Newspaper Clips

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Foreign tieups big draw for most

TIMES NEWS NETWORK

New Delhi: On the first day of academic session at Bennett University, students, teachers and parents were coming together as a community. The management students have already had one round of orientation; the engineering ones will start soon. Classes begin on August 16.

Although there are three streams in engineering, mechanical, electronics and communication and computer science, the maximum number of new entrants seem to have signed up for computer science. Many chose to forego other offers to join Bennett University's maiden batch, prompted mainly by its foreign collaborations and the reputation of the 177-year-old brand. "The reputation of Times Group and the respect it commands was a reason. With a campus ambience this good, I am sure my daughter will have no problem here," said Manish Mansharmani, whose daughter, Vidhi is a BTech student. Like tech courses in most institutes, the gender ratio is skewed but less heavily so; the MBA class is balanced in more ways than one – about 40% are women, 50% are non-engineers and about that many have work-experience. "We have students here with a CAT score as high as 97 percentile," said dean, management, Saji Gopinath. The university has considered CAT, XAT and GMAT scores for admission.

Times Group MD and the first chancellor of Bennett University Vineet Jain with students and parents

For admission into the BTech programmes, Joint Entrance Examination (Main) scores were considered. "We took the qualifying score for JEE Advanced, 100," said Suneet Tuli, dean, engineering. Most students have come from Delhi-NCR, Andhra Pradesh and Telangana.

Parents appreciated the focus on "holistic" education.

Vikram Gulati, father of B.Tech student, Cairo Gulati said that "unlike other institutions, here the emphasis is given on the student's overall development." "I am quite impressed by the sports facilities, the library and the laboratories," he said. The teachers on board were a big draw too. "I came all the way from Kolkata to apply here for I was impressed by their unique curriculum. The faculty good," said BTech computer science student, Sohan Pramanik.

The enthusiasm is understandable. Although a new venture – some professors fondly call it a "startup" – nothing is being left to newbies. The dean, engineering, Suneet Tuli, was with IIT, Delhi, from the 1980's till February this year. The dean, management, Saji Gopinath, was with IIM, Kozhikode, from its start in 1997. "We have also been very selective in recruiting because the initial team makes a lot of difference," said Gopinath,

"We picked people who have either studied or taught at an IIM or institutes of that level." His is a department of six and includes, for instance, Vijaylakshmi Singh, who has a PhD from IIM Ahmedabad. The engineering department has 16 permanent teachers – all PhDs. The department includes former faculty-members of IIT Mumbai, Indian School of Mines, Dhanbad and National Institute of Technology, Calicut. "We don't have a MTech yet but we have five part-time PhDs already enrolled and another one is joining. In private sector there's no research but here there will be," said Tuli. Sartaj Sahni, author of the classic Data Structures, will address students on Friday, he adds, and next July, 20 of the engineering students will head to Babson College for an entrepreneurship course.

It wasn't just the academic part that appealed to parents. "Unlike other universities, Bennett will provide a practical approach. The campus and hostel facilities are good," said parent Sudha Ramakrishnan.

Economics Times ND 09.08.2016 P-07

IITs Encouraging Students to go for Internships to Boost Job Prospects

Pre-placements will make room for more students in the final placement season in December

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New Delhi: Most of the Indian Institutes of Technology are encouraging students to accept internship offers from prospective employers, an attempt on part of the elite engineering institutes to minimise the number of students who do not get any job offers by the time of final placements in December.

The IITs at Kharagpur, Chennai, Kanpur, Guwahati, Roorkee, Varanasi (Banaras Hindu University) and Hyderabad are part of this overdrive, people aware of the matter said.

Every year, 5-15% students at IITs fail to get any job offers, they said.

"Internship is a natural step for all the IITs. This will make room for more students in the final placement season," Debasis Deb, chairman of IIT Kharagpur's Career Development Centre told ET.

IIT Kharagpur has quite a task on hand as it seeks to place nearly 2,000 students every year.

"If we get 300 PPOs (pre-placement offers) this year, which is almost double of last year's, the pressure on final placement gets reduced," Deb said.

It is a challenge for the IITs to place all of their undergraduate, postgraduate and PhD students.

"This is not the problem of one IIT but all the IITs. Students who do not perform that well (with less than 5 CGPA or cumulative grade point average) find almost no takers," said Kaustubha Mohanty, faculty member in charge of placement at IIT Guwahati.

Mohanty said that most IITs are barely able to cross the 80% mark in terms of placing all its students other than undergraduates, including postgraduates, dual degree holders and PhDs. "Not a single IIT has 100% success rate in placing all its students," he said.

