

Name

Name Comes Here

LODESTAR

Career Guidance

ENGINEERING BRANCH SELECTOR TEST REPORT



Table of Contents

Page No. Content

1	Engineering Branch Selection
2	Your Test Results <ul style="list-style-type: none">• Your RIASEC code• Your Aptitude Test Scores
3	Engineering Branch Recommendation
4	Engineering Branch Description
6	The Next Steps
7	Career Guidance Test <ul style="list-style-type: none">• The Science behind the Test• RIASEC Test• Aptitude Test
13	About Lodestar

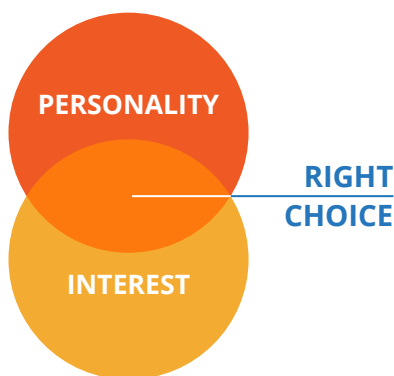
Engineering Branch Selection

The Importance & Science Behind it.

Engineering both as an area of study and career has been gaining more importance over the last 20 years. This has resulted in an unprecedented growth in engineering colleges and courses. With over 30 different kinds of engineering branches across 5000 engineering colleges available now, it is of utmost importance to know and understand what kind of engineering degree will be suitable for you.

Not all engineering branches are the same though! The subjects you will study, the kind of degrees you will be eligible for at the Masters level, the companies that will hire you - all will differ from branch to branch. While information about colleges and their ranking is widely available, understanding the different options of engineering is a bit more tricky.

This report helps you to understand the right engineering branch suitable for your personality and aptitude. Choosing the correct branch will enable you to realize your full potential and study subjects that suit your personality, interest and aptitude. The right branch will also give you a great platform for future educational and career choices.



Studying the right branch will enable you to be good at it and which will then help you to get a better job/placement.

Your best-fit branch is based on these two key parameters **Personality and Interest**

Vocational Personality

Vocational Personality or Vocational Interest is your personality which is related to the type of work you are most suited to do. This tells what kind of work you will be successful in in the future. Based on the type of careers you are most suited to we have determined the type of engineering stream that is the best-suited for you.

Aptitude

Every person has some aptitude. Finding out your aptitude and selecting the right branch accordingly is very important. We have measured your aptitudes on five dimensions – Numerical, Logical, Reasoning, Verbal, Spatial and Mechanical. Each engineering job needs a different combination of abilities and this is taken into consideration while determining the aptitude suitability.

A detailed description of the parameters of Personality and Aptitude is given at the end.

