



NEWS CLIPS

AUGUST 1-31, 2020

JEE, NEET Exam 2020: IIT students launch portal 'Eduride' to help students reach exam centre- how to apply

August 30, 2020 https://www.timesnownews.com/education/article/jee-neet-exam-2020-iit-students-launch-portal-eduride-to-help-students-reach-exam-centre-how-to-apply/644968?utm_source=taboola&utm_medium=referral&utm_campaign=en-article-education

IIT students come together to help JEE, NEET Exam 2020 aspirants reach exam center amid pandemic. A new portal 'Eduride' has been created by IIT students for support.

Students of the Indian Institute of Technology, IIT has developed a new portal for JEE, NEET Exam 2020 aspirants. The portal named 'Eduride' will help the candidates from remote areas to easily commute to their exam centers amid lockdown.

The portal has been divided into two sections for registration- one for the aspirant and the other for the alumni/volunteer. Students will have to give their name and contact details, home and centre pin codes, and admit card details to avail this free service by IIT students.

JEE, NEET Exam 2020: How to apply on Eduride

Students can avail the help by following these simple steps given below.

Visit the official site of Edu Ride at eduride.in.

Click on students link and enter the necessary details asked in the newly opened page that includes personal details and exam details.

Press enter and your details have been submitted.

Once the details are submitted, students will get the information about their ride on their mail id or on the official link.

The registration process for Alumni/Volunteer is also created on the website. They can help the students in two ways- either by driving the students themselves to the exam center or by making arrangements for students to travel.

The website mainly developed to help the students who are facing the transport issues however does not promise to ensure that the offered service will be available. The admin of the portal has asked the students appearing for the exams to keep an alternative option ready to reach the exam center on their own in case of any eventuality.

JEE Advanced 2020: IIT Delhi to launch portal to provide logistics support to needy aspirants

August 30, 2020 <https://www.timesnownews.com/education/article/jee-advanced-2020-iit-delhi-to-launch-portal-to-provide-logistics-support-to-needy-aspirants/644901>

IIT Delhi to help needy aspirants of JEE Advanced 2020. A portal will be launched soon by the Institute that will help the aspirants to get logistics support to reach the exam centre.

Indian Institute of Technology, IIT Delhi along with other alumni associations have come up to support aspirants for JEE Advanced 2020 examination. The Institute has decided to set up a portal to help provide logistics support to needy aspirants who will appear for the JEE Advanced exam in September 2020.

JEE Advanced 2020 examination will be conducted on September 27, 2020. The Institute has appealed to its community to help the students reach the exam center in the pandemic. Students soon after the launch of the portal can register for help regarding logistics to reach the exam center. The registrations would commence from September 11, 2020.

While speaking to TOI, IIT Delhi Director V Ramgopal Rao said, "As citizens, we need to stand up together in times of crisis and help each other. If I am in a village and got a car, and if there is a poor student who needs to go to the exam center and cannot afford private transport, I would take the student to the examination hall. I would do it entirely free of cost. That's such a natural thing to do, I hope to hear such stories after the exam is over."

IIT Delhi Director V Ramgopal Rao has also appealed to the IIT community to help the students appearing for JEE Main exam. Through this portal, IIT Delhi Director is confident to help students appearing for JEE Main exam as well.

Meanwhile, IIT Director has also appealed to the state authorities for support in the smooth conduct of the exams. JEE Advanced Chairperson Professor Sidharth Pandey of IIT Delhi has made it clear that the Institute will implement social distancing measures as per GoI guidelines. Moreover, adequate measures will be taken to ensure the implementation to be made for the safety of students without compromising the high standards, sanctity, and fairness in the conduct of the exam.

Govt initiates plan for IITs and other top Indian institutes to open campuses abroad

August 29, 2020 <https://theprint.in/india/education/govt-initiates-plan-for-iits-and-other-top-indian-institutes-to-open-campuses-abroad/490932/>

IIT Delhi director V. Ramgopal Rao says the Ministry of Education has already written to them, asking if they are interested in taking it up and how they plan to do it.



The central government wants top higher education institutes like the Indian Institutes of Technology (IITs) and others to set up campuses abroad.

This is a part of the plan laid down in the new National Education Policy (NEP), which calls for internationalisation of education. According to the NEP, foreign universities will be allowed to set up campuses in India and top Indian institutes will be allowed to set up branches outside the country.

In an interview with ThePrint, IIT Delhi director V. Ramgopal Rao said that discussion in this regard has already started with top institutes such as the IITs.

“The NEP also talks about this (internationalisation of education)... while they are inviting international universities to come and set up campuses here, they are also encouraging our leading institutions to go out and start campuses elsewhere. In fact, MHRD (ministry of education) has already written to us, asking ‘are you interested in taking this up and how do you plan to do that’,” said Rao.

“One of the reasons why our international rankings don’t look so good is because our footprint is so small. It’s all limited to India. We do not have any presence outside India, our students, faculty, staff are all Indian,” he added.

Rao explained this with an example. “If IIT Delhi sets up a campus in the Middle East, we will have students and faculty from there and our footprint will increase.”

‘Will help in achieving a GER of 50%’

Rao said that internationalisation and branching out will also help in increasing enrolment, which will help the government achieve their goal of 50 per cent Gross Enrolment Ratio (GER) by the year 2040. The NEP calls for achieving a GER of 50 per cent by 2040.

“Doubling the GER would mean almost doubling the enrolment in higher education institutions. Our institutions need to scale up, IITs need to become much larger in terms of their enrolment... it is here that the government is encouraging IITs to have extension branches, to open international centres,” he added.

According to the NEP 2020, “High performing Indian universities will be encouraged to set up campuses in other countries, and similarly, selected universities e.g., those from among the top 100 universities in the world, will be facilitated to operate in India.”

Education Minister Ramesh Pokhriyal ‘Nishank’ had also mentioned this at the vice chancellors’ conference organised by the Association of Indian Universities on 17 August.

JEE Advanced 2020: Registration to commence from Sep 11, exam on Sep 27

August 28, 2020 <https://timesofindia.indiatimes.com/india/registration-for-jee-advanced-to-commence-from-sep-11-exam-on-sep-27/articleshow/77794582.cms>



Registration for computer-based JEE (advanced) 2020 will commence from September 11, 2020. According to the new brochure, the deadline for registration ends on September 16 (5 m) and the last date for filing application fees is September 17 (5pm). The exam is scheduled for September 27, 2020. The top 2.5 lakh candidates from the JEE (main) merit list, along with other eligibility criteria, will be eligible to take the exams for admission to 23 IITs and centrally funded institutions like IISc and IISERs.

JEE (advanced) is the admission test for undergraduate courses leading to a bachelor’s, integrated master’s or bachelor-master dual degree in engineering, sciences or architecture in the 23 IITs. Some of other centrally funded higher education institutes which use JEE (advanced) ranks include IISc, Bangalore, IISERs in Behrampur, Bhopal, Kolkata, Mohali, Pune, Thiruvananthapuram and Tirupati, Indian Institute of Space Science and Technology, Thiruvananthapuram, Rajiv Gandhi Institute of Petroleum Technology, Rae Bareli and Indian Institute of Petroleum and Energy, Visakhapatnam.

