DR SUNIL KHANNA,
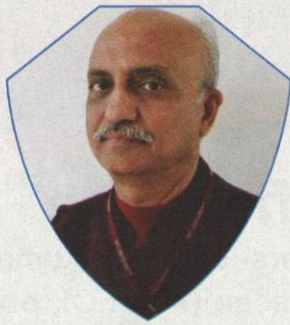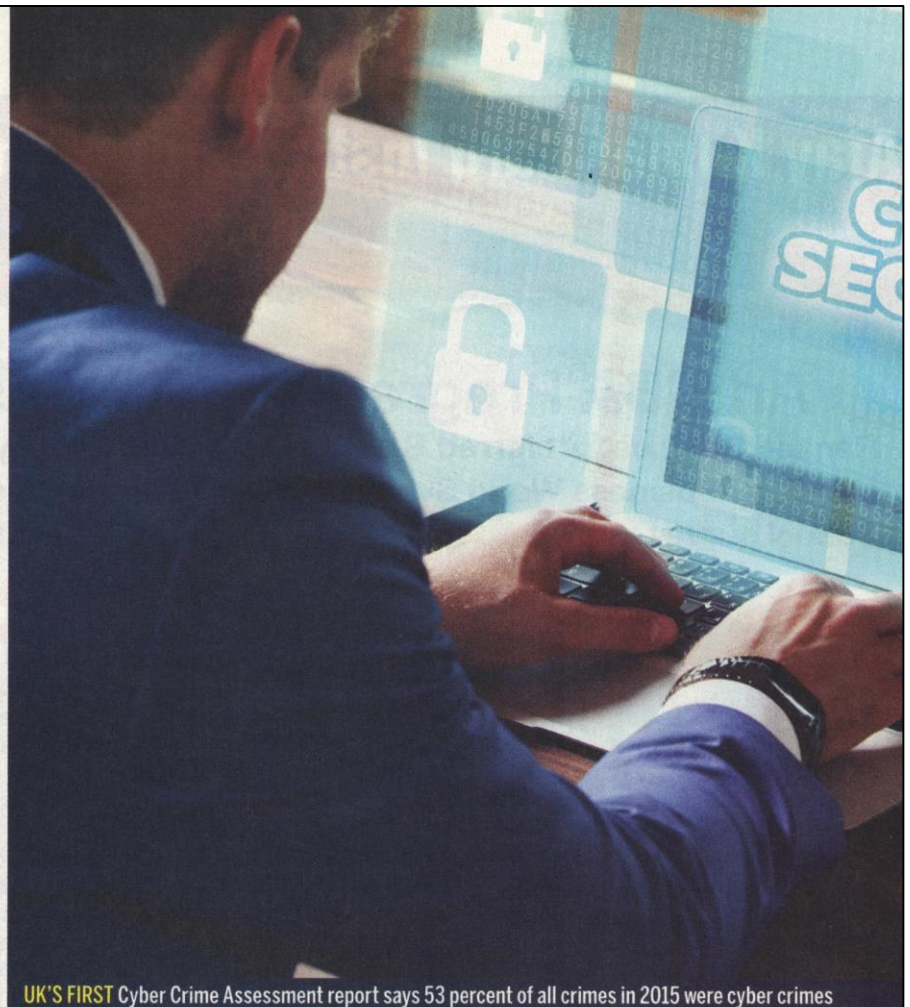Vice President, NIIT University

Cyber Security market will be one of the biggest and fastest job growth areas in the coming decade. This sector is highly demanding as well as a high paying field and requires security experts to constantly keep up with growing computer threats, attacks and changing technology

UK'S FIRST Cyber Crime Assessment report says 53 percent of all crimes in 2015 were cyber crimes

DETECTIVES OF
THE VIRTUAL WORLD

As India leapfrogs the West in the digital domain, cyber security has become a prime concern, spawning a huge demand for professionals qualified to tackle cyber crimes...

by Aeshwarya Tiwari

In this technology-enabled era we shop anything and everything; pay bills, exchange mails, and network online. But this habit has a dark side to it. This has given birth to cyber crimes, where hackers misuse confidential information, withdraw money or valuable information and inflict losses on companies and people. Courses in cyber security have evolved primarily to curb such crimes. "I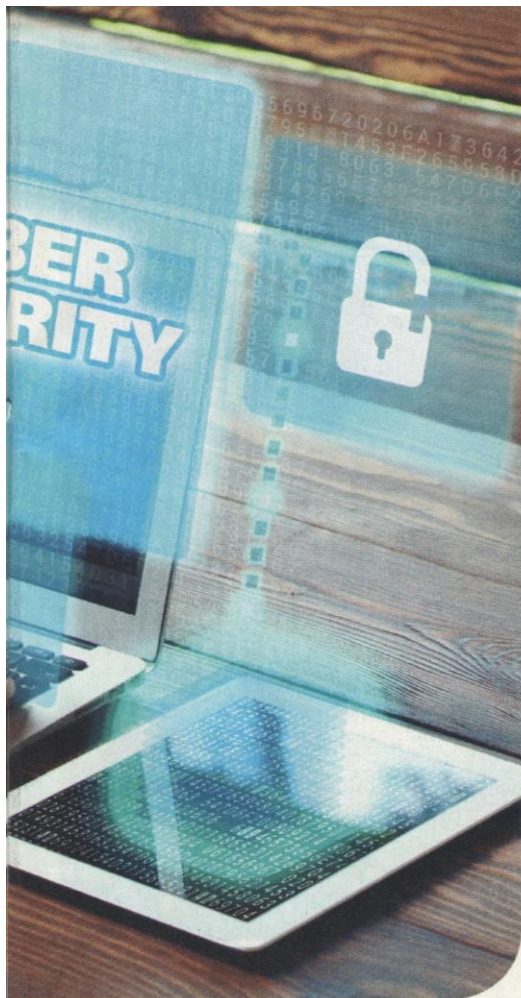 have always been fascinated by the world of computing and wanted to undertake a course that has great scope in the future," says Avi Sharma, a 3rd year B.Tech student in Cyber Security and Forensics at University of Petroleum & Energy Studies.

