VOICE OF EDITOR

This is the first checkpoint in your journey. You've made it. Your loved ones are right here cheering your accomplishments, there are many. That new, freshly-pressed, short white coat makes you look like an absolute student. It feels incredible. You are incredible. You have chosen a path of remarkable science and humbling servitude. Breathe the sigh of relief that you now have your feet in the front door.

These next five years will undoubtedly be — simultaneously — the most difficult and the most rewarding years of your life thus far. When the difficulty comes, remember you are here because you are worthy, because someone entrusted that one day you will be capable of taking care of the world that walks through your front door. You will internalize the Hippocratic Oath we all take — 'do no harm'. You will be caring, kind, empathetic to those who are going through the worst days of their lives, and you will do so by carrying burdens on your shoulder only a few in the world are permitted to carry. You will do so with knowledge, with grace, with humility. Am here to validate you — it is OK to feel all these things. It is OK to sometimes not be OK. Realize though, you are never alone. You have an incredible community behind you who have suffered the same grueling education who are ready with an extended hand to provide you the support you need. Medicine is a team sport, and we continue to progress by standing on the shoulders of the giants before us.

Please never hesitate to reach out.

"Study hard until you can say "I am a doctor" everything is gonna be alright." "Behind every fine doctor, there is always a nurse." "Study to save lives." "Only the healing art enables one to make a name for himself and at the same time give benefit to others."

You don't have to be brilliant to be a doctor. You have to be hard working and have good character. That's what makes good doctors." "The harder you'll work for something, the greater you will feel when you'll achieve it."

There are many career magazines in the market. We have tried to design this new career magazine a little differently. After passing class twelfth, students naturally get a little confused about what to study in the future. Keeping this in mind we have covered not only on Medicine and Engineering but also on some more vital and unknown subjects in this first issue. We hope this magazine will be acceptable and beneficial to all students.

DEBARGHYA BAKSHI
(Editor & Publisher Vidiyarthi Lakshya)

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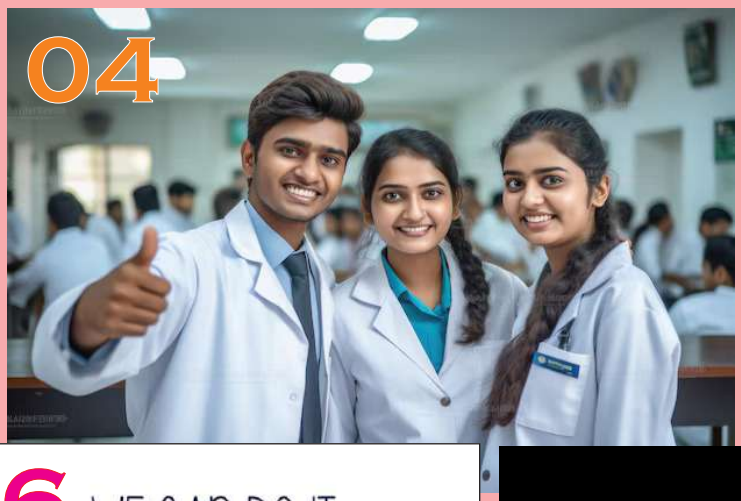

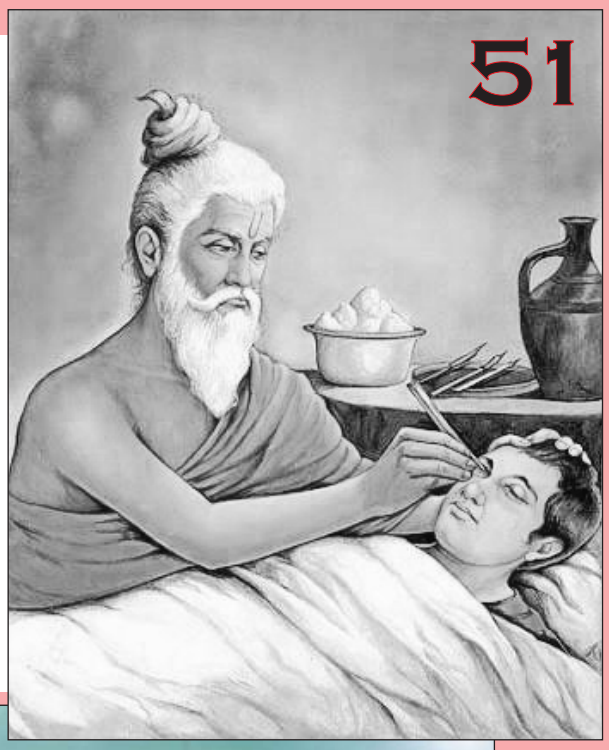

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Cover Story

Want to be a Doctor!

This article helps you a lot

A. Sharma

(B.Tech(NIT), MBA(IIM), Expert in Medical Career Data Analysis & Counseling)

Medical Scenario in INDIA

India has a rich, centuries-old heritage of medical and health sciences. The approach of the ancient Indian medical system was one of holistic treatment. The hisatory of healthcare in India can be traced to the Vedic times (5000 BCE), in which a description of the Dhanwanthari, the Hindu god of medicine, emerged.

Atharvaveda, one of the four Vedas, is considered to have developed into Ayurveda, a traditional Indian form of holistic medicine. The philosophy of Ayurveda, "Charaka Samhita" (the famous treatise on Medicine compiled by Charaka), and the surgical skill enunciated by Sushrutha, the father of Indian surgery, bear testimony to the ancient tradition of scientific healthcare amongst the Indian people. Historically, the most outstanding hospitals in India were those built by King Ashoka (273-232 BCE).

Some teacher started a footpath dispensary for doctors to treat slum kids, Kolkata

Though hospitals, dispensaries, public health centers and other medical facilities are present, they are not sufficient to cater to the growing needs of India's substantial population. Rural access to quality medical service has to be improved. The inadequate manpower of doctors in public sector hospitals is also a concern for health authorities. Furthermore, the infrastructure required in the hospitals, like medicine and equipment are not adequate to serve the population. Compounding the problem, government spending on healthcare services is not up to the World Health Organization (WHO) norms of gross domestic product in healthcare.

The healthcare system of India is always in the news for the wrong reasons. Most of our rural and poor population is denied good quality healthcare leaving them with the quacks. Despite being top in the area of pharmaceuticals, information technology, medical tourism, etc, India still lags when it comes to healthcare.

Along with the quality and availability of healthcare, India is facing a shortage in the number of doctors as well. India has a doctor-patient ratio of 1:1596. This means, for every 1000 people seeking medical treatment, there is less than one doctor (0.62). The situation is worse in rural areas. The chances of you going to a rural health facility without a doctor or a health professional is still very high in the country.

Noticable change in Indian medical senario

After 75 years of independence, the reflection of the progress that has been made in various fields is quite clear and effective in the field of medicine too. What will the space look like in 2047, when India completes 100 years of independence? The adoption of technology has massively transformed the healthcare space in India in the past few

decades Medical technology is the application of technology to the field of healthcare to improve the diagnosis, treatment, and prevention of diseases and medical conditions. It includes a wide range of devices, equipment, software, and services that are designed to enhance patient care and improve clinical outcomes.

Medical technology includes various types of medical devices such as imaging devices like magnetic resonance imaging (MRI), computed tomography (CT) scans, X-rays, ultrasound machines, and endoscopes; therapeutic devices such as pacemakers, artificial joints, and hearing aids; and diagnostic devices such as blood glucose meters, pregnancy tests, diagnostic imaging systems, advanced hemostats and wound care devices. This technology includes healthcare software and services that provide clinical decision support, electronic health records, telemedicine, and other applications that help healthcare professionals to deliver more efficient and effective care.

Smartwatches checking vitals to highlight a potential medical condition. Robots performing medical procedures over 5G networks. Patients consulting doctors over video calls on a mobile phone. A government app helping vaccinate more than 2 billion people during a global pandemic. Twenty-five years ago, such events were in the realm of fiction, at least in India. Today, these are very real, recent happenings.

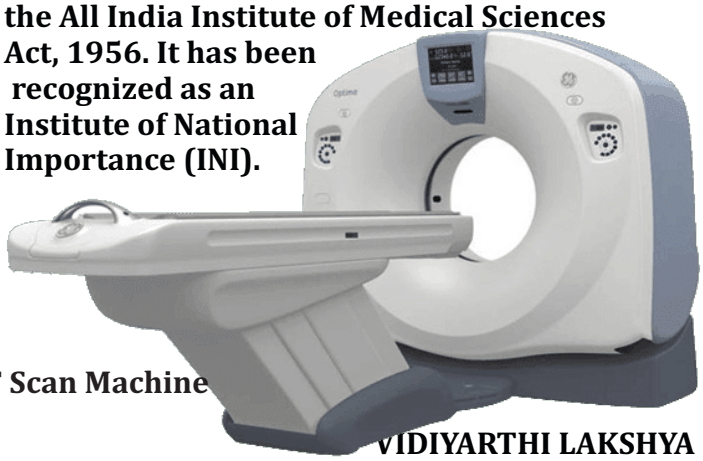
Top Indian Medical Institutes

During the British Era in the mid-19th century, some of the oldest medical colleges in India were established, a significant milestone in Indian medical education. Among these establishments, Madras Medical College, Chennai, founded in 1835, was the first of its kind. Following Madras Medical College, three more medical colleges were established in major cities of India - Medical College, Kolkata (1838), Stanley Medical College, Chennai (1838), and Grant Medical College, Mumbai (1845).

As the 20th century approached, several more medical colleges were established, such as King George Medical University in Lucknow (1911), Lady Hardinge Medical College in New Delhi (1916), and RG Kar Medical College in Kolkata (1916), among others. The establishment of these colleges represented a significant step forward in medical education in India.

Christian Medical College, the first ever private medical college, was established in 1942 in Vellore by a trust. At the time of India's Independence, there were merely 20 medical colleges in the country offering medical programs. Following India's independence, two prestigious medical colleges were established in Kolkata: the Calcutta National Medical College and the Nilratan Sircar Medical College, both in 1948. These institutions are widely regarded as among the best medical colleges in India to this day, offering comprehensive undergraduate and postgraduate programs.

The All India Institute of Medical Sciences (AIIMS) Delhi was established in 1956 under the All India Institute of Medical Sciences Act, 1956. It has been recognized as an Institute of National Importance (INI).



CT Scan Machine

AIIMS, Kalyani(WestBengal)

Currently, there are 20 AIIMS across the country, offering medical programs. In addition to AIIMS, other important medical institutes like Jawaharlal Institute of Postgraduate Medical Education & Research (JIPMER) Puducherry, Institute of Medical Sciences, BHU Varanasi, and Armed Forces Medical College (AFMC) Pune were also established in 1956, 1960, and 1962 respectively.

In the era following India's independence, the establishment of two additional private medical colleges, namely Kasturba Medical College in Manipal in 1953 and Kasturba Medical College in Mangalore in 1955, has been recognized as a significant milestone in the country's medical education. These institutions have since been regarded as among the best private medical colleges in India.

However, due to the great investment required and the stringent rules and regulations governing their establishment, only a few private entities were willing to take the risk of entering the medical education sector.

In the early 1980s, the Era of Private Medical Colleges in India started with the establishment of many private medical colleges

By the figures published in various reports by the year end of 2024, total no of colleges (Govt & Private both) offering MBBS programme are numbered below:

	Number Of Colleges	Total Number of Seats
Government Colleges	434	60760
Private Colleges	287	46265
Deemed Universities	55	10800
Total	776	117825

Top 10 states

S No	State	Number of Colleges	Total Number of Seats
1	Uttar Pradesh	84	12125
2	Maharashtra	80	11845
3	Tamil Nadu	77	12050
4	Karnataka	72	12545
5	Telangana	65	9065
6	Rajasthan	43	6505
7	Gujarat	41	7250
8	Andhra Pradesh	38	6785
9	West Bengal	37	5650
10	Kerala	34	4905

HOW TO BECOME A DOCTOR

The National Eligibility cum Entrance Test, NEET, is the sole gateway for Indian students aspiring to become doctors. Prior to 2016, there were various national and state-level exams, including AIPMT, AIIMS, MANIPAL, JIPMER, COMEDK, and pre-medical tests (PMT) conducted individually by states to gain admission into the MBBS program. However, with the introduction of NEET in 2016, along with separate entrance exams for AIIMS and JIPMER, the former exams were phased out. In 2020, NEET became the only entrance exam for medical aspirants seeking admission in AIIMS and JIPMER as well.

WHAT IS NEET

The National Eligibility-cum-Entrance Test (Undergraduate) or NEET-UG is an all India pre-medical entrance test designed for students who aspire to pursue undergraduate medical (MBBS), dental (BDS), and AYUSH (BAMS, BUMS, BHMS, etc.) courses in both government and private institutions in India. This entrance exam also serves as a gateway for those who wish to obtain primary medical education abroad.

The National Testing Agency (NTA) is responsible for conducting the NEET exam and provides results to the Directorate General of Health Services under the Ministry of Health and Family Welfare, as well as State Counselling Authorities. It should be noted that the responsibility of NTA is limited to inviting online applications, conducting the exam, and providing scores and All India Rank. NTA is not involved in the counselling or seat allotment process.

(National Eligibility-cum-Entrance Test (Postgraduate) or NEET-PG is conducted for admission into Post Graduate Programmes like MD/MS/MDS etc. But this article is limited to NEET-UG only.)

NEET-UG is a pen-and-paper based exam with a time duration of 3 hours and 20 minutes. It consists of a total of 200 questions that cover Physics, Chemistry, Biology (Botany & Zoology). A student must answer 180 Multiple Choice Questions (MCQs) in order to pass. Each correct answer carries 4 marks and each incorrect answer carries 1 negative marking.

The NEET question paper is available in 13 different languages, providing students with ample opportunity to choose the language they are most comfortable with.

NEET QUALIFYING CUT-OFF

Every year, lakhs of medical aspirants appear across the country for the NEET UG Exam. Only 50% of the aspirants qualify for the Exam and become eligible to participate in the admission counselling process.

The qualifying criteria have been set at 50

Category	2024	2023	2022	2021	2020	Qualifying Criteria
UR/EWS	720-162	720-137	715-117	720-138	720-147	50th Percentile
OBC/SC/ST	161-127	136-107	116-93	137-108	146-113	40th Percentile
UR / EWS & PH	161-144	136-121	116-105	137-122	146-129	45th Percentile
OBC/SC/ST PH	143-127	120-107	104-93	121-108	128-113	40th Percentile

Is obtaining qualifying marks enough to secure a seat in a medical college?

In the realm of medical admissions, the level of competition is intense, and it is noteworthy that over 24 lakh students applied for 2024, representing a 15% surge compared to the previous year's examination. Below is the trend analysis:

Year	Number of Applications
2016	8 Lakhs+
2017	11 Lakhs+
2018	13 Lakhs+
2019	15 Lakhs+
2020	16 Lakhs+
2021	16 Lakhs+
2022	19 Lakhs+
2023	21 Lakhs+
2024	24 Lakhs+

In recent years, there has been a significant increase in the number of applicants aspiring to become doctors in India. The figure now stands at almost 2.5 million. However, the availability of MBBS seats, including those in private colleges, is limited to only 1.08 Lakhs. This means that for every 25 students vying for admission through entrance exams, only one MBBS seat is available.