IIT-Delhi is the nodal IIT for conducting the exams this year. As per the official notification issued by IIT-Delhi, candidates should be among the top 2.5 lakh successful candidates (including all categories) in BE/ BTech paper of JEE (Main) 2020.

JEE (advanced) 2020 will consist of two question papers – Paper 1 and 2 of three-hour duration each.

JEE-Advanced: IIT Delhi appeals students, alumni to help candidates with transport facility

August 28, 2020 <https://indianexpress.com/article/education/jee-advanced-iit-delhi-appeals-students-alumni-to-help-candidates-with-transport-facility-6573839/>

Can IIT alumni or current students, who are spread all over the country, take a lead in creating a registration portal for such needy students and help take care of their logistics? The Olas and Ubers have IIT alumni at the helm. Can they participate in this initiative?, the IIT said.

In view of the COVID-19 pandemic, the Indian Institute of Technology (IIT) Delhi, has appealed to its students and alumni to help those appearing for the JEE-Advanced next month with transport to reach their exam centres.

The Joint Entrance Examination (JEE)-Advanced is conducted for admissions to IITs and National Institutes of Technology. IIT-Delhi is conducting the exam on September 27.

The institute has also suggested to its students and alumni to come up with a registration portal for needy candidates and help take care of their logistics. According to top officials at IIT Delhi, efforts are being made to allocate the first choice of examination centre to 95 to 99 per cent of students

“As citizens, we need to stand up together in times of crisis and help each other. If I am in a village and have a car, and if there is a poor student who needs to go to the examination centre and cannot afford private transport, I would take the student to the examination hall. I would do it entirely free of cost. That’s such a natural thing to do. I hope to hear such stories after the examination is over,” IIT Delhi Director V Ramgopal Rao said.

Can IIT alumni or current students, who are spread all over the country, take a lead in creating a registration portal for such needy students and help take care of their logistics? The Olas and Ubers have IIT alumni at the helm. Can they participate in this initiative?” he said in an appeal.

Rao said the number of centres have been doubled this year for all examinations.

“State governments need to come on board. Local administrations need to arrange special buses and make special provisions for students taking these examinations,” Rao said.

There has been a growing chorus against holding of crucial entrance exams in September including JEE-Mains, JEE-Advanced and NEET, in view of rising COVID-19 cases.

However, the Ministry of Education (MoE), has asserted that further delay in conducting the exams can lead to a zero academic year and hence, the exams will be conducted as per schedule in September.

“We will make sure to implement social distancing measures as per government guidelines in the current scenario of COVID-19 to ensure health and safety of the candidates. Adequate measures will

be implemented for the safety of all without compromising the high standards, sanctity, and fairness in the conduct of our examination,” said JEE-Advanced Chairman Sidharth Pandey.

“Candidates will also be asked to adhere to guidelines and a new process for social distancing and hygiene to ensure the safety and health of their own and fellow candidates. For safety purposes, we strongly advise candidates not to bring anything other than permitted items,” he said.

However, in case of an unavoidable situation, there will be arrangements to store bags at centres at owner’s risk, Pandey said.

IIT-Delhi to test returning students with in-house Covid kit

August 28, 2020 <https://timesofindia.indiatimes.com/city/mumbai/iit-d-to-test-returning-students-with-in-house-covid-kit/articleshow/77794426.cms>

Academic life at the IITs campuses seems to be picking up as several research students, and even some undergraduates who have connectivity issues, are coming back. Many IITs are preparing a safe working environment for the returning students. Across the IITs, close to 300-odd sophomores and seniors have returned, with the campuses encouraging close to 5,000 PhDs and senior researchers to come back.

AFTER COVID, THE NEW NORMAL ON CAMPUSES

ON CAMPUS

> Housekeeping staff reduced. Everyone to keep their surroundings clean, especially laboratories



> Infra changes made to reduce contact with public surfaces like door handles, lift buttons, taps, etc

> Extensive work carried out in hostel mess

> Ventilation in offices improved by installing exhaust fans

> Plexiglass barriers set up in areas where interaction is expected



FOR STUDENTS

> Over 2,500 students who could not access online classes helped with laptops and data package



> Phased return of seniors, PhD scholars has started

> Students allowed into campus in batches of about 70. Each batch quarantined for 14 days before moving to their regular hostel rooms

> They were observed for 2 weeks before a



Plexiglass barriers, foot-operated taps and doors are among additions in IITs hostels and buildings

second batch was allowed in

> Mess workers are back on campus and have undergone 2 weeks of quarantine. No

other eateries will function

> Students, once in, will not be allowed to leave campus until govt lifts social distancing guideline

Indian Institutes of Technology, Delhi, which has its in-house Covid testing kit, is planning to test all students and researchers who will be returning to the campus. The institute is also in the final stages of signing an agreement with a laboratory that has a pan-India presence so that other academic institutions can also benefit. It is the only institute in the country to do so until now. All the IITs

preparing to reboot their laboratories are taking precautions by installing plexiglass barriers and putting up exhaust fans to improve ventilation. Some IITs are also in the process of purchasing Covid health insurance and getting personal thermometers.

“Many students who took admission in and prior to 2016 and those who are pursuing their PhD have come back to campus. Most of the students who have come back are locals from the NCR region who are pursuing their PhDs and working directly on Covid-19 research. Around 20 undergraduate students, who have internet connectivity problems, have also been allowed to come back,” said Shantanu Roy, dean (academics), IIT-Delhi.

All the returning students will be quarantined in their hostel rooms for 14 days before they can step out. Canteen timings are being set and foot pedals are being installed on the doors. All other eateries and cafeterias have been shut down. Some IITs will send food to the students’ rooms while they are under quarantine while others have created a mess schedule and assigned seating areas. Students can step out of the campus only after getting written permission from authorities.

Nearly 80 undergraduate and 1,500 PhD students have come back to IIT-Bombay campus. “Many students want to come back but we are unable to allow them all,” said Ajit Kumar Chaturvedi, director, IIT-Roorkee . Meanwhile Anamika Barua, associate dean, students’ affairs, IIT-Guwahati said that no student pursuing undergraduate or Masters degree is allowed to come back to campus. “Around 150 PhD students have already arrived at the campus and 750 have said that they will be coming back,” she added. Anil Sao, associate dean, academics, IIT-Mandi, also said that so far, 119 PhD and 13 MS students, and 18 project staff had returned.

Interestingly, although the IITs have allowed students to take a gap year, just about no one is interested in taking a break. “So far, we have not received any request for a gap year,” said IIT Madras dean (academic courses) V Jagadeesh Kumar.

‘Engineering is about solutions’: V Ramgopal Rao on IIT Delhi’s future

August 24, 2020 <https://news.careers360.com/research-solutions-innovation-ramgopal-rao-on-iit-delhis-plans>



Professor Ramgopal Rao talks about the mission and direction of the Institute for the next 10 years

Indian Institute of Technology (IIT) Delhi's celebration of its Diamond Jubilee year, began with a new map. The next 60 years will be very different. IIT Delhi, founded in 1961, has already evolved from an institution producing quality-engineering graduates to one that focuses on research and innovation.

