



ACADEMICS AND CAREER COUNCIL  
IIT KANPUR



# GRAD: Graduate Research Application Directory



The Prospect of attending an International Graduate School harbours the will to innovate and expand imagination at its helm and once you decide to kindle the fire, all you need is an elegant application to take you all the way.

Applying to Universities for a Masters or a Ph.D is a paradigm shift from the usual experiences of application as this process aims to enable you to quantify and strengthen your base interests and notions. These months of application involve formalities pertaining to CV, LORs, Transcripts, Essays and Deadlines, apart from all the ongoing introspection. In addition, the application process in itself is quite expensive and needs to be done with crucial pre-planning to avoid excessive spending.

This Guide aims to enable you to traverse the ins and outs of the concept of Applying to an International Graduate School. The Guide is a compilation of the experiences and proficiency of our recent alumni who underwent similar sentiments and doubts and ultimately overcame them in favour of their application. Details of the individuals have been mentioned at the end. Hence, we promise an objective set of procedures along with a subjective perspective, and trust us when we say that it will all be worth it when you receive that Acceptance Letter.

**Look out for more such resources and always feel free to reach out to us to gain more insights. We wish you all the best for your future endeavors.**

Grad school-why?

Deciding to pursue higher studies

MS vs. Ph.D

Pre-app planning

Profile building - Research interest/goals, Projects, Internships

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# DECIDING TO PURSUE HIGHER STUDIES

Deciding to pursue Higher studies after completing an undergraduate degree is a very subjective question and invites deep thought and clarity from the individual in question. Zeal and excitement to explore and contribute to a particular subject forms most of the motivation.

**It's usually a match between your interests and work culture in both the areas that help you decide between corporate jobs and academia. Other factors such as flexible work hours in academia, better job opportunities gives an extra edge to graduate studies over industrial jobs just after graduation.**

At times, it is difficult to get a job in one's preferred field right after a B.Tech or a BS degree, companies look for individuals with some specific skills which are not essentially covered in a UG curriculum. If your career preference is to get a job in a particular field, doing an MS will enhance your chances to land on a job in that field with better pay. An MS program is more specific to a field, more detail-oriented, and provides you with a deeper knowledge of your field of study. Hence, having a master's degree makes you eligible for jobs with higher and more specific skill requirements.



## The chief questions you may want to settle during your B.Tech are :



Particularly, for IITK students, the SURGE internship program offered in the summers after 4th sem, may help clear your vision towards research. A couple of academic projects or internships may add further to your clarity whether you want to explore further after undergraduate studies or not.

