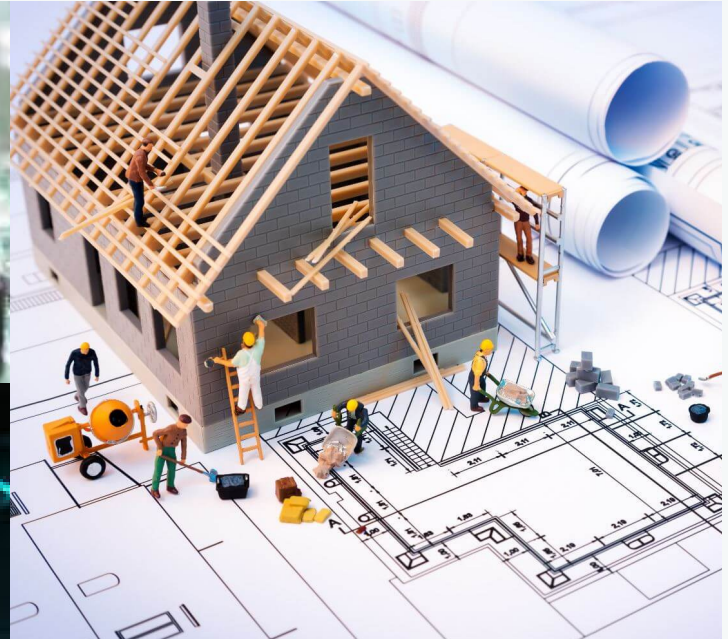


# THE EDUCAFE TIMES



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### THE BIG INDIAN DREAM OF ENGINEERING.

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### Message from the Editor

Hello Readers!

We bring to you another edition of Educafe Times, talking about the pros and cons of the big Indian dream of Engineering. Hope we are able to clear your doubts regarding this career. This edition also has a puzzle for our math enthusiasts. Solve it and send your answer to [educafestudentsolutions@gmail.com](mailto:educafestudentsolutions@gmail.com) and we will post your answer along with your name and photo.

Happy Reading!

## The Big Indian Dream of Engineering.

*"Scientists investigate that which already is; Engineers create that which has never been" – Albert Einstein*

Engineering has long been a sought after career and has been one of the troika of Engineering, Medicine and Law, which all parents [especially Indian] wanted their children to aspire for.

The large number of students still appearing for the JEE every year seems to imply that the career scene has not changed too much, over the years. Why is this so? This is because Engineering is the Art of applying scientific principles to everyday things, to make life easier and simpler. It is a multi-disciplined field which allows one to use one's creative thinking and engineering skills, work as a part of a team, travel, make a difference and earn a good salary. In short, Engineering is a great career.

Down the years, Civil, Mechanical, Electrical, Electronics and Computer Science have been the most popular branches of Engineering. However, with the advancement of science and technology, new disciplines and branches are being added and have gained immense popularity.

### The Career Path

To pursue a career in Engineering, one should study Science in their 11th /12th or at the +2 level with three compulsory subjects- Physics, Chemistry and Mathematics.

- At the end of the 11th /12th or +2, take up the relevant Engineering entrance exam. These exams are conducted either at the state level or at the national level [JEE Main /JEE Advanced]. Subjects for these exams would be Physics, Chemistry and Mathematics with varying syllabi.