The change in orientation allowed it to be at the forefront of the fight against COVID-19 producing, among many other essential items, the most cost-effective diagnostic kit.

Its director, V Ramgopal Rao, spoke to Careers360 about the road map for the next decade – research that leads to sustainable solutions to problems, fostering innovation and start-ups.

Q. You have released a mission statement for the next 10 years. Can you elaborate on that?

A. I will say not a vision for IIT Delhi but it is the vision of IIT Delhi. We have been working on all of these for the past five years or so, and many of these things are under progress. It also comes with an action-based strategy. For example, we plan to start a new school for entrepreneurship and similar things. So, some of these are actionable items, actions arising out of this document, which we will do in a time-bound manner.

Q. How is the path defined by the strategy document different from how IIT Delhi has worked over the past 60 years?

A. IITs started as undergraduate institutions, they were to produce the best quality undergraduates and nothing more than that. At that time, the government created research labs, the CSIR (Council of Scientific and Industrial Research) labs but the IITs were created for producing high-quality BTechs. So, for almost 30 years, they remained as undergraduate institutions and IITs became the best-known institutions in the world for the undergraduate students.

Over the decade between 1990 and 2000, the IITs started to orient a little more towards research. That is when we started to push our faculty to write and publish papers in the top journals and conferences. So, research orientation came only in the '90s. But there was a huge financial crisis at that time and not much money to invest in a research facility or anything like that. Research picked up starting from 2005 onward. If you see, over 60% of our students now are actually postgraduate students. That is a major change in direction. In all older IITs, majority of the students are postgraduate students. In IIT Delhi, PhDs are at least 50% of our postgraduate students.

IIT Delhi has around 3,500 PhD students, another 3,000 masters students, about 4,000 BTech students. In research in QS (Quacquarelli Symonds) ranking, we are in the top 100 in the world.

In the last five years in IIT Delhi, we are focusing on the innovation part. Innovation is basically applying this research knowledge to real-world problems.

When you do research, you can pick any topic under the sun. But when you talk about innovation, relevance becomes very important. The research needs to be relevant so that you can find a solution and apply that on the ground.

Q. How is IIT Delhi closing the gap between research and its implementation?

A. The difference between research and innovation is relevance. If research is relevant then you are finding a solution to a problem, once you have the solution to a problem, you build a prototype. And then you use start-ups and industry connections to deliver the solution to the society.

In the process, patenting becomes important. At IIT Delhi, we have started concentrating more on problem-solving research. When we find a solution to a problem, we also patent that solution. And then we use our start-ups to deliver that to society. IIT Delhi, in the first 55 years, filed about 500 patents. And in the last five years, we filed another 500 patents. That was the kind of change in the trajectory.

We started using these patents to start companies. That is how now we have 100 companies on the campus. This is boosting the innovation ecosystem on the campus.

In 2020, maybe we will be filing over 200 patents.

We have also done almost 350 projects from industry over the last five years. We have created eight centres of excellence with funding from industry and alumni.

We are now trying to look at what those five areas are where we would like to focus and what the problems are first. Till now, we were not putting the problems first and work would remain within the boundaries of the discipline and within those boundaries, you cannot really solve many problems.

For example, tackling the farmers' problem. It requires engineers to work with agricultural scientists. It also requires business schools to come forward. So you need every discipline of engineering gets involved in solving the farmer's problem

In the statement, we are saying a healthy balance between different types of research. IIT Delhi will also continue to support fundamental research.

Q. How are the problems framed? How does a student identify what the problems are for, say, the farming community?

A. In the summers they go and spend a couple of months with a farmer. When they know the problems of the farmer then they know. Engineering is all about solving problems. It is not about electrical, mechanical. What we have created in artificial boundaries. It is something which finds optimal and sustainable solutions to problems. The boundaries came in because of convenience and various other reasons.

Students come from across disciplines. We started a programme about three years ago which we call "1, 2, 3, 4 Discover and Learn Program". One student from each of the four years of BTech comes up and the four form a group and choose a problem to work on. They can come from completely diverse disciplines. They also come from different branches and different tiers of study. So when the fourth-year students graduate, the third-year students join, so these projects become a kind of relay project. The projects are not discontinued but over a period of time, they build solutions to problems. Some of these projects become start-ups.

We also have a Faculty Interdisciplinary Research Program, we also call it FIRP. We currently have a scheme at IIT Delhi where two faculty members from two completely diverse disciplines -- electrical engineering and biology, let us say -- want to work together. We give each faculty-member Rs 5 lakh per year for two years for research purposes and together they can get about 20 lakhs from the institute for two years with the condition that the project will be reviewed once it is submitted by the external expert committee. There are about 70 FIRP projects in IIT Delhi now.

We started similar FIRP projects between IIT Delhi and AIIMS (All India Institute of Medical Sciences), ICAR (Indian Council of Agricultural Research), and NII (National Institute of Immunology). Earlier it was between different departments of IIT but now we have extended to different institutions also.

From this year we are also collaborating with different institutions abroad. We are collaborating with European universities on a similar model. They fund their faculty, we fund ours.

Q. IIT Delhi has been very active in the fight against COVID-19. Are there other projects focusing on medical issues as well?

A. For that, we have a very good group, we have the Centre for Biomedical Engineering which is one of the oldest centres in the country.

For addressing COVID-19, we are looking at it from the point of prevention. We have come up with masks, PPEs or the low cost detection kits or say herbal treatment. The scientific analysis of the medicines, like Ashwagandha or herbal tea to treat COVID have been done.

All the faculty members were initially funded internally for COVID-19-related projects. At that time, no one was prepared and we cannot tell the faculty to get funding from outside. We earmarked some funds from the internal resources so that the faculty could start their work, we kept labs open, and then we allowed students who are willing to stay back. So, we funded 20 such groups to work on COVID and after about three months, the results started coming in.

We have a dozen projects which have resulted in products.

Q. How are you preparing IIT Delhi to respond to such crises in the future?

A. For that, we have started another research vertical. We have 'grand challenge' kind of projects. We announce a 'grand challenge' for the faculty and they form teams to solve these grand challenge problems.

Another project that we funded internally was to tackle the locust attack. We now have two groups working on that problem. Some of this will have technologies as a solution. Similarly, we are working on air quality in Delhi.

Some of the projects consist of converting waste to wealth. They are all working with the industries and the Delhi Government.

Q. How is this strategy different from what has existed for six decades?

A. In the last five years, we have done very well if you just look at the numbers. Our research funding used to be Rs 470 to 480 crore for five years. Now we are getting research projects valued at Rs 400 crore every year for the last two years. Our research funding has increased four-fold.

In 2016 we were filing 10-15 patents. Now we are filing 150 patents in a year. The start-ups we were incubating were in single digits. Now we are incubating 30-40 start-ups every year.

We were not even bothered about alumni earlier but now we are generating Rs 30 to 40 crore from alumni. There is a magnitude of improvement and growth.

