

EDITION 01

First Year Students and Brainheaters.

A brief introduction, guidelines
and tips for the Freshers.

Bh.Handbook

 Brainheaters



CREATOR & AUTHOR

A book by
Harsh Patel

CEO, FOUNDER & DEVELOPER

www.brainheaters.in

01

System & Journey of Engineering

Everything you need to know about the four years journey. A short summary of all the happenings in the world of engineering, the rules and the information.

Engineering is one of the most wonderful and creative course only if you know your “why” in the first year of engineering.

_Harsh Patel (CEO, Founder & Creator)

ALL IMPORTANT ELEMENTS

The 4 year of engineering will be all about Assignments, Practicals, Orals, Submission, Attendance, Marks and pointers. Every year you have to deal with 2 final semester exams, one final exam per semester

TERM TEST

There are two internals per subject per semester called - Term Test I and Term Test II. To learn more about grading system of term test check “Bh.Handbook Credits & Results”

VIVA & PRACTICALS

There are oral exams called as “Viva” in the world of engineering along with practicals. To understand grading and marks of Viva & practical check “Bh.Hand book Credits & Results”

As you step into your first year you will find yourself nowhere and that's understandable. Now let's move ahead with this point and have an overview of First year & rest of the three years

THE FIRST YEAR



First year of engineering shares common subjects with all the students. Irrespective of your department. For the first 2 semester (F.E) all students are in the same boat.

You will find students from different departments in your class for first year only, F.E is common for all. There are 12 subjects in F.E divided 6 per semester – Semester 1: Physics I, Chemistry I, Maths I, Mechanics, B.E.E, EVS and Semester 2: Physics II, Maths II, Chemistry II, E.D, SPA, C.S

First year of Engineering is easy and scoring as long as you stay on track, plan and take actions accordingly. Follow Bh.StudyRoom, Guidelines and Tutorials starting from your first semester to stay on top of study plan

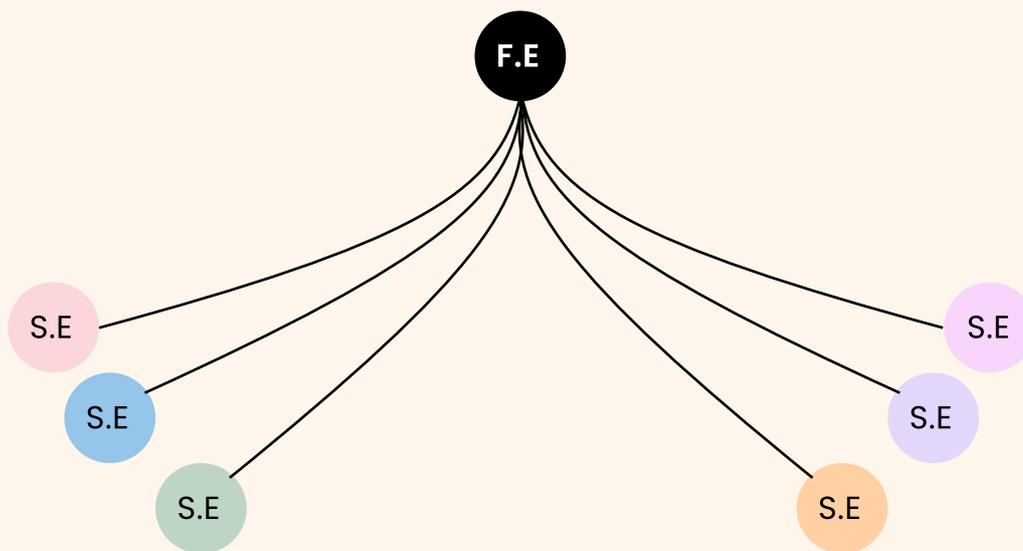


Figure 01

First year students are now (Second Year -S.E) distributed in to their respective departments. Different colors in *Figure 01* denotes different department of engineering.

THE SECOND YEAR

Second year of engineering is the first step to your core department. In other words you walk in to your specific department of engineering to study subjects related to your department only.