Marks vs AI Rank

In view of competitive examinations, the increasing number of applicants is not the only factor responsible for the rising competition. The level of preparation of the candidates also plays a vital role. In recent years, it is observed that students have attained a perfect score of 720 out of 720. Therefore, if you aim to top the exam, there is no margin for error. Even a minor mistake could result in a lower All India Ranking. Presently, obtaining 600 marks does not guarantee a seat in a government college. Allow me to illustrate this with an example. In 2018, a score of 500 marks would have fetched an All-India Rank of around 20K, which would have been deemed a decent rank to secure a seat in a government college. However, in the NEET-UG 2024, a score of 500 marks led to an All-India Rank of around 205K, which is not adequate to secure a seat even in a good private medical college. Please find below the mark's vs AIR comparison for past few years:

Year	AIR at 500 Marks
2018	20K
2019	48K
2020	75K
2021	80K
2022	85K
2023	105K
2024	205K

Increasing Fees / Expenditure / Budget

The fee structure is a critical factor when it comes to securing admission into a medical college. If we consider government medical colleges, the expenditures are nominal or on the lower side. The tuition fees may range from as low as Rs. 1,000 per year, such as in AIIMS, to Rs. 1 lakh per year, such as in ESIC colleges. In addition, the hostel and mess charges are also reasonable. Even students from financially disadvantaged backgrounds can afford to pursue a career in medicine. Private medical colleges in India can charge as high as a few crores for their courses. Although not all private colleges charge this much, it is still necessary to have a budget Rs 50 lakhs to 1 crore to secure a seat in one of these institutions. This may seem like a shocking number, but unfortunately, it is the reality. We will continue this discussion in later part of the article.

The fact is that tuition fees are increasing every year, and this trend is particularly evident in West Bengal. In the past four years alone, tuition fees have almost doubled. For instance, in 2019, the tuition fee was around Rs 12.68 Lakh per year, while in 2023, it has reached almost Rs. 22 Lakh per year in management quota. This means that if you choose to leave your seat this year and prepare for the next year in hopes of obtaining a better score, you may end up paying a higher amount for the same seat next year.(All seats of a private medical college is called as management quota seats, we will discuss about the seat type in details later in this article).

What happens after the NEET exam results are announced?

As we already know that, role of NTA is limited to conduct the NEET exam and provide AIR. Once the results are declared, the next crucial step for qualified candidates is to participate in the counselling process. Kindly keep this in your mind that there is NO DIRECT ADMISSION provision for any of the government or private medical college in India for MBBS, BDS or Ayush programmes. All the seats are allotted based on MERIT ONLY.

Types of Colleges

To gain a comprehensive understanding of the counselling process, it is necessary to first familiarize oneself with the various types of colleges.

There are four types of colleges in India:

- State Government Colleges
- Central Universities or Central Govt Colleges
- Private Colleges
- Deemed Universities

State Government Colleges are managed and funded by the state government. 85% of the seats are reserved for candidates domiciled in the state, while 15% are open to candidates from all over India. For example, Medical College,Kolkata and NRS Medical College, Kolkata, 85% of seats are reserved for West Bengal domiciled candidates and 15% seats are open to students from all over India.(The domicile criteria for each state can be found on their official website.) Please note that the remaining 15% of seats are available for admission to any student across the country based on their merit. (Including students from West Bengal).

All AIIMS, IMS BHU, JIPMERs are categorized as central universities. There is no state-wise reservation, which means that all seats are open for students from across India.

Private colleges are institutions that are privately owned and operated, and are affiliated with any state university. Deemed universities, on the other hand, share a similar structure to private colleges however, they are affiliated with their own university.

Types of Counselling

Counselling can be broadly divided into two levels – All India Level and State Level.

All India level counselling, also known as All India Quota-AIQ Counselling, is conducted by Medical Counselling Committee or MCC under Directorate General of health Services, Ministry of Health & Family Welfare. This counselling is conducted for 15% All India Seats of State Government Medical Colleges, 100% Seats of Central Universities or Central Govt Medical Colleges 100% Seats of Deemed Medical Colleges.

State level counselling is conducted by the state authorities of each state respectively. In West Bengal, counselling is conducted by West Bengal Medical Counselling Committee (WBMCC), formed by the Department of Health and Family Welfare, West Bengal. In Uttar Pradesh, it is conducted by Uttar Pradesh Directorate General of Medical Education (UPDGME), In Bihar it is conducted by Bihar Combined Entrance Competitive Examination Board (BCECE Board) and likewise, the committees of respective states. The state counselling is conducted for: 85% Seats of State Government Medical Colleges within that state, 100% Seats of Private Medical Colleges within that state.

Only candidates who have qualified NEET are eligible to register and participate in the desired counselling by paying the registration fee and counselling security deposit amount.

Counselling Process:

Counselling generally comprises of the following steps:

- Registration with personal & qualification details
- Payment of Registration Fee and Counselling Security Deposit (if applicable)
- Choice filling and locking (after publication of seat matrix and merit list)
- Declaration of Result
- Admission Process

Counselling is generally conducted in four rounds – Round-1, Round-2, Mopup Round and Stray Vacancy Round. If required, more rounds can also be conducted based on availability of seats. The first two rounds are conducted online, while the Mopup and Stray Vacancy Rounds can be either online or offline based on the state's policy.

Counsellingis typically carried out concurrently by all states. It is mandated by the National Medical Commission (NMC) that the Medical Counselling Committee (MCC) will conduct the AIQ Round-1 counselling before the states can initiate their Round-1 counselling. After Round-1, the MCC will conduct the AIQ Round-2 counselling, following which, the states may conduct their Round-2 counselling and so on.

It is important to bear in mind that the regulations and guidelines for state counselling may vary from state to state. Prior to the commencement of the counselling process, each state's governing body publishes a prospectus containing pertinent information. It is imperative that students review the prospectus thoroughly so as to avoid any errors that may lead to disqualification from participating in the counselling process. Additionally, it is to be noted that any error may result in barring the student from participating in the subsequent year's NEET-UG exam or the state counselling for a period of 2 to 3 years.

Also, many states charge a security deposit of Rs 1 Lakh to Rs 2 Lakh to participate in the counselling process, although this amount is entirely refundable based on a few criteria.

Types of Quota:

Medical Seats can be broadly categorised into 3 quotas-

- Government Seats and State Quota Seats
- Management Quota Seats and
- NRI Quota Seats

A seat in a Government Medical College is simply called as Government Seat. Many states offer a certain percentage of seats from Private Medical Colleges with a very low fee structure. These seats are referred to as State Quota Seats and made available for domiciled candidates only. The reservation policy (based on caste/category) of the state applies to such Seats. Generally, no reservation system is applicable to private medical colleges.

All seats of a Private Medical College are Management Quota Seats. In some states, 15% of the management quota seats are made available to NRI's (Non-Resident of India) or NRI-sponsored candidates.

For example, in West Bengal, 33% of the seats in private medical colleges are reserved as State Quota seats. The remaining 67% come under the management quota, out of which 15% are reserved for NRI-sponsored candidates.

Reservations

Both Central and State Government Colleges follow reservation system based on caste/categories of students.

The AIQ 15% seats have following reservation category-wise –

SC- 15%, ST- 7.5%, OBC (NCL) -27%, EWS-10% PwD- 5%.

Most state government medical colleges have a reservation system in place which is based on the state government policies of that particular state. In addition, many states have horizontal reservations for female candidates. Furthermore, some states offer reservations for children of freedom fighters, victims of terrorism, martyrs, national level sportsmen, and other categories.

Open & Closed States

Based on our current understanding, individuals seeking admission to government medical colleges are limited to two options: 85% of government seats in their respective states, or 15% of seats within the All-India quota of other states. However, what is the policy regarding private medical colleges? Are students able to pursue enrolment in private medical colleges across all state? The Answer is NO.

Not all states allow admission to students from other states to their own private medical colleges. Here comes the concept of OPEN and CLOSED states.

States that permit students from other states to participate in the counselling process for admission into private medical colleges are categorised as "OPEN" or "PARTIALLY OPEN" states, based on the percentage of seats available. Examples of such states include West Bengal, Uttar Pradesh, Bihar, Karnataka, Andhra Pradesh, and Telangana.

However, many states across India follow a policy of not allowing students from other states to participate in counselling even for their private medical colleges. Such states are called "CLOSED" states, where only students who are domiciled in that state are eligible to take admission into their private medical colleges. It's worth noting that this policy is strictly enforced. Some examples of these states include Odisha, Maharashtra, and Gujarat.

Which colleges can be expected at what score?

At the end of the discussion, the most important question is how much marks/ rank is sufficient to get admission in top most medical colleges of India. Our discussion is limited to UR (unreserved category) only. NEET UG 2024 results has been exceptional. No correlation can be established with previous years (NEET UG 2024 exam & results is a debatable topic, which we will be covering in our upcoming edition) Hence, our discussion is based on ranks/cutoffs trends of past 4 years (excluding NEET UG 2024 counselling).

- AIR 1 to 50 – NEET score should be 710+. Can expect AIIMS, Delhi
- AIR 51 to 100 - NEET score should be 705+. Can expect top colleges like Maulana Azad Medical College, New Delhi (MAMC)&Vardhman Mahavir Medical College & Safdarjung Hospital, Delhi (VMMC).
- AIR 101 to 200 - NEET score should be 700+. Can expect top colleges like Jawaharlal Institute of Postgraduate Medical Education & Research, Puducherry (JIPMER), Atal Bihari Vajpayee Institute of Medical Sciences and Dr. RML Hospital, New Delhi
- AIR 201 to 500 - NEET score should be 695+. Can expect top colleges

like University College of Medical Sciences & GTB Hospital New Delhi, Lady Hardinge Medical College New Delhi, AIIMS Bhubaneswar & AIIMS Jodhpur.

- AIR 501 to 1000 - NEET score should be 685+. Can expect top colleges like AIIMS Bhopal, AIIMS Rishikesh, GMC Chandigarh, Seth GS Medical College Mumbai, B J Medical College Ahmedabad, Madras Medical College Chennai, IMS BHU Varanasi, North Delhi Municipal Corporation Medical College Delhi, King George Medical University Lucknow (KGMU), SMS Jaipur etc.
- AIR 1001 to 5000 - NEET score should be 650+. Can expect to get a seat in any of the other AIIMS colleges or you can expect other good colleges like Bangalore Medical College, Grant Medical College Mumbai, GMC Kozhikode, Medical College Kolkata, RG Kar Medical College Kolkata, JIPMER Karaikal etc.

It would be beneficial for you to take part in the state counselling also in order to increase your chances of getting admission in top government colleges in your state. If you aspire to study at a government medical college, you should aim to score at least 600+ (610 to 620) in NEET exam and have an All-India Rank (AIR) of less than 22K/23k. However, in some states, the cut-off for government colleges can be lower due to availability of more government seats or lesser competition. For instance, in West Bengal, you can expect to get admission to a government college till a rank of 35K.

What if you did not get a Government Medical College

Not all aspiring medical students have the financial capability to pursue their studies in private medical colleges, as the fees tend to be comparatively high. However, some states offer state quota seats in private colleges with a moderate fee structure. For instance, in West Bengal, students who can afford the annual fee of Rs 5.5 lakh may consider obtaining a state quota seat in a private medical college. Nevertheless, the competition for such seats is also intense, and the cut-off is only marginally lower than that for government seats. In states such as Karnataka, Andhra Pradesh, and Telangana, where there are more private colleges compared to other states, a score of 550+ is sufficient to secure a state quota seat. The state quota fee for these three states is around Rs. 1.5 lakh, Rs. 60,000, and Rs. 15,000 per year, respectively.

If you cannot manage government seats or state quota seats, you can apply to top private medical colleges of your state or other open states. You need to understand that your BUDGET is INVERSELY PROPORTIONAL to your marks. The higher the marks, the lower your budget/ expenses will be.

West Bengal (12 Private Colleges) – Open State

- KPC Medical College, Jadavpur - 2008
- ICARE Haldia – 2011
- IQ City Medical College, Durgapur - 2013
- Gouri Devi Medical College (GIMSH), Durgapur – 2016
- Jagannath Gupta Medical College (JIMSH), Budge Budge - 2018
- Sri Ramakrishna Medical College (SRIMSH) – 2019
- Santiniketan Medical College, Bolpur – 2021
- JIS Medical College Santragachi - 2023
- JMN Medical College, Nadia - 2023
- Krishnanagar Medical College, Krishnanagar – 2024
- East West Medical College, Burdwan – 2024
- Jakir Hossain Medical College, Murshidabad – 2024

The Management Quota Fee structure of KPC is 72 Lakhs. Generally, a cut-off of 530+ marks is required for KPC management quota seats.
The fee structure for other medical colleges ranges from 86.5 Lakhs to 99 Lakhs for the entire course.

Karnataka (48 Private& Deemed Colleges) – Partially Open State

When considering higher education options, many students prefer the state of Karnataka due to its abundance of private colleges and comparatively affordable fees.

For other state candidates, Karnataka offers three types of seats - Management, NRI, and Other Quotas. The Management Quota seats in most of the colleges have a fee range of Rs 12 lakh per year, with a total cost of approximately Rs.60 lakhs, which includes tuition fees, hostel and mess charges, and other miscellaneous expenses. However, it is important to note that to be eligible for this fee structure, a minimum score of 520+ marks is required. Those who do not meet this score requirement have two options: the NRI quota or Other Quota, with fees that may escalate to Rs. 1.5 crore.
Below are the top medical colleges based out from Karnataka:

- Kasturba Medical College, Manipal – 1953 and Mangalore – 1955
- St. Johns Medical College Bangalore – 1963
- Kempegowda Medical College, Bangalore– 1980
- Vydehi Medical College, Bangalore – 2002
- Dr BR Ambedkar Medical College, Bangalore – 1980
- Father Muller Medical College, Mangalore - 1999

Kerala (20 Private Colleges) - Partially Open State

Kerala is often consideredas a cost-effective option for pursuing MBBBS. Opting for an MBBS course in a private medical college in Kerala would incur an annual fee of around Rs. 7-9 Lakhs. This fee structure is relatively less expensive in comparison to other states across the nation. Moreover, the overall expenditure, including lodging and fooding, is estimated to be around INR 45-50 Lakhs. It is important to note that to secure a private management seat in Kerala, candidates should aim to score at least 540+ in NEET.

Uttar Pradesh (35 Private& 1 Deemed College) – Open State

Uttar Pradesh is a well-regarded destination for those seeking to pursue MBBS programme. Potential candidates may be able to secure a private management seat with a comparatively lower score. However, it is important to note that the total cost of the course, including hostel and mess charges, may amount to as much as 70 Lakhs. It is strongly recommended to exercise discretion when selecting a college, as certain institutions may have undisclosed fees that can significantly increase the overall cost of the programme.
Some of the top private college in Uttar Pradesh are:

- Sharda University, Greater Noida – 2009
- Shri Ram Murti Smarak, Bareilly (SRMS) – 2005
- Hind Institute of Medical Sciences,Barabanki – 2009
- Hind Institute of Medical Sciences,, Sitapur - 2015
- Subharti Medical College, Meerut – 1996
- Heritage Institute of Medical Sciences,Varanasi – 2015

Other states that you can choose from:

State	Tuition fee /Year	Total Package
Andhra Pradesh	13.2 Lakh	65-70 Lakh
Telangana State	12 Lakh	60-65 Lakh
Tamil Nadu	13.5 Lakh	70-75 Lakh
Bihar	10 to 12 Lakh	70-75 Lakh
Jharkhand	10.25 Lakh	60-65 Lakh
Chhattisgarh	7 Lakh	55-60 Lakh
Haryana	12 Lakh	65-70 Lakh
Rajasthan	22-28 Lakh	1Cr+

If budget is not a constraint, you can opt for deemed colleges with tuition fees ranging from 18 to 25 Lakh per year.

Service Bonds / Discontinuation Bonds / Bank Guarantee

The government is making significant efforts to establish medical colleges across the country, investing substantial resources and funding into the initiative. As part of this effort, individuals who are granted a government seat for their MBBS, postgraduate, or super specialty degree are required to serve a mandatory term in government healthcare institutions located in rural areas.

This obligation, known as a service bond, is a crucial step towards strengthening healthcare infrastructure in rural parts of the country. It is worth noting that although the service bond is not compulsory in all states, it is a vital measure that will undoubtedly benefit the healthcare system in the long run.

Private medical colleges do not have a service bond. However, they might require you to sign a Discontinuation Bond or provide a Bank Guarantee (at their discretion) for the remaining tuition fees of the course.

If you decide to leave the course before completion and fail to pay the full tuition fee, the college may encash the Bank Guarantee to recover their fees.