The question was how to sustain this growth? The strategy document defines what further steps we need to take so that the momentum will continue. We want to have more and more structured programs so that the growth will continue.

IIT Delhi Director: Further Delay in Conducting NEET, JEE Can Have Serious Repercussions

August 26, 2020 <https://www.republicworld.com/india-news/education/further-delay-in-conducting-jee-neet-can-have-serious-repercussions-iit-delhi-director.html>

Any further delay in conducting entrance exams JEE and NEET will have "serious repercussions" on not only the academic calendar but also career of bright students, IIT Delhi Director V Ramgopal Rao said.



Any further delay in conducting entrance exams JEE and NEET will have "serious repercussions" on not only the academic calendar but also career of bright students, IIT Delhi Director V Ramgopal Rao said.

Rao's comments come in the wake of growing clamour for postponing the two crucial exams in the wake of rise in COVID-19 cases.

"The consequences of postponing these exams any further can have serious repercussions on IIT academic calendars and for candidates. I fail to see how we can run two batches together. It will become a zero academic year for lakhs of students. Our academic calendars are too packed already and linked to too many other things. The delays can impact the careers of so many bright students.

"We have already lost six months. If we conduct the exams in September, we can at least start the sessions in Indian Institutes of Technology (could be online) in December. Tinkering with the

examination pattern or admission processes in these times will also be detrimental and unfair for everyone," Rao said in a social media post.

He said coronavirus is not going to go away for at least a year and we cannot be perpetually in lockdown mode, and appealed to the students to "trust the institutions" and take the entrance tests while strictly following the COVID-19 safety guidelines.

"COVID is not going to go away for another six months to one year. We all need to get used to this new normal. The earlier we realise that, the better it is for all of us. The last postponement of exams definitely helped us prepare well now.

"I feel sad for those serious students preparing for these examinations. I did receive a large number of emails from them. As if COVID-19 is not enough, this uncertainty about exam dates is further adding to the stress levels of students. Personally, I am for conducting these examinations by taking all precautions and following social distancing norms. Lockdown is not a solution to COVID. Lockdown was needed to prepare ourselves better," he said.

The IIT director also noted that the Joint Entrance Examination (Main) is now conducted multiple times a year. "Incase some students cannot write the JEE Main this time, they can take the exam after six months again. I don't see any reason for a concern. As the JEE Advanced organising institute, I assure everyone that IITs will do their best and put their best foot forward in organising the JEE Advanced examination," he said.

Rao said they will also be closely monitoring the situation and take necessary steps as required. "Health of candidates is of utmost concern to all of us. We all have children and we can connect with the parents of candidates," he said.

The JEE Main and the National Eligibility-cum-Entrance Test (NEET-UG) will be conducted in September as scheduled, the Ministry of Education officials had on Tuesday said, amid a growing chorus for postponing the crucial tests in view of the COVID-19 pandemic. While the JEE Main is scheduled from September 1-6, NEET is planned on September 13.

Several opposition leaders in India, including Congress' Rahul Gandhi, West Bengal Chief Minister Mamata Banerjee, her Odisha counterpart Naveen Patnaik and DMK president M K Stalin have demanded the exams be postponed.

IIT Delhi to set up Technology Innovation Hub on cobotics; DST sanctions Rs 170 crore

August 22, 2020 <https://english.jagran.com/india/iit-delhi-to-set-up-technology-innovation-hub-on-cobotics-dst-sanctions-rs-170-crore-10015628>

The IHFC will be covering 'medical robotics, agriculture and disaster management, defence and smart manufacturing (Industry 4.0)' at the IIT Delhi.

The Ministry of Education (MoE) on Saturday said that the Department of Science and Technology (DST) has sanctioned Rs 170 crore to Indian Institute of Technology (IIT) Delhi to set up a Technology

Innovation Hub on Cobotics. The money was sanctioned under the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS).

“@IndiaDST has sanctioned Rs 170 crores to @iitdelhi to set up a Technology Innovation Hub on #Cobotics. The focus will be given to technologies where robots can work together with humans to maximize the benefits of human intelligence”, the MoE said in a tweet.

(Official Twitter Handle of Ministry of Education)

The innovation hub on Cobotics is also known as the ‘I-Hub Foundation for Cobotics (IHFC)’ was incorporated as a section-8 company by the IIT Delhi in June 2020 with initial funding from the DST.

“The I-Hub Foundation for Cobotics (IHFC) will not only perform research in the area of Collaborative Robotics i.e. Cobotics, but also proactively translate the outcomes into products for the benefit of the humanity,” Prof. V. Ramgopal Rao, Director, IIT Delhi who chairs the board of the company under the NM-ICPS programme of DST said as reported by Careers 360

The IHFC will be covering ‘medical robotics, agriculture and disaster management, defence and smart manufacturing (Industry 4.0)’ at the IIT Delhi. Under the IHFC, the focus will be on the technologies where the humans can work along with robots and increasing the benefit of robots’ precision and ability to work in an atmosphere where it is not possible for humans to work.

Apart from 50 faculties at IIT Delhi and other universities in India, universities from Japan, Korea, USA, the UK along with several companies have already committed to the IHFC at IIT Delhi.

One of the Board Members of the IHFC at IIT Delhi, Prof. S.K. Saha, as reported by Careers 360, said, “We have already initiated two robotic applications with three companies to fulfil requirements of AIIMS New Delhi and PGI Chandigarh with respect COVID-19. Besides, a seed grant of more than Rs. 02 Cr has already been allocated to faculty for hiring PhD students and initiate research for the IHFC. We have also advertised for the post of CEO, IHFC.”

IIT Madras, IIT Bombay and IIT Delhi are the top three centrally funded institutes

August 18, 2020 <https://www.businessinsider.in/education/news/iit-madras-iit-bombay-and-iit-delhi-are-the-top-three-centrally-funded-institutes/articleshow/77612783>.

The ranking is done in six categories.

- **In the first category, IISc Bangalore and IIT Kharagpur have bagged the fourth and fifth ranks respectively. Seven IITs have figured in the top 10 list under the category.**
- **Institute of Chemical Technology, Maharashtra, has been ranked at the top among state-funded universities, followed by Panjab University and Chaudhary Charan Singh Haryana Agricultural University.**

- **Among state-funded autonomous institutes, College of Engineering, Pune, has bagged first rank followed by PES College of Engineering, Karnataka and Coimbatore Institute of Technology, Tamil Nadu.**

Madras, Bombay and Delhi IITs have bagged the top three positions among centrally-funded institutes of national importance in the Atal Ranking of Institutions on Innovations Achievements (ARIIA), announced on Tuesday. ARIIA is an initiative of the Ministry of Education to systematically rank higher education institutions and universities on indicators related to innovation.

The ranking is done in six categories -- centrally-funded institutes of national importance, state-funded universities, state-funded autonomous institutions, deemed universities, private institutions, and women only higher educational institutions.

In the first category, IISc Bangalore and IIT Kharagpur have bagged the fourth and fifth ranks respectively. Seven IITs have figured in the top 10 list under the category.