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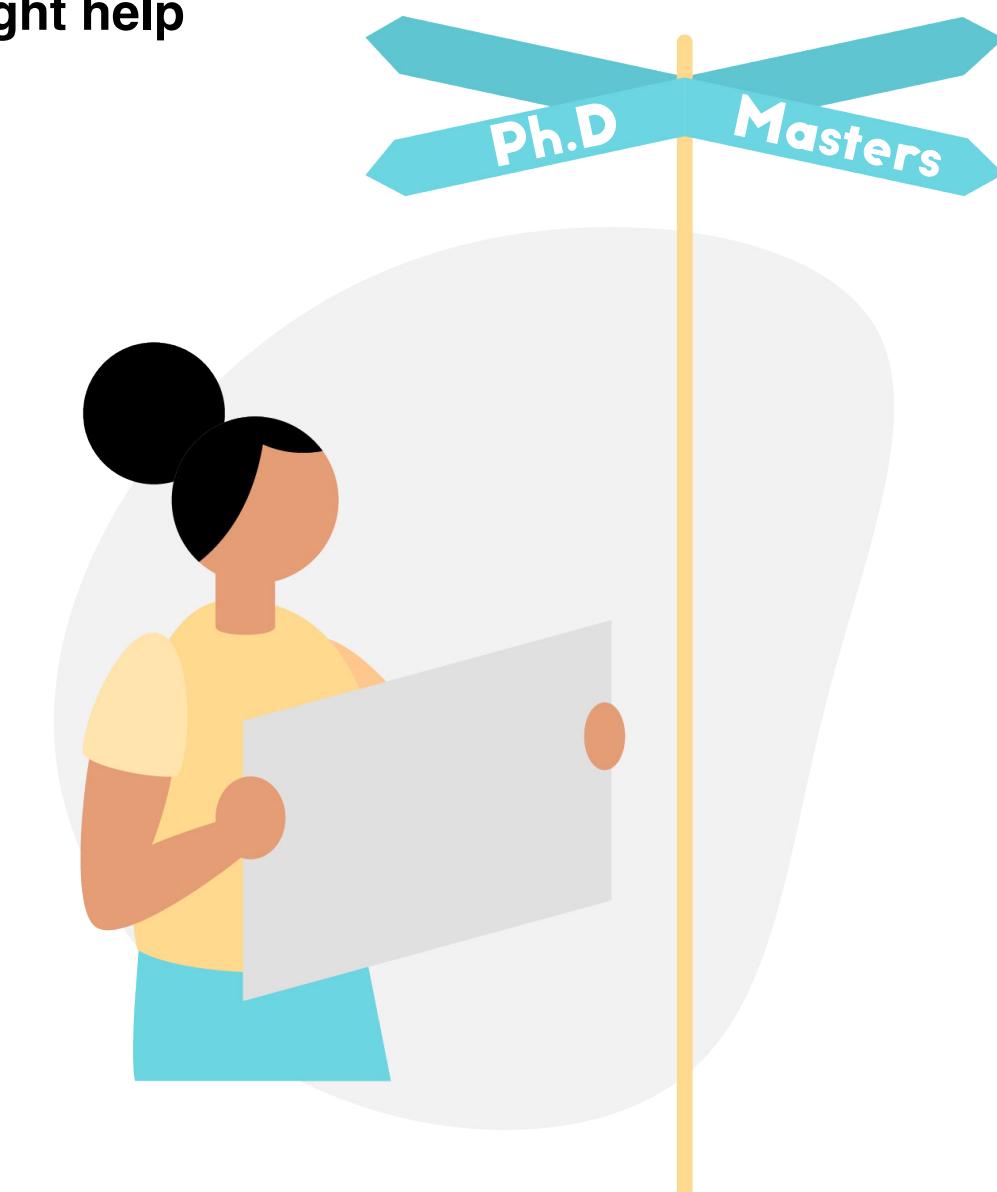
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# MS v/s Ph.D

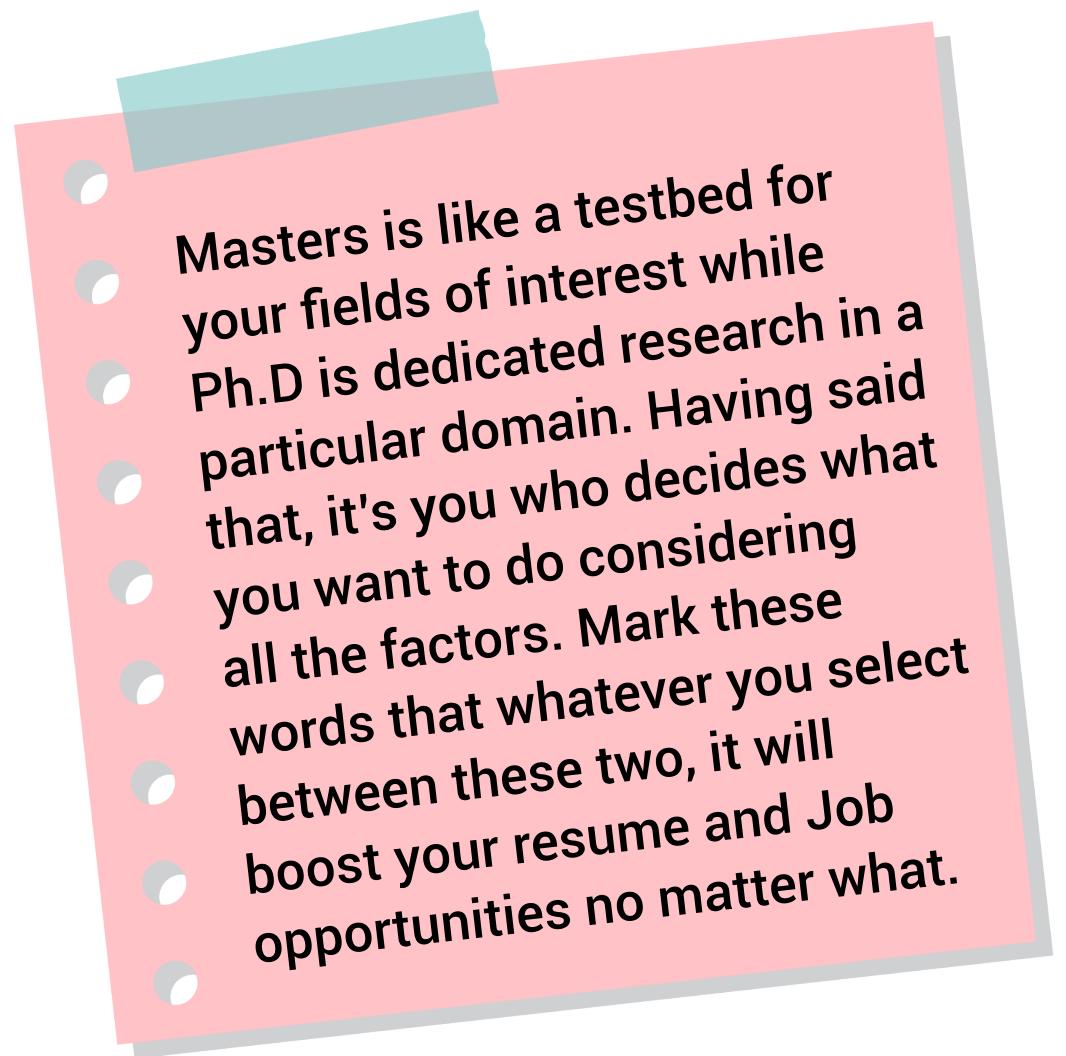
After graduating with a B.Tech degree you can apply for masters (and later decide if you want to pursue a Ph.D or not) or opt for a direct Ph.D course. However, both the paths have their pros and cons and other factors that may help you choose the path you want to opt for. We have listed a few points below which might help provide you a better insight:-