Your Test Results

Your Vocational Personality Code: **A E I**

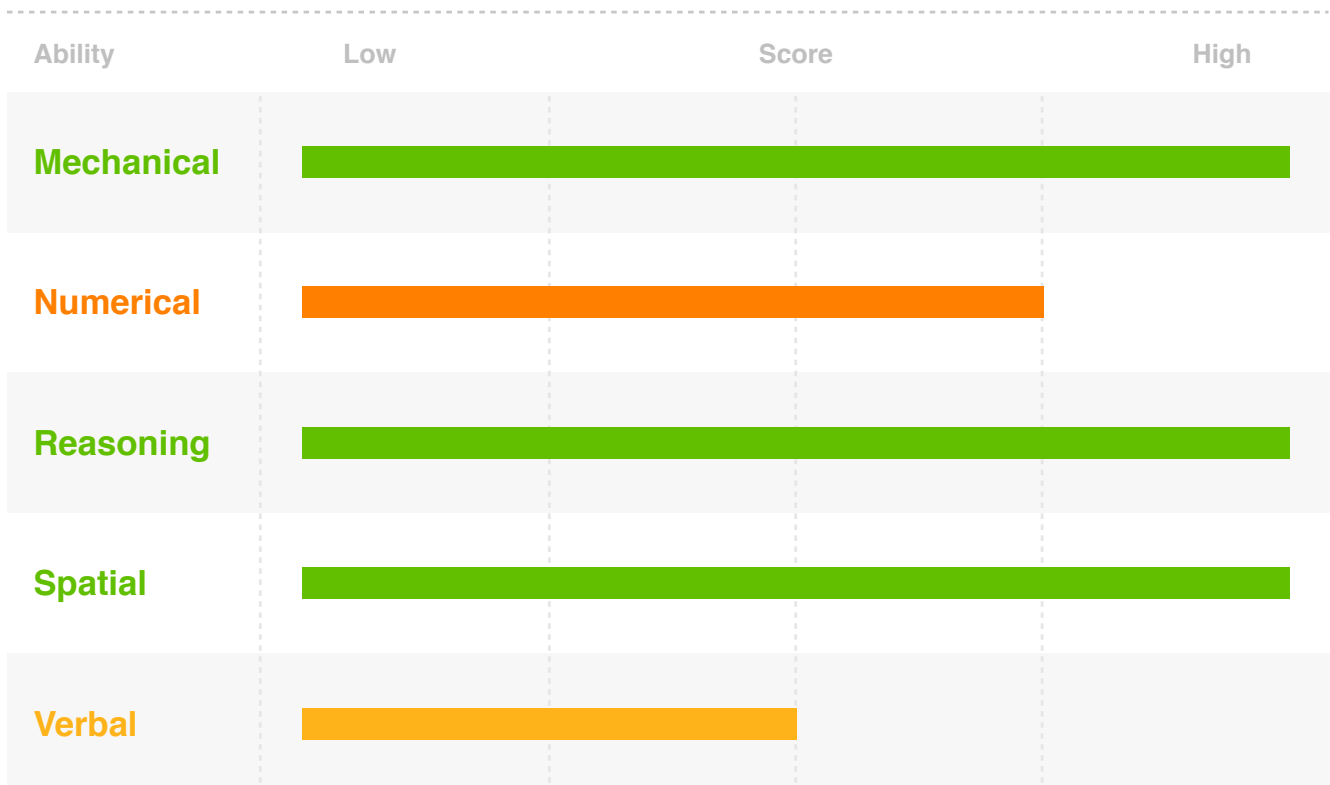
Artistic Enterprising Investigative

According to your code, you like working in environments that have variety and change as compared to a repetitive environment. Artistic people are creative and imaginative. You tend to value and enjoy aesthetics. Also, you enjoy initiating projects and convincing others to jump on board. Competitive and dynamic work environment is something you will enjoy working in. As an investigative individual you also enjoy exploring ideas, uncovering facts and establishing theories.

Characteristics: **Intuitive, Creative, Persuasive, Confident, Reserved, Independent**

Aptitude Test Results

Your aptitude test covered 5 very important areas like Verbal ability, Numerical Ability, Logical Reasoning, Spatial Ability and Mechanical Ability. Apart from your knowledge in different subjects these aptitudes are very important for success in your future career and studies.



Engineering Branch Recommendation

Based on your Personality your BEST FIT Engineering branches are

Engineering Branch	Related Branches
Aeronautical Engineering	Aerospace, Avionics, Electronics
Aerospace Engineering	Aeronautical, Avionics, Electronics
Mechanical Engineering	Automobile, Mechatronics, Industrial
Architecture	Architecture

The Engineering Branch selector test has matched your Vocational Personality and aptitude scores with **all the following** engineering branches before recommending the above Best-Fit options.

Aeronautical Engineering	Aerospace Engineering	Agricultural Engineering	Architecture	Computer Science (AI)
Automobile Engineering	Avionics Engineering	Biotechnology	Biomedical Engineering	Chemical Engineering
Civil Engineering	Computer Engineering	Electrical Engineering	Electronics Engineering	Environmental Engineering
Food Technology & Engineering	Industrial Engineering	Marine Engineering	Mechanical Engineering	Mechatronics Engineering
Mining Engineering	Petroleum Engineering	Production Engineering	Robotics & Automation Engineering	Computer Science
Electronics & Communication Engineering	Textile Engineering	Structural Engineering		

The related branches mentioned above are similar in course content and are other names that some colleges use for these branches.