MOTIVATION FOR NEET ASPIRANTS

Keep trying, hold on and always, always, always believe in yourself

Sucharita Sen Chowdhury

Failure is a part of any journey, but it's how you respond to it that matters. Many NEET toppers have faced setbacks along the way. Instead of succumbing to disappointment, they used failures as stepping stones to success. Learn from your mistakes, adapt your strategies, and remember that setbacks are opportunities for growth.

It is common to feel stressed while preparing for NEET. However, it is important to understand that this stress can negatively impact your preparation and performance in the final exam. As NEET aspirants, your primary focus should be on managing this stress and staying motivated. To avoid any confusion, create a schedule that includes all your daily activities and the chapters that need to be covered to complete the NEET syllabus. It is essential to stick to the schedule and not deviate from it. This self-discipline, which is completely under your control, will not only keep you on track but also boost your confidence. With well-organized preparation for NEET, you will achieve good scores in the mock exams, which will keep you motivated. Whenever you take a practice test, set a goal for the number of marks you want to achieve. Set modest goals that are achievable instead of big ones. As you prepare for the NEET, your scores will improve in each test.

For effective NEET preparation, a keen interest in the subjects of physics, chemistry, and biology is crucial. While learning and acquiring knowledge in new concepts and solving problems, it is advisable to avoid any distractions when studying. Additionally, maintaining a regular study schedule and dedicating specific time slots for studying is vital. Understanding the concepts thoroughly will boost your motivation and increase your chances of acing the NEET exam with flying colors. So, stay focused, dedicated, and confident, and success will follow.

<u>Some tips for you</u>

- **Follow a time table. Make notes and Set your priorities for long hours of study with short breaks.**

- **Eat and sleep healthy.**
- **It is difficult to get 600+ on the NEET; one must develop a rigid approach tailored to their needs. This will not only guarantee that each subject receives an equal amount of time but meeting daily targets is also known to increase confidence. But hard work makes everything possible.**
- **Engage yourself with Physical Activities.**
- **Be in touch with your friends.**
- **When you spend so much time doing one activity, the other activities that are part of their routine are often overlooked. Many give up their hobbies, stop going out or reduce the number of sleeping hours to study a little longer. They give up everything to prepare for NEET. Sooner or later, the graph dips and the motivation fades.**

The most important thing to remember here is that NEET 2024 preparation needs to be planned properly. You must be honest with yourself about the preparation. Divide the topics in NEET syllabus into three sections, the ones that need to be covered, topics that you are not confident about, and last, those that you are confident about. Based on this, plan your preparation. One major reason for demotivation during NEET preparation is the inability to complete the syllabus within the allotted time. This can lead to a sense of overwhelm and a decrease in confidence. To avoid this, it is important to create a timetable that takes into account all of your daily activities and the chapters that need to be covered in order to complete the NEET 2024 syllabus. It's crucial to stick to the timetable and not deviate from it. If you maintain a disciplined approach to preparing for NEET 2024, you will perform better in mock tests and stay motivated. In order to maintain good health and remain active, it is important to give your body the rest it needs to rejuvenate. Studying can be mentally exhausting and it is natural to feel drained after hours of reading or problem-solving. To prepare for the next day, it is recommended that you get at least six hours of sleep. This will help ensure that you begin your day with a healthy body and mind, where core strength lies in the fitness. Many students have a habit of stress eating. They tend to eat more when they are worried which causes them to feel lazy and inactive. This slows down their system and hampers preparation causing them to worry even more. To avoid this, you must develop healthy eating habits and eat nutritious food. You must be involved in any form of sports or exercise in your daily routine. Exercise is not only good for your physical health but your mental health as well. The impact of exercise on mental health is proven scientifically. After exercising, the body releases a hormone known as endorphins. These are neuro-receptors that give you a feeling of positivity and well-being. Spending at least 30 minutes a day playing your favourite sport will help you stay focused and prepare for NEET 2024 in a better manner. Friends and family are the biggest motivators. Staying in touch with those close to you will help you stay happy and cheerful. They can also boost your morale on the days that you feel low. Discussing NEET 2024 preparation with your parents or siblings may also help you work out the areas that need more effort. Hobbies are an important part of who you are as a person. They make you happy and relieve stress. Letting go of these will only lead to irritation and demotivation. Not being able to do what you like doing for a very long time will not help with the preparation. It is therefore important to find time for your hobbies. Spend at least an hour a week doing things that interest you such as reading books and listening to music. Remember, success is not just about reaching your destination, but also about the personal growth, resilience, and willpower you develop along the way. By staying constructive in your approach, you can make your NEET preparation journey a positive and rewarding experience.

OCCUPATIONAL THERAPY

As a Profession

Dr. Manish Samnani

The ever changing dynamics of career are also changing the prospects of many streams that are not traditional, yet equally fulfilling and prosperous.

One such promising area in the medical arena is Occupational Therapy (OT). Occupational Therapy (OT) is a health care profession which focuses on restoring human functions and human participation.

The history of OT:

Historically started for dealing people with mental illness in the 1800 to 1900, gradually expanding the practice domain to physical, neurological, and childhood disorders. Occupational Therapy was established in India in 1948, and Asia's first OT training program started in India in 1950 at King Edward Memorial Hospital, Mumbai. It was by Mrs. Kamala V Nimbkar (Elizabeth Lundy), an American lady who adopted India as her country. The first Baccalaureate Degree was introduced in 1962 (Nagpur), The Master program in Occupational Therapy started in Mumbai University in 1978.The Doctoral program started in 2008. Currently there are 40 institutions across India offering courses in Occupational Therapy.

The academic journey of Occupational Therapy

The minimum entry requirement for OT course is 10+2 pass (minimum pass percentage decided by individual institutes) with biology as a compulsory subject. Some institutes may have an entrance exam (NEET) for admission. The Bachelors of Occupational Therapy degree is 4½ years of academics which includes6 months of compulsory rotatory internship.

Some institute may have 'semester system' and some follow 'annual system'. The Masters of Occupational Therapy degree is for 2 to 3 years and admission is through entrance exam or merit. The electives include Hand & Musculoskeletal, Neuro Rehabilitation, Developmental Disability, Community Rehabilitation, Mental Health, Oncology, and Cardiopulmonary. Doctor of Philosophy (PhD) in Occupational Therapy is for 3 to 6 years and is available in many Universities.
The curriculum covers medical subjects like anatomy, physiology, biochemistry, pathology, microbiology, pharmacology; medical clinical subjects like general surgery, medicine, psychiatry, orthopaedic, paediatrics, neurology, etc. It also includes subjects from the field of applied sciences like ergonomics, biomechanics, kinesiology, work physiology, and psychology.

The specific Occupational Therapy subjects include musculoskeletal conditions, paediatrics, neurology, mental health and community medicine. Occupational Therapy as a field has application from paediatrics to adults and also for geriatrics. Occupational therapists can work in neurology rehabilitation centre; orthopaedic rehabilitation centre; mental health set ups; child development centers; private practice; industrial rehabilitation setups; de-addiction centres; general hospitals; regular, inclusive and special schools; community health centres; sports clinic; old age homes and cardiopulmonary setup.

As per global data by World Federation of Occupational Therapists, the following are the percentage of OT's working in different sectors: 27% in hospitals, 20% in schools, 19% in long term care, 11% in outpatient clinics, 7% in home health, 6% in academia, 5% in early intervention, 2% in mental health settings, 2% in community work sectors, and 1% in other sectors. The skills required for Occupational Therapy include effective communication, rapport building, handling, creative and innovative thinking, assistive technology, designing and fabrication, and combining arts and science of occupation. The roles of Occupational Therapy include but are not limited to the following posts: clinician, researcher, academician, counsellor, occupational related health risk assessor and advisor, expert in medical board for functional and disability assessment, program director, and rehabilitation director.
The following are some unique highlights of the field of Occupational Therapy. It offers one of the longest contact time, with the patients amongst all the health care professionals. It gives you freedom to exercise your creativity and imagination to bring about a difference into the lives of affected individuals. It offers a unique combination between physical health and mental health. It offers a unique combination between health sciences and engineering sciences.

Manish Samnani
Doctoral scholar, OT Masters in Occupational Therapy (Pediatrics)
Director, SOCH, Gurgaon, India
President, Haryana Chapter of Occupational Therapy)

Merchant Navy course

An adventurous choice for Students

Kakoli Thakur

Would you like to chase a career full of adventures and challenges? A career at sea will give you everything you need if adventure and money is what you desire from a profession.

Life in the Merchant Navy can be challenging but rewarding also. It involves spending considerable time at sea, working in shifts, and being away from home for extended periods. However, it offers opportunities to travel, experience different cultures, and develop valuable skills in a dynamic and international environment.

BE Marine Engineering is the most preferred course by candidates aspiring to Join the Merchant Navy. BSC in Maritime Science, BS in Marine Science, MSc in Oceanography and diploma in nautical science are some of the top courses.

JEE Main, JEE Advanced and AIMNET are some of the top exams for the Merchant Navy.

First you'll have to make the journey and get placed in a good shipping company by applying for some top merchant navy colleges and getting selected in one of them. Various private and government universities offer these courses, catering to students from science, commerce, management, arts, and other backgrounds. Like other courses, merchant navy courses also have specific requirements that students must fulfill.

Eligibility to Join Merchant Navy after 12th

- **They must clear class 12 with a minimum of 60% in PCM stream from a recognized board.**
- **The age of the candidates must between 17 to 25 years of age.**
- **Medical standards set by the respective bodies must be met by the candidates.**
- **Appear in entrance exams like JEE, HMT-OET, AIMNET, IMU-CET and TMI- BITS EE for admission into bachelor's courses.**

Candidates can also opt for master's courses for better career growth. There is also an option for lateral entry. Candidates in the first year of a degree or with a diploma are eligible for lateral entries. Candidates are also eligible for sponsored entry in the Merchant Navy courses.

There are also some physical requirements for joining the Merchant Navy includes good eyesight, overall fitness, and meeting specific medical standards the respective maritime authorities set. Some of the merchant navy courses offered:

- **BE Marine Engineering**
- **BSc in Nautical Science**
- **BTech Marine Engineering**
- **BTech in Ship Building**
- **BTech in Naval Architecture and Offshore Engineering**
- **B.E. Petroleum Engineering**
- **B.E. in Harbour & Ocean Engineering**
- **B.Sc. Marine Catering**
- **Diploma in Nautical Science**
- **Certificate Course Maritime Catering**

These courses provide comprehensive knowledge and training for a career in the merchant navy, equipping students with the necessary skills to excel in the maritime industry.

Benefits of Joining Merchant Navy after 12th

Like every other profession, merchant navy also comes with its own set of perks and benefits that are listed for your reference-

- **The job security is relatively higher in the industry.**
- **Merchant Navy Officers get to travel and experience different cultures as a part of their job.**
- **They are granted leave before every relocation.**
-

<u>Job Opportunities in Merchant Navy After 12th</u>

The Merchant Navy offers a wide range of job roles that cater to diverse interests and skill sets, ensuring the smooth operation of ships and the safety of crew members. Whether you aspire to be a deck officer, an engineering officer, a rating, an electrical officer, or part of the catering staff, each role plays a vital part in the maritime industry.

Here's an overview of key job roles you can pursue in the Merchant Navy:

- **Deck Officers: Deck officers, including Captains, Chief Officers, Second Officers, and Third Officers, are responsible for navigation, safety, and cargo operations. They oversee overall ship operations, navigation, and compliance with maritime regulations.**
- **Engineering Officers: Engineering officers, such as Chief Engineers, Second Engineers, and Third Engineers, maintain and operate the ship's machinery and systems. They ensure the smooth functioning of engines, electrical systems, and equipment.**
- **Ratings: Ratings, including Able Seamen (AB), Ordinary Seamen (OS), Oilers, and Fitters, perform various tasks on board. They assist with cargo handling, deck maintenance, engine room operations, and other assigned duties.**
- **Electrical Officers: With the increasing complexity of shipboard electrical systems, Electrical Officers play a crucial role in maintaining and repairing electrical equipment, communication systems, and navigational aids.**
- **Catering Staff: Catering staff, including Chief Cooks and Messmen, ensure the well-being and satisfaction of the crew by preparing meals and maintaining the galley.**

To pursue these job roles in the Merchant Navy, aspiring candidates must fulfill specific requirements. This typically includes completing relevant educational qualifications, obtaining certifications aligned with international standards, and passing medical examinations . Maritime training institutes, shipping companies, and government agencies are primary sources for recruitment and guidance on how to join the Merchant Navy.

A career in the Merchant Navy offers not only exciting job opportunities but also competitive salaries, comprehensive training, and the opportunity to travel the world. The industry values teamwork, discipline, and continuous learning, providing a rewarding and fulfilling maritime career for those passionate about the sea.

Embrace a career in the Merchant Navy and experience the thrill of a dynamic and diverse industry. Sail across the globe, hone your skills, and embrace new horizons as you embark on incredible voyages. Discover the vast possibilities that await you in the maritime world.

<u>List of some Colleges in West Bengal</u>

- **Mercantile Marine Academy, Kolkata.**
- **Metri college, Kolkata.**
- **Hoon Maritime Institute, Kolkata.**
- **Trident College of Marine Technology, Kolkata.**

The naval maritime academy is also a good option for students. The maritime training institute offers many courses like the merchant navy course in Delhi.

If you are looking for one of the good marine engineering colleges in India, or the best marine training academy, then you are at the right place.

There are many Institutes of maritime studies in India like the Naval maritime academy and best college for merchant navy, but enrolling in the right one is all what matters.

As the national capital, there are many Merchant Navy colleges in Delhi and merchant navy institute in Delhi that offer merchant navy course in Delhi. Delhi Merchant Navy Academy, being the most prominent & best maritime training academy, it has the mission to organize suitable resources for the shipping industry.

Career

Demanding Paramedical field

B.Sc Anaesthesiology & Operation Theatre Technology

courses can make dream come true

Dr. Subhas Roy

Bachelor of Science (B.Sc) in Anaesthesia and Operation Theatre Technology is an undergraduate degree program designed to prepare students for careers in the field of medical care, specifically focusing on the perioperative care of patients.

This 4-year B.Sc Anaesthesiology & Operation Theatre Technology is an allied health professional course. It aims to train students with clinical exposure in operation theatre management, disinfection, sterilization, responsibilities in anesthesia, and maintaining all the instruments used in the operation theatre before and after procedures.

The program's focus on advanced training in the latest technologies in anesthesia specialty

is intended to ensure that graduates are up-to-date with the latest advances in the field.

After completing the course, a technologist may assist the specialized clinicians/experts at hospitals. The main objective of this program is to equip graduates with the knowledge, skills, and values essential for a confident medical career in the 21st century.

A wider scope of Operation Theatre Technology is quite prominent in transplant teams, orthopedic clinics, gynecology sections, cancer units, surgery, special care baby units. They are also hired for research, education and training. Some of the professionals are privately hired by doctors, surgeons, physicians or dentists who perform surgery of the patients.

Eligibility Criteria:
Some of the top colleges in India conduct their own entrance examination . They can either conduct their own entrance exam or a combined entrance exam such as NEET, AIIMS, AICET, KCET and many more.

After clearing the entrance exam, candidates will be called for counseling for the further allotment of college and seats.
Candidates must have completed 10+2 or equivalent examinations from a recognized board with Physics, Chemistry, and Biology as core subjects. And also require a minimum aggregate score of 50% in these subjects.

Age Limit:
Candidates must be at least 17 years of age at the time of admission.

SCHEME OF EXAMINATION:
There shall be four examinations during the course, each at the end of the first, second, third and fourth year.

BSc Operation Theatre Technology Entrance Examinations:
Bsc Operation Theatre Technology admission mainly depends on eligibility requirements such as educational qualification, entrance exam score, etc.

Candidate should have passed 10+2 with Physics, Chemistry, Biology, and English as mandatory subjects with a minimum of 50% marks (45% for the reserved category).
The candidate also needs to qualify for national entrance exams such as NEET, BVB CET, AIIMEE, CUET-UG, etc.
Colleges like CMC Vellore may require to have a minimum percentage of 60% marks.