1. Masters is mostly coursework driven aimed towards gaining more advanced knowledge in a specific field in a short time duration while a Ph.D degree is about pursuing independent research in a specific field and contributing towards knowledge in that area.



2. Financial considerations prove to be very important while making the decision. It's usually quite difficult to get funding for Masters. One can apply to some scholarships that the university offers or even try for some external scholarships, but they tend to be very competitive. The Ph.D is however fully funded in most cases; all the tuition fee etc. is covered and you also get a stipend. Ph.D admissions are more competitive than Masters because they are fully supported by the university.

3. In most engineering programs, you do not need to get a Masters before a Ph.D, you can directly apply for a Ph.D after your B.Tech. Now it's up to you, if you really like studying and enjoyed doing research projects during your college career and you feel strongly about a certain field of your interest, we would suggest that you go for a Ph.D (An additional perk of getting to add "Doctor" to your name is also there). On the other hand, if you are sure about going for higher studies but are still unsure about committing 4-5 years (or more) on a Ph.D then a Masters is a better suitable option for you as it sets you apart from undergraduates and could open more employment opportunities meanwhile giving you ample time to ponder over your future academic endeavors.



Masters is like a testbed for your fields of interest while Ph.D is dedicated research in a particular domain. Having said that, it's you who decides what you want to do considering all the factors. Mark these words that whatever you select between these two, it will boost your resume and job opportunities no matter what.

# PRE-APP PLANNING

You have made the decision that you want to pursue higher studies?

Now is the time to sit down and prepare your profile for the subject or research area you want to further pursue. After the profile, you will have to look up the universities that you wish to attend and understand the requirements they lay down for their admission procedure. There are some standard examinations and other documents for most universities.

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# PROFILE BUILDING - RESEARCH INTEREST/GOALS, PROJECTS, INTERN

Once you decide you are going to pursue higher studies, now is the time to buckle up and start preparing for stuff which makes your application strong and gives you an edge over other candidates. The first thing you need to do is narrow down your research interest and that can be done by exploring various fields that attract you.

**Becoming part of projects on campus is the best way to decide what fields you like and what you don't like. UGPs (or BTPs), summer research projects under professors, academic internships, etc. help you know more about various fields out there. Apart from projects, courses are a great way to learn about new fields. Department electives (DEs) and Open electives(OEs) are always there for you to explore a particular subject you find interesting.**



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# **RESUME**

A resume is essentially a document that highlights one's academic and professional history in brief. It includes the details of your education, your industrial and corporate exploits, your internships, projects and publications, your awards and honors, and other things that are relevant to your application, or make your application look stronger in general.

