ENGINEERING

MEDICAL

PHARMACY

ARCHITECTURE

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EDUCATION INSTITUTE

CAREER IN SCIENCE

CAREER IN SCIENCE

Career paths in the science can lead to almost any industry from manufacturing, to medicine, to microeconomics. The Career Cornerstone Centre offers resources to explore career paths in science, biology, chemistry, the geoscience, physics, and science technology.

➲ *Various Field in Science :*
  ➢ Engineering and Technology
  ➢ Medicine and Paramedicine
  ➢ Pharmacy
  ➢ Architecture
  ➢ Pure Science

➲ *Important Thing For Career Planning :*
  ➢ Interest
  ➢ Priorities
  ➢ Abilities
  ➢ Work Environment Preference
  ➢ Passion
  ➢ Skills
  ➢ Attitude
  ➢ Values and Lifestyles
  ➢ Work Your Career Option
  ➢ Availability Of Jobs

➲ *Role of Parents :*
  ➢ Encourage your child to pursue extracurricular activities
  ➢ Cultivate productive habits
  ➢ Take help of professional counselor
  ➢ Be open to the inclination of the child

MEDICAL (AS A CAREER)

➲ *Introduction :*
  ➢ The word medicine is derived from the word "medicina", meaning the art of healing.
  ➢ Medicine is the field of applied science related to the art of healing by diagnosis, treatment and prevention of disease. It encompasses a variety of health care practices evolved to

maintain and restore health by the prevention and treatment of illness in human beings.

➢ Contemporary medicine applies health science, biomedical research, genetics and medical technology to diagnose, treat, and prevent injury and disease, typically through medication or surgery, but also through therapies as diverse as psychotherapy, external splints and traction, prostheses, biologies, pharmaceuticals, ionizing radiation among others.

⮕ *Scope :*

List of Popular Medical Courses in India

Courses	Award	Duration in years
Bachelor of Medicine and Bachelor of Surgery	M.B.B.S	5 ½ years
Bachelor of Dental Surgery	B.D.S.	4 years
Bachelor of Homeopathic Medicine & Surgery	B.H.M.S.	5 ½ years
Bachelor of Ayurvedic Medicine and Surgery	B.A.M.S.	5 ½ years
Doctor of Medicine	M.D.	3 after M.B.B.S.
Master of Surgery	M.S.	3 after M.B.B.S.

To seek admission into any of the medical courses in India a student has to pass through an Entrance Test. There may be multiple Entrance exams a student can prepare to seek admission into medical courses like AIPMT, AFMC, AIIMS, JIPMAR, etc. Currently, India has 271 Medical colleges (138 Govt. Colleges + 133 Private Collages), offering a total of over 31000 MBBS seat.

⮕ *Careers in Medicine and Paramedicine :*

➢ Surgery Medicine
➢ Anaesthetist Medicare
➢ Neurologist
➢ Pathologist
➢ Gynaecologist – Obstetrician
➢ Orthopaedist
➢ Radiologist
➢ Venerologist
➢ Chiropodist

➢ Dentistry Medicine
➢ Psychiatrist Medicines
➢ Paediatrician Medicine
➢ Cardiologist
➢ Dermatologist
➢ Gastroenterologist
➢ ENT Specialist
➢ Ophthalmologist
➢ Physiologist

➢ Bacteriologist

➢ Veterinary physician

➢ Occupational therapist

➢ Nutritionist

➢ Physiotherapist

➲ *Eligibility :*

➢ The candidate must be at least 17 years of age as on December 31 of the year of entrance examination and is on Indian National.

➢ The candidate must have passed 10+2 Senior School Certificate Examination / Intermediate Science or an equivalent examination from a recognized board of university of any Indian state with a minimum of 50% marks taken together in Physics, Chemistry and Biology / Bio-technology.

➲ *Admission Procedure :*

➢ Direct On line Enrollment with Director of Medical Education and Research.

➢ www.aipmt.nic.in

➢ Enrollment for AIPMT in month of November / December.

➢ Enrollment for AIIMS in month of February.

➢ For Medical admission visit www.dmer.org.

