty](#). Without the ability to perform high-level research, many leading professors would move on to other careers, which would weaken American universities as a global center for science. In addition to subsidizing tuition for many domestic students, international students make more courses available for U.S. students.

Canada has a ban on most travelers from outside the country. On May 14, 2020, the Canadian government [announced significant flexibility for international students](#). The flexibility is aimed at preserving the ability of international students to work after graduation. Unlike the United States, when the Covid-19 pandemic ends, Canada will be in a good position to continue attracting international students.

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. Advisory Board members include Columbia University economist Jagdish Bhagwati, Cornell Law School professor Stephen W. Yale-Loehr, Ohio University economist Richard Vedder and former INS Commissioner James 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.
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