An academic resume should typically contain the following:-

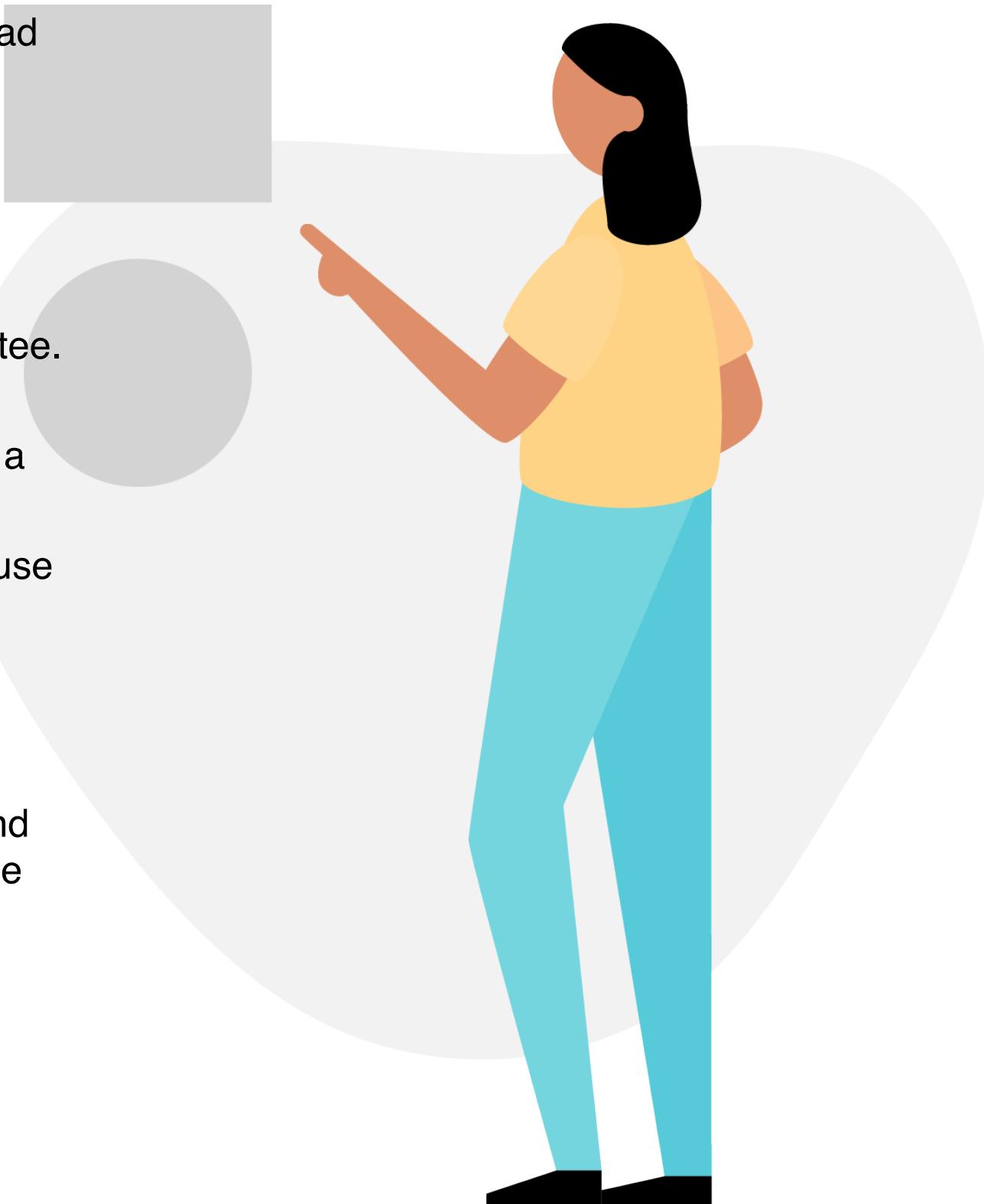
- Contact Information**
- Educational Details and Personal Profile**
- Jobs and Internships**
- Projects and Publication**
- Awards and Honours**
- Teaching Experience**
- Volunteer Work and Positions of Responsibility**
- Language and Skills**
- Extra-Curriculars**

There isn't any fixed order or priority of the sections and subsections and it should be based on its relevance and quality, where the relevance should be to the field you are applying in and quality refers to the quality of work and the eventual accomplishments out of it. A bit of general advice would be to ensure that you put the things that you want the committee to notice and acknowledge higher up i.e. in Reverse Chronological Order.