➲ *Exam Overview (NEET) :*

Exam Pattern	Exam Months	Subjects	No. of MCQ	Marks Per MCQ	Total Marks	Duration (Hrs.)	Negative Marking
Multiple Choice Question (MCQ)	May	Physics	45	4	180	3	1 Mark Per MCQ
		Chemistry	45	4	180		
		Botany	45	4	180		
		Zoology	45	4	180		
			180		**720**		

➲ *Top 10 Medical Colleges in Maharashtra :*

1. Armed Forces Medical, Pune.
2. Seth Gordhandas Sunderdas Medical College and King Edward Memorial Medical College, Mumbai.
3. Grant Medical College and Sir JJ Group of Hospitals, Mumbai.
4. Lokmanya Tilak Municiple General Hospital and Lokmanya Tilak Municipal Medical College, Mumbai.
5. Topiwala National Medical College and B Y L. Nair Charitable Hospital, Mumbai.

6. Padmashree Dr. D. Y. Patil Vidyapeeth, Navi Mumbai.
7. Kasturba Health Society Mahatma Gandhi Institute of Medical Sciences, Sevagram.
8. Byramjee Jeejabhoy Goverment Medical College and Sassoon General Hospital, and College of Nursing, Pune.
9. Government Medical College, Aurangabad.
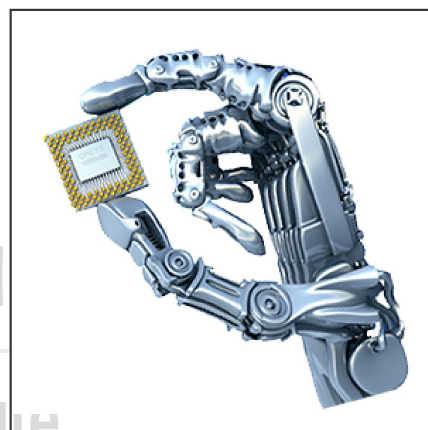10. Krishna Institute of Medical Sciences Deemed University, Karad.

➲ *No. of seats available for different courses in Mumbai and Pune :*

City	MBBS	BAMS	BDS
Mumbai	600	160	160
Pune	200	140	150

ENGINEERING (AS A CAREER)

➲ *Introduction :*
  ➢ Engineer literally means to "make things happen".
  ➢ Engineer is about design and production of useful product and service.
  ➢ Engineering know-how converts scientific knowledge into technology and then technology into successful invention.
  ➢ From information technology to Medical Science and mining, from buildings roads to space travel, everything comes under Engineering.

➲ *Scope :*
  ➢ Electrical / Electronics / Electronics and Telecommunication Engineering
  ➢ Mechanical Engineering
  ➢ Automobile Engineering
  ➢ Marine Engineering
  ➢ Computer / IT Engineering
  ➢ Civil Engineering
  ➢ Chemical Engineering
  ➢ Aeronautical Engineering
  ➢ Industrial Engineering
  ➢ Metallurgical and Materials Engineer
  ➢ Mining Engineering
  ➢ Agriculture Engineering
  ➢ Biotechnology

- For all the above mentioned Engineering Branches Degree Awarded is B.E. and duration for each of the above branches is 4 years.
- To seek admission into any of the Engineering courses in India a student has to pass through an Entrance Test.
- JEE-Mains (for all other Engineering Institute expect IIT's) & JEE – Advance (applicant only for IIT's).
- Currently, India has 16 IIT's, 1 ISM, 30 NIT's, 5 IIT's, 13 Central / State Govt. Engineering Collages and 354 Engineering Collages in Maharashtra.

➲ *Eligibility :*

➢ The candidate must be at least 17 years of age as on December 31 of the year of entrance examination and is a Indian National.

➢ The candidate must have passed 10+2 Senior School Certificate Examination / Intermediate Science or an equivalent examination from a recognized board or university of any Indian state.

➢ Minimum 50% marks should be secured compulsory in physics and maths along with any one of the following subject.

    (a) Chemistry
    (b) Bio-Technology
    (c) Any Bifocal Subject

➲ *Admission Procedure :*

➢ Direct On line Enrollment with CBSE
➢ http: // jeemain.nic.in
➢ For Engineering admission visit http: // miemaharashtra.gov.in

➲ *Exam Overview :*

➢ **JEE Main**

Exam Pattern	Exam Months	Subjects	No. of MCQ	Marks Per MCQ	Total Marks	Duration (Hrs.)	Negative Marking
Multiple Choice Question	April	Physics	30	4	120	3	1 Mark Per MCQ
		Chemistry	30	4	120		
		Maths	30	4	120		
			90		**360**		