Here you have specific group of teachers assigned to your department and a Head of the department. The exam pattern remains the same *refer page 01*



THE THIRD YEAR

The journey of Third Year is similar to that of Second Year, except the mini project and elective subjects. During your academic journey of T.E (third year) you create mini projects for the selective subjects and sometimes it is also applicable in S.E for few subjects.

Here you have same group of teachers you had in S.E and some new professors for next subjects assigned to your department and a Head of the department. The exam pattern remains the same *refer page 01*

FINAL YEAR

Final year; the most amazing experience of the engineering. Here you are the senior most students on the college and you know all the in,out and jugaad of academics.

The academics in B.E (final year) is a bit challenging and fun! You got to deal with regular subjects + Campus interview preparation + Final year Project + Black Book.

Academics

Pretty much the same as T.E and S.E, you can see less subjects as compare to T.E & S.E (*refer pg 01*)

Final Year Project

It is also called as B.E project, considered as vital element of engineering and you have to make a realtime project that works in real world & Black Book documentation of project

Campus interview

You will see companies walking in your college or you looking for off campus interview. This is where you prepare yourself to step out in the real world.



02

Academics & Attendance

A general overview of the academic journey
and the importance of attendance in college

Academics

First year of engineering is divided into two semesters: Semester 1 also termed as “Odd semester” and Semester 2 as “Even semester” The pattern below remains same through out your engineering journey.

As the semester starts, soon after a couple of weeks you have your Term Test I which is generally of 20 marks which cover first 20-40% of your syllabus, a few weeks later you have your Term Test II These are your internals.

Note - Internals are always controlled and judge by college professor

Soon after term test II you will have to complete your submissions (Assignments and Practicals of each subject in respective files) and then you have your P.L - Preparation Leave before your final exams. Your final exams are conducted by Board (University) and every thing is under their control along with paper correction and marks distribution. (applicable for both the semesters)

To learn more about marks in details refer - [“Credits & results by Brainheaters”](#)

Attendance

Always keep in mind that you are responsible to maintain 75% of your attendance in college.

Failing to do so, can affect your submission, internal marks and also in worst case you might not be allowed to sit in final exams

75%

Your Attendance = 05 Marks

03

Four Subjects that can hit you hard

Everything you should know about the subjects that can be challenging in your F.E journey and their reasons.

THE FOUR

First year Engineering subjects are similar to your 12th science except these four: Mechanics, B.E.E, S.P.A and Engineering Drawing.

93% of Students finds these subjects as most challenging in their first attempt and this drags them to a year drop by the end of second year. *(To understand KT and Revaluation process refer "KT and Golden by Brainheaters")*

What is the cause?

Students score less marks and fail because of less focus, understanding, study plan, new concepts and challenge.

You might find Physics, Chemistry and Maths similar to your 12th studies because you are comfortable with those concepts and similar chapters in last years.

But when it comes to these 4 subjects - They are completely out of your box. You are doing Machine Drawings, C language, Electricals and Mechanics, this requires more focus, planning and understanding.

A step by step smart plan to deal with the 4 challenging subjects



04

A smart plan to smash all four in F.E

A step by step planning about how to deal with those subjects and understanding the psychology

PSYCHOLOGY

First thing is to realize that this is not a difficult subject, it just requires your focus and correct attitude towards study. So train your mind to understand the subject and study smart.

Think about the feeling you had when you stepped into Junior college of science and you encounter Physics, Chemistry for the first time, it might be difficult for a few weeks to deal with the subjects but then things were easy because of constant understanding and learning.

- Don't give up confidence due to peoples opinion on these subjects
- Don't decide that it is difficult subject until you give your 100%
- Don't build a losers attitude from the start

STUDY PLAN

To deal with these subjects the important elements are analysis, planning, calculated smart study and proper presentation