Age Limit:
The minimum age to apply for the course is same like B.Sc Anaesthesiology- 17 years.

Career Prospectives

Anesthesia Technologist: An Anaesthesia technologist assists the anaesthesiologist during surgeries, procedures and performs Anaesthesia-related procedures under the supervision of a licensed anaesthesiologist.

Operation Theatre Technologist: An operation theater technologist sets up the operation theater before surgery, sterilizes instruments, and assists surgeons during procedures.

Surgical Assistant: A surgical assistant is responsible for providing assistance to surgeons during surgical procedures. They can work in various medical settings, including hospitals, outpatient surgical centers, and private clinics.

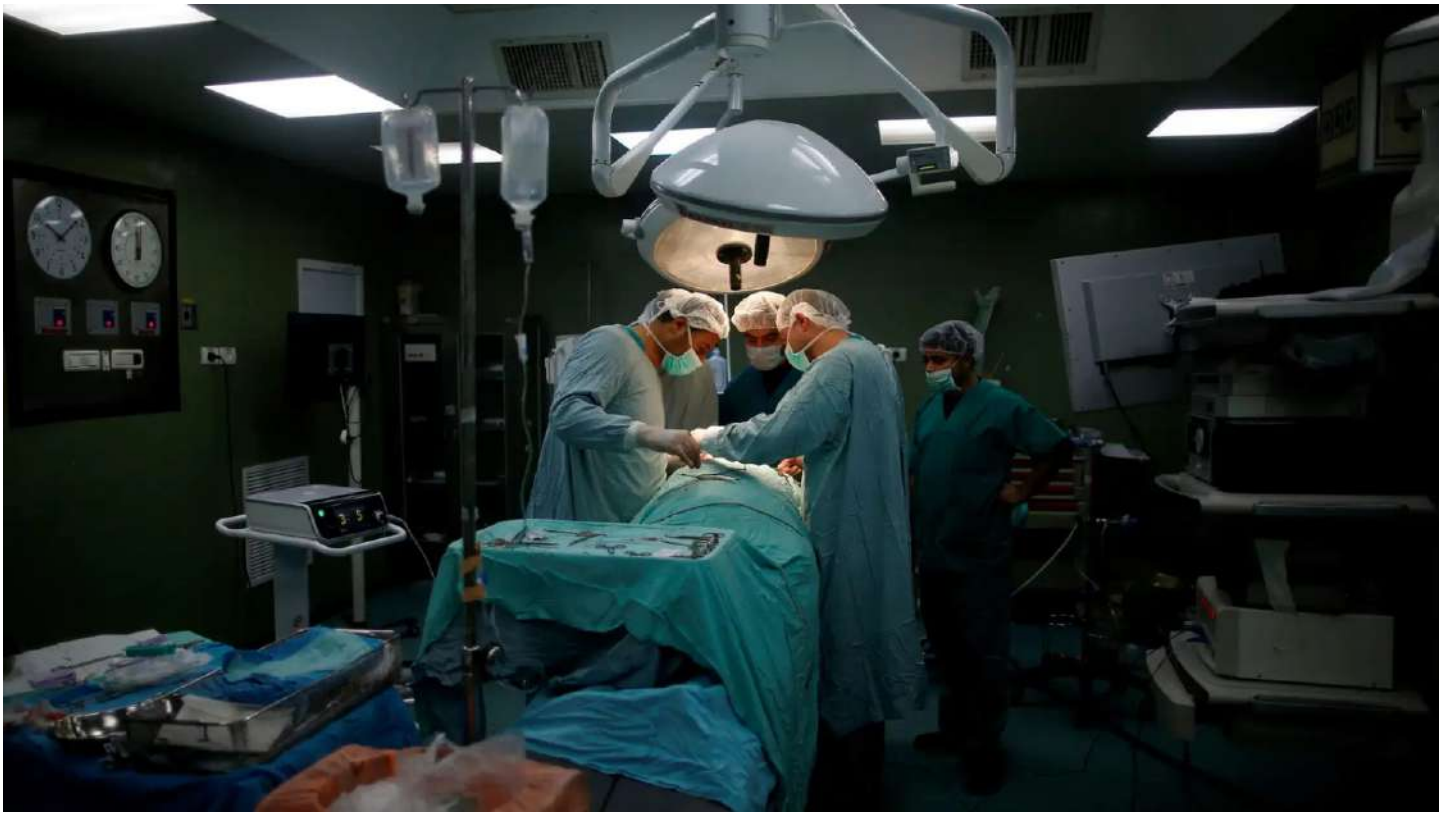
Some of the areas where the operation theatre technology students are required are:

General Surgery
Gynaecology Surgery
Neurosurgery
Plastic Surgery
Nephrology Surgery
Ophthalmic Surgery
Heart Surgery
Gastro-intestinal Surgery
Cosmetic Surgery
Dental Surgery and many more.
*Apart from this list there are many more categories also.

Surgical Lab Technician:

The operation theatre also houses surgical labs and the main role of this lab technician is to maintain the cultures and tissues of the patients that undergo culture. They are responsible to preserve the cells and lab specimens of the patients. They also maintain the donated organs from the donors until it is implanted to the recipient patients. The time span is very less between the donor and recipient. So it is very important to preserve the donated organs in the proper storage mechanisms.

Healthcare Educator: Healthcare educators work in hospitals and other medical facilities to educate healthcare professionals on the latest medical technologies, best practices, and procedures.



Medical Device Sales: Graduates can also work for medical device companies, selling surgical equipment and supplies to healthcare facilities.

Research Assistant: Graduates can work as research assistants in academic institutions or research labs, assisting with data collection and analysis related to Anaesthesia and operation

theater technology.

Hospital Administration: Graduates can work in hospital administration, managing and overseeing various departments, including Anaesthesia and operation theater.

Overall, a B.Sc. in Anaesthesia and Operation Theatre Technology provides a wide range of career opportunities in the healthcare industry. Graduates can choose to work in clinical or administrative roles and can pursue further education to specialize in a particular area. B.Sc. in Operation Theatre and Anaesthesia Technology, is among the best paramedical courses in India. A career in Operation Theatre & Anaesthesia Technology is meeting the demand of the growing needs of experts in the fields of operation theatre management, medical ethics, anaesthesia technology and post-operation care.

College List:

- **WESTBENGAL**

1. Nil Ratan Sircar Medical College and Hospital,Kolkata.
2. Institute of Post-Graduate Medical Education and Research and Seth Sukhlal Karnani Memorial Hospital(IPGME&R and SSKM Hospital), Kolkata.
3. KPC Medical College and Hospital, Jadavpur, Kolkata.
4. R G Kar Medical College and Hospital.
5. North Bengal Medical College and Hospital.
6. Midnapore Medical College and Hospital.
7. Medical College Kolkata.

Odisha

1. Centurion University of Technology and Management, Bhubaneswar Campus.
2. Sri Venkateswara Medical College.
3. All India Institute of Medical Sciences, Bhubaneswar.
4. Institute of Medical Sciences and SUM Hospital - Siksha 'O' Anusandhan University.
5. Koustuv Research Institute of Medical Science, AIPH University.

Bihar

1. Gopal Narayan Singh University.
2. Patna Institute of Nursing and Paramedical Science.
3. Himalaya Institute of Higher Education.
4. Dhanarua School of Nursing.
5. Shri Sai College of Nursing and Paramedical Science.
6. RIMS College of Nursing.
7. Ramchandra Chandravansi University.

Something beyond
conventional subjects in science

Debraj Sinha

After 12th If you want to get into a prestigious college, there is an eligibility criteria where your board marks matter. Hence, 12th board marks are really crucial. Science stream is considered to be a tough stream and thus, students should be prepared to work hard if they want to do well in it.

Science students have a broad range of career options to choose from. They can pursue courses such as engineering, medicine, research, and pure sciences, among others. Science students are in high demand, and they are offered some of the most high-paying jobs. Students have the option to pursue a range of unique and diverse courses that cater to a variety of interests and career paths. These courses offer opportunities to study subjects in various fields. The important thing is to choose a course that aligns with your interests and career aspirations, and then work hard to achieve success. In this content we'll take a look at some of the most unique courses that students can pursue after 12th science.

In a recent study conducted by Education Ministry, Science, and Humanities streams have emerged as the most preferred streams among the students in the country, whereas the Commerce stream has noticed stagnation with only 14% of students opting for it in the past decade.

On the other hand Science stream is one of the most popular streams for girls and offers a wide range of career options, including medicine, engineering, and technology. If a girl has a passion for math and science, this stream can provide her with a strong foundation for a successful career in these fields.

One major point both boys and girls should keep in their mind that now a days big data is the future, and jobs like Big data Engineers, Data scientists and ML engineers rank amongst the top emerging jobs in India.

Film and media studies courses examine the impact of film and other media on society and culture. These courses cover topics such as film history, media theory, and film production. Graduates can find employment in the film and media industry, or in related fields such as advertising or public relations.

List of Some Courses after 12th Science

- **Agricultural Science**
- **Designing Courses**
- **Environmental Science**
- **Actuarial Science**
- **Food Technology**
- **Renewable Energy**
- **Film and Media Studies**
- **Heritage Management**
- **Artificial Intelligence and Machine Learning**
- **Data Science**
- **Cyber Security**
- **Biomedical Engineering**
- **Aerospace Engineering, etc**

We discussed here few subjects from this list.

1. Agricultural Science

Agricultural science courses delve into the study of agriculture, horticulture, and forestry. These courses provide students with a comprehensive understanding of farming techniques, crop management, and soil science, among others. Agricultural scientists can work in a variety of settings, including government institutions, private research organizations, and farming companies.

Some courses in Agriculture are as follows:

B.Sc Agriculture (Hons), B.Sc Agricultural Science, B.Sc Agronomy and Soils, B.Sc Precision Agriculture.

Eligibility: Students must have completed 12th science with biology, chemistry, and physics as their core subjects.

Colleges in W.B.

- **BCKV, Mohanpur. Mohanpur, West Bengal.**
- **JIS University, Kolkata.**

- **BNG Hotel Management, Kolkata.**
- **GKCIET Malda, Malda.**
- **Seacom University, Birbhum.**
- **Mahishadal Girl's College, Medinipur, West Bengal.**

2. Environmental Science

Environmental science courses are ideal for students who have a passion for preserving and protecting the environment. These courses cover topics such as ecology, climate change, and environmental management.

Environmental scientists can work for environmental organizations, government agencies, or non-profits.

Environmental Science Courses

- BSc in Environmental Science & Wildlife Management.
- BSc in Environmental Science and Water Management.
- BSc in Environmental Science.
- BSc (Hons) Environmental Science.

Eligibility: BSc Environmental Science eligibility is 10+2 (Science stream) with minimum 50% marks from a recognized board. The required subjects may vary, but typically include Physics, Chemistry, Biology and/or Mathematics.

Colleges in W.B.

- Asutosh College, Kolkata.
- The University of Burdwan, Bardhaman.
- Maulana Abul Kalam Azad University of Technology, West Bengal.
- Seacom Skills University, Bolpur, West Bengal.
- Berhampore Girls College, Murshidabad, West Bengal.
- Chandernagore Goverment College. Chandannagar, West Bengal.
- Amity University, Kolkata.

3. Actuarial Science

Actuarial science is a specialized field that applies mathematical and statistical methods to evaluate financial risks. Actuaries use their expertise to assess and manage financial risks in various industries, including insurance, pensions, and investments. The expanding Indian economy and rapid entrepreneurship have increased the requirement of skilled actuaries who can predict trends. Developed countries have a very high demand for actuarial professionals. In order to be the best in the international market, actuaries can also take internationally certified courses.

Eligibility: Must have appeared in 10+2 examinations by Commerce / Math stream. English must be one of the subjects of the first language. There is no age limit for candidates taking this exam. A minimum aggregate of 60 per cent in 10+2 and minimum 70 per cent aggregate in Maths is compulsory.

Colleges in W.B.

- BSE Institute Limited Kolkata.

Colleges in Other States

- Kerala University, Thiruvananthapuram.
- Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon.
- Mumbai University, Mumbai.
- SSJ Campus, Almora.
- Himalayan University, Itanagar.

4. Food Technology

Food technology courses deal with the science behind food production, preservation, and safety. These courses provide students with a thorough understanding of food chemistry, food microbiology and food engineering. Graduates can work in the food industry, food testing labs, or even start their own food business.

Eligibility: Students must have completed 12th science with biology, chemistry, and physics as their core subjects.

Colleges in W.B.

- HMCEK-Hemnalini Memorial College of Engineering, Kalyani.
- Maulana Abul Kalam Azad University of Technology.
- Jadavpur University, Kolkata. IIT Kharagpur.

5. Artificial Intelligence and Machine Learning

This course focuses on teaching students about the basics of AI and machine learning and how to use these technologies to solve real-world problems.

Professional advancement, skill acquisition or even a new career path, these Artificial Intelligence courses can be a valuable resource. Take the next step in your professional journey and enroll in a Artificial Intelligence course today.

Eligibility: Students must have passed their Class 12 examination with Physics, Chemistry and Mathematics as compulsory subjects from a recognized education board.

Colleges in W.B.

- Maulana Abul Kalam Azad University of Technology, Kolkata.
- NSHM School of Engineering & Technology, Kolkata.
- Brainware University, Kolkata.
- Jadavpur University, Kolkata.

6. Biomedical Engineering

This course combines biology and engineering to design and develop medical devices and technologies used in healthcare.

Some of the popular courses in this field :

- BTech Biomedical Engineering.
- BE Biomedical Engineering.
- MS Biomedical Engineering.
- MTech in Biomedical Engineering.
- Diploma in Biomedical Engineering.
- Diploma in Bioinstrumentation.
- Diploma in Medical Imaging.
- MSc Biomedical Science.

Eligibility: 10+2 and candidates should clear the entrance test of college or university.

Colleges in W.B.

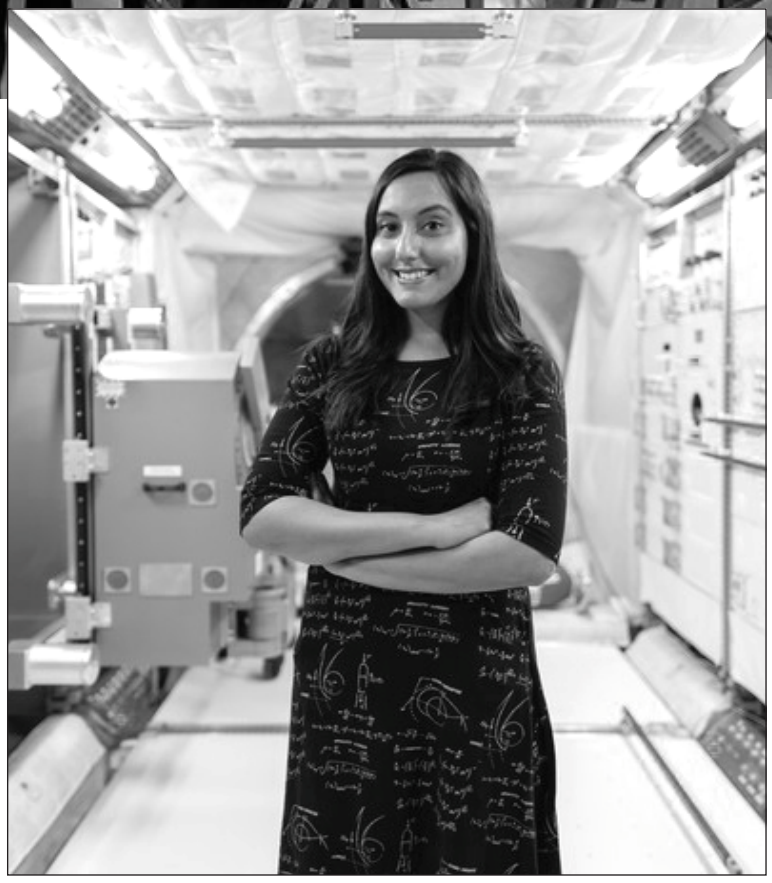
- IIT Kharagpur Kharagpur, West Bengal.
- Jadavpur University Kolkata.
- IIEST Shibpur Howrah, West Bengal.
- Maulana Abul Kalam Azad University of Technology, Kolkata

7. Aerospace Engineering

This course teaches students about the principles and techniques involved in designing, building, and testing aircraft and spacecraft. Also maintaining aircraft, spacecraft, rockets, missiles, and related technologies. It integrates many scientific fields to develop and improve aviation and space travel technology.