Institute of Chemical Technology, Maharashtra, has been ranked at the top among state-funded universities, followed by Panjab University and Chaudhary Charan Singh Haryana Agricultural University.

Among state-funded autonomous institutes, College of Engineering, Pune, has bagged first rank followed by PES College of Engineering, Karnataka and Coimbatore Institute of Technology, Tamil Nadu.

Kalinga Institute of Industrial Technology, Odisha has been ranked at the top among private universities, followed by SRM Institute of Science and Technology and Vellore Institute of Technology, both in Tamil Nadu.

Speaking at the occasion, Union Minister of Education Ramesh Pokhriyal 'Nishank' mentioned that the ranking is named after former Prime Minister Atal Bihari Vajpayee.

"Under his leadership, India took many leaps in the field of Innovation. ARIIA gives us a reflection of our efforts and provides us with a reason to celebrate our achievements. A National Research Foundation (NRF) will be set up for invigorating innovation and research under recently released Nation Education Policy (NEP)," he said.

The minister said this year, the category of women only higher educational institutions was introduced to encourage women and bringing gender parity in the areas of innovation and entrepreneurship.

Avinashilingam Institute for Home Science and Higher Education for Women bagged the top prize in the category.

Releasing the ranking, Vice President Venkaiah Naidu said, "Innovation has always been key defining feature of human progress. India has its own illustrious history of innovations spanning at least 20 centuries right from the invention of 'zero' and the decimal system. India was known as the 'vishwa guru'. We must regain that intellectual leadership, we must again emerge as a global hub of learning and innovation."

"We have highly talented youths brimming with new ideas, with a passion for implementation and willingness to forge a new path. The youth will define our country's future. They need encouragement, facilitation and recognition, they must be given needed guidance and freedom to explore new frontiers," Naidu added.

IIT Delhi to develop home-based COVID-19 testing kit

August 18, 2020 <https://www.biospectrumindia.com/news/78/17053/iit-delhi-to-develop-home-based-covid-19-testing-kit.html>

IIT Delhi and Wells Fargo recently signed a Memorandum of Understanding (MoU) for the development of a peptide-based ELISA test for the detection of COVID-19 antibodies



US based Wells Fargo International Solutions Private Limited through their philanthropic partner, United Way of Bengaluru (UWBe), has joined hands with IIT Delhi in this fight against coronavirus.

IIT Delhi and Wells Fargo recently signed a Memorandum of Understanding (MoU) for the development of a peptide-based ELISA test for the detection of COVID-19 antibodies.

ELISA, short for serological enzyme-linked immunosorbent assay, determines whether a person possesses antibodies for COVID-19 in the blood. The test results can help the medical fraternity fight the disease in many ways; a significant way would be the identification of individuals with antibodies who can donate their blood as part of an experimental treatment of infected patients.

This project- a collaboration between IIT Delhi and National Chemical Laboratory (NCL), Pune - has the potential of making a meaningful difference to this situation by enabling affordable, home-based testing.

This research will utilise the microplate-based enzyme immune-assay technique. The choice of antigen will be a peptide that has been computationally identified. Structural analysis of the available complex will be performed to design a novel peptide that has a complementary property with spike protein of COVID-19.

A set of peptides will be designed using a combination approach to test their binding. From the sequences of the variable regions of the Heavy and Light chain including the novel designed peptide, cloning of the mAb fragment (CV-Fab) will be performed. CV-Fab will be produced from which ELISA based testing kits will be created.

On Diamond Jubilee, IIT Delhi Sets Five Goals, Will Contribute Through Education and Research

August 17, 2020 <https://www.ndtv.com/education/on-diamond-jubilee-iit-delhi-sets-five-goals-will-contribute-through-education-and-research>

IIT Delhi is believed to have the potential to transform and compete on a global scale. In order to achieve this transformation, IIT Delhi has set five bold aspirations for 2030, in consultation with the IIT Delhi administration, faculty, alumni and the Endowment Fund's contributors.

The Indian Institute of Technology (IIT) Delhi has shown growth in student and faculty strength while delivering academic and research output over the period of time. In the last decade, IIT Delhi saw a 55 percent surge in student base and a 35 percent growth in faculty. In the last five years, it has filed for over 500 patents, published nearly 10,000 research papers and completed approximately 350 industry projects.

Compare top colleges in India based on Facilities, Fee, Infrastructure, Placements, Student Reviews.

Additionally, in the year 2019, the IIT Delhi Endowment Fund was launched by President Ramnath Kovind, backed by an initial commitment of Rs 250 crore by alumni, with a stated goal of raising USD 1 billion over a period of time.

Subsequently, IIT Delhi initiated the development of its vision and direction for 2030, with a focus to build and use the Endowment Fund towards achieving these goals. The objectives of this effort were to -- Articulate a set of aspirations for IIT Delhi for the next 10 years, define the initiatives required to achieve those aspirations by 2030 and enable the Endowment Fund to meet its goal of raising USD 1 billion.

IIT Delhi is believed to have the potential to transform and compete on a global scale. In order to achieve this transformation, IIT Delhi has set five bold aspirations for 2030, in consultation with the IIT Delhi administration, faculty, alumni and the Endowment Fund's contributors.

1. Drive research excellence

IIT Delhi will provide faculty with the resources and facilitation they need— including grants, infrastructure and staff—so they can perform to their maximum potential across their focus areas. The institute will aim to maintain a healthy balance between different types of research. While there will be focused efforts on exploring technology development and commercialization of applied research, IIT Delhi will continue to support fundamental research, which could have long gestation period for its impact to be acknowledged by industry and society.

2. Enhance educational experience and employability

IIT Delhi will provide its students with modern learning and research experience. The curriculum will reflect the latest and future requirements of the industry. A renewed emphasis will be placed on the

overall development of students to provide them with the skills to compete in a dynamically changing world. The institute's method of instruction will adapt to technological innovation in pedagogy while building capabilities to deliver education online at scale.

An additional thrust will also be placed on students' overall well-being and health.

3. Attain global competitiveness in select technology areas

By 2030, IIT Delhi aims to build a healthy pipeline of licensing agreements, develop teaching programs and sponsored projects with industry in those technology areas.

4. Sustain global leadership in entrepreneurship

IIT Delhi aims to become the preferred destination for aspiring entrepreneurs in India and neighbouring countries by nurturing a start-up culture among students and faculty and bridging the gap between research and entrepreneurship. The institute will also make a concerted effort to offer partnership opportunities to alumni embarking on their entrepreneurship journey by providing relevant support services and connections.

5. Contribute to society and the country

IIT Delhi will continue investing in research areas of social and national importance such as rural development while exploring other potential areas of focus.

The institute will encourage students to continue their on-ground collaboration with external partners who are committed to furthering relevant social causes (e.g., leading NGOs) to maintain a culture of giving back to society.