01

Visit: www.brainheaters.in & Signup with Brainheatres

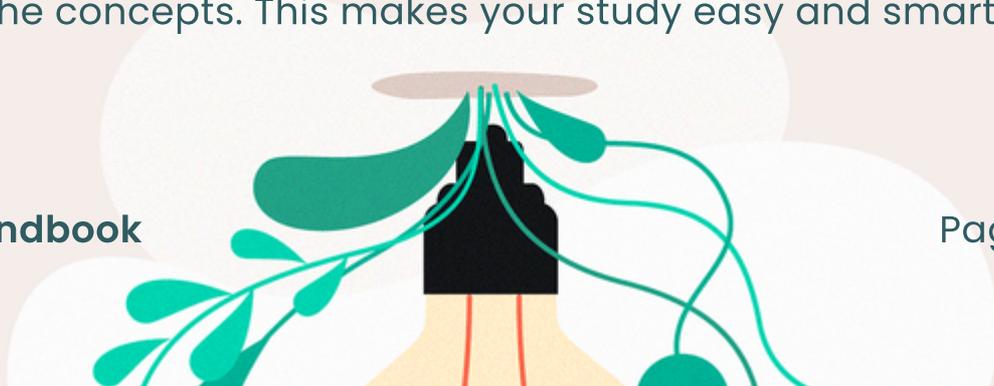
Refer Bh.Papers and get a detailed analysis of question papers to understand the pattern of questions and priority of the modules. This gives you a clear idea about paper arrangement and marks, modules distribution.

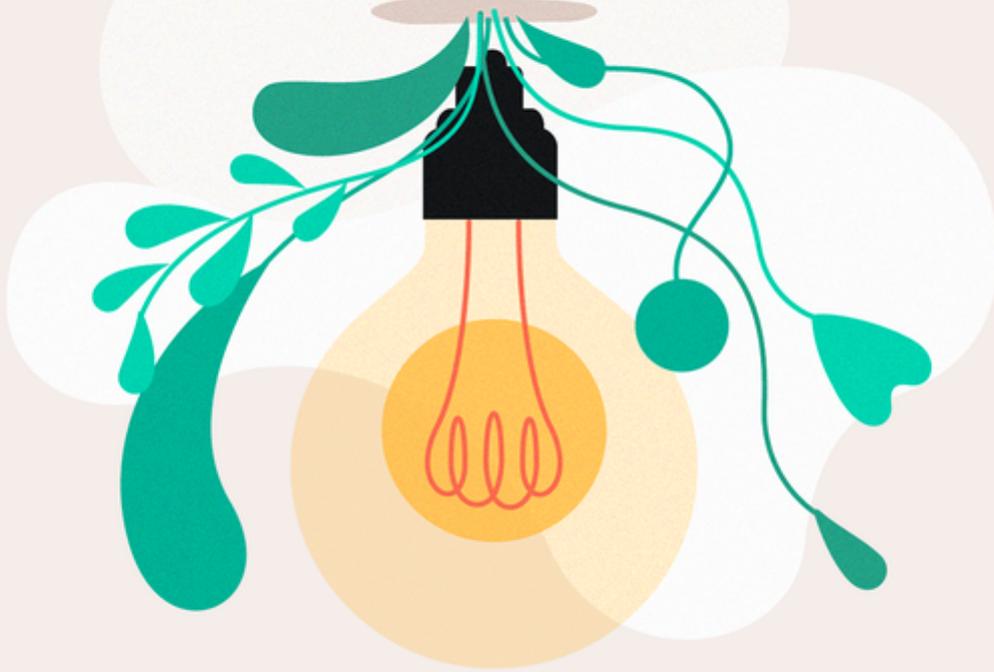
02

Use Bh.Question Banks and target the list of questions, that helps you to focus on most important concepts and avoid the unnecessary pressure of studies.

03

Use Bh.Notes (*available*) for preparation and understand the concepts. This makes your study easy and smart.





04

You have bh.plans to target specific area of the subjects depending on your Goal, In the Bh.Plans you have got 3 plans: just passing marks, average marks or top scores and refer How to Pass / Score video series on [youtube @brainheaters](https://www.youtube.com/@brainheaters)

Bonus materials

05

Bh.School

Learn and understand about paper presentation, smart study techniques, learning techniques, career crafting, time management and many more skills at Bh.School

06

@brainheaters

Stay tuned with all the live session on instagram and you always have access to highlights. Check the stories and Highlights regularly to stay on top of announcement, study plans and new release.

