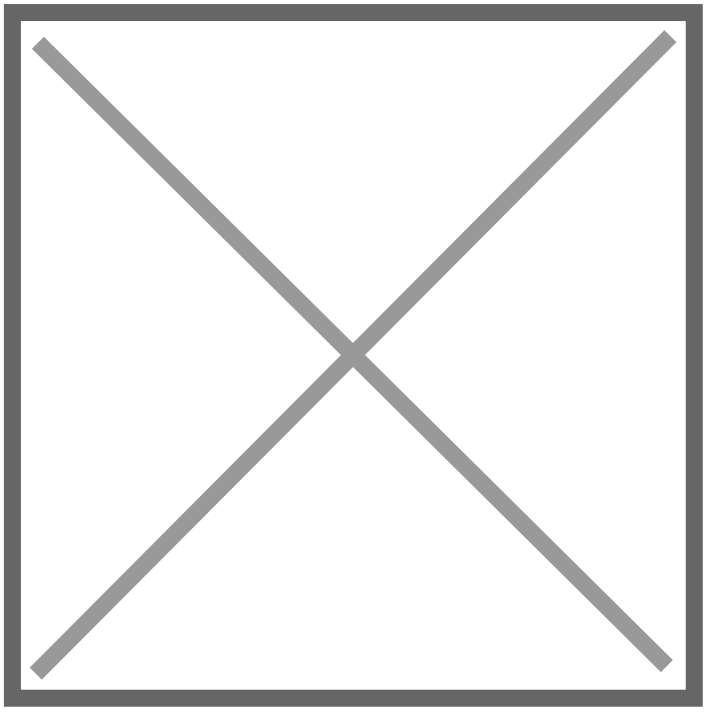
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Asian Institutes Increase Student Intake

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Asian Institutes Increase Student Intake

Knowledge is not limited to national boundaries in today's cohesive world. The international migration of students for education is more of a norm than an exception now.

The 1990s saw a tremendous increase in transborder movement of students for higher degrees. For Asian students, although the US tops the list of dream destinations, many Asian countries are attractive options as well. With science and technology becoming the key driver of development in Asia, scientific educational institutes with international standards have also come up. A number of countries in this region like Australia, Japan and Singapore have increased foreign student enrollment in recent years. In 2004, more than 84,000 foreign students, mainly from the Asian region, enrolled at the undergraduate and graduate levels in Japan, of which about 50,000 enrolled in science and engineering fields.

Here is a snapshot of select Asian countries and institutes, which are bullish on life sciences education.

Australia: A rich history in science and technology

Australia is a leader in life sciences education and research.

Australia is one of the top three destinations for international students. According to statistics, in 2004, it attracted over 3,22,000 international students from over 190 different nationalities. New life sciences course work gets implemented each year keeping the students, researchers and other personnel in the forefront of biological innovation.

Life sciences education in Australian universities is supported by investment from the government and industry. The Australian government support includes various programs under Backing Australia's Ability-a five-year $3 billion innovation action plan launched in 2001. Further Australia's science and innovation performance will be boosted through a $5.3-billion package that strengthens the successful "Backing Australia's Ability" program. Together these packages constitute a 10-year, $8.3-billion funding commitment stretching from 2001 to 2011. Combined with other science and innovation programs, they take the Australian government's 10-year investment in this key area to around $52 billion.

Universities and institutes

Australia has about 37 government-funded universities and two private universities, as well as a number of specialist institutions providing approved courses at the higher education level.

Most of the Australian universities offer courses in life sciences. They are the Melbourne University, Australian National University (ANU), University of New South Wales, Curtin University of Technology, Deakin University, Edith Cowan University,

Flinders University and many others. Many universities have international collaborations as well. The faculty of ANU is internationally linked with universities such as Oxford and Cambridge, Singapore and Beijing, Osaka and Seoul, California and British Columbia. Similarly, the University of New South Wales (UNSW) has set up an Asian arm, UNSW Asia, which will open its doors in Singapore in March 2007 and shall offer a comprehensive range of undergraduate, postgraduate and research degrees in diverse arenas including science. A new research institute for molecular science and biotechnology, known as the Bio21, was set up recently at the Melbourne University. It is one of Australia's largest biomedical research centers and home to 230 researchers, including postgraduate students, from 12 different disciplines.

Australian universities are increasingly providing unique specializations to ensure personnel and students stay abreast in life sciences as so many new fields have emerged (bioinformatics and proteomics) and each new technology leads to new capabilities and new issues (eg: bio-security, stem cell research).

Most of the undergraduate life science courses last for three years and a majority of the courses start in February. Some of the courses also begin in July and October.

Applications to study at Australian institutes can be sent directly to the institutes.