M. Venkaiah Naidu inaugurates IIT Delhi's Diamond Jubilee celebrations

August 17, 2020 <https://www.5dariyanews.com/news/300730-M-Venkaiah-Naidu-inaugurates-IIT-Delhis-Diamond-Jubilee-celebrations>

VICE PRESIDENT OF INDIA RELEASES DIAMOND JUBILEE LOGO AND STRATEGY DOCUMENT OF IIT DELHI FOR 2030 IN THE PRESENCE OF SHRI RAMESH POKHRIYAL 'NISHANK'



Vice President of India, Shri M. Venkaiah Naidu inaugurated the year-long Diamond Jubilee celebrations of IIT Delhi via video conferencing on Monday in the presence of Union HRD Minister Shri Ramesh Pokhriyal 'Nishank'. On this occasion, Vice President of India released the Diamond Jubilee logo and the institute's strategy document- 'IIT Delhi- Setting the Vision and Direction for 2030'. While addressing the participants, Shri M Venkaiah Naidu today emphasized that research at IITs and other higher education institutes must be relevant to society and focus on finding solutions to various problems faced by mankind from climate change to health issues. He said Indian institutions will be counted among the world's best only when they start impacting the societies around them by developing optimal and sustainable solutions to the problems faced by the nation. Calling for greater investment in R & D projects which focus on finding solutions to societal problems, the Vice President urged the private sector to collaborate with the academia in identifying such projects and fund them liberally. He also emphasised that research should focus on making the lives of people comfortable, quicken the progress and ensure a more equitable world order. Calling upon the IITians to pay attention to the problems faced by the farmers and rural India, Shri Naidu asked them to work not only for enhancing agri-production, but also specially focus on the production of nutritious and protein-rich food.

Asking the higher education institutions not to work in silos and form a symbiotic relationship with the industry to develop cutting-edge technology, he said the industry experts in various areas should act as mentors in guiding researchers. This type of collaboration will help in fast-tracking projects and produce quicker results, he added. Expressing his happiness that the New Education Policy seeks to promote India as a global study destination, Shri Naidu pointed out that only eight Indian institutions figured in the top 500 globally. He said this situation has to change and there has to be a concerted and collective action from all the stakeholders—governments, universities, educationists and the private sector to bring about a radical improvement in the standards and quality of education of our institutes of higher learning. Observing that there is a huge potential for India to become a world leader in various technological domains given the demographic advantage and the presence of highly talented youth, the Vice President said "the need of the hour is to impart quality education". Lauding IIT Delhi for emerging as a leader in the entrepreneurship space, Shri Naidu was happy to note that Institutions such as IIT Delhi are producing job providers rather than job seekers and becoming trendsetters for other institutions in the country. The Vice President of India concluded by praising IIT Delhi, the national coordinating institute for the MHRD's flagship programme Unnat Bharat Abhiyan (UBA), for playing a strong catalytic role. The UBA already has over 2000 Participating Institutions (PIs) and these institutions have adopted more than 10,000 villages. Speaking on the occasion, Shri Pokhriyal expressed his gratitude to the Vice President of India for inaugurating the Diamond Jubilee celebrations of IIT Delhi. He said that the National Education Policy -2020 focuses on the quality of education in India and intends to make Indian education system the most advanced and modern for students of our Country. He added that new opportunities in higher education have now emerged as a result of this New Education Policy and India will become a global study destination with effective implementation of the NEP-2020.

While congratulating IIT Delhi on its Diamond Jubilee the Minister said that the institute's journey of glorious 60 years is of great pride and inspiration for the entire country. He said that the contributions of IIT Delhi in meeting the national challenge of fighting COVID-19 through technological support are praiseworthy. From developing the world's cheapest RT-PCR-based

COVID-19 diagnostic kit to supplying over 40 lakh PPEs to India and the world, the institute's researchers have done a remarkable job. The Minister was happy to note that over 500 patents have been filed by IIT Delhi faculty and students in the last 5 years in addition to publishing over 10000 research papers in peer reviewed international journals in the same period. IIT Delhi Research Project funding from competitive research grants has also grown 4 times in the last 5 years, from 100 crores per year in 2016 to over Rs. 400 crores in 2019."Shri Pokhriyal further said that the IIT Delhi has by far the best eco-system for start-ups in the country. I feel proud that IIT Delhi alumni have created close to 800 start-ups, the highest in the country as compared to alumni of any other institute. Of the close to 30 unicorns created by Indians, 15 of them are by IIT Delhi alumni alone. IIT Delhi alumni led start-ups have created over 30 million jobs and raised USD 19 Billion in investments and have been the trend setters in the country as well as in the world. Director, IIT Delhi, Prof. V. Ramgopal Rao said that With the vision for 2030 in place, IIT Delhi is on the road to its next phase of growth. The successful achievement of its vision will positively impact the lives of students, alumni, faculty and staff, while shaping the progress of our nation for decades to come. The second session of the Diamond Jubilee inaugural ceremony witnessed Inaugural Talks by Prof. Devangkhakhar, Distinguished Alumnus & Former Director, IIT Bombay and by Prof. M. Balakrishnan, Vice Chancellor, Satya Bharti Institute of Technology & Professor (On Leave), CSE, IIT Delhi. A panel discussion was also organised on "IIT Delhi: Reminiscing 60 Years of Excellence and Way Forward " in which former Directors of IIT Delhi Prof. V. S. Raju, Prof. R. S. Sirohi, Prof. Surendra Prasad and Prof. R. K. Shevgaonkar participated.

IIT Delhi to provide support, opportunities to nurture startup culture

August 17, 2020 <https://www.livemint.com/education/news/iit-delhi-to-provide-support-opportunities-to-nurture-startup-culture-11597667963385.html>

The institute said it will expand networking and mentorship opportunities for students through regular guest lectures by successful alumni

The Indian Institute of Technology in Delhi (IIT-Delhi) on Monday said it will provide space, funding connect and mentorship opportunities to entrepreneurs, students and teachers from India and neighbouring countries to set up startups inside its campuses. The move underlines the vision of country's premier institution to become a global start-up destination.

"IIT Delhi will become the preferred destination for aspiring entrepreneurs in India, and neighbouring countries by nurturing a startup culture among students and faculty and bridging the gap between research and entrepreneurship," the elite engineering and tech school said while celebrating its diamond jubilee.

The IIT said it will establish a "world class entrepreneurship center" and "increase engagement of Institute with the startup ecosystem". "Create a one stop shop for entrepreneurs in India and neighbouring countries, by providing access to resources for example workspaces, cloud storage, processing power, mentorship from faculty and alumni, connect with funders, etc," the institute underlined in its new vision document.

"Enable tighter linkages between research, technology and development and commercialisation through startups by faculty and students...and build focused outreach mechanism to invite alumni to

partner with IIT Delhi in launching their startup," the institute said adding that it will create a competitive model for equity stakes in incubated startups to diversify income sources in the long run.

IIT Delhi's alumni has produced several unicorns including the leading e-commerce leader Flipkart both in India and abroad. While the Delhi campus has incubation facilities, its two extended campuses in Sonapat and Jajhar (both in Haryana) are expected to give a big push to its focus on nurturing startups.