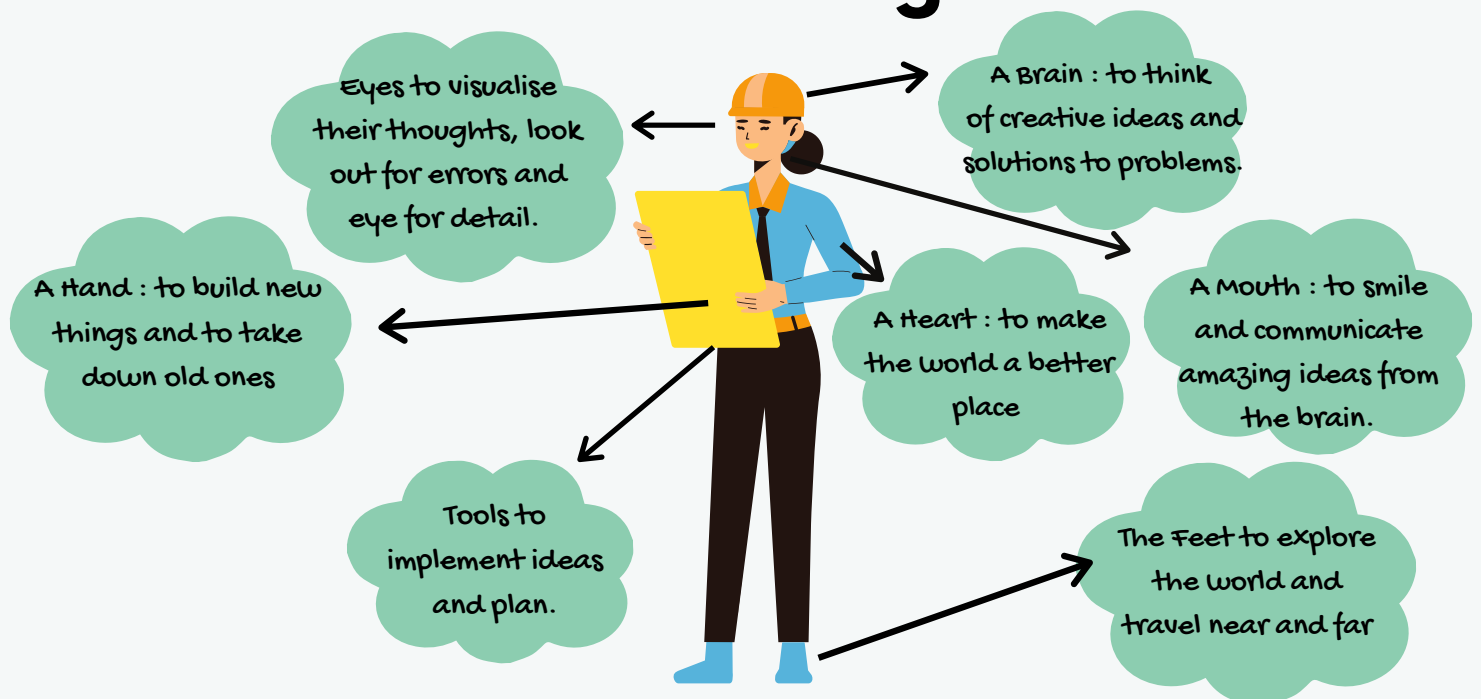
## SKILL SET REQUIRED BY ENGINEERS.

Computer Knowledge  
Problem-solving skills  
Critical reasoning  
Creativity  
Ability to handle pressure  
Attention to detail  
Interpersonal skills  
Industry skills  
Teamwork  
Communication  
Educational commitment  
Data modelling  
Leadership  
Innovation  
Resilience

- Some private or autonomous colleges /Universities conduct their own entrance examinations.
- These exams rank you based on your performance.
- Scores in the 11th /12th or +2 exam and the entrance exam ranking, influence the options available in terms of colleges and branches/streams.
- After a Bachelors' in Engineering, [B.E./B.Tech] one can do a post-graduation in Engineering, either in India or abroad, and specialize in the engineering branch /specialization that interests them or they could start working in a related field. Admission to Universities abroad is done on the basis of an entrance exam and an English Language Test like IELTS or TOEFL. The entrance exams may vary from country to country. It is always good to choose colleges that offer scholarships as there are various countries that do not allow international students to take up jobs after completing the undergraduate programs.

Irrespective of trends in the markets, engineers are always in demand especially those in Electrical, Electronics, Civil, Mechanical and Computer Science fields. Growth opportunities are vast, as India is an open economy with multinationals opening their offices in India.

## Parts of an Engineer



Engineering can be a demanding career as one might have to stay for long hours in the office /worksite while they fix the problem. One might have to stay away from home for projects that require onsite engineers.