Apart from students who are low performers (5-10% at each IIT), there are those students who do not opt for placements at all as they take up higher studies or entrepreneurship.

NP Padhy, professor in charge of placements at IIT Roorkee said that the number of students doing internships and getting a PPO is increasing. "The faith in internship is highest ever from the student fraternity. As an institute we too are ensuring that more and more companies come this year," he said.

IIT Hyderabad is also laying special emphasis on PPOs this year. "There is a 90 per cent chance that students interning in companies will land a job," said B Venkatesham, faculty member in charge of placement and training cell at IIT Hyderabad.

Among the newer IITs, the one in Varanasi is seeing interest from a number of companies. A few companies have handed out PPOs this year compared to none last year.

Most IITs are to begin the PPOs season in a few weeks.

"The action is already very strong this year," said IIT Madras' former placement advisor Babu Viswanathan. The institute is perhaps taking internship offers for its students most seriously, having recently opened a full-fledged office dedicated to internship. "We are hoping that with more PPOs, the pressure on final placements will reduce," said Viswanathan.

Most companies too prefer the internship route, faculty members said.

"Internship is a courtship route for both companies and students before deciding on job offers," said Mohanty.

Internship increases chances of getting a job offer manifold compared to the final placement route, according to experts.

"Internship gives sufficient time to examine the compatibility between a company and student. It also gives a comfort factor to students and companies before the examinations kick in," said Rohin Kapoor, director at Deloitte in India.

The Learning Curve

IITs at Kharagpur, Chennai, Kanpur, Guwahati, Roorkee, Varanasi, Hyderabad are pushing for pre-placements like never before

- Interest from students is also high as more and more students enrol for internship
- Placement through internship ensure higher compatibility between student and company
- This also decrease chances of students being left out during final placement
- Every year, 5-15% students at IITs fail to get any job offers

Students who are left out during final placements are mostly with CGPA of lower than 5

Internship gives sufficient time to examine the compatibility between a company and student

Dainik Bhaskar ND 09.08.2016 P-02

आईआईटी, खड़गपुर के 53 छात्रों को मिला प्री-प्लेसमेंट ऑफर

आईआईटी खड़गपुर के 53 छात्रों को नया शिक्षा सत्र शुरू होने से पहले ही उच्च श्रेणी के संस्थानों द्वारा प्री-प्लेसमेंट ऑफर मिले हैं। 31 जुलाई तक सैमसंग ने सबसे ज्यादा 20 छात्रों को ऑफर दिए हैं, जबकि टेक्सस इंस्ट्रूमेंट्स और सीआईटीआई ने 6 छात्रों को ऑफर दिए हैं। संस्थान के इन छात्रों ने मई और जून में समर इंटर्नशिप किया था, जिसके बाद कंपनियों ने उन्हें प्लेसमेंट का ऑफर दिया। आईआईटी में 6 अगस्त से इंटर्नशिप सीजन आरंभ हो चुका है, जिसमें गूगल, माइक्रोसॉफ्ट, हिंदुस्तान, यूनिलीवर, आईटीसी जैसी बड़ी कंपनियां शामिल हुई। संस्थान को आने वाले समय में इंटर्नशिप और प्लेसमेंट के लिए पब्लिक सेक्टर कंपनियों की भागीदारी की उम्मीद है।

Economics Times ND 09.08.2016 P-08

Graphene Bonds Tata Steel to IIT-M's Research Team

Steel major weighs sponsoring research by IIT-Madras scientists into graphene

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Chennai: India's largest private sector steel company Tata Steel is looking at sponsoring research by IIT-Madras scientists into graphene, a new-generation carbon material hotly pursued by corporations in search of the next building block for electronic gadgets and transform processes in the manufacturing sector.

Just one-atom thick, many times stronger and lighter than steel, graphene is being tested in applications from replacing silicon in smartphones to the components of aircraft bodies in making flying more fuel-efficient. Its use has already been experimented in making automotive lubricants and how memory devices like hard drives in computers can be made more powerful by exploiting their unique electrical properties.

Likely applications involve enhancements in coating, manufacturing processes, sensors and wearable devices

For IIT-Madras, the Tata Steel partnership could open up further investments in next frontier technology areas. "The deal is most likely to be signed next week at the IIT-Madras Research Park," Krishnan Balasubramanian, Dean of Industrial Consultancy and Sponsored Research at the technology institute, told **ET**. Earlier, **ET** had reported that IIT Madras was planning a Centre of Excellence for Graphene. Now, the institute believes the centre, to be set up at the research park, will be for many other nano-materials with primary focus on graphene.