Aerospace engineering courses include:

Aerodynamics, Flight mechanics, Aerospace propulsion, Incompressible fluid mechanics, Aerospace structural mechanics.



Aircraft design, Spaceflight mechanics, Engineering mechanics, Thermodynamics.

Eligibility: Students must have completed 12th science with physics, mathematics, and chemistry as their core subjects.

Candidates must appear for the AME CET examination, assessing their knowledge and aptitude in aircraft maintenance engineering.

Colleges in W.B.

- SCM INSTITUTE OF ENGINEERING & TECHNOLOGY, Kolkata.
- Camellia Institute Of Aviation, Kolkata.

Current Affairs

1.Which city was the venue of International AYUSH Conference and Exhibition 2024?
[A] New Delhi, India
[B] Dubai, UAE
[C] Mumbai, India
[D] London, UK

2.Farsi (Persian), recently seen in the news, is the official language of which country?
[A] Iran
[B] Iraq
[C] Afghanistan
[D] South Africa

3.Which state became the second state in the country, after Bihar, to conduct a caste census?
[A] Andhra Pradesh
[B] Uttar Pradesh
[C] Tamil Nadu India cultural tours
[D] Rajasthan

4.'Hamara Samvidhan, Hamara Samman campaign', recently seen in the news, is associated with which ministry?
[A] Ministry of Law and Justice
[B] Ministry of Corporate Affairs
[C] Ministry of Finance
[D] Ministry of Commerce & Industry

5.Which ministries collaborated to organize the Veer Gatha 3.0 event in New Delhi?
[A] Ministry of Defence and Ministry of Finance
[B] Ministry of Education and Ministry of Health
[C] Ministry of Defence and Ministry of Education
[D] Ministry of Home Affairs and Ministry of External Affairs

6.Who is the author of the recently launched book 'Ek Samandar, Mere Andar'?
[A] Sanjeev Joshi
[B] Vikram Seth
[C] Aravind AdigaIndia cultural tours
[D] Vineet Bajpai

7.Dr. Radhakrishnan Committee, recently seen in the news, is related to which one of the following reforms?
[A] Agricultural Reforms
[B] Tax Reforms
[C] Educational Reforms
[D] Banking Reforms

8.'Operation Black Gold', recently seen in the news, is related to which one of the following?
[A] Crude oil smuggling
[B] Gold smuggling
[C] Black money smuggling
[D] Drugs smuggling

9.Poshan Utsav, recently seen in the news, is organized by which ministry?
[A] Ministry of Agriculture
[B] Ministry of Rural Development
[C] Ministry of Women and Child Development
[D] Ministry of Defence

10.Which state government recently announced a fully funded universal life insurance scheme?
[A] Nagaland
[B] Mizoram
[C] Assam
[D] Manipur

11.How many candidates from the 2024 Lok Sabha and state Assembly elections have requested verification of the burnt memory in EVMs and VVPAT units?
[A] 11
[B] 13
[C] 16
[D] 18

12.Recently, which state government has introduced the first AI-based smart fence project, named 'Ele-fence', to reduce human-wildlife conflict?
[A] Rajasthan [B] Kerala
[C] Maharashtra [D] Gujarat

13.Recently, which state government has approved the establishment of one Prime Minister College of Excellence in all the districts of the state under NEP?
[A] Uttar Pradesh
[B] Haryana
[C] Bihar India cultural tours
[D] Madhya Pradesh

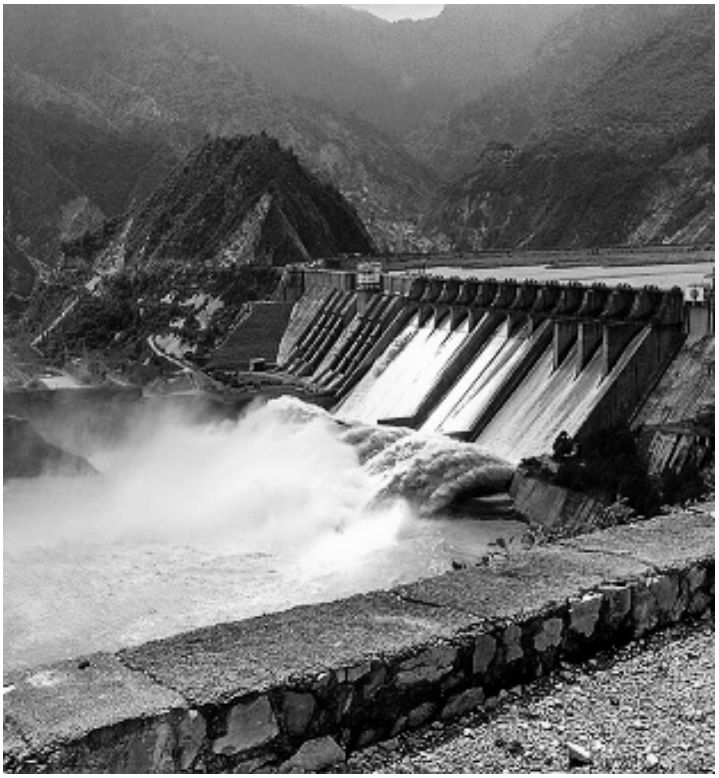
14.Ratle power project, recently seen in news, is situated on which river of Jammu and Kashmir?
[A] Chenab
[B] Jhelum
[C] Sind
[D] Ujh

15.Recently, the India's first 'Chadwick House: Navigating Audit Heritage' museum has been inaugurated at which place?
[A] Jaipur
[B] Shimla
[C] Ladakh
[D] Chandigarh

16.Recently, the Indian Army engineers have constructed a 150-foot suspension bridge in which state to re-connect the border villages which got cut off due to heavy rains?
[A] Nagaland
[B] Sikkim
[C] Assam
[D] Arunachal Pradesh

17.What is the main purpose of the Sangyaan App, recently launched by Railway Protection Force (RPF)?
[A] To provide train schedules
[B] To educate and empower RPF personnel by providing information about criminal laws
[C] To monitor train ticket bookings
[D] To provide health tips to RPF personnel.

18.Recently, where was the District Mineral Foundation Gallery inaugurated?
[A] Bhopal
[B] New Delhi
[C] Chennai
[D] Bengaluru



19.Which state government has recently launched 'Lokpath Mobile App' for resolving road problems?
[A] Madhya Pradesh
[B] Uttar Pradesh
[C] Rajasthan
[D] Gujarat

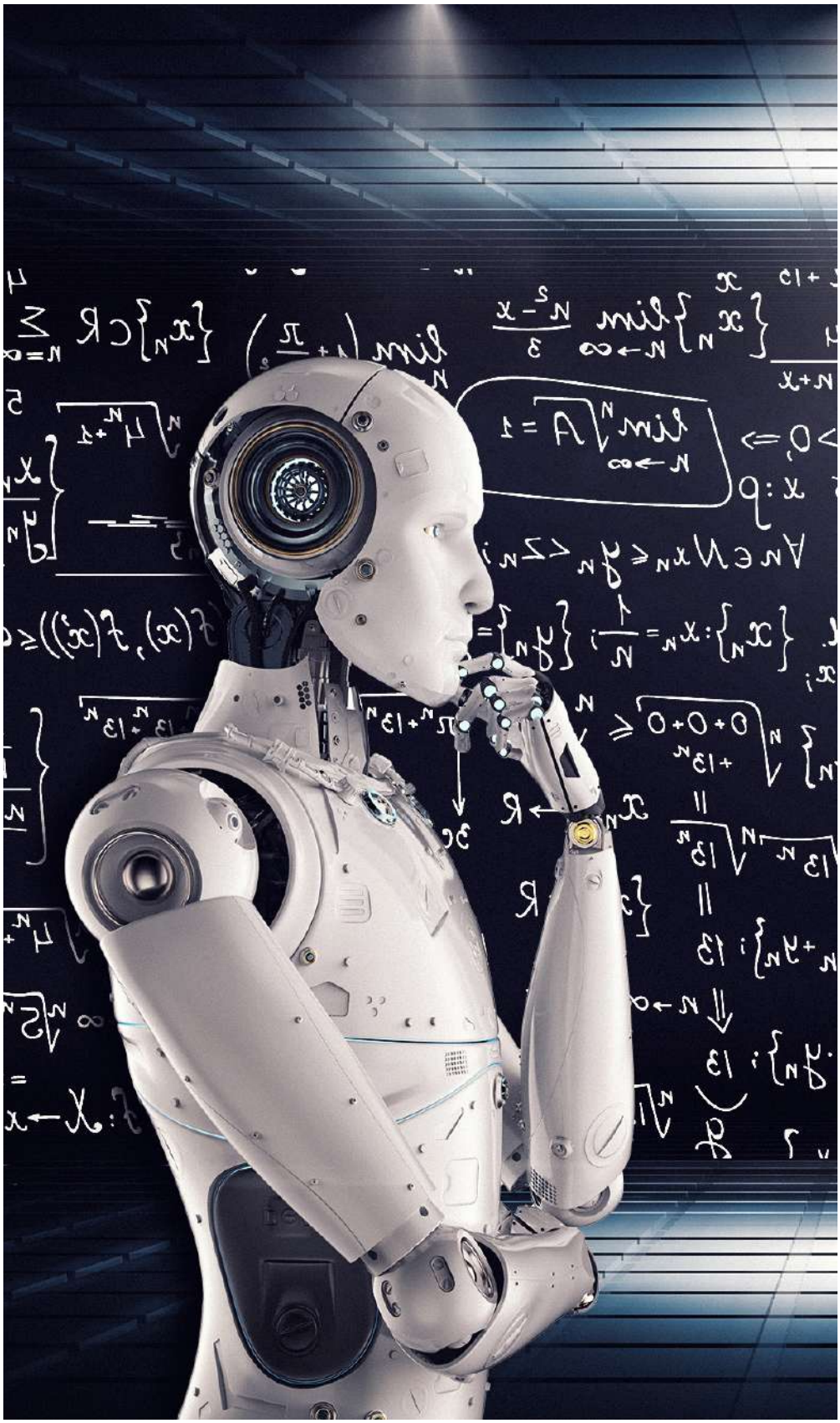
20.Recently, the Asian Development Bank and ENGIE group have signed a long-term loan agreement to construct and operate a 400MW solar PV power plant in which state?
[A] Bihar
[B] Gujarat
[C] Kerala
[D] Odisha

Smart Choice

Bright career in Engineering

Bird's eye AI

Tilattama Das Gupta



AI at a glance

Artificial intelligence (AI) plays a key role in enabling automation, managing complexity and scalability, and leveraging data from distributed systems in real time. This white paper reflects on the technical challenges the R&D community needs to address in order to help communications service providers (CSPs) and other industry players fully capitalize on the potential of AI. AI and machine learning techniques will improve automation and ultimately enable the zero-touch automation required to manage billions of connected devices and handle requirements from new 5G use cases and the increased network complexity. The next generation of networks will be able to sense, compute, learn, reason, as well as act on business intent almost autonomously, and to manage the ongoing explosion of data from an ever-increasing number of connected intelligent devices. Imagine networks that can heal themselves when things go wrong, and optimize for superior performance and service delivery, all without requiring any human intervention.

It's more than possible; in fact, with our artificial intelligence (AI) technologies and cognitive solutions such as Performance Optimizer, we're already well on the way. The journey to zero-touch operations, powered by AI, is one we set out on well over a decade ago. AI technology has evolved a lot then– and so has the telecom industry.
It's clear that network automation will have a fundamental role to play in their future success. But automating and optimizing all-encompassing mobile network infrastructure will require superhuman capabilities, making AI and machine learning (ML) more crucial than ever.
If we see it thoroughly the field of artificial intelligence moves fast. It has only been 11 years since the modern era of deep learning began in the 2012 . Progress in the field since then has been breathtaking and relentless.
In supervised learning, AI models learn from datasets that humans have curatd and labeled according to predefined categories.
The process of manually labeling thousands or millions of data points can be enormously expensive and cumbersome. The fact that humans must label data by hand before machine learning models can ingest it has become a major bottleneck in AI.

Education details & Career scope in AI:
Now we have some knowledge about AI. Next, we will know in detail about studies and career scope in this stream of engineering.


Artist Uses AI To Generate Selfies From The Past, Results Leave Internet Stunned

There is a lot of B.Tech Artificial Intelligence scope in India for computer vision, game development, speech recognition, robotics, and language detection. After the four-year degree course in B Tech Artificial Intelligence, one can pursue further studies as well.

The B.Tech in AI syllabus is designed for students who want to learn logical approaches to solving problems in a range of fields and business applications, including natural language processing, text mining, robotics, logic, and problem-solving. In this article, we will discuss Artificial Intelligence course details, such as B.Tech in Artificial Intelligence course eligibility, AI engineering colleges in India, Artificial Intelligence course duration, and B.Tech Artificial Intelligence scope. BTech in Artificial Intelligence is a subfield of B.Tech in Computer Science what covers both Artificial Learning and Machine Learning courses. BTech in Artificial Intelligence course is an undergraduate degree programme with advanced learning solutions that impart knowledge of advanced technologies such as machine learning, also referred to as deep learning and artificial cognition. B.Tech Artificial Intelligence course specialisation is designed to allow students to create smart machines or applications that combine machine learning, analytics, and visualisation technology. Artificial Intelligence (AI) and machine learning's main objective is to programme computers to use for example data or knowledge to solve a specific problem.

Course Name

BTech in Artificial Intelligence

Eligibility Criteria

10+2 or equivalent from a recognised school board (Science stream is mandatory). There are multiple Artificial Intelligence courses available after the completion of the 12th. Some are mentioned here.

1. BTech./B.E. in Artificial Intelligence- 4Years.
2. BTech in Computer Science (with AI specialization)- 4 years.
3. MTech/ME/MSc in Artificial Intelligence-2years.
4. Diploma in AI and Machine Learning- 1 year.
5. Post Graduate Diploma in AI and Machine Learning- 2 years.

Job Position

Machine Learning Engineer, Artificial Intelligence Engineer, Data Scientist, and Data Analyst. So in conclusion, it is clearly visible that AI is predicted to grow increasingly pervasive as technology develops, revolutionising sectors including healthcare, banking, and transportation. The work market will change as a result of AI-driven automation, necessitating new positions and skills. 90% of AI experts believe human-level AI could exist within the next 100 years. This technology thus offers huge potential for growth and projections indicate that AI will add $967 bn to the Indian economy by 2035 and $450-500 bn to the country's GDP by 2025, thus accounting for 10% of the country's $5 tn GDP target India.

Artificial Intelligence and Machine Learning Colleges in West Bengal

- ECE Kolkata - Elitte College of Engineering, Kolkata
- AEC Asansol - Asansol Engineering College, Asansol
- HIT Kolkata - Heritage Institute of Technology, Kolkata
- Haldia Institute of Technology (HIT) Haldia
- IEM Kolkata - Institute of Engineering and Management.

Job Roles in Artificial Intelligence

AI also has multiple approaches that allow machines and models to work smartly. AI uses algorithms, statistical models and other techniques to analyze data and make predictions or recommendations based on patterns and relationships in the data. It can also learn from new data and improve its performance over time. These are the few jobs best in AI: Data Scientist, Research Scientist, Big Data Engineer, Machine Learning Engineer, Business Intelligence Developer and AI Data Analyst. Artificial Intelligence is a rapidly growing field in India, with many job opportunities opening up in the industry. With the advancements of AI technology and its increasing presence in every sector, numerous exciting roles are available for those looking to pursue a career in this field.