Though all good institutes have campus placements, yet not all engineers are well placed. Today, MBA has almost become synonymous with engineering. Most engineers opt for MBA after engineering and therefore demand for engineers without an MBA has dropped sharply.

To put in a nutshell, **an engineering career is a constant love affair between a man and his machines.**

# THE BRANCHES OF ENGINEERING

- Building & Construction Technology
- Ceramic Technology
- Chemical Engineering
- Civil Engineering
- Computer Science Engineering
- Dairy Technology
- Electrical Engineering
- Electronics Engineering
- Electronics & Telecommunication
- Electronics & Communication
- Metallurgy & Materials Science
- Metallurgical Engineering
- Mechanical Engineering

- Aerospace Engineering
- Architecture
- Agricultural
- Automobile Engineering
- Automation & Robotics
- Bio-Chemical Engineering
- Bio-Medical Engineering
- Bio-Technology
- Bio-Informatics
- Electronics & Instrumentation
- Environmental Engineering
- Energy
- Fire Technology
- Food Technology
- Industrial Engineering
- Information Technology
- Instrumentation & Control
- and many more.....

## Meet the Professional- Srikanth Varadarajan

*In conversation with Srikanth Varadarajan, an automobile engineer who completed his Bachelors in Mechanical Engineering from Sir MVIT (Bangalore). He has been working with Kautex Textron for the past 9 years and currently holds the position of Engineer manager at Kautex Textron (United Kingdom).*



### 1. When did you decide that you wanted to become an engineer? Specifically, an automobile engineer?

During high school I was very interested in working on projects where we could build electronic and mechanical models. This made me think of Engineering where one could use their skills to work on similar projects, even on a professional platform.

I chose Automobile Engineering after the first day in College where I was introduced to Computer Aided Design engineering. It was fascinating to be able to create designs of cars or parts which one could only imagine or conceptualize.



### 2. What made you choose this profession? Or why do you like engineering?

The concept of engineering exists in our everyday activities, that all of us encounter on a daily basis. I chose Engineering to be able to understand these concepts and apply them to improve people's lives or to solve problems. I initially chose Engineering to be able to learn the skills required to build designs and technology concepts.

### 3. Any message to a young engineering aspirant in India?

Join engineering not just to complete the course but to learn the basic skills required to improve or solve problems in the world. Choose one such topic before you join Engineering and try to find the solution or answer for it by the time you graduate. This activity might also give you ideas for startups or your own venture.



#### 4. Is unemployment for engineers a serious topic? Or are there jobs available for engineers with reference to the Indian context ?

There is a simple rule when it comes to Engineering and jobs in engineering. **Evolve or perish**. We need to update our information and technology all the time. Things are evolving and changing so rapidly, that if after college, we sit back thinking that we have finished with our studying, we will be in for a big shock. Take the evolution of car keys for example. From 1960-2010 most or all cars had mechanical keys to open car doors. Since 2010 all cars use electronic keys. They still require automotive/ mechanical engineers to design the systems, but the skills required for this job are a combination of mechanical and electronic engineering. This gave rise to the branch of mechatronic engineering which is the future of automotive/ mechanical engineering. The professionals who updated their skills and evolved, have survived this change and do not need to be worried about unemployment. India is in dire need of Engineers who have the skills and technical knowledge of future technologies. We need to make sure that we learn more about newer technologies and acquire the skills which are needed to improve the country and support the growth/development of the young enthusiastic population.

Want to more know about his work? Here's the [link](#).

## Career Queries

by : Dr. Sudha Bhogle



**Q. I am in my final year B. Pharm. As my course is about to finish, I would like to know what all I could do in the future. Can you please suggest which course is better for me to do, after a B. Pharm?**

**A.** Hello, there are several opportunities available to you after a B. Pharm. You have the following course options open to you - start working or do your M. Pharm, MBA, or B.Tech (in Biotechnology and Bioinformatics).