The institute said it will expand networking and mentorship opportunities for students through regular guest lectures by successful alumni to streamline courses, offering across various academic units in the institute as well as from external sources. It said the institute will deliver "end to end training (on) entrepreneurship --from prototyping to product development, running operation to fundraising".

Besides, IIT Delhi said it will engage with leading industry professionals to develop a global competitive innovation ecosystem in India, create learning program for professionals in the industry and expand its outreach in India and abroad. On academics side, it said the focus will be on strengthening "teaching and research, incorporating demand driven approach to curriculum through structural feedback from students...industry experts and consideration of national priorities."

IIT Delhi develops world's most affordable COVID-19 testing kit Corosure **August 16, 2020** <http://newsonair.com/Main-News-Details.aspx?id=397412>

In the series Atmanirbhar Bharat, AIR brings a special story on the world's most affordable COVID-19 testing kit Corosure developed in the country.

Corosure diagnostic kit has been indigenously developed by Indian Institute of Technology, Delhi. The RT-PCR assay test through this kit costs less than 500 rupees and it delivers the test result in only around 3 hours.

Education Minister Ramesh Pokhriyal Nishank launched the low priced testing kit last month for larger public use in the COVID labs.

The Institute gave non exclusive, open license to around ten companies for its commercial usage. The diagnostic kit has proved it's efficacy by augmenting the daily testing figures in the country to a considerable extent.

IIT-D Finds the ‘Greatest Threat to Human Health’ in Yamuna’s Water: Things to Know

August 13, 2020 <https://www.thebetterindia.com/235433/iit-delhi-bacteria-threat-who-yamuna-river-antibiotics-health-covid-pollution-ros174/>

A team of researchers from IIT-Delhi conducted a study across 20 major sewer drains and 5 prominent sites on river Yamuna in New Delhi. And what they found is a health threat we can no longer afford to ignore.

The Yamuna, a sacred river, and the second-largest tributary of the Ganges is one the most polluted rivers in the country. Two months after the COVID-19 lockdown, Delhi Pollution Control Committee (DPCC) had found that compared to the pre-lockdown days, river Yamuna was cleaner by around 33%.

But once the lockdown was eased and industries resumed their work, the pollution was back. According to ANI, toxic foam was seen in river Yamuna at Okhla Barrage in July. This foam is formed due to a rise in pollution level, and is hazardous for people who live in nearby areas.

But it is not just this one threat that Yamuna poses.

In 2017, the World Health Organization (WHO) had published its first list of Antibiotic-Resistant Priority Pathogens that pose the greatest threat to human lives. The list published by WHO is divided into three categories, based on the urgency for new antibiotics: critical, high, and medium priority.

In that same year, a research paper published by the Indian Institute of Technology, Delhi, proclaimed that River Yamuna contains certain multi-drug resistant bacteria that fall under the critical category.

WHO Priority Pathogen List

The criteria for selecting pathogens on the list are –

How deadly the infections they cause are.
Duration of the treatment and whether it requires long hospital stays.
How easily they spread between animals, from animals to humans, and from person to person.
Whether the spread of the infection can be prevented.

Critical

This category includes multidrug-resistant bacteria that can pose as threats in hospitals, and among patients whose care requires devices such as ventilators and catheters. The viruses that fall under this category are

Acinetobacter baumannii
Pseudomonas aeruginosa
Enterobacteriaceae

According to the report, these bacteria have become resistant to a large number of antibiotics, including the best ones such as carbapenems and third-generation cephalosporins. They can cause severe and often deadly infections such as bloodstream infections and pneumonia.

High risk:

Enterococcus faecium
Staphylococcus aureus
Helicobacter pylori
Campylobacter spp
Salmonellae
Neisseria gonorrhoeae

Medium risk:

Streptococcus pneumoniae
Haemophilus influenzae
Shigella spp

The pathogens and bacteria under these two categories can cause common diseases such as gonorrhoea and food poisoning.

About the IIT Study on River Yamuna

A team of three researchers from IIT-D conducted a microbial analysis study across 20 major sewer drains and 5 prominent sites on river Yamuna in New Delhi. Microbial Analysis is a method of testing water to estimate the numbers of bacteria present in it and what kind of bacteria they are.

According to estimates made by the Central Pollution Control Board (CPCB), Delhi generates 3,000 million litres of sewage per day. More than half of this amount does not receive any sort of treatment and is allowed to flow into the Yamuna, unchecked.

The researchers collected samples of water in both summer and winter seasons to check the seasonal variation of antibiotic-resistant bacteria.

Results

The samples indicated an abundant presence of coliforms which are bacteria present in the feces of all warm-blooded animals and humans, Extended-spectrum beta-lactamases (ESBL) resistant bacteria, and carbapenem-resistant bacteria which are enzymes that are resistant to most antibiotics, including penicillins.

According to the study, a major reason for an increase in the pollution of the river is poor connectivity between drains and sewage treatment plants. This has caused the discharge of untreated sewage at different locations of the river Yamuna and thereby breeding of these pathogens.

The COVID-19 pandemic and the lockdown that followed has made humans understand that nature can heal, and undo the damage done, only if we stay away.

IIT Delhi, OUAT Bhubaneswar Sign MoU for Strengthening Research & Education in Cutting Edge Areas of Agriculture and Allied Subjects

August 10, 2020 <https://indiaeducationdiary.in/iit-delhi-ouat-bhubaneswar-sign-mou-for-strengthening-research-education-in-cutting-edge-areas-of-agriculture-and-allied-subjects/>

Indian Institute of Technology (IIT) Delhi and Odisha University of Agriculture and Technology (OUAT), Bhubaneswar have signed a Memorandum of Understanding (MoU) to generate frontier technologies and produce quality human resources in the field of agricultural research and education for addressing the challenges faced by the rural communities and improving their quality of life.

OUAT, Bhubaneswar and IIT Delhi would work jointly in the field of Sensor Application in Agriculture, Precision Farming, Geospatial Technology, Nanotechnology, Biotechnology, and related aspects of agriculture, leading to the creation of rural livelihood opportunities. There will be a strengthening of faculty/ scientists through exchange programmes and the use of laboratories of both the organisations.

The MoU was signed by Prof. V. Ramgopal Rao, Director, IIT Delhi and Dr. Pawan Kumar Agrawal, Vice-Chancellor, OUAT Bhubaneswar.

After signing the MoU, Dr. P.K. Agrawal, Vice-Chancellor, OUAT expressed that this collaboration will create new avenues for interdisciplinary research with the involvement of scientists from OUAT and IIT Delhi.

Speaking of the MoU, Prof. Rao, Director, IIT Delhi said, "As part of IIT Delhi's resolve to strengthen the rural economy through technology interventions, the institute is closely working with multiple ICAR laboratories on a variety of agricultural problems. Through this collaborative agreement with OUAT, we hope to also initiate multiple funded projects between IIT Delhi and OUAT faculty under IIT Delhi's Faculty Interdisciplinary Research Programme (FIRP)".

"The academic and research collaborations between OUAT and IIT Delhi especially in the areas of sensor based agricultural technologies, nanotechnology and biotechnology applications will develop strategies and modern techniques for meeting current challenges faced by agricultural sectors," said Prof. Sunil Kr. Khare, Dean, R&D, IIT Delhi.

