How IIT-Hyderabad became one of India's Top 10 engineering colleges

The second-generation IITs are not only outperforming the older peers in terms of attracting marquee names, but also when it comes to rankings and salaries being offered



A vibrant research culture, top faculty, tie-ups with leading academic institutions around the Institute of Technology-Hyderabad (IIT-H) has stood high in the rankings this year. The IIT-H is among the top 10 engineering institutes in the National Institutional Ranking Framework of the Ministry of Human Resource Development, coming in at No. 9. In fact, IIT-H, one of nine second-generation IITs set up by the government a decade ago, was the only younger sibling that made it to the top 10. The institution also came in at 16th place, ahead of some of its peers, in the recent UK-based QS India specific rankings 2019. The first signs that IIT-H was making a name for itself emerged about five years ago when it became known for being popular with students and faculty, despite its newcomer status. "Our goal is to reach to the top league of IIT-Bombay, IIT-Delhi, IIT-Madras, and the Indian Institute of Science-Bengaluru. We are not there as yet,"

said IIT-H Director U B Desai. The sheer size of the campus alone speaks of ambition; it will eventually accommodate 20,000 students, double the size of IIT-Bombay, Madras, and Delhi. As with any institution of higher education, the quality faculty distinguishes IIT-H and explains its academic and research performance. It's not just that the faculty-student ratio is a healthy 1:13. It's also the policy of faculty hiring throughout the year, as and when the management spot the right talent, rather than a need-based policy driven by faculty shortage. According to Desai, the institute has been able to instil a strong sense of ownership and commitment among the faculty by extending them the academic freedom they need within the campus. "Some of us had offers from the older IITs, but we came here because we have a wider scope to contribute to the growth of a young IIT as compared to an established institute," said Ch. Subrahmanyam, dean of academic programmes. IIT-H currently has 2,600 students, almost a third of them in PhD programmes. The student numbers in the other second-generation IITs set up at the same time remains at around 1,500. "We may reach the full capacity strength of 20,000 over a period of 20 years. I expect that the current student strength would nearly double in the next five years," said Desai. Apart from an excellent campus and faculty, IIT-H has been doing well on other parameters: investing in research infrastructure, engaging in innovation in courses and curricula, acquiring an international dimension (it has collaborated with at least 50 overseas institutes), and the quality of its research. The institute has published 3,000 research papers with one transfer of technology and filed nearly 85 patents. Desai said the effort is on to raise the quality of future research publications and citations to the level of international recognition. The desire to excel in research is based on the realisation that research is the key differentiator among institutions of higher learning. This realisation has been backed by investments in research infrastructure and modern lab equipment. The campus has 110 laboratories, of which 50 are exclusively for research. The outcome of this focus on research is that IIT-H claims that its ongoing research into 5G technology has been the best in the country. Battery and solar power technologies are among the other important research areas undertaken by the respective departments. Electrical engineering and computer science are the two top areas of research, followed by chemistry, physics, and biomedical subjects. The total research funding being extended to all individual projects at the institute is to the tune of ~3.5 billion, according to Desai. Funding generated through industry collaboration is additional. New courses are constantly being devised and offered to keep the curriculum fresh and relevant. Besides offering 'fractal academics' (continuous evaluation) to students and providing a wide choice on topics outside their core area, the institute launched new machine learning and artificial intelligence courses before other IITs. It was also the first to launch an M.Tech programme in data science for working professionals.

Its record on campus placements and internships is also something that students look at closely when they choose where to apply. Last year, about 100 companies visited for campus hiring. In all, 426 students were registered for placements during 2017-18. The previous year's students

received 268 placement offers according to the data provided by the placements department. Last year, a computer science graduate from IIT-H was offered an annual package of ~15 million through campus hiring. A fat salary is not the be all and end all for Sumit Yempalle, who is doing a Master's in design. It is the 'intellectual buzz' at IIT-H that keeps him hooked. "What's amazing is the international exposure and the advanced research facilities. Lot of interesting things keeps happening on the campus all the time," he said.

IIT-H: CASE STUDY

- Ranked among top 10 engineering colleges in National Institutional Ranking Framework
- Ranked among top 20 Indian institutes in latest QS rankings
- Published 3,000 research papers, filed 85 patents
- 110 laboratories, of which 50 are exclusively for research
- 2,560 students; 850 are in PhD programmes
- Student-faculty ratio of 1:13, one of the best among IITs

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