Some of the career options available after B. Pharm are: Academics, Pharmacist, Sales and Marketing, Clinical Research, Quality Assurance, Health Manager, Medical Transcription, Analytical Chemist or Quality Control Manager. Which course you take would depend on what you would like to do and also on the marks you obtain in your B. Pharm exams. With globalization and the healthcare industry opening up, there are numerous careers that you could choose from. To be able to guide you further, we need more information on why you chose B. Pharm, what aspect of the career interests you etc.

Remember that apart from your interests; your abilities, personality, and work values should play a role when you make your choice, for you to succeed. Since you are so uncertain, meet a competent career counselor who would help and guide you to make an informed choice regarding which career you would be best suited for, based on your interests and your potential.

Wish you all success

## LEARNING WITH FUN

### Riddles

1. What do you throw out when you want to use it but take in when you don't want to use it?
2. What question can you never answer "yes" to?
3. What can travel around the world while staying in a corner?

Answers: 1. An Anchor, 2. Are you sleeping?, 3. a stamp

How quickly can you solve this, using each number given, only once?

1, 2, 2, 4, 6, 7, 7, 8, 9

$$\boxed{\phantom{0}} + \boxed{\phantom{0}} \div \boxed{\phantom{0}} = 2$$

x                      +                      +

$$\boxed{\phantom{0}} - \boxed{\phantom{0}} + \boxed{\phantom{0}} = 5$$

-                      +                      +

$$\boxed{\phantom{0}} + \boxed{\phantom{0}} - \boxed{\phantom{0}} = 13$$

=7                      =15                      =15

**Did you know?** *The Ferris Wheel is considered one of the greatest engineering wonders in the world? The first Ferris Wheel was created by Pittsburgh, Pennsylvania engineer, George W. Ferris, in 1893. The wheel is supported by two 140-foot steel towers and connected by a 45-foot axle -- the largest single piece of forged steel ever made at that time.*



**Q.** I am a student of 2nd year B. Com. I am planning to do my C.A. but I am confused as to whether I should do it now (simultaneously with B. Com) or after completing my B.Com. I am also concerned about the time factor involved in the C.A. course. I personally would prefer to do my C.A. after completing my B.Com. because my college timings are such that I will only be able to concentrate on one syllabus (either B.Com or C.A.), but I am afraid that if I do my C.A. after B.Com. it might take a very long time to complete the course.

**A.** With globalization and the concerns about the economy, careers in the area of finance and accounts are becoming popular and the most prestigious career option in this field is Chartered Accountancy. The CA program is offered by the Institute of Chartered Accountants of India (ICAI: <http://www.icai.org>).

The entire C.A. course has undergone tremendous changes in the last few years. Soft skills training, is also now mandatory.

While it is definitely possible to do your CA along with B.Com., how well you fare in both would depend on your abilities, and more importantly, your motivation. CA is a professional and taxing course. If you honestly believe that you would not be able to do justice to both the courses, then, since you are in the 2nd year, finish your B.Com. and then join for your C.A. course. This would imply a one-year difference, which may be a better choice than trying to do the two simultaneously, and failing in both. In the meantime, do other one-year courses, either in the area of finance or personality development and communication. These would help you become a better C.A.

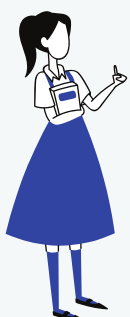
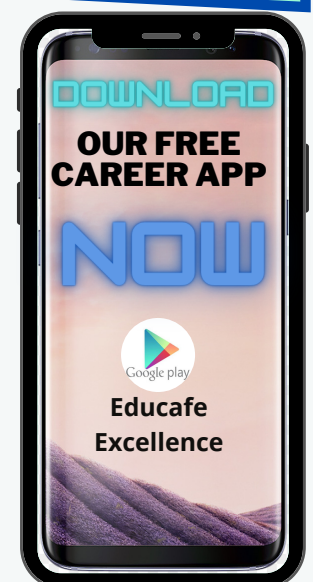
However, if you are willing to work very hard and do your best, you can think of doing them simultaneously. So make an informed decision regarding your career path.

All the BEST.

*In our  
next  
Edition*



We will talk about the career of this person. Can you guess?



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