

Education TIMES

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TOWARDS TOMORROW

Advertorial, Education Promotional Feature

PORTALUPDATE

POLL
Your voice
Will the quality of education improve if colleges become autonomous?
Yes 60%
No 20%
Can't Say 20%

EXPERT EYE
Health initiative
The founder of a health initiative and vice-chancellor of an Australian university on the importance of screening for cervical cancer

COURSE CURSOR
Media management
A PG certificate programme in media and entertainment management offers insights into the business of media and modern and emerging trends in the media and entertainment industry

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Information technology (IT) has virtually brought the world to millions of people through computers and smartphones. The information highway it paved also opened global opportunities for students with a love of technology. Students can pick from a variety of degree programmes to build careers in different countries. Karan Gupta, international education counsellor, says, "If you study IT or computer science at a US university, you would be able to opt for a double major wherein you study IT along with another subject of your choice. One of the most popular choices is a Bachelor's in Computer Science along with a Bachelor's in Business Administration at the same time." Here's a look at a few options.

Computer science
"Digital business transformation remains a driving force for small and large enterprises alike," as per US-based Computing Technology Industry Association (CompTIA)'s IT industry outlook 2017. It adds that "those on the right path will have the opportunity to explore advances in areas such as virtual reality, artificial intelligence, advanced analytics, the internet of things, and inevitably, a few unexpected breakthroughs." Hence, unsurprisingly, an array of computer science (CS) programmes have proliferated around the globe. There are BS — as well as BA degrees — with CS as a major or minor or combined with related (such as electrical engineering) or different (say, biology) disciplines. Broadly, students study calculus and/or applied linear algebra/linear algebra, probability and/or statistics, data structures and algorithms, programming, computer organisation and operating systems along with a range of other courses. In addition to the core courses, a university may also allow them to opt for concentrations in chosen tracks.

Graduates can work as software application developers, software systems developers, software QA testers, computer programmers, computer systems analysts/engineers, database administrators and web developers, among others.

Information systems
"Information systems (IS or management information systems, MIS) is the study of the digitalisation of business," says Jan Recker, treasurer, Australian Council of Professors and Heads of Information Systems, and professor, School of Management, QUT Business School, Queensland University of Technology. "With the advent of the digital age, it is perfectly placed to understand the current disruptions of



The info highway

A bird's-eye view of a few overseas degrees for the technically inclined

lieve we know about entrepreneurship, innovation and our social life. Degree specialisations that connect to these topics will be fundamental for the years to come," adds Recker. The qualification can lead to roles as business systems analysts, business application developers, IT consultants, database administrators, business intelligence analysts, systems developers, database analysts, network administrators, information systems managers and web developers, among others. "MIS graduates' career opportunities have looked good for several years now, and the trend continues to be positive in terms of diversity, volume and salary of jobs. The most prominent new roles are those of the chief digital officer or chief innovation officer, as well as of consultants on digital transformation," says Recker.

Engineering management
Degrees in this field are for students who wish to develop an engineering base with managerial capabilities for technological contexts. Bachelor's programmes in engineering management combine the study of engineering, business and other subjects. The curricula include calculus, statistics, macroeconomics, microeconomics, algorithms and data structures, programming for engineers, strength of materials, mechanics, thermodynamics, systems analysis and design, technology management and project management and other courses. Counsellor Swati Salunkhe adds, "The skills students learn prepare them for leadership roles in technology-based industries. Armed with management and engineering knowledge, graduates are able to guide teams of specialists in highly scientific tasks."

Graduates can become business system analysts, engineering project manager, technical system analysts, quality engineers, technical consultants, and industrial managers, among others.

AT A GLANCE

- You need to successfully complete class XII to be able to apply to a Bachelor's degree in one of these fields. To study at a US university, SAT or ACT, SAT Subject tests and TOEFL scores are required. For admission to universities in Canada and Australia, you need to take the IELTS
- "If you study in the US, Canada or Australia, you would be able to apply for work permits after graduation and stay back in the country," says Gupta

the global marketplace as well as to predict and design the next-generation changes brought forth by technology." Undergraduate programmes in MIS cover courses such as calculus, statistics, macroeconomics, microeconomics, management information systems, accounting, marketing, database management systems, network administration and management, business web applications, e-business and more. "The latest trends concern how digital technology upends what we be-

CBSE school textbooks

The Central Board of Secondary Education (CBSE) has asked all schools affiliated to it to use only NCERT books from the academic year 2017-18. The decision came in a recent review meeting on the use of NCERT books in CBSE schools. The National Council of Educational Research and Training (NCERT) will print and supply textbooks for all classes from class I to XII through its empanelled 680 distribution vendors. The board has created a link on its website, www.cbse.nic.in, for schools to make indents, which it would share with the council. HRD minister Prakash Javadekar chaired the meeting.

VIRTUAL VISTAS

Tom Garner, research scientist at the University of Portsmouth, UK, on how the world is acknowledging the value of virtual reality as a discipline

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Virtual reality (VR) is enjoying much success thanks to recent breakthrough products for personal computers, consoles and mobiles. Multinational companies now

endorse this novel technology. This success has begun to influence education, with universities recognising the opportunity for students to find engaging employment with established companies or strike out on their own as 'indie' developers.

In healthcare, trainee surgeons can operate on robot patients while wearing a VR headset that places a digital human body over the physical robot. In space exploration, NASA uses an augmented reality system called ProtoSpace with the Microsoft HoloLens. This allows it to project a 3D model of anything from a propulsion engine to a Martian rover into a real space where the team can walk around it and manipulate parts with their hands.

