Newspaper Clips
October 18, 2016

Business Line ND 18.10.2016 P-5

Thales partners with IITs, IISc for doctoral fellowships

Four students to be selected for the joint programme in the first batch

AMRITA NAIR-GHASWALLA
Mumbai, October 17

Collaborating with universities across the globe is a key aspect of innovation at Thales, a French defence company. Known for its innovative research and technology projects with France's prestigious universities, Thales now has close ties with academic partners in India.

Best known for its work in weapons manufacture, Thales makes electrical systems for defence, aerospace and transportation. The company's defence and security segment is its largest. However, to develop the technologies it needs, Thales relies heavily on cooperation between its research teams and the academic world.

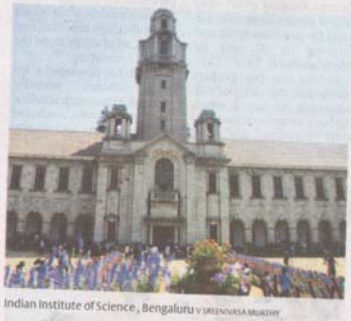
To that end, this September, Thales and the Indian Institute of Technology, Delhi (IIT Delhi) signed a memorandum of understanding (MoU) to create a jointly supervised IIT Delhi-CNRS PhD fellowship programme. In the first batch, up to four students would be selected for research in advanced electronics, electromagnetics and complex systems engineering.

Tie-ups in India

Antoine Caput, Vice President and Country Director-India, Thales, says India is a source of rich talent. He adds that by building partnerships with industrial and scientific communities, the company looks to enhance the synergies among industrial groups, innovation driven companies and training and research institutions.

"Through collaborations with Indian academic institutions, we can contribute to the Indian government's mission of skilling and upskilling people, and its focus on enhancing the research and development fields in India," said Caput, adding: "Thales looks at working for India and from India to extend its global performance and presence."

Since inventing a flagship product or solution is a process, Thales tends to rely on the creativity and technology expertise of a whole ecosystem of stakeholders, including academic researchers and customers.



Indian Institute of Science, Bengaluru V SREENIVASA MURTHY

Thales had also signed a similar MoU with the Indian Institute of Technology (IIT) Bombay, to create a jointly supervised IIT Bombay-CNRS PhD fellowship scheme starting July 2016. Previously, Thales had signed an MoU with the Indian Institute of Science (IISc), Bangalore in October 2015.

Thales is interested in areas such as advanced electronics and electromagnetics. The IISc has considerable expertise in the areas, which will be considered for the Thales PhD Fellowship Programme for IISc students. The students benefiting from these jointly supervised PhD fellowships will have a PhD supervisor in India and a co-supervisor in France, from one of the identified CNRS laboratories. A joint degree option between IISc and French institutions is also being explored.

Close on the heels of the tie-ups with Universities in the United Kingdom, Canada, the United States, Australia and Singapore, Thales' academic-research network has been expanding to include universities in emerging economies. The company works primarily with governments. In 2014, the company generated revenues of €13 billion.

Innovation at the core

The evolution of new global technologies and threats has ensured that most of Thales's business activities are technology intensive, making innovation a strategic priority and the driving force behind the long-term development of the Thales Group.

Apart from IIT Delhi, Thales had signed MoU with IIT Bombay and IISc, Bengaluru. The firm has also invested €2.5 billion in R&D

"Innovation is integral to Thales," said Caput. "Much of Thales' capabilities in innovation come from its staff, a third of whom are engineers, and their skills and know-how."

In June 2014, Thales opened an Innovation Hub in Hong Kong. In October the same year, another Innovation Hub was opened in Singapore, the company's first multidisciplinary innovation centre outside Europe. The company's 'pivot to Asia' is expected to bring Thales direct insights into local attitudes and approaches to innovation.

Caput added that Thales invests 20 per cent of its annual revenues in research and development (R&D). "The focus on innovation enables Thales to deliver solutions that are attractive, add value and differentiate Thales from competition," he added.