There will also be a joint venture to operate research projects having a common interest in both the institutions.

NHAI, IIT-Delhi sign MoU for centre of excellence

August 09, 2020 <https://www.energyinfrapost.com/nhai-iit-delhi-sign-mou-for-centre-of-excellence/>

The National Highways Authority of India (NHAI) and the Indian Institute of Technology (IIT) Delhi on Friday signed a Memorandum of Understanding (MoU) to set up a Centre of Excellence (CoE) on Advance Data Management System for Highways in IIT Delhi.

According to officials, the collaboration of NHAI and IIT will work on Project Management and Data Management, Highway Network Traffic Demand and Incident Management, Highway safety, Highway Work-zone Management, Highway Pavement Management System. IIT Delhi will provide space and infrastructural facility, scientific and technical expertise, and extend the available advance research facilities for the CoE.

Efforts will also be made to attract students and research scholars for setting up start-ups and incubators on different transportation and highways related research solutions, said an official. "NHAI, on the other hand, will provide critical data support and necessary access to its information resources, including the data software — Data Lake.

It will also extend the required financial support for research and various activities at the proposed CoE," said the IIT official. The MOU will remain in effect for next five years and is expected to bring out highly effective digitized systems on which the NHAI will thrive further.

‘We are trying to improve online... don’t postpone exams, we don’t know when we will reconvene’

August 1, 2020 <https://indianexpress.com/article/explained/coronavirus-panic-online-education-exams-6533268/>

In this E-Xplained session before a nationwide audience on Zoom, Prof V Ramgopal Rao, Director IIT Delhi, discusses challenges posed by the pandemic, and the effectiveness and limitations of online learning.



In this E-Xplained session before a nationwide audience on Zoom, Prof V Ramgopal Rao, Director IIT Delhi, discusses challenges posed by the pandemic, and the effectiveness and limitations of online learning. Edited excerpts:

On coping with the pandemic

It has been a difficult time, I must tell you. It was also sudden, we were not prepared well enough... When Covid struck, within a matter of 10 days, two weeks, we told faculty you were teaching in the classrooms, now you suddenly start doing everything online. The transition was not easy at all. Even personally for me, it was a big challenge. Because with the kind of infrastructure we have on our campuses, with the kind of diversity we have, students from such varied economic and social backgrounds, suddenly to move to an online kind of education was a nightmare. The moment we said we will run classes, there will be a hundred emails from students saying, “But I don’t have a laptop”. We are still struggling... but now I think we are better prepared. Within a matter of a month, at least 300 courses from IIT Delhi went online, but there are still challenges.

I think now the next semester is going to be much better. In fact, we are also bringing back students who have issues with online. We have done a survey: 4% of IIT Delhi students cannot take classes from their hometowns or their places of stay, so now we are trying to bring back these 4% to the campus, make them stay in hostels, even give them laptops where they require them.

How effective is online learning

Online teaching is not just about teaching in front of a camera. The way you behave in a classroom, the way you behave in front of a camera, are very different. If you make Tendulkar act, we know how lousy Tendulkar is when he is in front of a camera. But you make him play and you shoot him while he is at his natural best, he will come across as the world’s best batsman. That is true with some of our teachers too. Some of our best teachers, who are very good at connecting with students in the classroom — the moment they moved online, they just did not know where to start. So the training part also became very important for us.

In a classroom, I can give a one-hour lecture without any issues. But online, if I start lecturing one hour, people get bored very, very fast. We even saw some studies that say 10 minutes is the maximum time that you can hold the students’ attention when you are online. So how do we now give a one-hour lecture in smaller modules when you are online? Another big challenge I see is: On campus a lot of peer learning happens — you learn by interacting with your peers — and that is mostly missing in the online kind of a model...

I hope that we will also be able to move to more hybrid forms of teaching.

How to make up for peer learning and tutorial system

We are now training many of our faculty on the flip classroom approach, where you make available the lecture content. Some of it can be recorded by the faculty member himself or herself. Some of it may be already available because IITs have been very extensively participating in the NPTEL programme. NPTEL is thousands of courses and all of them are available. So we will also make use of some of the resource material, and students will get to hear the lecture whenever they want. But when you are live with the faculty member, that will be a more discussion kind of session...

But nothing can really beat the classroom and the real-time and the physical. If you ask me, the gurukul way of teaching, what our ancients used to do, is the best form of education, and we have compromised it because we needed to scale up our systems. Now we have reached a stage where the gurukul kind of education is gone, and the hostel kind of education has come in. From here to jump to online and say everything will become virtual is never going to be the same as what we started with...

Certain things can be done very well online, certain things cannot be done well online. IITs are mostly engineering-centric and almost every course has a laboratory component. Those laboratory things, we cannot do anymore... Now, if in December we can start the campuses, we may be okay. But if it further gets extended... that uncertainty is also there. Therefore, now we are no longer saying that we will postpone examinations. We are trying to make use of technology, make use of whatever is available for you... and start closing down the semester, start improving your effectiveness online, and start conducting examinations online... Don't postpone anything because we don't know when we are going to reconvene.

On conducting entrance exams

I think joining of the new batch can be delayed, if the examination gets postponed for some more time. We will be able to accommodate that in our calendars. But conducting these examinations is important... At some point, we need to figure out ways of getting back to a normal state by taking all the precautions we need to take. If you are following [social distancing](#) norms, if you are wearing a mask all the time... I don't think anybody should have a reason to complain.

But the challenge again comes down to infrastructure. All these examinations are held in various centres, which are managed by multiple companies. For example, JEE Advanced is conducted by TCS. When we follow social distancing norms, you need twice the number of centres as compared to normal times. We had a certain number of centres, let's say 80 centres, now you suddenly require 150-160 if you are maintaining social distancing norms. The question is, can TCS make available in these times, another 80 centres? What are these centres and what is their condition... If you are not able to hold JEE Advanced in one centre, the entire exam needs to be cancelled. In JEE Mains that is not an issue; they do it in multiple sessions.

So we have to expand the number of centres, we have to follow social distancing norms, but that costs money. In fact, we have been in negotiations with TCS. These are the challenges.

Audience Questions

On alternative plans if exams are not possible even in September

I would like to believe we will be able to conduct in September. If we are not able to do that... two batches simultaneously is an issue in terms of logistics. But we will have to see what other options we can consider. We can observe a semester kind of a break. If the next semester doesn't happen, we will be able to still absorb it. December would have been vacation time and May to June-July would have been vacation time. By consuming December and the summer next year, we would have brought things to a normal state at least by the end of 2021.

On the possibility of using artificial intelligence for exams invigilation

We are discussing some of these aspects right now. For example, there are start-up companies developing online evaluation methods. IIT Delhi would like to look into that. The other option is take-home examinations, and as an instructor, I always give students take-home examinations. I used to tell students that even if I am conducting an examination in the classroom, if you say I could not answer this question because I don't remember, I would give you full marks. We are not testing students on their memory, we are testing them on their cognitive ability, on their thinking.