Engineering Branch Description

Description of your Recommended Branches



Aeronautical Engineering

Description Aeronautical Engineering is the study that involves researching, designing, constructing, testing, and manufacturing of the aircraft within Earth's atmosphere. It also covers the investigation into aerodynamic elements of aircraft, including behaviours and related factors such as control surfaces, lift, airfoil, and drag.

Typical subjects studied include Materials sciences, Propulsion, Structural Analysis, Fluid Dynamics, Automatic Control and Guidance, Aircraft Performance and Aircraft Structures.

Special / Technical skills needed for this engineering degree include knowledge of CAD /CAM software.

Career Scope Aeronautical engineers go on to work for companies such as Boeing, Airbus, Air India, Indigo, AirAsia and organisations such as Civil Aviation Department, ISRO, DRDO and HAL. Typical career choices for this branch will include Aircraft Engineer, Thermal Design Engineer, Aircraft Production Manager, Aerospace Design Checker.

Further Education Students can also pursue further education - ME / M Tech in the following areas - Mechanical, Electronics, Aerospace, Avionics etc

Aerospace Engineering

Description Aeronautical Engineering is the study that involves researching, designing, constructing, testing, and manufacturing of the aircraft within Earth's atmosphere. It also covers the investigation into aerodynamic elements of aircraft, including behaviours and related factors such as control surfaces, lift, airfoil, and drag.

Typical subjects studied include Materials sciences, Propulsion, Structural Analysis, Fluid Dynamics, Automatic Control and Guidance, Aircraft Performance and Aircraft Structures.

Special / Technical skills needed for this engineering degree include knowledge of CAD /CAM software.

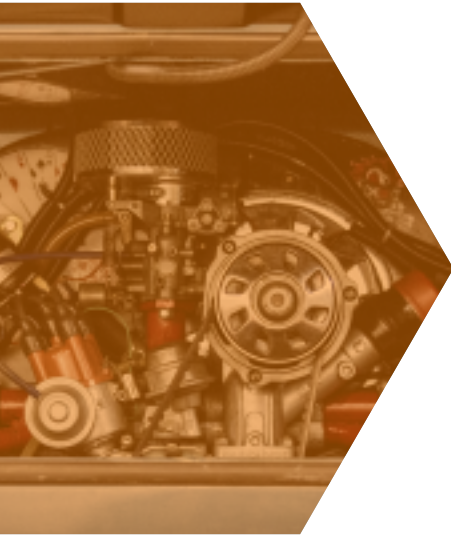
Career Scope Aeronautical engineers go on to work for companies such as Boeing, Airbus, Air India, Indigo, AirAsia and organisations such as Civil Aviation Department, ISRO, DRDO and HAL. Typical career choices for this branch will include Aircraft Engineer, Thermal Design Engineer, Aircraft Production Manager, Aerospace Design Checker.

Further Education Students can also pursue further education - ME / M Tech in the following areas - Mechanical, Electronics, Aerospace, Avionics etc



Engineering Branch Description

Description of your Recommended Branches



Mechanical Engineering

Description Aeronautical Engineering is the study that involves researching, designing, constructing, testing, and manufacturing of the aircraft within Earth's atmosphere. It also covers the investigation into aerodynamic elements of aircraft, including behaviours and related factors such as control surfaces, lift, airfoil, and drag.

Typical subjects studied include Materials sciences, Propulsion, Structural Analysis, Fluid Dynamics, Automatic Control and Guidance, Aircraft Performance and Aircraft Structures.

Special / Technical skills needed for this engineering degree include knowledge of CAD /CAM software.

Career Scope Aeronautical engineers go on to work for companies such as Boeing, Airbus, Air India, Indigo, AirAsia and organisations such as Civil Aviation Department, ISRO, DRDO and HAL. Typical career choices for this branch will include Aircraft Engineer, Thermal Design Engineer, Aircraft Production Manager, Aerospace Design Checker.

Further Education Students can also pursue further education - ME / M Tech in the following areas - Mechanical, Electronics, Aerospace, Avionics etc

Architecture

Description Aeronautical Engineering is the study that involves researching, designing, constructing, testing, and manufacturing of the aircraft within Earth's atmosphere. It also covers the investigation into aerodynamic elements of aircraft, including behaviours and related factors such as control surfaces, lift, airfoil, and drag.