The company has invested over €2.5 billion in R&D. Caput went on to add that Thales "has been and will continue to invest in India by partnering with customers, universities, commercial and technology partners, and hire and train local people to be as local as possible."

Nav Bharat Times ND 18.10.2016 P-16

NIT के लिए भी 12वीं में 75% मार्क्स जरूरी !

एचआरडी मिनिस्ट्री का सुझाव

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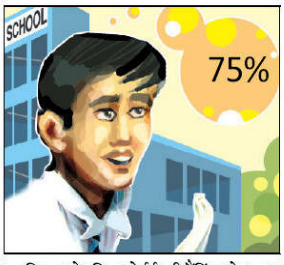

अगले साल से एनआईटी में एडमिशन लेने के लिए भी आईआईटी की तरह स्टूडेंट्स के 12वीं में 75 पर्सेंट मार्क्स होना जरूरी हो सकता है। एचआरडी मिनिस्ट्री ने यह सुझाव दिया है। इस पर सेंट्रल सीट अलोकेशन बोर्ड (सीसेब) जल्द ही फैसला ले सकता है। एचआरडी मिनिस्ट्री के सूत्रों के मुताबिक मिनिस्ट्री के किसी भी सुझाव को आमतौर पर सीसेब स्वीकार कर लेता है।

मिनिस्ट्री के अधिकारी के मुताबिक 2017 से जेईई एग्जाम में 12वीं के एग्जाम का 40 पर्सेंट वेटेज खत्म हो जाएगा। इसके साथ ही मिनिस्ट्री की तरफ से कहा गया है कि एनआईटी के लिए मिनिमम क्वॉलिफिकेशन बढ़ाई जाए।

अभी जेईई एग्जाम में रैंक हासिल करने के बाद भी किसी आईआईटी में एडमिशन के लिए स्टूडेंट के 12वीं में एक तय लिमिट से ज्यादा मार्क्स होने जरूरी हैं। जनरल कटैगरी के स्टूडेंट्स के लिए यह 75 पर्सेंट है। वहीं एससी-एसटी कैटिगरी के लिए 70 पर्सेंट। इसी तरह अब तक एनआईटी में एडमिशन के लिए जेईई की रैंकिंग के साथ ही जनरल कैटिगरी के स्टूडेंट के 12वीं में 70 पर्सेंट और एससी-एसटी कैटिगरी के स्टूडेंट्स के लिए 65 पर्सेंट मार्क्स होना मिनिमम क्वॉलिफिकेशन है। अब एचआरडी मिनिस्ट्री चाहती है कि एनआईटी में एडमिशन के लिए भी आईआईटी की तरह 75 पर्सेंट और 70 पर्सेंट मार्क्स को मिनिमम क्वॉलिफिकेशन बनाया जाए। गौरतलब है कि जेईई मेन्स एग्जाम में हर साल करीब 12 लाख स्टूडेंट्स बैठते हैं और उनमें से करीब 2 लाख स्टूडेंट्स जेईई एडवांस दे पाते हैं। जेईई एडवांस की रैंकिंग से आईआईटी में एडमिशन मिलता है और जेईई मेन्स की रैंकिंग से एनआईटी में एडमिशन दिया जाता है।

Indian Express ND 18.10.2016 P-1

Too stretched, can't increase B.Tech seats, 7 IITs tell HRD

RITIKA CHOPRA
NEW DELHI, OCTOBER 17

CITING STRETCHED resources — from infrastructure to faculty — the seven older Indian Institutes of Technology (IITs), Bombay, Delhi, Guwahati, Kharagpur, Kanpur, Madras and Roorkee, have not agreed to add more seats to their four-year Bachelor of Technology (B.Tech) programmes as proposed by the government at the IIT Council meeting held on August 23.

