

Attracting the Best Students in the World to U.S. Universities: Challenges and Opportunities

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Recent surveys by the American Physical Society of physics department chairs and international physics students reveal that *the U.S. is losing its ability to attract the best students in the world*, with an average 2-year decline of -22% in international applications to physics departments outside the top tier. International students are experiencing numerous challenges in coming to the U.S., and they are seeing growing opportunities outside the U.S.

This decline is an advanced warning of rising economic risk to the U.S. A country's ability to attract the best students in the world provides a critical competitive advantage that imparts essential innovation and generates the highest caliber STEM workforce for domestic industry.

Fortunately, the recent surveys also indicate that appropriate federal policies can reverse the downward trend. The data shows that making the F-1 visa "dual intent" and providing a clear path to a green card for international students who earn advanced STEM degrees from U.S. institutions will help restore the U.S. as a competitive destination-of-choice for the world's top students.

BACKGROUND

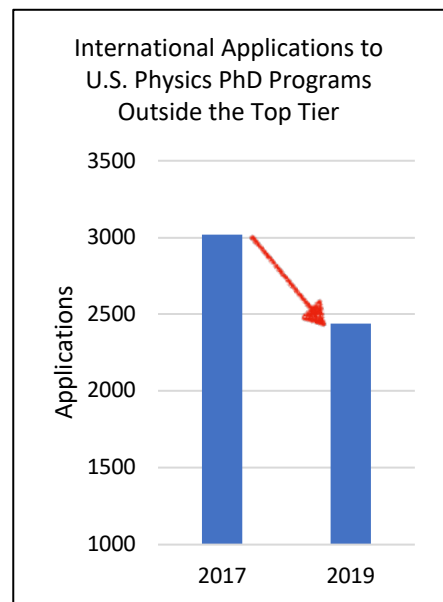
APS carries out surveys to assess the health and competitiveness of the profession. Recent surveys were conducted in mid-2019 to evaluate international student applications to U.S. physics departments. There were three distinct groups surveyed: chairs of physics departments graduating 10 or more PhDs per year; international students who came to the U.S. to earn advanced degrees; and international students who chose NOT to come to the U.S. More than 60 departments and more than 700 international members were surveyed.

Taken together, the data provide a clear view of what is happening in the U.S. at the departmental level, and it puts hard numbers around the challenges that international students face in coming to the U.S., along with reasons why many choose not to come here. The data is current to August 2019, providing an assessment of incoming classes and current student attitudes.

THE DECLINE: A survey of U.S. physics departments

This is the second year APS has surveyed physics department chairs regarding international student applications, and three key points emerged:

- There is a group of institutions that are insulated from any sustained decline. These institutions didn't suffer year-over-year declines. In fact, some of them even experienced *increases* in international applications. This group of institutions is typically regarded as the top tier of physics research institutions (e.g. Stanford, UC Berkeley, MIT).
- Outside of the top tier, physics departments across the U.S. have suffered an average *2-year decline in international applications of -22%*. A substantial gap is now opening between top tier universities and all others, in their ability to attract international students.
- Many institutions now face destabilizing declines and are making significant changes to adapt, including lowering standards.



These institutions outside the top tier play an essential role in both training the U.S. STEM workforce and in U.S. innovation: more than 70% of all U.S. physics PhDs are from institutions outside the top 15; and, since 1990, six Nobel laureates in physics, including Donna Strickland, received PhDs from institutions outside the top 15.

CAUSES OF THE DECLINE: A survey of international students

Of those students who are trying to come to the U.S. to study, nearly 30% report having challenges obtaining a student visa, including:

- 85% experience delays in processing their visa
- 20% have trouble proving “intent to leave” after getting a degree*

Of those students who choose not to come to the U.S.:

- 32% believe the U.S. is “unwelcoming to foreigners”
- 21% believe they have better educational opportunities outside the U.S.
- 20% believe they have better long-term employment opportunities outside the U.S.

* The dilemma that international students face – that they must prove they will leave our country after getting their degree – is a current State Department requirement for students applying for an F-1 visa to study in the U.S. It has an unfortunate effect: the U.S. trains international students only to have them go back to their home country and compete against us.

THE CONCLUSION: Rising economic risk

Taken together, the surveys indicate that U.S. physics departments are losing their global attraction, as international students face challenges coming here and they believe they have better opportunities outside the U.S. This decline in international applications to U.S. institutions outside the top tier is an advanced warning of rising economic risk to the U.S. The ability of a country to attract the best students in the world provides a critical competitive advantage that imparts innovation and generates the highest caliber STEM workforce for domestic industry.

AN EFFECTIVE POLICY RESPONSE

The survey probed ways to reverse the downward trend in applications and have a significant impact on international students’ decisions. Of the respondents who indicated they do not anticipate being able to obtain a green card or permanent residency to stay in the United States:

- 85% say that it is more likely that they will apply to a school if the country it is in provides options to stay and work after graduation.

While no one action can overcome all the challenges, *the surveys indicate that two policy responses can have an immediate and substantial impact.*

POLICY RESPONSE

Allow students applying for an F-1 visa to indicate they would like to stay in the US after receiving their advanced degree

Provide students a path to a green card upon earning an advanced degree from a U.S. institution

“International students are key to continued American economic leadership... They wind their way to building innovative, market-leading companies, creating tens of thousands of jobs and meaningful economic advantage.”

- FORBES