> **MHT-CET**

Exam Pattern	Exam Months	Subjects	No. of MCQ	Marks Per MCQ	Total Marks	Duration (Hrs.)	Negative Marking
Multiple Choice Question	May	Physics	50	1	50	3	No Negative Marking
		Chemistry	50	1	50		
		Maths	50	2	100		
			150		**200**		

⮞ *List of Top Engineering Colleges in Mumbai :*

1. Indian Institute of Technology (IIT), Powai, Mumbai.
2. Institute of Chemical Technology (ICT), Matunga, Mumbai
3. Veermata Jijabai Technological Institute (VJTI), Matunga, Mumbai
4. Sardar Patel College of Engineering, Andheri, Mumbai.
5. D. J. Sanghvi College of Engineering, Juhu, Mumbai.
6. Thadomal Shahani Engineering Colleges, Bandra, Mumbai.
7. Don Bosco Institute of Technology, Kurla, Mumbai.
8. Vivekananda Education Society's Institute of Technology, Chembur, Mumbai
9. K. J. Somaiya College of Engineering, Vidyavihar, Mumbai.
10. Fr. Conceicao Rodrigues College of Engineering, Bandra, Mumbai.
11. Agnel Charities' FR. C. Rodrigues Institute of Technology, Vashi, Mumbai.
12. St. Francis Institute of Technology, Borivali, Mumbai.
13. Manjara Charitable Trust's Rajiv Gandhi Institute of Technology, Andheri, Mumbai.

PHARMACY (AS A CAREER)

⮞ *Introduction*

Pharmacy is versatile, dynamic, growing and increasingly diverse profession, one which creates an excitement because there are so many opportunities for service. It is an age old profession which has transformed into a hub for "Global Healthcare" and evolved as a multidisciplinary and multifaceted field in

recent times. With the phenomenal rate of advances in the pharmaceutical industry, the health sector has thrown open a sea of opportunities of pharmacy Professionals.

● *Scope :*

One need to complete undergraduate level studies with B. Pharm degree and post graduation with the degree of M. Pharm. According to recent developments there is also an option to pursue MBA in Healthcare Sciences.

● *Areas of Opportunity :*

- Biometrics
- Education
- Health Economics
- Health Information
- Health Maintenance Organization / Managed care
- Hospice / Palliative Care / Pain Management
- HMOs and PBMs
- Hospital Pharmacy
- Legal Research
- Neuropharmacology
- Mail Order
- Patient Management
- Sales and Marketing
- Veterinary care

- Community Pharmacy (Ambulatory care)
- Government
- Health-Care Administration
- Home care / Infusion therapy
- Industrial / Pharmaceutical Companies
- Long term Care
- Primary Care / Pediatrics / Geriatrics
- Management
- Regulatory affairs (e.g. FDA)
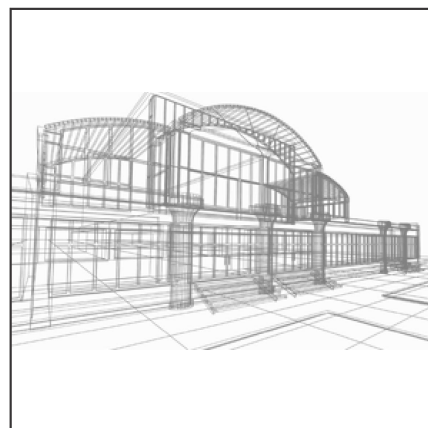- Specialty Compounding
- Clinical Research

● *Top 10 Colleges in Maharashtra :*

1. Bombay College of Pharmacy, Kalina, Santacruz (E), Mumbai.
2. University Deptt. of Chemical Tech. (U.D.C.T.) University of Bombay, Nathalal Parikh Marg, Matunga, Mumbai
3. K.M. Kundnani College of Pharmacy, Cuffe Parade, Mumbai.
4. Mumbai Educational Trust's, Institute of Pharmacy, Bandra (W), Mumbai,
5. C.U.Shah College of Pharmacy S.N.D.T. women's university, Santacruz (W), Mumbai.
6. Bharati Vidyapeeth's College of Pharmacy, Sector 8, C.B.D., Thane
7. Parshvanath Charitable Trust's Veer Mara Hiraben P. Shah College Of pharmacy, Sonarpada, Thane.
8. N.D.M.V.P. Samaj's College of Pharmacy, MVP Campus, Nashik.
9. Jagdamba Education Society's S.N.D. College of Pharmacy, Nashik.
10. Shri Neminath Jain Brahmacharyashram's Trust, College Of Pharmacy, Neminagar, Nashik .