Scholarships

Most of the universities have a range of scholarship opportunities to offer. For example, the ANU offers international students from any country five full undergraduate tuition scholarships and four full undergraduate tuition scholarships for a student from each of Hong Kong, Malaysia, Singapore and Thailand. Likewise the UNSW provides many scholarships for international students. They include the Endeavour International Postgraduate Research Scholarships (EIPRS) and University International Postgraduate Award (UIPA). These scholarships are highly competitive. In addition, there are general as well as faculty specific scholarships for the undergraduate programs of study like the Alton and Neryda Fancourt Chapple Biological Science Scholarship; The Dean's Honours Year Scholarship; Children's Cancer Institute Australia (CCIA) Honours Scholarship amongst others for studies in the life sciences arena.

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China: A silent progressive revolution

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China has emerged as one of the fastest growing centers for education

China has a long history of having students from foreign shores studying in its institutes and out of the 2000 plus universities and colleges, more than 300 have overseas students on their campuses. There are well over 1 lakh foreign students studying in China, who have flocked from more than 164 countries across the world, though a majority of them (nearly 70 percent) are from the Asian region.

Universities and institutes

Beijing Institute of Technology, China Agricultural University, Fudan University, Harbin Institute of Technology, University of Science and Technology of China, Nanjing University, Peking University are some of the prominent institutes offering courses in life sciences.

Candidates aspiring for a Chinese degree have to go through a national examination and only those whose exam scores are up to the required standard can become registered students to study for a degree there. Most of China's institutions of higher learning operate on a centralized enrolment system in which admissions committees at the provincial level operate under the aegis of the Ministry of Education. The nationwide examinations are during the first half of July. The tests themselves, issued by the Ministry of Education, fall into two categories-the humanities, and the sciences and engineering. While candidates can appear for only one of the two, they can list the institutions and departments they wish to join in order of preference.

Scholarships

Scholarship programs are bilateral exchange programs, and those who want to apply to study in China on a Chinese scholarship have to go through their government. Private students can send their application directly to the university or college that they wish to study in.

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India: A center for learning

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India has one of the largest higher education programs.

Higher education in India has gone through a big paradigm shift and become more international. With over 226 universities and thousands of colleges affiliated to them, about 428 engineering colleges and technological institutes, more than a 100 medical colleges, scores of agricultural institutes and many other specialized centers of learning and research cross cutting across disciplines, India can claim its position as one of the leading countries providing quality higher education.

Universities and institutes

There are three principle levels of qualifications within the higher education system in India. These are bachelor/undergraduate level, masters/post-graduate level and doctoral/pre-doctoral level

Diploma courses are also available at the undergraduate and postgraduate level. The academic session is yearly and generally starts in July or August while admission starts in the month of May/June on the basis of written examination or interview. Some universities/institutes reserve a limited number of seats for foreign students/NRI students, which are given on the basis of the applicant's academic record. The Jawaharlal Nehru University, Indian Institutes of Technology and the Indian Institute of Science are some of the internationally acclaimed institutes for a higher degree in life sciences. Some of the important universities offering high technology courses in this arena are the University of Hyderabad, Anna University, Madurai Kamaraj University, Institute of Chemical Technology, Pune University and a few other universities.

Scholarships

Every year a few scholarships are offered to international students according to the terms and conditions of the cultural exchange program signed between the Indian government and the government of the respective country, for studying, training and research in various fields. There is a General Cultural Scholarship Scheme (GCSS), where scholarships are awarded annually to international students belonging to certain Asian, African and Latin American countries for the undergraduate, postgraduate degrees and for pursuing research at Indian universities. Other international scholarships available are Commonwealth Fellowships, Technical Cooperation scheme of the Colombo plan, Reciprocal Scholarship Scheme and the SAARC Scholarship scheme.

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Japan: Favorite destination for international students

Japan: Favorite destination for international students

Science and technology is the driving force behind Japan's development.

The greatest appeal of studying in Japan is its academic environment where one can study state-of-the-art technology and acquire the knowledge that enabled Japan's phenomenal postwar economic growth.

Japan promotes the acceptance of foreign students from various nations around the world. This is evident from the fact that in 2004, more than 84,000 foreign students enrolled for undergraduate and graduate levels in Japan, of which about 50,000 enrolled for science and engineering disciplines. Significantly, about 90 percent of the international students who study in Japan come from other parts of Asia.

Universities and institutes

There are about 700 universities in Japan, including national, state and private universities. Foreign students can enroll for one of the five types of institutions of higher learning: universities (undergraduate courses), graduate schools, junior colleges, special training colleges (post-secondary courses) and colleges of technology. The duration of study in an undergraduate university is four years with the exception of medicine and veterinary science department, which require six years of study. The study duration in a graduate school depends on whether a student has enrolled for a masters or doctorate program. The duration of the masters program is two years, while that of the doctorate program is five years, including the first two years of the masters degree. Some important universities offering life sciences courses in Japan include Gakushuin University, Graduate University for Advanced Studies, Gunma University, Hiroshima Shudo University, Hokkaido Tokai University, Kyoto University, Nagasaki University, Osaka University, Science University of Tokyo, Tokyo University, Yokohama City University and many others.