In fact, only the second-generation IITs in Hyderabad, Mandi, Ropar, Patna (set up by the UPA government) and IIT Jammu established by NDA II will increase their undergraduate student strength from next year. Currently, there are 23 IITs in the country.

Sources told *The Indian Express* that IIT Hyderabad, to begin with, will add another 40 seats next year, IIT Mandi will add 50; IIT Patna 25; IIT Ropar 105 seats and IIT Jammu 30 seats.

The older IITs witnessed their biggest hike in B.Tech seats at the time of implementing the 27 per cent OBC reservation. In 2008, before the quota was introduced, there were about 4,000 undergraduate seats among these

CONTINUED ON PAGE 2

10,000 PLUS

- Currently, 10,000 B.Tech seats among all 23 IITs. 7 older IITs account for 6,500 seats.
- HRD wanted 4,000 more B.Tech seats each year until 2020; 6,000 M.Tech, PhD
- IITs need to waive hostel requirement, impractical for IITs in remote locations
- Only five IITs agreed to increase seats

Too stretched, can't increase seats: IITs

seven institutions. Now, together, they account for close to 6,500 seats.

The IIT Council — the highest decision-making body of the premier engineering schools — had given an in-principle approval to the ministry's suggestion to increase their student strength from 72,000 to 1 lakh over the next three years until 2020. This, in effect, meant the institutes would collectively aim to add 4,000 B.Tech seats each year until 2020 and 6,000 M.Tech and research seats each year over the next three years. Currently, there are close to 10,000 B.Tech seats among all 23 IITs.

To achieve this, the IITs would have to waive the condition which makes students stay compulsorily on campus. In other words, the institutes will depend on admitting more non-resident students. All the 23 IITs were asked to assess their capacity and resources and come up with a roadmap on how to achieve the overall proposed hike.

As many as 20 of the 23 IITs have sent their feedback to the HRD Ministry this month of which only five are said to have completely agreed with the proposal. None of the seven older IITs is on board as far as increasing undergraduate seats are concerned, said sources. "They are interested in taking in more M.Tech and Ph.D students," said a source.

"The older IITs have reached their saturation point as far as admitting B.Tech aspirants is concerned. The onus is now on the newer lot to achieve the B.Tech increase suggested by the government," said a director of one of the seven older IITs who spoke on the condition of anonymity.

"Hostel accommodation for new students cannot be arranged overnight. We have been asked to admit more non-residential students. But this is not possible for some of the institutes which are located in remote locations. How can IIT Guwahati, IIT Kanpur and Kharagpur do this? Finding rented accommodation near these institutes is very difficult. Students stay back late in the laboratories. They need to stay on campus," said another director of one of the seven older IITs, who also did not wish to be identified.

Poor faculty strength is another reason why IITs have not accepted the government suggestion. While each IIT is supposed to maintain a ratio of one teacher for 10 students, the ratio now is one for 15. There are an estimated 2500 faculty vacancies across the IITs. Of the seven IITs which figured in the top 700 of the QS world rankings this year, six have slipped several places compared to last year. IIT Madras was the only exception which improved its ranking by five places to join the top 250 club.

Hindustan ND 18.10.2016 P-18

आईआईटी-खड़गपुर के छात्र स्वदेशी ड्रोन बना रहे

कोलकाता। भारतीय प्रौद्योगिकी संस्थान (आईआईटी) खड़गपुर के विद्यार्थी पूरी तरह स्वदेशी निर्मित ड्रोन विकसित कर रहे हैं। इस ड्रोन में इस्तेमाल हार्डवेयर और सॉफ्टवेयर को भी देश में ही बनाया गया है।

ड्रोन का विकास आईआईटी के एरियल रोबोटिक्स खड़गपुर (एआरके) की पहल पर किया जा रहा है। इसका विकास सेंटर फॉर एक्सिलेंस इन रोबोटिक्स कर रहा है, जबकि स्पॉन्सर्ड रिसर्च एंड इंडस्ट्रियल कंसल्टेंसी (एसआरआईसी) योजना का वित्तपोषण कर रही है। इस केंद्र को 12 परियोजनाओं के लिए संस्थान से पांच करोड़ रुपये मिले हैं।