ARCHITECTURE (AS A CAREER)

○ *Introduction :*

At its simplest, architecture is the design of buildings, groups of buildings and often the space between buildings. But the scope of architecture goes well beyond just the drawing of plans. Architecture takes imagination; the ability to order ideas and communicate them clearly; creativity (not necessarily artistic ability); a keen interest in human behaviour, our habitat and the natural environment; and problem solving skills.

○ *Entrance Test :*

The general entrance exam for architecture in India is the NATA (National aptitude Test). The test scores, along with the class XII scores comprise the eligibility of applicants for the undergraduate course in Architecture (B.Arch).

○ *Exam Overview :*

➢ **For IITs, NIT and SPAs**

Part	Subject	Question Type	No. of MCQ	Marks per MCQ	Total Marks	Duration
Part I	Mathematics	MCQ	30	4	120	3 Hours
Part II	Aptitude test	MCQ	50	4	200	
Part III	Drawing test	Drawing Aptitude	02 (Memory, 2D Design)	70	140	

➢ **Other Institute :** NATA score + marks of qualifying examination.

○ *Top Institute in Maharashtra for Architecture :*

1. Rizvi College of Architecture, Mumbai
2. LS Raheja School of Architecture, Mumbai
3. Indian Institute of Technology, Kharagpur
4. Sir JJ College of Architecture, Mumbai
5. Kamla Raheja Vidyanidhi Institute of Architecture, Mumbai

6. Balwant Sheth School of Architecture, Mumbai
7. Visvesvaraya National Institute Of Technology, Nagpur
8. Rachana Sansad Academy of Architecture, Mumbai

CAREER IN PURE SCIENCE

1. B.Sc. Home Science
2. B.Sc. Nautical Sciences
3. B.Sc. Statistics
4. B.Sc. Hospitality studies
5. B.Sc. Aviation
6. B.Sc. Biochemistry
7. B.Sc. Mari-time Hospitality Studies
8. B.Sc. Forensic Science
9. B.Sc. Biomedical Science
10. B.Sc. Mari-time Science
11. B.Sc. Economics
12. B.Sc. Architecture
13. B.Sc. Computer Science
14. B.Sc. Information Technology
15. B.Sc. Nursing
16. B.Sc. Sports Management
17. B.Sc. Bio-Technology
18. B.Sc. Physical Therapy
19. B.Sc. Physics
20. B.Sc. Chemistry
21. B.Sc. Maths
22. B.Sc. Zoology
23. B.Sc. Botany

After the completion of the B.Sc. degree there are various options available for the science i.e. M.Sc., MBA, MS, go in research area and can even look for professional job oriented courses.

○ *How to reach success :*

When rail roads were first invented engineers started to notice that the rail lines break at different points with no apparent reason. When they investigated further they found that sunlight resulted in the expansion of the metal forming the rail causing a pressure that breaks the line at its weakest points. As a walk around, rail roads were redesigned to include slots that allows the expansion and contraction of the metal without breaking it. So you might be asking yourself what does this has to do with reaching success? The moral of the story is simple; reaching successes only a matter of failing first then modifying your approach to become successful!!

○ *Success comes after failure :*

Of course there might be few people out there who succeeded from the first attempts but the majority of successful people failed many times before they managed to reach success. A very large percentage of billionaires faced financial troubles at many points in their lives and some of them even lost all of their money and had to start all over again. Learning is all about making mistakes first then knowing how to avoid these mistakes in the future. You have to do things wrong before you can learn how to do them the right way and thus in order to reach success you must first know how to not become successful. Do you remember the first time you tried to ride a bicycle or use a skateboard? How many times did you fall? How many things have you done wrong?

○ *Dealing with failure :*

- ➢ Forget about what people say
- ➢ Try again
- ➢ Motivate yourself
- ➢ Stop worrying

"Change can start with ourselves and can begin only from within"

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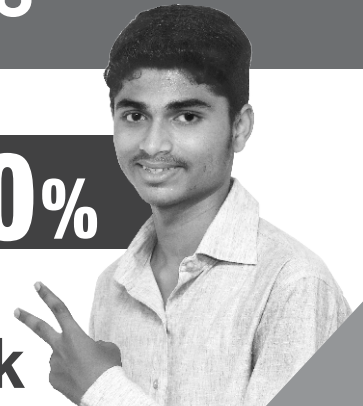
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