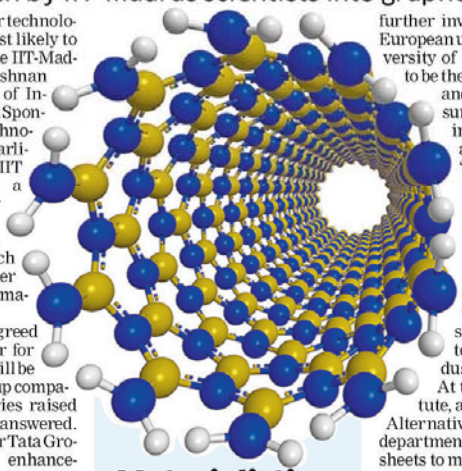
"While Tata Steel has agreed to be the anchor investor for the centre, the research will be for many other Tata Group companies too," he said. Queries raised with Tata Steel went unanswered. The likely applications for Tata Group companies involve enhancements in coating, manufacturing processes, sensors and wearable devices. Graphene, or other nano-materials, can also find their way in new photo voltaic surfaces to be used in solar panels.

While the initial investment by Tata Steel is expected to be in the range of ₹10 crore this year, the corporate is expected to commit to a 5-year relationship with the institute with further investments in the future. European universities like The University of Manchester, considered to be the birthplace of graphene, and corporations like Samsung are redoubling efforts in finding commercial applications for the "wonder material".

At Indian institutes — like IIT Madras; Indian Institute of Science, Bengaluru; and Tata Institute of Fundamental Research (TIFR) in Mumbai — research into graphene has progressed from prototypes to testing scalability for industrial applications.

At the Chennai-based institute, a team of scientists at the Alternative Energy and Materials department had rolled graphene sheets to make nanotubes for application in cancer treatment.

At the Mumbai-based TIFR, significantly funded by central government agencies like Department of Atomic Energy and the Science and Technology wing, focus is on getting graphene into electronic devices. The nanomaterials centre at the institute is also working with corporate sponsors to make graphene-based sensors.



Materialistic

For IIT-M, Tata Steel partnership could open up further investments in next frontier tech areas

₹10 crore	5 years
Expected investment by Tata Steel this year	Period Tata Steel may commit to the project

Economics Times ND 09.08.2016 P-08

Intel, DST, IIT-B Plan Hardware Startup Incubator Plugin

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New Delhi: Intel India, Department of Science and Technology (DST) and IIT Bombay's SINE, is launching a new a hardware startup incubator called Plugin to support hardware and systems-based startups through mentoring, training, lab facilities, hardware kits, prototyping, business services and funding.

Incubator to support hardware and systems-based startups

The call for applications for the first batch of the programme will be announced in early August 2016.

"Whereas lot of innovations are happening in the IoT arena, hardware startups in India lack manufacturing, design and mentoring support," said Nivruti Rai, general manager, Intel India, which will lend technical support to budding startups.

Not enough water to interlink rivers across India IIT

http://paper.hindustantimes.com/epaper/viewer.aspx

This is not an opposition to interlinking rivers. Linking rivers will have an ecological impact when building a chain of reservoirs, canals and dams. The project should be re-analysed and reevaluated taking into account changes in weather patterns. SACHIN S GUNTHE, civil engineering department, IIT M

MUMBAI: The government's ambitious plan to interlink India's rivers for better distribution of water across the country may need to be tweaked to factor in the effects of climate change. An analysis of weather data for 103 years (1901 to 2004) by researchers from the Indian Institutes of Technology in Mumbai and Chennai shows that rainfall has decreased over the years, reducing water stocks even in river basins that have a surplus. The data was collected from 1,384 weather stations of the India Meteorological Department. The eightmember team from the Indian Institute of Technology Bombay (IITB) and the Indian Institute of Technology Madras (IIT M) found a significant decrease in rainfall — more than 10% each in the major surplus basins of the Mahanadi, the Godavari, the Brahmani, the Mahi, the Meghna and the multiple small rivers in the Western Ghats and those flowing east. Only the Brahmaputra river basin showed no decrease in rainfall. "One of the plans of interlinking of rivers is supplying water from a surplus basin to a deficient one," said Professor Subimal Ghosh, civil engineering department, IITB . "But if the surplus basin itself shows a declining trend of water availability, they will find it difficult to both meet their own demands and also supply the quantum of water committed to the deficit river basins. The project may not be sustainable." The team has called for a detailed climate change impact assessment for individual river basins that is essential for India's water management. "One of the important aspects (for the variability) could be perturbations in cloud and precipitation formation processes due to changes in extrinsic and intrinsic properties of atmospheric aerosols," said Professor Sachin S Gunthe, civil engineering department, IIT M, adding that detailed studies were needed. Atmospheric aerosols are fine suspended particles with size range of 50 nm (nanometers) to 500 nm that act as a seed for the formation of cloud and precipitation. "This is not an opposition to interlinking rivers. Linking rivers will have an ecological impact when building a chain of reservoirs, canals and dams. The project therefore should be re-analysed and reevaluated taking into account changes in weather patterns," said Gunthe. "Such a decrease in surplus river basin contradicts the traditional notion that climate change is causing wet areas to become wetter and dry areas to become drier over Indian region." The analysis found that Indus and Ganga rivers are deficit basins given the huge water demand for agriculture, industrial and domestic sectors that are met by ground water rather than rainfall. "Climate model projections are available, and hence projects must be designed estimating the availability of water for the next 30 to 40 years. Else, it will be a failure," said Ghosh.