VR continues to grow and there is much work to be done — from finding

new ways to mix virtual and real content (augmented reality, mixed reality) to creating multi-sensory feedback (adding virtual touch, smell and taste) so that we can really feel virtual worlds. With new applications and challenges being raised almost daily, there is a skills shortage and a need for the right people.

UK-based undergraduate degrees already offer VR modules within broader subjects. More recently, VR-specific courses have become available in the UK, revealing how higher education is

acknowledging the value of this technology as a discipline. Postgraduate students also have the opportunity to study advanced VR at Master's and doctoral level.

To study VR in the UK, evidence of English language skills (IELTS or equivalent) is required and basic programming knowledge is advisable (C# and Java are two good choices). Equally important is an open-mindedness to VR design. Students who perceive VR development to be just a game and headset often struggle as this stream presents many unique challenges and opportunities that

cannot be underestimated. Academically, universities offering VR as a module within a design-orientated course typically require slightly lower course-entry grades. Alternatively, studying VR within a computer science or mathematics course requires higher grades.

>> CAREER PROSPECTS

The pay for graduates can vary dramatically depending on the industry and job. Fresh graduates in VR can expect £20,000-24,000 (Rs 17 lakh-20 lakh) per annum while experienced developers can command up to £70,000 (Rs 59 lakh) per annum.



FACULTY VIEW

Don't work for money: Apple CEO

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PHOTOS: MARTIN SHIELDS

Apple CEO Tim Cook was conferred an honorary Doctorate of Science degree by the University of Glasgow on February 8, 2017. This is the first time that he has accepted an honorary degree from a UK university. During his acceptance speech at the university's Bute Hall, his advice to students was: "Don't work for money — it will wear out fast or never be enough. But be passionate about what you do. You have to find the intersection of doing something you're passionate about and at the same time something that is in the service of other people."



On US President Donald Trump's executive order on immigration, he replied, "our simple view is that Apple would not



Left: Apple CEO Tim Cook after receiving an honorary DSc degree from the University of Glasgow. Above: The gathering in the university's Bute Hall

exist without immigration. We do not support the travel ban. But I am optimistic that the right thing will prevail." He further added

that more than any other country, the US has benefitted the most from its immigrant history and its capacity to welcome people from all nations.

In a response to a student's question, Cook said that the late Apple co-founder Steve Jobs had the strongest influence on his life. "He gave me an opportunity when I was 36 years old. I met a CEO for the first time that was totally focused on making great products. He had a focus unlike any other. His thinking was so pure. He really understood the sort of things we work on and the results that come from those things..."

Interfaith training

TIMES NEWS NETWORK

Jamia Millia Islamia (JMI) plans to engage students in practising "tolerance" through a series of workshops and seminars by theological experts in the country. The British High Commission will fund the programme.

The university's department of Islamic studies (DIS), which has been taking part in interfaith dialogues, has drafted a training programme consisting of articles by theological figures from various religions and cultures. It started with a curriculum development workshop earlier this month. Apart from lectures, the programme will be designed to explore activities that can help promote interfaith practice in the coming days.

A university official said, "The idea is to teach them that apart from faith and rituals, people across religions

have common, basic issues that influence their lives in the same manner. So, instead of clashing with each other's faith, we should be collectively working on our common issues."

JMI plans to expand the programme to universities in Jodhpur, Aligarh, Lucknow and Patiala.

"We have been witnessing a rise in tolerance and inter-religion debates in India. There is so much written on social media and not all of it is right. While it is important to express your doubts and raise questions, it is even more important to find the right answers. That is why we have invited religious leaders to train students to indulge in interfaith practices. India is a multicultural country. If religious leaders are able to make students imbibe this fact, we can have a young tolerant force," said the official.



Algae biz for refugees

TIMES NEWS NETWORK

Four IIT-BHU students' idea of algae cultivation to help refugees earn extra money won the first edition of the Hult Prize India contest recently. Their kit requiring about a 1-sq-m area is supposed to help refugees grow algae used in industry. The team zeroed in on three-four species of the photosynthetic organisms found around the world. The reason is they are simple to grow, require little care and have applications in pharmaceutical, food supplements, as well as other industries.

"The intent is to provide an additional source of income to families by providing them the means and apparatus for in-house cultivation," said Dhruv Chawla, a BTech chemical engineering student from the winning team which will go to the regional fi-

nal in Dubai to compete for a slot in the global finals in September 2017. "The commercial value of algae is gradually being recognised." His teammates are Debjyoti Biswas (BTech chemical engineering), Pratyush Choudhury (BPharma) and Dhruv Goel (BTech metallurgical engineering). Their eureka moment happened during one of their conversations over tea. According to one of the judges, the proposal is practical. "The team has been selected for the idea to utilise existing standardised technology for algae cultivation to supplement migrant communities' income by production and sale of nutrient and antioxidant-rich algae. The idea is simple. Its implementation is feasible and the project is scalable," said Gaurav Kumar, VP, Yes Institute, Yes Bank.

Nine other teams will represent India in the global regional rounds for the US\$1 million Hult Prize, an international student competition. Hult Prize India is a joint initiative of the Hult Prize Foundation (US) and Aravindam Foundation (India).

The intent is to provide an additional source of income to families through in-house cultivation

> For the complete story, visit www.educationtimes.com

CLAT 2017/18

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