Typical subjects studied include Materials sciences, Propulsion, Structural Analysis, Fluid Dynamics, Automatic Control and Guidance, Aircraft Performance and Aircraft Structures.

Special / Technical skills needed for this engineering degree include knowledge of CAD /CAM software.

Career Scope Aeronautical engineers go on to work for companies such as Boeing, Airbus, Air India, Indigo, AirAsia and organisations such as Civil Aviation Department, ISRO, DRDO and HAL. Typical career choices for this branch will include Aircraft Engineer, Thermal Design Engineer, Aircraft Production Manager, Aerospace Design Checker.

Further Education Students can also pursue further education - ME / M Tech in the following areas - Mechanical, Electronics, Aerospace, Avionics etc



The Next Steps

Now, after getting this engineering branch recommendation you should do the following:

1

Talk to a career counselor in case you have any other doubts and finalise your options from the top 4 we have recommended. Keep in mind to opt for these courses when you are going through the online counselling for seat allocation. You can reach us at guidance @lodestar.guru in case you need more clarification.

2

The related branches of engineering listed under each option could be an alternate choice of branch that you can take up.

3

Remember that not all colleges have all branches of engineering. Identify colleges that offer the courses you want to take up. Figure out the multiple ways of getting into that college and cutoffs of the various exams. Eg., many colleges accept JEE Main scores for admission as well as conduct their own entrance exams. This will help you understand the score you need to get into the college for the particular branch.

4

In case you do not get these choices in the college of your preference, do not compromise on the degree to choose a particular college. Choose one of the degrees recommended for you above as this has been scientifically matched to both your personality and aptitude. Remember there is scope for every branch if you are good at it. You will only be good at a branch if that branch is best suited to you and you are interested to study it. It is always preferred to be going to a slightly lower ranked college - but stick to the degree.

5

This mapping is to help you understand your choices in case you want to pursue a core role in engineering. If you are using engineering only as a stepping stone to a different career, then you will need more guidance. Eg., if you want to do MBA or become an IAS officer. There are other factors to be considered and evaluated for such situations. Please feel free to get in touch with us at guidance@lodestar.guru in case you need more clarification.

Career Guidance Test

The Science Behind

RIASEC Test - Vocational Personality Test

This test is based on the internationally approved Holland's theory of Vocational Personalities in Work Environments (RIASEC), commonly known as Holland Codes theory. The RIASEC model maintains that in choosing a career, people search for environments that will let them use their skills and abilities, and express their attitudes and values, while taking on enjoyable problems and roles. The Holland Code is the key, or at least one of the keys, to finding a compatible career.

Holland theory is based on the premise that there are 6 work environments and 6 vocational areas. A good match between the employee's interests and the vocational area will lead to job success and job satisfaction.

The six Vocational Personality types in the RIASEC model are:



An In-depth look into **RIASEC**

The Science Behind



Realistic

A person with this Occupational Interest likes to work with their hands, focus on things in the physical world and use physical skills. They like to explore places and things and frequently have a desire for adventure. They like to repair and make things with their hands, tools, and machines. They prefer outdoor work.

Characteristics

Stable, Assertive, Practical

Investigative

A person with this Occupational Interest tends to focus on ideas. They enjoy collecting and analyzing data and information. They are curious and tend to be creative and original. Investigative types are task oriented, and tend to prefer loosely structured situations with minimal rules or regulations, although some structure contributes to their creativity.

Characteristics

Reserved, Independent, Analytical



An In-depth look into **RIASEC**

The Science Behind



Artistic

A person with this Occupational Interest is the most creative of all the types and tend to focus on self-expression through various forms/mediums: images, materials, music, words, movement, as well as systems and programs. They are able to see possibilities in various settings and are not afraid to experiment with their ideas. They like variety and tend to feel cramped in structured situations.

Characteristics

Intuitive, Creative, Expressive

Social

A person with this Occupational Interest is concerned with people and their welfare. Social types make friends easily and tend to have well developed communications skills. They enjoy working with groups or individuals, using empathy and an ability to identify and solve problems, and tend to be high achievers and good leaders.