इसका नेतृत्व करने वाले गणित विभाग के सोमेश कुमार ने सोमवार को बताया कि यह ड्रोन स्वतः उड़ान भरने में सक्षम होगा और जीपीएस रहित क्षेत्र में भी उड़ सकेगा। इसे जमीन पर मोबाइल से नियंत्रित किया जा सकेगा। **(एजेंसी)**

Business Standard ND 18.10.2016 P-10

Case for a parallel higher education

We need to take a number of steps, from fixing schools to ending apartheid against distance learning, to make graduates employable

MANISH SABHARWAL & ASHOK REDDY

The world has produced more graduates in the last 35 years than it did in the 800 years before that. This means that a college isn't what it used to be; 60 per cent of Korean taxi drivers, 31 per cent of US retail sales clerks, and 15 per cent of high-end Indian security guards now have a college degree. But while the employability signalling value of a degree has declined, the social signalling value of a degree is still strong — the most valuable part is not being at an Indian Institute of Technology (IIT) but being from IIT. We'd like to make the case for reviewing the regulatory cholesterol that hinders the emergence of skill universities with large student numbers that focus on employability relative to our traditional definition of a university that has small numbers and focusses on knowledge and research. We do not suggest research universities are not important but believe the regulatory space for disruption must be created.

India needs to think harder about the deep connections between education, employment and employability reflected in the work of multiple Nobel Prize winners. Michael Spence got his for cautioning about not being patronising about the pursuit or craving for degrees; vocational training is usually for other people's children, not our children, and going to college seems to rationally matter beyond the traditional "*shaadi*" requirement of degrees; the signalling value of higher education. Shapley and Roth got theirs for their work on how labour markets that clear on information are different from stock markets that clear on price. Arthur Lewis got his for his work on how countries need to think hard about how policy can accelerate the positive wage impact of the farm to non-farm transition. Gary Becker's work on financing skills and education is particularly important for India; it is unrealistic to expect employers to manufacture their own employees. The broadest case is made by Robert Solow who found that increases in employment and capital stock only explained a tenth of long-term economic growth with the rest being technological innovation.

India's higher education has evolved. College 1.0 was started by the British with the objective of producing an elite class to perpetuate their rule. College 2.0 began with Independence and led to the masterful creation of IITs and Indian Institutes of Management. College 3.0 began in the 1980s with a private sector response to the lack of state capacity expansion. College 4.0 began in the last five years with 30 per cent vacancy in the private sector's capacity in engineering and business.

We believe it is time for College 5.0; the creation of a parallel higher education system that focuses on employability. College 5.0 needs us to do five things.

First, we must fix schools because you can't teach people in three years what they should have learnt in 12 years, in the new world of work, reading, writing and arithmetic are the most important vocational skills, and colleges are often teaching what schools should. This needs our toxic Right to Education Act — that confuses school buildings with building schools — to be amended to become the Right to Learning Act. Second, we must end the dead-end view of vocational educational by creating full modularity between a three-month certificate, one-year diploma, two-year associate degree, and a three-year degree. Third, we need to use recent amendments to the Apprentice Act to rapidly increase our apprentices (India only has four lakh apprentices while Germany has three million and Japan 10 million) and give academic credit for apprenticeship so that learning by doing and learning while earning also enables lateral entry into the degree modularity ladder. Many higher education systems are recognising the power of practical experience and India could be an innovator at scale. Fourth, we should end the apartheid against distance and online learning; all universities must be allowed to freely sign up students nationally. Of course, we all know technology matters in education but we just don't know how and online learning outcomes have been mixed. But as economic historian Carlota Perez suggests in her great book "Technological Revolutions and Financial Capital", technology innovations need time and we are probably a few iterations away from something that works. More importantly it is unfair that global MOOC (Massive open online courses) like Coursera, Edx and Udacity can freely sign up students in India but Indian universities cannot operate outside their state. Fifth, the current higher education regulatory regime must end because we need biodiversity in institutional forms, innovation in delivery and massive capacity. Over the last few decades two different regulatory regimes have led to substantially different outcomes because we produce 15 lakh engineers but only 35,000 doctors every year. Quantity is now leading to quality in engineering and this must be replicated across higher education accompanied by a reversal of over-regulation and under-supervision.