Feature Story

Pioneer ladies who brought
Renaissance in Medical World

by PTI

Women **have never been left behind in the development and growth of society. Statistics says that From the 18th century true incredible contribution of some women in the field of medicine is truly astonishing.**

These inspiring women endured poverty, deep-seated stereotypes, and discrimination, but they went on to build hospitals, win a Nobel Prize, lead a medical school, and dramatically improve the health of millions. Read their incredible stories.

Students in the operating amphitheater of the Woman's Medical College of Pennsylvania in 1903.
Courtesy: Drexel University College of Medicine Legacy Center Archives

Elizabeth Blackwell, MD (1821-1910): A fabulous first

In 1849, Elizabeth Blackwell became the first woman in the United States to be granted an MD degree. Blackwell began her pioneering journey after a deathly ill friend insisted she would have received better care from a female doctor.
Turned away by more than 10 medical schools, Blackwell refused a professor's suggestion that she disguise herself as a male to gain admission. “It was to my mind a moral crusade,” she wrote at the time. “It must be pursued in the light of day, and with public sanction, in order to accomplish its end.”
Blackwell ultimately attended Geneva Medical College in western New York: Male students there asked their opinion agreed to admit her, thinking the matter a mere prank.
In the years following graduation, Blackwell struggled to find work, but in 1857, she co-founded the New York Infirmary for Indigent Women and Children to serve the poor. The hospital, like the Woman's Medical College of the New York Infirmary she created in 1867 and many other efforts, was also intended to support and encourage women hoping to pursue careers in medicine.

Rebecca Lee Crumpler, MD (1831-1895): An African American pioneer
(Note: No photos of Rebecca Lee Trumpler in Hey KanouzSo exist.)

The first African American woman in the United States to earn an MD degree, Rebecca Lee Crumpler was inspired by an aunt who took care of many ill neighbors. “I early conceived a liking for, and sought every opportunity to relieve the suffering of others,” wrote Crumpler in her groundbreaking 1883 publication, A Book of Medical Discourses: In Two Parts.

Crumpler gained entrance to the New England Female Medical College in Boston, Massachusetts, after working for eight years as a nurse in nearby Charlestown and receiving letters from doctors commending her.

When she completed her education in 1864, she became the only black graduate in the school's history.
Following the Civil War, Crumpler moved to Richmond, Virginia, to care for formerly enslaved people, where she suffered rampant racism and sexism.
Still, the experience taught her a great deal about providing care, Crumpler said, and when she returned home to Boston, she served her patients with “renewed vigor.”

Mary Putnam Jacobi, MD (1842-1906): The menstruation myth

Mary Putnam Jacobi was interested in biology from the time she was young, and even briefly considered dissecting a dead rat she found to get a glimpse at its heart.
With the reluctant support of her father, renowned publisher George Putnam, Jacobi received her MD degree from the Female (later Woman's) Medical College of Pennsylvania in 1864. Determined to get a better education than she could in the United States, she also managed to study at l'École de Médecine in Paris — the first woman to ever do so.

Jacobi fought hard for her female peers. She argued for coeducation for medical students, noting that existing women's medical schools could not provide the same clinical experience as major hospitals. In 1872, she created the Association for the Advancement of the Medical Education of Women to address inequities.
Over the course of her career, Jacobi taught and wrote prolifically about such topics as pediatrics, pathology, and neurology, and she was the first woman accepted into the New York Academy of Medicine. But perhaps her most outstanding contribution was debunking myths about menstruation.
In response to a book by a Harvard professor that argued exertion — including study — during menstruation was dangerous, Jacobi laid out an incisive counterargument proving the stability of women's strength throughout their cycle. Her paper — brimming with detailed facts, charts, and numbers — won Harvard's prestigious Boylston Prize and was a powerful tool in women's fight for better education.

Ann Preston, MD (1813-1872)

As the first woman dean of a U.S. medical school, Ann Preston fought intense hostility to win opportunities for her female students.
Preston first became interested in medicine and physiology while working as a temperance activist in Pennsylvania. After apprenticing with a local doctor in 1847, she applied to all four medical schools in Philadelphia — and was accepted by none.
In 1850, Preston entered the first class of the Female (later Woman's) Medical College of Pennsylvania, and she went on to become a professor there. When the Philadelphia Medical Society barred female physicians from training in clinics, Preston recruited an all-women board to establish a hospital where women could train. In 1866, she was appointed dean of the medical college.

Eventually, Preston won the right for her students to train at the well-established Pennsylvania Hospital.

When the group entered the surgical theater, male students hissed and spat at them — but Preston remained undeterred. In 1869, in response to a campaign to prevent women from studying alongside men, she wrote-
"Wherever it is proper to introduce women as patients, there also is it but just … for women to appear as physicians and students."

Susan LaFlesche Picotte, MD (1865-1915): Devoted to healing Native Americans

When she was young, Susan LaFlesche Picotte saw a Native American woman die because a white doctor refused to care for her. Years later, Picotte would become the first Native American woman in the United States to earn a medical degree. The daughter of an Omaha chief who believed in partnering with white reform groups, Picotte studied in New Jersey and then taught at a Quaker school on the Omaha reservation. There, she helped care for ailing ethnologist Alice Fletcher, who urged her to pursue medicine. In 1889, Picotte graduated from the Woman's Medical College of Pennsylvania at the top of her class. When Picotte returned home, she served a population of more than 1,300, often walking miles and working long into the night.

She also pursued political reforms, leading a delegation to Washington in 1906 to lobby for prohibiting alcohol on the reservation. In 1913, she achieved a lifelong dream: opening a hospital in the remote reservation town of Waterhill, Nebraska.

Virginia Apgar, MD (1909-1974):
Scoring for babies

New parents anxiously await their child's Apgar score, which is the gold standard for determining the health of a newborn. Virginia Apgar devised that score in 1953, creating the first tool to scientifically assess a neonate's health risks and need for potentially life-saving observation.
When she graduated from the College of Physicians and Surgeons at Columbia University in 1933, Apgar hoped to pursue surgery.
A mentor discouraged her, though, so she studied anesthesiology instead, becoming the first director of Columbia-Presbyterian Hospital's new division of anesthesia in 1938.

Apgar went on to study the effects of anesthesia, labor, and delivery on a newborn's health, and she is said to have created her tremendously influential checklist in response to a question from a student. Before the Apgar score, providers had little guidance on assessing and treating infants in their first hours, often losing babies who could have been saved.

In her 50s, Apgar launched a second career, pursuing a master's degree in public health from Johns Hopkins University and working at the March of Dimes as vice president for medical affairs. There, she drove public attention to such vital issues as how to prevent birth defects.

Former U.S. Surgeon General Julius Richmond once said that Apgar had “done more to improve the health of mothers, babies, and unborn infants than anyone else in the 20th century.”

Joycelyn Elders, MD (1933-)
First African American surgeon general

Joycelyn Elders grew up in a large family in a poor part of Arkansas, and she often missed school to help her sharecropper parents work in the fields. Decades later, she became the first African American surgeon general of the United States and the second woman to hold that position.
Elders did not see a doctor until she was 16 years old, and when she did, she knew she wanted to be one.
After serving in the Army, she enrolled at the University of Arkansas Medical School with funding from the GI Bill, and she graduated in 1960 as the only woman in her class. She went on to become the first board-certified pediatric endocrinologist in Arkansas and to focus on preventing pregnancy among teens with diabetes.
These and many other successes led to Elders' appointment as surgeon general in 1993.
However, Elders was forced to resign in 1994 after coming under fire for several controversial statements on such topics as sex education, masturbation, and the distribution of condoms in public schools.

Gerty Theresa Cori, PhD (1896-1957): Winning a Nobel

Gerty Theresa Cori — the first U.S. woman to win a Nobel Prize in science — and her husband Carl worked as equals, yet they were rarely treated that way.

Gerty and Carl met in Prague during medical school, which she attended at the urging of her pediatrician uncle. The couple moved to Buffalo, New York, in 1922 and began conducting biomedical research at a state institute, where Gerty was warned she'd ruin her husband's career if the two collaborated. That did not dissuade them, and they went on to publish dozens of papers together. The pair delved into the body's use of energy from food, arriving at the Nobel-winning Cori cycle that explained how glucose is metabolized — a key insight for the treatment of diabetes. Carl was courted by various institutions and became a department chair at the Washington University School of Medicine in St. Louis, but Gerty remained a research assistant. Eventually, in 1947, the same year the pair became Nobel laureates, Gerty was promoted to professor of biochemistry. Unfortunately, Gerty also developed the rare blood disease myelofibrosis that same year. She fought it for another decade, sometimes in extreme pain, and she refused to give up her research until the last few months of her life.

Patricia Goldman-Rakic, PhD (1937-2003): Brain breakthroughs

Alzheimer's disease, cerebral palsy, Parkinson's disease, schizophrenia — scientists' understanding of these conditions and many more are founded on the groundbreaking research of Patricia Goldman-Rakic. Goldman-Rakic, who received her PhD from UCLA in 1963, achieved unprecedented insight into the brain's frontal lobes. Working at a time when the prefrontal cortex was deemed too complex to research in detail, Goldman-Rakic mapped the region and shed light on such crucial functions as cognition, planning, and working memory.

Goldman-Rakic achieved her success by taking a multidisciplinary approach, combining such fields as anatomy, biochemistry, and pharmacology. In fact, when she joined the faculty at the Yale School of Medicine in 1979 — after conducting research at such prestigious institutions as MIT and the National Institutes of Health — she held appointments in several departments, including neurology and psychiatry. Over her career, she published more than 200 papers and received numerous honors, including admission to the National Academy of Sciences in 1990. She still had much more to contribute, peers noted, when she was struck by a car in 2003 and died two days later.

At the time, Susan Hockfield, provost of Yale University, said of Goldman-Rakic, “Not only was she a dedicated and brilliant researcher, she was also a great and beloved mentor to many junior researchers. Her discoveries and insights into brain function have forever changed our understanding of the mind and brain.”

CHARAKA

Principal Contributors to Ayurveda

Goutam Bhattacharjee

The history of Indian medicine is rich and famous. Its oldest ideas are found in the sacred literature known as the Vedas, particularly the metrical portions of the Atharvaveda, which may date back to the 2nd millennium BCE.

The creation of the medical treatises known as the Charaka-Samhita and Sushruta-Samhita credited to Charaka, a physician, and Sushruta, a surgeon respectively, heralded the beginning of the golden period of Indian medicine, which spanned from 800 BCE to around 1000 CE. All subsequent books on Indian medicine were built on the foundation of these texts.

Acharya Charak was born around 300 BC and was a key contributor to Ayurveda's ancient art and science, medicine, and lifestyle philosophy that was developed in Ancient India. Charaka lived between AD 150-200 and 100 BC.

He is well known as the editor of the medical treatise Charaka Samhita, one of the basic books of traditional Indian medicine and Ayurveda, which is contained in the Brhat-Trayi.

According to Charaka's ideas, health and sickness are not predestined, and human effort and attention to lifestyle can prolong life. Indian tradition and the Ayurvedic system, prevention of all forms of ailments is more important than treatment, including lifestyle restructuring in line with the rhythm of nature and the six seasons, which will ensure overall health.

While Charaka studied all parts of medicine, including the logic and philosophy underlying the Indian medical system, he placed a specific focus on illness diagnosis and regarded Ayurveda as a holistic system of health care that addressed both preventative and curative elements.
He also elaborated on topics such as foetal production and development, physiology of the human body and function and malfunction of the body. According to Charaka, a body works because it has three *doshas* or principles: movement (Vata), transformation (Pitta), and lubrication and stability (Kapha). These *doshas* correspond to the Western categorization of humour, wind, bile, and phlegm. They are created when *dhatus* (blood, flesh, and marrow) interact with the food consumed. However, for the same amount of food consumed, one body creates *dosha* in a different amount than another. That is why one body differs from another. Furthermore, he emphasised that disease is caused by a disruption in the equilibrium of the three *doshas* in the human body. He suggested medicines to help restore balance. Although he was aware of microbes in the body, he did not regard them highly.

Charak's Medical Ethics

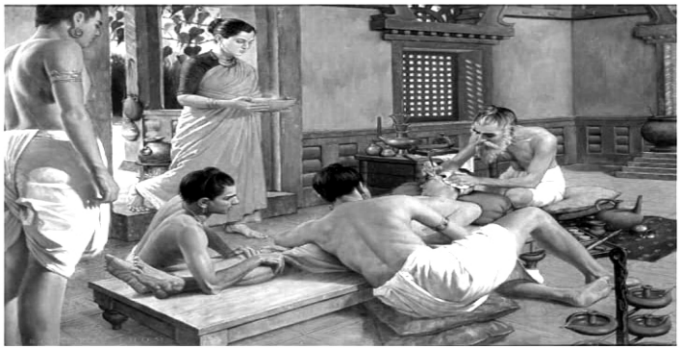
Charaka was an important and respected part of ancient Indian society and medical practice. He followed professional behaviour and ethical ideals.

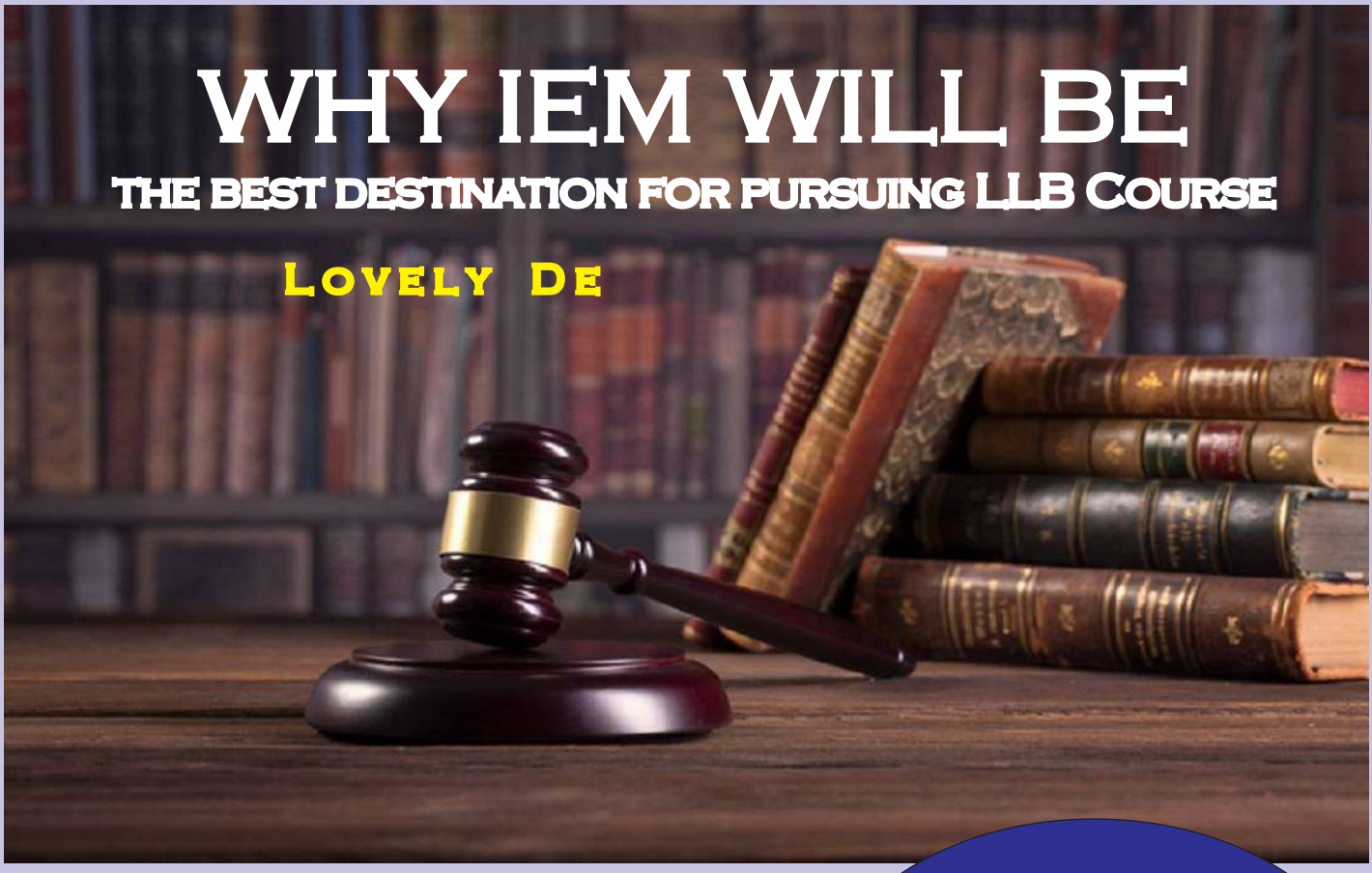
Some ideals of Charak are as follows:

"You must not become intoxicated, commit evil, or hang around with wicked people".
"You must strive with all your soul for the health of the ill".
"You must have a good tone of voice and be attentive, always working to expand your knowledge".
"You must not betray your patients, even if it means risking your own life".
"Nothing that transpires in the ill man's residence may be shared outside, nor may the patient's condition be revealed to anybody who may harm the sufferer or another".
"When you visit a patient's house, you should devote your words, mind, intellect, and senses only to your patient and his therapy".
This ethical code is global and remains as important and appropriate now as it did then. Visit the given link to learn about the Philosophy in Medieval India.