Scholarships

There are several types of Japanese government-sponsored scholarships available: those for research students, undergraduate university students, college of technology students and special training students, besides a host of other schemes.

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Singapore: Leader in biomedical sciences

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The fourth pillar of Singapore's economy is the specialized arena of biomedical sciences.

Singapore had been poised to launch a new direction in economic development post 2000. After the announcement of the first draft of human genome in June 2000, the Singapore government decided to launch biomedical sciences as the fourth pillar of industry. The focus on biomedical sciences has been due to some good reasons. As opposed to the existing chemical, electronics and engineering industries, which faced regional competition due to low labor cost, biomedical sciences has a "high barrier entry" as it is very capital intensive. It is a high-end industry and needs a lot of good, well-researched products. Moreover, the potential for the growth of the biomedical sciences is tremendous as against agriculture and non-medical devices. The global human therapeutic industry will be worth $27 billion by 2008 and human diagnostics will be a $4.3-billion industry.

Universities and institutes

There are three local universities in Singapore-The National University of Singapore (NUS), Nanyang Technological University (NTU) and the Singapore Management University (SMU). In addition, BioPolis, the biomedical research hub of Singapore, has 12 A*STAR (Agency for Science, Technology And Research), like the BioInformatics Institute (BII), the Bioprocessing Technology Institute (BTI), the Genome Institute of Singapore (GIS), the Institute of Molecular and Cell Biology (IMCB) and the Institute of Bioengineering & Nanotechnology (IBN) which conduct a variety of short and long-term training programs in association with the universities.

In addition to local universities, leading international universities have increased the level and scope of tertiary education in Singapore. Some leading international universities, which have collaborated with local institutions to launch their presence in Singapore include Georgia Institute of Technology-The Logistics Institute, Asia Pacific, Johns Hopkins University-Johns Hopkins Singapore, Massachusetts Institute of Technology (MIT)-Singapore MIT Alliance, Shanghai Jiao Tong University, Stanford University-Singapore Stanford Partnership, Wharton School of the University of Pennsylvania-Wharton SMU Research Centre and the Technische Universitat Munchen-German Institute of Science and Technology.

Scholarships

The ASEAN* Undergraduate Scholarship (AUS) is awarded to freshmen who are citizens and permanent residents of a member country of ASEAN. SembCorp Industries Undergraduate Scholarship is another popular scholarship.

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South Korea: Highly competitive

South Korea: Highly competitive

South Korea has experienced a spectacular expansion of higher education.

The Korean educational system has undergone a series of reforms and the Korean universities have expanded rapidly since 1970. In fact, the number of students and professors in four-year universities have increased 11 times and seven times between 1970 and 1999 respectively. Focusing on higher education, the Ministry of Education launched Brain Korea 21(BK21), a human resource development program, which targets seven important areas in science and technology necessary to enhance national competitiveness in the 21st century. Incidentally, biotechnology, which encompasses agriculture, medical science and environment, is the first target area selected for program implementation. The South Korean government has recently allocated the second round of funding for the 'Brain Korea' 21 (BK21) project, allocating $2 billion over seven years to strengthen further the country's post-graduate competitiveness. For 1.6 million students approximately 184 million dollars are presently being invested in the public and private four-year Korean universities.

Universities and institutes

The Seoul National University (SNU) is amongst the leaders of higher education in Korea and is known for its quality graduates. The founding of SNU in 1946 marked the opening of the first national university in modern Korean history. Besides SNU, some other premier universities and institutes offering life sciences courses in Korea include Korea Basic Science Institute, Korea Institute of Science and Technology, Korea Research Institute of Chemical Technology, Andong National University, Cheju National University, Chonnam National University, Korea Advanced Institute of Science and Technology , Kwangju Institute of Science and Technology, Phohang University of Science and Technology, Sunchon National University, Suwon University, University of Seoul, and Yonsei University.

Scholarships

International students have attractive chances of being awarded scholarships. The Ministry of Education offers a scholarship program for foreign students from countries that have concluded a bilateral cultural agreement with Korea. A few other outside scholarships include Korea Foundation Fellowship for Graduate Studies; Korea-Japan Cultural Association Scholarship; and the Overseas Korean Foundation Scholarship. Besides, most of the Korean universities also provide scholarships for international students. The Seoul National University offers SNU Tuition Scholarship in addition to a limited number of work scholarships by the individual departments or professors. There are two types of work scholarship opportunities available- Teaching Assistant (TA) and Research Assistantships (RA), where the students receive a partial tuition waiver as well as a monthly stipend.

Rolly Dureha