05

Preparation for internals

Overview and the guidelines to understand the internal exams and steps for preparation

YOUR DUTY

Internals are your 20 marks term tests, your first duty is to not take it lightly. Your internals play a major role in your final grades and pointer calculation. *(refer credits & results by brainheaters)*
You should be always 15+ in your internals to make things easy in your final semester exams

PREPARATION

01

Make sure you make notes or keep updates about the college lectures for all subjects, this helps you to make term test preparation easy.

02

You get a list of questions by your professor called as Question banks for your preparation and sometimes you may not.

04

Prepare the list of questions with a proper time plan and understanding. To learn the time table making techniques refer Bh.School.

05

If you do not have a question bank - Check your class notes, Bh.Papers and Bh.Questionbanks to create your own questionbanks just by highlighting the questions of the given modules for term test.

06

Prepare using Bh.Notes, Class notes, Reference books (available in Bh.library) understand and write in your own words with a proper presentation. Do not forget to highlight the keywords and important points.



06

Get ready for Oral & practicals

Overview and the guidelines to understand the Viva and Practical exams and steps for preparation along with some pro tips for oral exams.

OVERVIEW

Oral exams are the Viva conducted by external professor. Here a professor out of your college are invited to take your oral exams & test your subject studies. Viva are usually in a group of 3 students, external professor asks you questions about anything from syllabus. If you fail to answer the professor they can give you a re-viva which means you will have to appear after sometime again.

YOUR PLAN

- You need to prepare with understanding, in viva memorisation won't work.
 - Professor would like to see whether you understand the concepts or not.
 - Prepare from term test question banks, Bh.questionbanks and just try to speak in your own words. (remember it is oral)
- Stay confident and transparent.
 - Do not bluff or waste time if you go blank for a question.
 - If you don't know, say it instead of wasting time
 - Be smart with your roll calls. (Check the questions asked to previous group of students in roll calls)
 - 65% of questions are repeated after the viva for first few groups
 - If you are in first 5 groups be prepared for all the unique questions and everything.
 - If you are after first 5 groups, check the questions asked to the previous groups.

07

Final exam prep. & some facts

The final step and final guideline to deal with semester exams and to understand in and out of everything of semester exams. Some interesting facts to help you find a proper direction.

This is not school or junior college exams. Keep one thing in mind that “every semester exams is a kind of board exams”. F.E & B.E are under the control of university, paper setting and paper checking.

Your final semester exams are of 60 or 80 marks depending on the subjects (check the syllabus or Bh.papers to know more..)

PREPARATION

Your preparation should be smart and on point, no need to study more or less just the proper proportion should be fine and for that you need to use Bh.StudyRoom & Bh.School follow the guidelines and stay tuned at [live session on instagram @brainheaters](#).

1. Make the most of P.L and plan
2. Make your time table (no of days)
3. Select your set of modules and questions
4. Create a study plan in time table
5. Use the learning skills (bh.school) and start study
6. Use Term Test Questionbanks & Bh.Questionbanks
7. Practice maths & numerical subjects on paper
8. Give a smart paper presentation (bh.school)

FACTS

- Your answer sheet will take sometime to complete the formalities for the first time
- Your answer sheet is scanned in a machine for checking
- Answer sheet is then also examined by a moderator
- You might see some surprisingly less or more marks in your paper during results
- You can always appeal for re-checking
- University decision is last decision and you have to accept it
- It is always better to be prepared for all situation, so seniors recommend to strictly follow Brainheaters
- No one cares about your scores so be selfish and help yourself first.
- If you don't have a good relation & impression with your department it might affect your internals
- Do not just think of college, marks and grades, think out of box.
- Industries do not need a topper they need a skilled engineer so focus on self development and growth
- You need to build your skill set on your own, so do not depend on just college education.
- Self learning is always over workshops, follow your instinct before you take a course.
- Just because all are saying it doesn't mean you should do that. Be the change and follow your vibes. Discover your interest starting from F.E



FROM THE AUTHOR

“The best thing you could do during your first year of engineering is - Understand the system, don't rush for marks, start discovering your interest”