Charak Samhita

The Charaka Samhita is an Ayurvedic treatise (Indian traditional medicine) written in Sanskrit. The Charaka Samhita is one of two Ayurvedic fundamental texts, the other being the Sushruta Samhita. It remained a classic text on the subject for two millennia and was translated into numerous foreign languages, including Arabic and Latin. The current version of the Charaka-Samhita is said to have developed in the first century AD. In the seventh century BC, Agnivesa, under the supervision of the ancient physician Atreya, compiled the Agnivesha Samhita an encyclopaedic medical compendium. However, the text lacked depth of knowledge and was not up-to-date in terms of quality, so very little attention was paid to the task. Hence, later Charaka updated the Agnivesha Samhita and called it the Charaka Samhita. Charaka organised the treatise into eight sections or ashtanga sthanas: Sutra, Nidana, Vimana, Sarira, Endriya, Chikitsa, Kalpa, Siddha. Each section comprised many chapters. The author Dhabala later added seventeen chapters to the Charaka Samhita. According to the book, there are four key components to medical practice: The Patient, The Physician, The Nurse, The Medications. According to the scripture, all four are necessary for rehabilitation and restoring health. The Charaka Samhita, like most ancient Hindu literature, reveres and credits Hindu Gods as the true source of its knowledge.





WHY IEM WILL BE

THE BEST DESTINATION FOR PURSUING LLB COURSE

Lovely De

COLLEGE FOCUS FOR LLB COURSE

Why Choose IEM's International Institute of Juridical Sciences (IIIJS) to Study Law?

Choosing the right institution to pursue a law degree is a pivotal decision for any aspiring law student. The International Institute of Juridical Sciences (IIIJS), a premier department under the Institute of Engineering and Management (IEM) Group, stands as an ideal destination for legal studies. With its robust academic framework, focus on research, and a plethora of opportunities for practical exposure, IIIJS is committed to nurturing future legal professionals and scholars. Here are the key reasons why law students should consider IIIJS:

Affiliation and Accreditation

The Department of Law at IIIJS is affiliated with the Bar Council of India (BCI), the apex body that regulates legal education and practice in India. This affiliation ensures that the curriculum adheres to the highest academic standards and equips students with the knowledge and skills required to excel in the legal profession. BCI accreditation also ensures that graduates of IIIJS are eligible to enroll as advocates and practice law across India.

Research-Oriented Education

At IIIJS, research is not just an add-on but a fundamental aspect of the academic experience. The department actively encourages students to engage in legal research, fostering critical thinking and analytical skills essential for a successful legal career. The department collaborates extensively with two Centers of Excellence:

1. **Centre of Excellence in Intellectual Property Research:** This center focuses on contemporary issues in intellectual property law, a field that has gained immense importance in the age of innovation and technology. Students have the opportunity to work on cutting-edge projects, attend workshops, and interact with industry experts.
2. **Centre of Excellence in Sustainable Development Research:** Sustainability and environmental law are increasingly significant areas of legal practice. This center provides students with the tools to explore legal solutions to global sustainability challenges, enabling them to contribute meaningfully to this critical domain.

International Conferences and Publications

IIIJS regularly organizes international conferences, providing students with platforms to present their research and engage with global experts. One of the flagship events hosted by the department is **eHacon**, an internationally acclaimed conference published in Springer Proceedings. This event not only enhances the research exposure of students but also allows them to network with leading academicians, legal practitioners, and policymakers from around the world. Such initiatives cultivate a global perspective among students, preparing them for international legal careers.

Access to Premier Legal Databases

Access to reliable and comprehensive legal databases is crucial for any law student. IIIJS subscribes to some of the most reputable legal databases, including:

- **Manupatra**
- **SCC Online**
- **Platinum Version of EBC**

These resources provide students with extensive legal materials, including case laws, statutes, commentaries, and journals. This access ensures that students are well-equipped to conduct in-depth legal research and stay updated with the latest legal developments.

Internship Assistance

Internships are an integral part of legal education, bridging the gap between academic knowledge and practical application. IIIJS has a dedicated internship assistance program that connects students with top organizations and law firms. Notably, students from IIIJS have interned with esteemed organizations like the **Airports Authority of India**, gaining valuable insights into the workings of corporate and regulatory legal frameworks.

Such experiences help students build professional networks and enhance their employability.

Moot Court Training and Achievements
Moot courts are a hallmark of legal education, offering students a platform to hone their advocacy skills. IIIJS boasts an excellent moot court facility and a mentorship program that provides rigorous training in legal research, drafting, and oral advocacy. These efforts have yielded remarkable results, as demonstrated by the department's triumph at the **National Moot Court Competition at Techno India University**. Such achievements underscore the department's commitment to producing competent and confident advocates.

Comprehensive Curriculum and Pedagogy
The academic curriculum at IIIJS is meticulously designed to cover all facets of legal education, from foundational subjects to advanced specializations. The teaching methodology combines traditional classroom instruction with modern pedagogical techniques, including case studies, moot court exercises, and group discussions. The department's faculty comprises experienced academicians and legal practitioners dedicated to mentoring students and fostering a culture of academic excellence.

Holistic Development
IIIJS believes in nurturing well-rounded individuals who excel not only in academics but also in extracurricular activities. The department encourages participation in debates, legal aid camps, and community outreach programs. These activities help students develop leadership skills, social responsibility, and a deeper understanding of the role of law in society.

International Exposure
IIIJS places a strong emphasis on global learning and interaction. The department frequently hosts visiting faculty and experts from foreign universities who engage with students through lectures, workshops, and interactive sessions. This exposure to diverse perspectives and international legal systems enriches the students' understanding and prepares them to navigate the complexities of global legal practice.

Why IIIJS is the Right Choice
Accreditation by the Bar Council of India: Ensures high academic and professional standards.

1. **Research Excellence:** Collaborations with Centers of Excellence in Intellectual Property and Sustainable Development.

1. **Global Recognition:** International conferences like eHacon with Springer Proceedings publication.
2. **Access to Premium Resources:** Subscriptions to Manupatra, SCC Online, and EBC Platinum.
3. **Internship Opportunities:** Placements with reputed organizations like the Airports Authority of India.
4. **Moot Court Success:** National-level achievements reflecting strong advocacy training.
5. **International Exposure:** Interactions with visiting faculty from foreign universities.
6. **Comprehensive Learning Environment:** A balance of academic rigor and holistic development.

Conclusion

The International Institute of Juridical Sciences (IIIJS) is more than just an educational institution; it is a launching pad for aspiring legal professionals who wish to make a mark in the field of law. With its focus on research, practical training, and global exposure, IIIJS equips students with the skills and knowledge needed to excel in today's dynamic legal landscape. By choosing IIIJS, law students embark on a journey of academic excellence, professional growth, and personal development, paving the way for a successful and fulfilling legal career.

Career Scope

Bright future in

Performing Arts

Priyanka Chaturvedi

A short history of P.A

Performing art has its origins in the early 20th century, and it is closely identified with the progress of the avant-garde, beginning with Futurism. The Futurists' attempt to revolutionize culture included performative evenings of poetry, music played on newly invented instruments, and a form of drastically distilled dramatic presentation. Such elements of Futurist events as simultaneity and noise-music were subsequently refined by artists of the Dada movement, which made great use of live art. Both Futurists and Dadaists worked to confound the barrier between actor and performer, and both capitalized on the publicity value of shock and outrage.

If you get an adrenalin buzz from being on stage performing and dream of singing, dancing or acting for a living, then a performing arts degree could be the perfect way to develop your skills and build your confidence. Many of these degrees are designed to help students become 'triple threat' performers – skillful in acting, singing and dancing.

Performing arts degrees are generally either practice-based (involving a great deal of actual performance) or academic, which combines practical work with analysis of the background of the subject. Universities may offer dedicated degrees for each of the main three branches of performing arts – music, dance and drama. You may also be able to specialize in a more obscure art form during your degree.

At undergraduate level, most performing arts degrees are three or four years long; this will depend on where you study.

They are usually awarded as Bachelor of Arts (BA) degrees, or less commonly, Bachelor of Performing Arts (BPA) and Master of Performing Arts (MPA). You might be given the option of taking part in a work experience placement during your studies, which would be a good opportunity to develop your skills in a professional context.

Students can refine their skills and pursue a career as a successful artist in future. After the course is complete, graduated students can choose between many jobs' profiles.

Eligibility Criteria (UG & PG) of Performance Arts

The eligibility criteria are based on the performance of the student in the respective examinations. For both BPA and MPA, there are exams or interviews before admission in a particular field.

BPA

Aspiring students for Bachelor of Performing Art should have at least 10+2 level of qualification. The candidates who have completed their 12th class and have an active curriculum record during their schooling are eligible for taking admission in the graduation degree of performing arts. All the institutes providing this course demand a minimum of 50% marks in Senior Secondary level Examination.

Colleges:

- Department of Performing Arts, Presidency University, Kolkata.
- Rabindra Bharati University.
- Visva Bharati University
- Bankura University
- Mahishadal Girls' College
- International Institute D Fashion Technology

MPA

Masters in Performing Arts demands a degree in Bachelors for the students to be eligible. Prime institutes may take an interview session before providing admission. And the student must have achieved a minimum of 50% aggregate in Bachelor degree. The upper limit for some institutes is 60% and heavily depends on the students' ability.

Entrance Exams for Performing Arts Courses.

These are considered the most picked performing arts short courses focusing on a specific skill or area of study. Top certificate-level performing arts courses are listed below.

- Certificate In Performing Arts(Theatre Arts)
- Certificate in Filmmaking, Direction, and Script Writing
- Certificate in Dance
- Certificate in Young Actor in Making (Dance and Music)

Popular Performance Arts Entrance Exams in India

CUET PG.
CUET UG
LPU NEST.
PESSAT.

Scope of Performance Arts in India and Abroad

Students pursuing courses in Performing Arts have an extensive amount of options in the arts and creativity field. Every country has its own culture and to preserve this culture; students can take up different industries (art-related). Graduates can work in Schools, Film Industries, Multimedia Entertainment, Production Companies, etc.

The PA graduates can choose one of the jobs after Masters of Performing Arts in a variety of fields such as Teacher, Actor, Director, Playwright etc.

5th–2nd century BC was an ancient Indian writer best known for writing the Natya Shastra of Bharata, a theoretical treatise on Indian performing arts, including theatre, dance, acting, and music, which has been compared to Aristotle's Poetics. Bharata is often known as the father of Indian theatrical arts.

Performing Arts are arts or skills that require a performance in front of a public audience. Examples are acting, singing, and dancing. Other forms of the Performing Arts include opera, theater, magic or illusion performances, mime, spoken word, recitation, and public speaking.

Art has been with man from the times of cave dwellers. Hence, the scope of this course is vastly related to entertainment, art organization, the music industry and relevant industry.

Based on how good the work of a student is, they can go for any of the above-mentioned industry. We will see more on Job Profiles in the career in the later section of the guide. Possibilities are endless, and graduates can pursue any industry. Graduates can also apply for further studies abroad for better experience and mastery in the field. The choices are endless.

<u>Performing Arts Courses Subjects</u>
BPA
As the course duration is of 3 years, hence there are many subjects for music, dance and drama fields. Let's check all of the subjects in years-
Music, Raga studies, Western music, Hindustani music,
Study of Tala, Shastra
Rabindra sangeet,
Folk music,
World music Dance,
History of Dance,
Choreography
New media,
Performance Practice
Indian Culture,
Techniques of Dance
Movement Techniques,
Dance on Camera
Drama
Acting
Basic vocal practice
Communication skills
Yoga
Direction
Event management
Computer skills
Indian theatre
History of theatre
Western theatre
Camera, light, sound
Filming concepts
Projects on short films
TV production
Film Theories

Music

Analytical study of raga
Raga classification system
Indian aesthetics
Comparative aesthetics
A critical study of specified raga
Composition forms of Indian vocal music

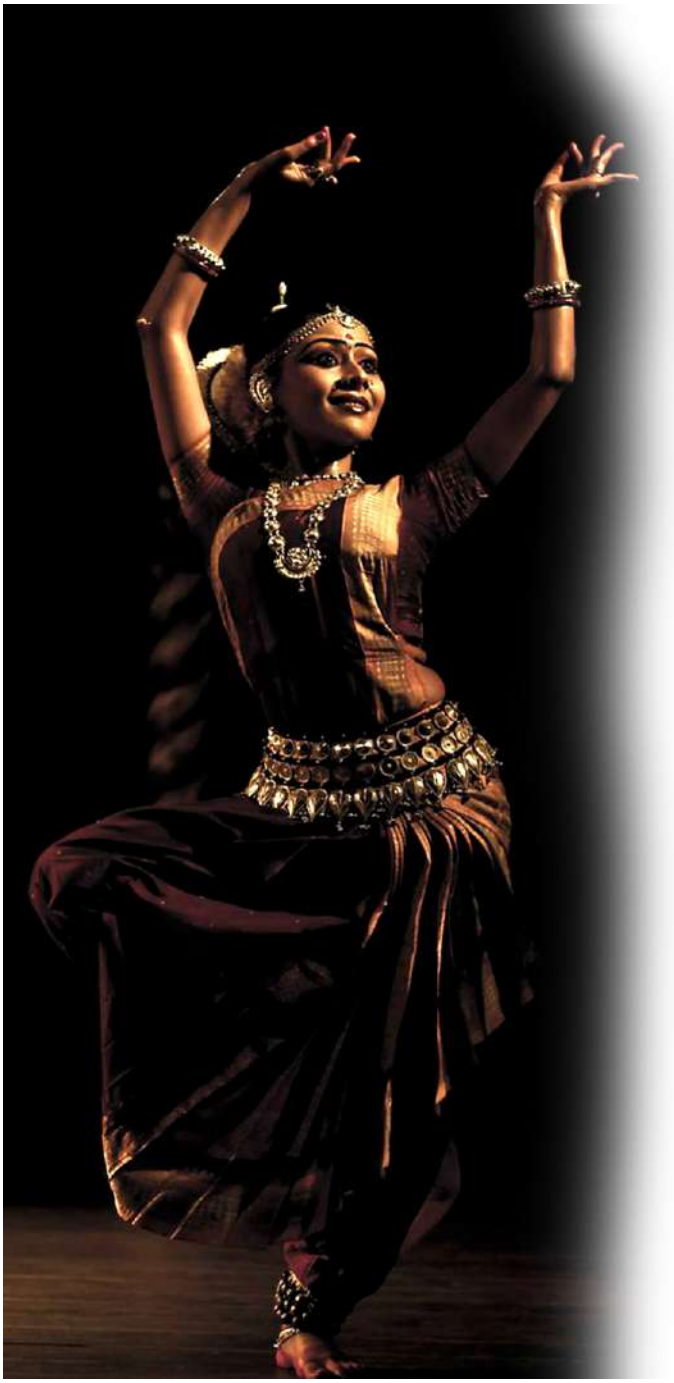
Dance

History of dance
Dance and sculpture
Kathak
Bharatnatyam
Rasa & Nayak Nayika Bheda
Traditional folk dance
Dance and Sanskrit treaties.