What is cyber security and Digital forensics?
Cyber security is defined as the protection of systems, networks and data in cyberspace or you can say the practices designed to protect networks, computers, programs and data from cyber-attack, damage or unauthorized access in your web space. A related area, digital forensics or computer forensics is a part of cyber security which helps to deal in an investigation and involves examining a variety of digital footprints such as system registry, event logs, recycle bin, digital storage media etc.

The demand for security workforce is on the rise and India needs 1 million cyber security professionals by 2020. "Cyber security will be one of the biggest and fastest job growth areas in the coming decade," says Dr Sunil Khanna, Vice President, NIIT University.

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curriculum is completely focused on application and computer programming. A few popular subjects are: Foundations to Computer Security; Network Security; Privacy and Security in Online Social Media; Ethical Hacking; Security Engineering etc.

Industry-integrated offerings

Some universities have tie-ups with corporates to offer courses tailored to industry needs. UPES' B.Tech is in academic collaboration with IBM. NIIT University has a tie-up with PricewaterhouseCoopers (PwC), a big four audit firm, and offers Master's in Cyber Security followed by an internship at PwC.

Cyber Law

Cyber Law addresses legal issues related to technology. "Cyber professionals are required in almost in all the organizations which deal with IT and ITes," says Dr. Atul Kumar Pandey, Faculty In-charge, Rajiv Gandhi National Cyber Law Centre, NLIU, Bhopal which offers a Master's in Cyber Law and Information Security. The boom in digital commerce will fuel the demand of professionals. Those who have a cyber-law degree can work as cyber law expert, advisors, consultants in various government and private organization.

Job profiles and salary package

After completing a course in cyber security, one can work as a cyber security expert; cyber forensics solutions architect; tech consultant; cyber malware analyst; security administrator; intelligence analyst; computer and information system manager etc.

Salaries vary according to job profiles. "The average salary package of the students is Rs 4.5 Lakh p.a. with some packages being offered at Rs. 6.5 lakhs per annum," says Dr. Latika Singh, Head of Department, CSE&IT, The NorthCap University, Gurgaon. Sectors that require professionals in large numbers are: banking, finance, telecom, utilities such as power, and a host of government agencies, including police, army etc. So if you have a passion to become a detective in the virtual world, go for a course in cyber security. ◘

How to get in

For B.Tech or BSc, it is 10+2 with PCM subjects with minimum 60% marks and for PG course one must have a degree in any technical discipline or have a degree such as B.Tech or B.Sc preferably in CE/IT/CS/EC with minimum 60 percent marks. Selection is usually based on the basis of institute-specific entrance tests or on academic performance. Select institutions offering courses in cyber security are:

● IIIT Delhi; Gujarat Forensic Sciences University, Gandhinagar; M. S. Ramaiah University of Applied Sciences, Bangalore; Amrita University, Coimbatore; UPES, Dehradun; Hindustan University & SRM University, Chennai; KL University, Guntur; The NorthCap University, Gurgaon

What do you learn?

The course structure is designed as per industry needs. One can learn various types of crimes related to digital systems and how solutions are being made for crimes committed using information and communication systems. The

SAKET MODI,
CEO, Lucideus
(An IT Risk
Assessment and
Digital Security
Services provider)

SPECIALIZATION IS EXTREMELY IMPORTANT

When digital growth, be it in e-commerce, social media, Internet of Things or mobile applications is taking shape globally, the security of digital is a natural point of concern for the advancements. Therefore, there is tremendous growth opportunity, especially for the person who is studying cyber security today, for the next ten years.

As the world is increasingly moving towards specialization, the top management of large companies are already asking for niche cyber security advice, which is an integral part of their digital strategy. To be able to give this advice, specialization is extremely important.

The Indian cyber security policy states a requirement of over 500,000 cyber security professionals, while currently the official count is only 60,000 professionals. I would recommend young persons to take up any aspect of cyber security and develop in deep way their expertise in it. For a young person I feel, the question should not be which field has the potential, but it should be about which field interests him/her the most.

There is an ample requirement of network, web application, and mobile application database end point security professionals. In India every large company is a potential recruiter and typically they would be having all the components mentioned above in their technology stack. ◘