IIT-R researcher develops cigarette filter that eliminates most chemicals from smoke, gets 15L funding from institute

http://timesofindia.indiatimes.com/city/dehradun/IIT-R-researcher-develops-cigarette-filter-that-eliminates-most-chemicals-from-smoke-gets-15L-funding-from-institute/articleshow/53604961.cms

ROORKEE: In some good news for cigarette smokers, a PhD student from IIT Roorkee has developed an affordable 'safe-smoke' cigarette filter using the wonder material graphene. The student, from Deoband in UP, says that by using the filter, smokers can reduce their toxic chemical intake by as much as 80% without affecting their user experience in any way.

He plans to launch the product commercially by October this year and has formed a startup called Log9materials. IIT Roorkee has provided Rs 15 lakh as seed money to the firm.

"In laboratory tests, the cigarette filter produced desired results. The tests established that the filter eliminates tar [the

particulate matter which is generated by burning tobacco] by 80%, carcinogenic toxins by 60% and heavy metals by 50% from cigarette smoke," said Akshay Singhal, who is enrolled in a PhD programme in nanotechnology at the institute.

"The filter will be priced at Rs 30. A single filter can last for five cigarettes. We will monitor the market response for our product in October and November. If we are able to sell enough pieces, we will mass produce the product to bring the prices down. We are determined to give it at Rs 10 to the user," said Singhal, who completed his BTech in metallurgical engineering branch from IIT Roorkee in 2015.

The filter uses graphene, an allotrope of carbon, dubbed the wonder material for its various properties. Graphene conducts electricity better than copper and is 200 times stronger than steel but six times lighter.

IIT Roorkee has not only given Rs 15 lakh as seed money to Log9materials but also provided Singhal with an office space in its sprawling campus. While the 23-year-old conducts the day-to-day affairs of his firm from Roorkee, the production unit is in Deoband.

M Parida, dean (sponsored research & industrial consultancy) said that in tests conducted at labs in the Centre for Nanotechnology in the institute the filter was found to be effective. "The necessary tests and experiments have been conducted and the filter is effective. We appreciate the effort of the students," Parida said.

Singhal, who started working on his project in 2014, now has two more students as part of his team. Purnendu, a final year student of MSc Physics, and Sayantan Bishwas, a final year student of BTech mechanical engineering programme have recently joined Singhal.

"We had been working on water and air filters for some time when one day we went to watch a movie in the theatre. There was a statutory warning about smoking in the film that caught my attention. I thought whether there was a way the damage from cigarette smoke could be reduced. That is how the idea for the filter was born," said Singhal.

IIT Bombay's underwater vehicle 'Matsya' comes second at AUVSI Robosub 2016

http://timesofindia.indiatimes.com/tech/tech-news/IIT-Bombays-underwater-vehicle-Matsya-comes-second-at-AUVSI-Robosub-2016/articleshow/53612373.cms

NEW DELHI: IIT Bombay's autonomous underwater vehicle (AUV) 'Matsya' has secured the second position in AUVSI Robosub 2016. It was adjudged the best performance by an Asian team. The team beat six-time winner Cornell Universitybut lost the first position by a small margin to Caltech University, according to IITB release.

This year, the Robosub competition was held during July 27-31 in San Diego, California. More than 45 universities from around the world competed to create the most effective autonomous submarine. The teams were judged on their designs, technological innovations and performance in a series of obstacle courses. In this competition, the robots are autonomous,

their actions are pre-programmed and they are on their own to complete the objectives without any intervention from the teams.

AUV-IITB's Matsya qualified on the first day itself, performed exceptionally in the semi-finals and finals without any retries, according to IITB statement.