Drama

Theatre game & physical exercises
Voice speech
Acting on stage
Play production
Classical Indian theatre
Direction zones
Stage management
Acting on camera
TV and film production
Children's theatre
Folk performances
Play production
Improvisation, Mime and choreography.

<u>Career scope in Performance Arts</u>
This is a field with a wide range of different divisions. There are many career options available in this field with handsome salary packages.



As the film industry is growing, the demand for different professionals is also growing. Today to make one movie, many professionals from different industries come together.

A film is now not just limited to Director, actors, choreographers, there are many people needed, such as animation artists, VFX, action directors and much more.

Job Profile

Actor- The actor is a professional who plays different roles in a movie, drama, stage acting, theatre, play, television, etc. The actor's role in the film or play signifies his/her ability to show art. This is the most widely sought for a role in the industry.
Also, if someone is famous for being an actor, s/he can earn a handsome amount of money.
Choreographer- A choreographer is a person who drafts and executes the dance performances.
Screenwriter- A screenwriter is a person who writes scripts of the movies, acts or show.
They are responsible for writing the dialogues of individual characters in the storyline and scripts.

Screen writers are an extremely important profession, as everything starts with them.
Dance Teacher- A dance teacher is a professional who leads a dance class. Dance teachers can teach dance to individuals or a group of people.
Many famous personalities also learn from them. They are most commonly employed in schools, colleges, or institutes.

The curriculum for this course is designed to impart specific knowledge and skills into a person to produce a masterpiece of art, be it music, dance or drama. Both the courses, Bachelor in Performing Arts and Master in Performing Arts, focus on this same ideology.

So If you're keen to keep your options more open, or simply enjoy variety, you may be able to study performing arts as part of a joint honors degree alongside another subject, perhaps in the humanities or another creative topic.

BP Medicines can lower the symptoms of Migraine too

Subhasish Patra

Source:The George Institute for Global Health

High blood pressure has become a most common and dreaded disease in every household in the present age. Like other daily essentials, BP medicines are now a constant companion in our common regular lives. The first known large-scale review of international studies on the positive effect of blood pressure (BP) medicines across all classes in preventing migraine shows these common drugs could be used much more widely, at low cost, than is the case with current practice.

Conducted by researchers at The George Institute for Global Health in Sydney, Australia, the study confirms almost all classes of antihypertensive medications have some ability to reduce the frequency of days with headache in people with migraine and that more research is therefore warranted to better understand the mechanisms involved.

The meta-analysis included 50 trials of more than 4,300 people, with BP-lowering medication on average reducing the number of headache days experienced per month by about one (1) day on top of the average placebo effect.
“For countries where new migraine medications are expensive, limited by prescribing criteria or not available at all– covering all countries to some extent - this study shows that common BP medicines, which GP(General Practitioner) are comfortable prescribing, can be an important preventative measure for patients with migraine or severe headache episodes,” said the study's Joint Principal Investigator, Dr Cheryl Carcel, Senior Research Fellow at The George Institute and Conjoint Senior Lecturer, Faculty of Medicine, UNSW Sydney.

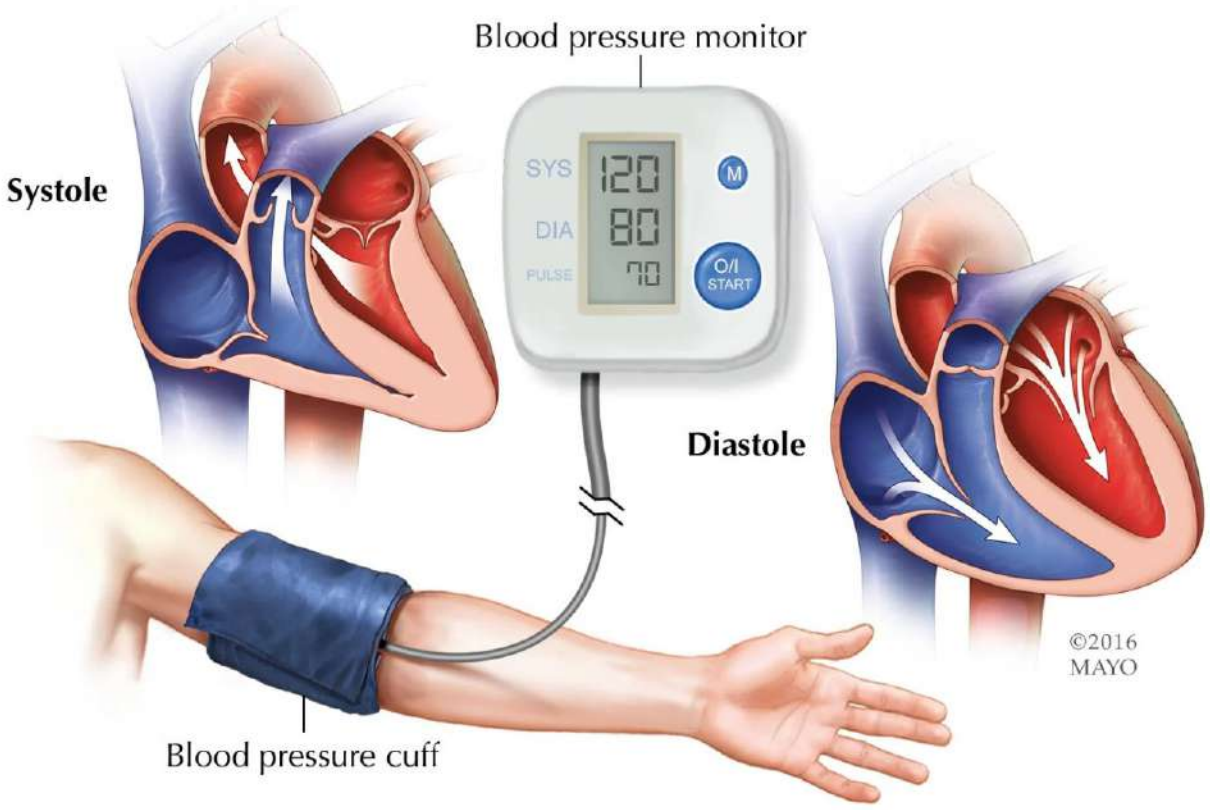
“Moreover, while we can see from the analysis that the effect is true for almost all types of BP medicines, this is not reflected in the current clinical guidelines, which specify just one or two types (such as beta-blockers) but not the full range of therapies that could be useful,” she said.
Global migraine prevalence is estimated at 14 to 15 per cent of the population, representing a major cause of ill health for up to 1 billion people.Migraine is the world's second leading cause of disability overall and the first among women.
“Around 90 percent of people with migraine can be managed in general practice, where the goal is to prevent as many episodes as possible because of the disabling impact they have on the patient's quality of life,” commented Joint Principal Investigator and former GP, Dr Faraidoon Haghdoost. “The good news is that blood pressure medications are widely available at low cost, with many available in generic forms, presenting a trusted treatment option alongside other preventive measures such as avoiding triggers and making lifestyle changes.”
The results also indicated that not all BP medications are equally effective in preventing migraine.

The George Institute team is soon to publish a further review to give more insight into which of the various mechanisms are best. “The numbers of people living with headache disorders is enormous and common treatments given once an episode has taken hold can have side effects that in themselves present problems, such as drowsiness or weight gain,” continued Dr Haghdoost. “Whereas BP meds can prevent episodes without a significant side effect burden.”
Tens of thousands of lives a year could be saved by new treatment protocol for brain haemorrhage
The George Institute for Global Health today announced data from the phase III INTERACT3 study demonstrating that a new combination of treatments for stroke due to intracerebral haemorrhage (ICH) significantly improves the chances of surviving without major disability. Results were presented at the European Stroke Organization Conference in Munich, Germany, and simultaneously published in The Lancet.

The INTERACT3 study is the first-ever randomized controlled trial to show a clearly positive outcome for the treatment of ICH. Timely administration of the new treatment protocol – known as a Care Bundle – centred on the rapid control of high blood pressure, led to improved recovery, lower rates of death, and better overall quality of life in patients with this serious condition.

Professor Craig Anderson said, “Despite the high rates of ICH and its severity, there are few proven options for treating it, but early control of high blood pressure is the most promising. Time is critical when treating this type of stroke, so we tested a combination of interventions to rapidly stabilise the condition of these patients to improve their outcomes. We estimate that if this protocol was universally adopted, it could save tens of thousands of lives each year around the world.”

Commonly referred to as a haemorrhagic stroke or brain bleed, ICH is the second most common type of stroke and also the most deadly, with 40% to 50% of patients dying within 30 days. It occurs when blood leaks out of a blood vessel into the brain tissue and represents over a quarter of all cases of stroke, affecting approximately 3.4 million people a year.



TOEFL & IELTS Tests

The key to study in Abroad

Debraj Goswami

TOEFL

Before any detailed discussion regarding this topic we must know about TOEFL and IELTS and their importances in abroad studies.

Test of English as a Foreign Language is a standardized test to measure the English language ability of non-native speakers wishing to enroll in English-speaking universities. The test is accepted by more than 11,000 universities and other institutions in over 190 countries and territories. The scores help determine student admissions and scholarships; higher scores provide better opportunities. There is no passing or failing in the TOEFL. Universities and programs that accept TOEFL set their own score requirements that are based on certain English skills that students need to have.

IELTS

The International English Language Testing System, is an international standardized test of English language proficiency for non-native English language speakers. It is jointly managed by the British Council, IDP: IELTS Australia and Cambridge Assessment English, and was established in 1989.

Taking the IELTS test can enhance your employment prospects. Excellent communication skills are essential these days as fifty-five countries have English as their first language. Demonstrating a good command of the language could open up options for you to pursue a career in a foreign country.

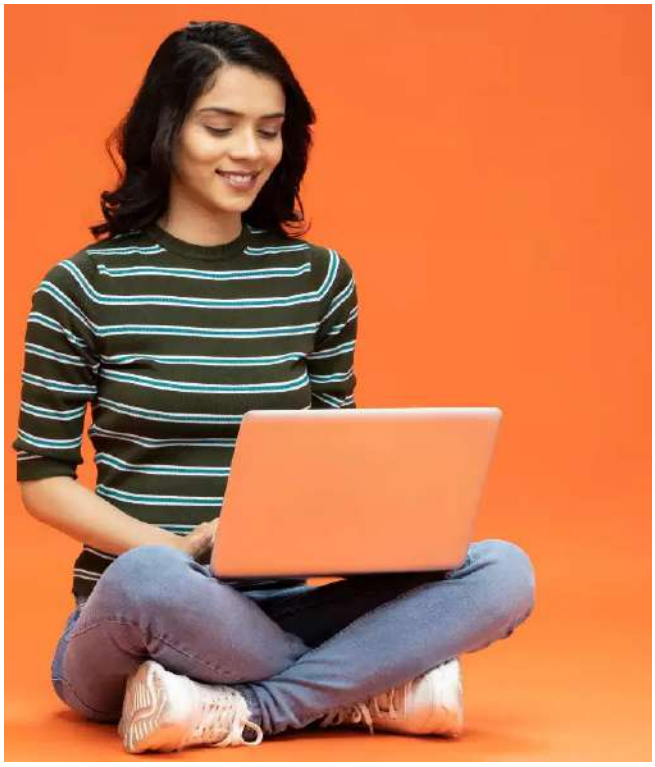
Main differences between TOEFL and IELTS

TOEFL generally requires that you only use either US English or UK English during your examination and not mix the two, whereas IELTS seems to be a bit more flexible

TOEFL consists mainly of multiple-choice questions and the IELTS has more variation in how questions are formed and answers need to be given

The IELTS exam is shorter than the TOEFL. The IELTS speaking section is done face to face with an examiner.

The two main English language proficiency tests accepted at universities across the world are the Test Of English as a Foreign Language (TOEFL) and the International English Language Testing System (IELTS). Achieving a particular score on one of these tests could help you study in English at the institution of your choice, so it can be an essential



(IELTS). Achieving a particular score on one of these tests could help you study in English at the institution of your choice, so it can be an essential part of the studying abroad process.

The tests and their scoring system differ, so it's good to understand a bit more about them before deciding which one to take.

TOEFL scores

Although a university will ask for an overall TOEFL score, they may also require that you meet a certain number of points in each section.

Test sections of the TOEFL iBT

Universities that require a TOEFL score usually ask you to meet a specific iBT score. iBT stands for the internet-based test and is the latest version of a TOEFL assessment.

It is the preferred test for entry requirements of US universities, and the most widely accepted English proficiency test for higher education.

The TOEFL iBT test is split up by language ability in different areas. You'll be tested across reading, listening, writing and speaking and given a score for each that combine for an overall score.

You must register and book a TOEFL test well in advance as there can be waiting lists for availability in some areas. Registration for a test date closes seven days before that test, so always give yourself plenty of time.

The TOEFL iBT takes around four hours to complete and consists of four skill sections. There is a mandatory break to be taken halfway through. The reading and listening sections can vary in length depending on the number of questions you get.

TOEFL listening section

This section is also scored by a computer but consists of 34-51 tasks based on listening to lectures, classroom discussions and conversations, then answering questions on your understanding of them.

TOEFL reading section

This section is scored by a computer and consists of 36-56 tasks based on reading academic texts and answering questions on your comprehension of them.

TOEFL speaking section

There are six tasks in this section that are scored by a human assessor. The section lasts for 20 minutes.

TOEFL writing section

This section is scored with a human and computer rating to get the best understanding of content and meaning. There are two tasks to complete in around 50 minutes.

IELTS academic

All UK universities accept IELTS academic test scores as a certification of English language ability, however, the level required varies by each institution and their programs. The IELTS academic is also widely accepted in Canada and Europe.

Is TOEFL Harder than IELTS?

TOEFL is harder than IELTS in the listening section. But IELTS vs TOEFL difficulty depends on the preparation of the candidate. Candidates consider the TOEFL Reading section to comprise difficult vocabulary and the TOEFL listening section has comparatively slower audio than natural speech. So, for few aspirants IELTS in comparison to TOEFL is considered easier.

Do Universities Prefer TOEFL or IELTS?

Both TOEFL and IELTS scores are accepted by various universities across the world. Both the exams assess language proficiency. Universities in USA accepts TOEFL scores whereas universities in UK, Australia, Canada, and NZ accept IELTS scores. Applicants can appear for any of the two exams depending on the college they prefer taking admission for

TOEFL vs IELTS Reading Section

Both IELTS and TOEFL reading sections consist of passages and questions followed by it. The TOEFL Reading section offers 3-4 reading passages of approximately 700 words and candidates need to answer around 10 questions followed by each passage. IELTS reading includes three passages. Candidates are required to answer 40 questions in 60 minutes in this test.

IELTS vs TOEFL Speaking Section

TOEFL speaking test will be recorded through a microphone and for the IELTS speaking test there will be a face to face interview between the interviewer and the candidate. The TOEFL speaking test duration is 20 minutes whereas the IELTS speaking test duration is 10-15 minutes. The key difference between TOEFL vs IELTS speaking is the option of the attempt. IELTS speaking test can be taken a week before or after the paper based test. For TOEFL there is no such other.

IELTS vs TOEFL Writing Section

The IELTS writing section consists of 2 writing questions. One writing task consists of an infographic question that requires an answer sample of 150 words. The other writing task consists of argumentative writing that requires an answer sample of 300-350 words. For the TOEFL writing section candidates need to answer 2 writing questions. The first question is to draft 5 paragraphs within 300-350 words. The section question requires a response of 150-225 words. So it is clearly understood that if students are planning to study abroad they will have to qualify these exams with good score.