STAMP OF APPROVAL **While the employability signalling value of a degree has declined in India, the social signalling value is still strong**

India today has two crore kids in a physical classroom, 50 lakh kids in distance education, 40 lakh kids pursuing vocational education and only four lakh kids doing apprenticeships. Skill universities are different from normal universities in three ways; they pray to the one God of employers, only five per cent of their kids are on campus with the balance in apprentices, online or on-the-job and only five per cent of their kids are doing a degree but all of them have the ability to use their certificate or diploma to go all the way to a degree. Skill universities represent a confluence of various stakeholder interests because they are one-third employment exchanges, one-third ITIs and one-third college.

John Gardner, a US education secretary in the 1960s, wrote a great book that asked, "Can we be equal and excellent?" This tension — always in existence in a democracy — is amplified in India where 10 lakh people will join the labour force every month for 10 years. Higher education faces an impossible trinity of cost, quality and quantity and it must resolve this by creating the regulatory space for massive, multi-modular and modular higher education that prays to the God of employability.

The writers are with Teamlease Services

Financial Express ND 18.10.2016 P-8

May the best state win

Swiss challenge for big projects is a good idea

Given the charges of partisan politics levelled by former J&K chief minister Omar Abdullah at the Centre's decision to locate an IIM at Jammu—as opposed to one in the Kashmir Valley—a few days ago, it is just as well that the government has decided to adopt the Swiss challenge method to award such projects in the future. It is not just the IIM at Jammu, decisions to establish hospitals such as AIIMS or educational institutions like IITs or even refineries or LNG terminals, among a host of others, have always been controversial, with favoured states generally walking away with prestigious projects over the years—indeed, the maximum number of Railway lines are typically associated with which state the railway minister hails from. According to a report in *The Indian Express*, the Cabinet secretariat has put out a note saying that the Swiss challenge method is to be used for 'selection of location' for even film festivals, the National Games and Pravasi Bhartiya Divas, among others.

Each government department has now been asked to submit a list of projects/institutions/events under them along with an indicative list of what the evaluation parameters could possibly be. Once this is done, each state will be free to bid on these parameters. If, say, the most important parameter is availability of land, any state is free to bid by indicating the amount of unencumbered land it can provide and how soon. Once this is done, as per the terms of a Swiss challenge, any other state can better this, and the original state can then better it again ... and the winning state will walk away with the project. This is not only taking competitive federalism to a new level, it will be good for projects since states will end up competing over ease of providing land, extent of fiscal concessions, connectivity, provision of utilities or speedy statutory clearances, among others. Consider the fact that, while the government had announced eight new IITs to be established back in 2008-09, only three have got full-fledged campuses—with land being allocated up-front, this cannot happen in the new scheme of things. A challenge process would prevent cases like Goa where, after receiving ₹98 crore in funding, the state now wants to delay the hosting of the National Games due to the impending elections. A potential problem is that such selection will ensure only the better-off states get new institutions, but this can be fixed provided only efficiency parameters are used—in any case, if a state is genuinely keen to get a project, there is no reason why it should not have to work for it by speeding up clearances, including provision of land.

Indian scientists discover cause for preterm births

http://www.deccanchronicle.com/lifestyle/health-and-wellbeing/171016/indian-scientists-discover-cause-for-preterm-births.html

Every year, 15 million babies are born preterm. This is more than 1 in every 10 babies.