Some other tasks that Matsya performed efficiently include identifying colored objects, locating sound sources, dropping markers and shooting torpedoes. Matsya was the only team to attempt all tasks barring one. As a result, Matsya received accolades from the competition organizers.

Javadekar responds positively to demand for IIIT in Raichur

http://www.thehindu.com/todays-paper/javadekar-responds-positively-to-demand-for-iiit-in-raichur/article8961974.ece

The State government has demanded that the Union government establish an Indian Institute of Information Technology (IIIT) in Raichur.

A delegation of Lok Sabha members from the State met Prakash Javadekar, Union Minister for Human Resources Development, in New Delhi and submitted a memorandum seeking IIIT for Raichur.

The delegation, which included Pralhad Joshi, Karadi Sanganna, Suresh Angadi and B.N. Chandrappa, was led by Basavaraj Rayaraddi, Minister for Higher Education.

Speaking to *The Hindu* over phone on Monday, Mr. Rayaraddi said that Mr. Javadekar responded positively.

“We have requested the Union government to establish an IIIT in Raichur that missed the IIT last year. We have expressed the State government’s readiness to provide space for a transit campus, land and all other infrastructure required for a permanent campus. Mr. Javadekar has responded positively. I hope that our dream of establishing an IIIT in Raichur would be realised,” Mr. Rayaraddy said.

Raichur Lok Sabha member B.V. Naik was unable to be part of the delegation as it was a last-minute decision to meet the Union Minister, he added.

IIT Madras researchers develop instrumentation for cancer treatment

http://www.thehindu.com/todays-paper/tp-features/tp-educationplus/iit-madras-researchers-develop-instrumentation-for-cancer-treatment/article8956330.ece

One of the treatment modalities for cancer is hyperthermia. This is a method by which the temperature of a region containing tumour cells is raised above normal levels. Exposing cells to elevate temperature leads to cytotoxicity.

Hyperthermia can be used in several ways. According to the U.S. National Cancer Institute's website, it can be used for achieving hyperthermia locally by using an external applicator or by placing probes inside cavities to treat small areas; regionally, for large areas; or whole body, to treat metastatic cancer.

Some of the modalities are being used, such as in the treatment of peritoneal cavity (space inside the abdomen which contains intestines, stomach and liver) when the doctor uses an infusion of the area, during surgery, with heated anticancer drug.

Others such as using applicators regionally are in the process of being developed, as fabricating the antennae, or array of antennae, that can achieve this can present challenges in instrumentation.

Dr S. Krishnan, radiation oncologist at Apollo Hospitals, Chennai, says, "It [hyperthermia therapy] may not be very effective as a stand alone method but is good when used along with radiation therapy and chemotherapy."

A team from IIT Madras, led by Dr Kavitha Arunachalam, which has been working on developing instrumentation has made progress in designing and testing a prototype applicator.

According to Dr Arunachalam, when there is an array of antennas, the heat may be focussed into a greater depth than is possible with a single antenna. A "water bag" attached to the surface of the applicator cools down the skin from outside. Therefore, the resultant temperature profile shows a peaking at a certain depth which can be adjusted by the cooling process. "Hyperthermia is scarcely practised in India and has little influence on oncology practice and awareness regarding this treatment modality is low. One of the primary reasons is the lack of industry participation in device development," says Dr Arunachalam.

As Dr Krishnan says, "It [hyperthermia therapy] is also time-consuming. When a patient can undergo radiation treatment for just 15-20 minutes and get results, why should they go for a treatment that takes much longer and which is not proved also? However, if better antennae that can deliver heat efficiently are developed, it is welcome."

Dr Arunachalam's team is working on developing an array of body-contacting antennas which can deposit energy at a depth using microwave radiation. Microwaves have a larger wavelength in the tissue as compared to high-frequency acoustic waves and so can be used to target larger tumours which can range in size from few centimetres to several centimetres. Their achievement is in reducing the size of the antenna to suit the required frequency of operation at 434 Megahertz. From the available large 10x10 cm square antenna, they have made progress to a circular one with radius 2 cm.

The team has conducted a preclinical pilot study of the energy coupling efficiency of the device on cancer patients and healthy volunteers, in collaboration with Dr K. Thayalan, Department of Radiation Oncology, Kamakshi Memorial Hospital, Chennai. When 1 milliwatt power was used, 85 per cent of it was used in heating the tissue in the head and neck region; it was 95 per cent in the case of breast tissue. Studies to evaluate safety and efficacy need to be carried out. The modalities for this are under way, according to Dr Arunachalam.