Characteristics

Humanistic, Verbal, Interpersonal



An In-depth look into **RIASEC**

The Science Behind



Enterprising

A person with this Occupational Interest is goal-oriented and desires to see results. They work with and through people, providing leadership and delegating responsibilities for organisational and/or financial gains. These people tend to function with a high degree of energy. They prefer business settings, and often want social events to have a purpose beyond socialising.

Characteristics

Persuasive, Confident, Leadership Skills

Conventional

A person with this Occupational Interest is oriented towards completing tasks initiated by others. They pay attention to detail, and prefer to work with data, particularly in the numerical, statistical, and record-keeping realm. They have a high sense of responsibility, follow the rules, and want to know precisely what is expected of them.

Characteristics

Conscientious, Efficient, Orderly



The Aptitude Test

The Science Behind

Abilities - Abilities found to be important across job roles and occupations are assessed by Lodestar to provide a fitment between interests and abilities. Each ability is rated on a High, Medium or Low scale to enable the student to fully understand where he or she stands in terms of those abilities.

Abilities are also called aptitudes and can always be improved upon by putting time and effort into them. These are crucial for success in jobs and careers.



Verbal Ability

This ability is typically assessed to measure the student's ability to quickly process verbal information which may impact decision making. This has questions related to how language is understood (comprehension), rules of the language (grammar) and usage of words. Many careers require the ability to communicate clearly like Reporter & Correspondent, Lawyer and Editor. Verbal ability scores can be improved by doing crossword puzzles, reading story books and journaling. Apps like Grammarly and Duolingo can help improve verbal ability.

Reasoning Ability

This ability is typically assessed to measure the student's lateral thinking skills or fluid intelligence - the ability to quickly identify patterns, logical rules and trends in new data, integrate this information, and apply it to solve problems. This area has questions like what comes next in the series (deductive reasoning), how two things are correlated (analogies) and what conclusion you can reach for a problem (inferences). This ability is very important to work in fields with high uncertainties like Doctor, IAS officer and Forex trader. Reasoning ability can be improved by doing Sudoku, crossword puzzles and lateral thinking questions. TED ED has some great reasoning puzzles that students can look at online.



The Aptitude Test

The Science Behind



Numerical Ability

This ability is typically assessed to measure the mathematical reasoning of the student. This area consists of arithmetic, algebra and geometry related questions. Questions related to Interest calculations, Discount, Profit and Loss are also included. Numerical ability is very important in commercial and scientific areas. A high score in Numerical ability also demonstrates a higher chance of cracking the calculations in competitive exams. Careers requiring high numerical ability are Chartered Accountant, Structural Engineer and Investment Banker. This ability can be improved by practicing and solving mathematical problems whether online or offline.

Spatial Ability

This measures the ability to mentally manipulate 2-dimensional, 3-dimensional and 4-dimensional figures. Spatial ability maps the visualisation skills and imaginative capability of the student. Typical questions include mirror images, symmetry, and shape matching. A high spatial ability is needed in careers like Architect, Surgeon and Chef. Spatial ability can be improved by doing jigsaw puzzles, rubik's cube and building blocks. Online games like Minecraft can also help hone these skills.



Mechanical Ability

This ability is typically assessed to measure the student's ability to understand and apply mechanical concepts and principles to solve problems. This section has questions on pulleys, levers and gears. Doing well in this area means a student will do well in technical and engineering related areas – for eg., Mechanical Engineers, Automobile Engineers or Aeronautical Engineers. Building real life working models or repairing things is a great way to improve mechanical ability. Some of the classic online games like Angry Birds and Cut the rope are also ways to improve your mechanical ability.

About Lodestar

Lodestar is India's first scientific Career Guidance program that uses authentic data and advanced decision methodologies to enable students to make Smart Decisions with respect to career, college, exams and tutorial. Over 40000 students from **150 leading schools from across India** have made a Smart Decision with this so far.



students feel that they made the **right Career & Education decision after the program.**



felt that Lodestar had successfully **answered all their Career and Education related questions.**