Team of Indian researchers who discovered the cause for preterm birth (From left to right) Manalee Surve, Anjali Anil, Prof. Anirban Banerjee, Kshama Kamath, Dr. Deepak Modi (NIRRH), Smita Bhutda.

Chennai: In a new study which eventually can bring down the pre-term births and neonate deaths, Indian scientists have discovered that the tiny toxic balloons emitted by the bacterium can cause preterm birth and stillbirths.

According to reports, preterm delivery is the single largest cause of death among neonates and young children. During a collaborative study between Bhaba Atomic Research Centre (BARC), National Institute for Research in Reproductive Health (NIRRH) and IIT-Bombay, it was found that a class of bacteria called group B Streptococcus (GBS) produces membrane-bound vesicles which move from the vagina to the uterus and cause inflammation of the membranes surrounding the foetus, leading to preterm and stillbirths.

Group B Streptococcus (GBS) is a type of bacterial infection found in a pregnant woman's vagina or rectum. While most women are asymptomatic, many women with GBS deliver preterm, but the infection is rarely found in the womb.

The researchers from IIT Bombay wondering how the GBS sitting at a distant place can cause preterm births, started growing GBS in liquid media. When they removed the bacteria and examined the remaining liquid by electron microscopy, they found numerous small spherical structures. In the surface of growing bacteria, vesicles were seen just budding off the bacterial cell, confirming that GBS produces membrane bound vesicles (MVs).

"This was a breakthrough in my lab as these vesicles were found to be loaded with tonnes of bacterial virulence factors, particularly toxins and collagen-degrading proteases," Professor Anirban Banerjee, a microbiologist from IIT Bombay told Deccan Chronicle.

The researchers then deposited the MVs without the bacteria into mouse vagina and hours later they found them throughout the uterus and in the developing fetus. "Not only these MVs could reach the feto-maternal barrier, but they lower the elasticity of the membrane holding the foetus so that it can't expand to accommodate the growing foetus leading to its rupture and preterm birth," said Deepak Modi, one of the co-authors and a reproductive biologist from the National Institute for Research in Reproductive Health (NIRRH).

Acknowledging the gap between the experimental results in mice and human pathogenesis, Anirban Banerjee said this discovery is a paradigm shift as it shows how GBS by simply sitting in the vagina can damage the baby in the womb without even physically going there and cause preterm birth.

"In our next step we plan to do a study among the pregnant women in India to know whether they carry GBS and if yes, how many of them carry and those who carry give preterm birth or not," he added. "This will pave the way to discover new drugs to halt the vesicle production by GBS. But it is not in the near future," he said.

DNA ND 18.10.2016 P-17

Beating all odds, Midnapur lad makes it to IIT, state govt to honour him

Siliguri (West Bengal): Chandan Roy, belonging to a poor household in West Bengal's Midnapur district, has made his family proud after earning a seat in the coveted IIT Bombay.

His father is a priest who struggles to make ends meet. But this did not stop Chandan from achieving his dream. "I didn't take any coaching. The only help I got was from my school and tuition teacher. I have a dream to become a scientist. My father is a Brahmin priest and owns a small grocery shop, where I help my father," Chandan said.

Through his sheer handwork and dedication, Chandan secured 314 in JEE Advanced (All India Rank) and 78 in JEE Main examination. Chandan loves to read novels and when he is not doing that he loves to explore his hometown on his bycycle.

Describing Chandan's ordeal during preparation, his teacher Nirmal Mondal said, "I bought and collected many books for him. He is a meritorious student. He is an inspiration to many in the village. We hope he gets help from government." Chandan said he received Rs50,000 as scholarship and the rest of the amount was paid with the help of his teachers.

However, his father, Suchinta Roy, is worried as he is cash strapped and wonders how he would continue to pay for rest of his education. —ANI