5 Tips for Studying STEM Subjects at U.S. Colleges

Learn how to earn a degree in one of these popular fields.



The U.S. offers extended practical training options for international students graduating with qualifying STEM degrees.

By Louis Farrell

June 2, 2015 | 8:00 a.m. EDT

With more than 400,000 international students studying science, technology, engineering and mathematics – also known as STEM – course work in the U.S., and more than 80 percent of international students from Asia pursuing STEM studies, the popularity of these courses continues to grow. If you're interested in learning more about STEM, follow these five useful tips.

1. Know what STEM means: The term STEM is short for science, technology, engineering and mathematics. These programs are considered a priority to the U.S. because they contribute to job creation and innovation. STEM graduates play a role in adding to the competitiveness of the U.S. in the global economy.

[Learn about ways international students can weigh potential majors.]

2. Research how to participate in a STEM program: Research a Student and Exchange Visitor Program certified school that offers STEM courses. As an international student, you can only enroll in a school certified by SEVP.

STEM programs are available at four-year colleges and universities, as well as most community colleges. Some vocational schools also offer STEM programs. You must do your own research on U.S. schools to make sure the offerings and requirements at those schools meet both your interests and academic needs.

3. Know what qualifies as a STEM degree: In 2012, as part of the U.S. plan to attract good, hardworking international students, the U.S. Department of Homeland Security expanded its list of STEM programs. The enhanced list includes STEM-designated degree programs like pharmaceutical sciences, econometrics and quantitative economics. [Get tips on successfully earning a STEM associate degree.]

4. Maintain your immigration status while performing lab work: Many STEM courses require you to participate in laboratory work like data and specimen collection, observation or experimentation. It is a good practice to always check with your designated school official about full course of study requirements for your degree, particularly because advanced degrees have different requirements from undergraduate degrees.

5. Get hands-on training: Many international students are eligible for up to 12 months of optional practical training upon completion of a degree. International students who receive a STEM-designated degree – see the link above – may qualify to participate in an OPT STEM extension beyond the initial 12 months of OPT. This enables them to remain in the U.S. for up to 29 months after graduation.

[Learn how to maintain your student immigration status.]

In order to qualify, you must have obtained a bachelor's, master's or doctoral degree in a STEM program listed on the Department of Homeland Security's STEM-designated degree program list, your employer must use the E-Verify program, and you must not have already received a 17-month extension of OPT. Additionally, you'll have to obtain work authorization through U.S. Citizenship and Immigration Services and pay a filing fee.

For more information on how and where to pursue STEM studies in the U.S., visit the Department of Homeland Security's Study in the States website.