Some general points to keep in mind while making a resume for grad school are:-

- **Highlight your research experience:** This is one of the main things on your resume, elaborate it extensively.
- **Avoid using college jargon:** Use terminologies that are more widely accepted or are understandable by the admission committee.
- **Use bullet points:** Try to keep the points within a single line and uniformly spaced, as much as possible. Don't use paragraphs in a resume.
- **Maintain uniformity:** use the same font (size, color, style), and use the same style of bullet points.
- **Length of a resume:** In general, a resume for graduate school applications is 2-3 pages long.

For specific universities, be sure to check out their requirements and make changes accordingly. Also get your resume reviewed by some relevant people as well.



Starts with education before moving on to relevant work/research experience.

Richard Smith

17 PrepScholar Court  
Salem, MA 01915

Uses bold and a larger font size to emphasize name.

richardsmith@prepscholar.com  
(555) 555-9900

## EDUCATION

HARVARD UNIVERSITY  
Master of Arts, Magic and Chemical Biology  
Bachelor of Arts, Chemistry

- Minor in Wizardry
- Graduated summa cum laude
- GPA: 3.95/4.00

Cambridge, MA

May 2016  
May 2014

Separating dates and locations from the rest of the text makes skimming easier.

## RESEARCH/WORK EXPERIENCE

- Spring 2016 Investigated functional maturation of green blood cells during development. Under the guidance of Minerva McGonagall at the Hogwarts Cell Institute.
- 2014-16 Discovered magic enzymes using enzymatic assay and fairy dust. Thesis: "Discovering Magic Enzymes." Under the guidance of Phoebe Halliwell at Charmed Ones Institute and Cole Turner at Demonic University.
- Summer 2015 Screened for anti-curse compounds specific for demonic cell lines in co-culture. Under the guidance of Garrick Ollivander at the Wand Institute.
- Summer 2013 Managed implementation of nationwide curse treatment program in Los Angeles, CA. Designed data collection and analysis system, and began equipment procurement and magical training logistics. Under the guidance of Sabrina Spellman of International Magic Health and the Teenage Witch Foundation.
- 2010-2012 Investigated anti-witch gene in mice DNA. Under the guidance of Hilda and Zelda Spellman at Massachusetts School of Magic.
- 2008-2010 Conducted research on unicorn horns under the guidance of Merlin at Gandalf Research Institute.

Uses reverse chronological order.

## PUBLICATIONS

- 2016 Potter H, **Smith R**. "Synthetic biology: new topics in biomagical engineering." Ministry of Magic Press. In press.
- 2016 Granger H, **Smith R**, Hagrid R, Weasley R. "Dark Curse Mutations Impair Heroic Tendencies in Mutator Mice and Are Prevalent in Neurons in Early-Stage Hexes." In preparation.
- 2010 W. Sanderson, S. Sanderson, M. Sanderson, **R. Smith**. "How to Light a Black-Flame Candle." Proceedings of Historical International Conference Witches and Spells,

Bolds name for emphasis in citations.

Uses citations for all publications (including pending).

Salem, Massachusetts, USA, pp.19-93, October 2006.

## HONORS & AWARDS

- 2014 Abracadabra International Internship Fellowship
- 2012 Society of Magic Millennium Scholar

## LEADERSHIP ACTIVITIES

- 2016 Co-founder of Save the Unicorns Foundation
- 2013-16 Editor-in-Chief of Spell4You
  - Produced in association with editors of the New England Journal of Magic
  - Increased readership to 15,000 per monthly issue
- 2013-16 Editor-in-Chief of Double Hex Publication
  - Publication addresses implications of scientific research and magic on humanity and magical beings
  - Managed a team of 302 elves and pixies
- Includes extracurricular activities relevant to field.
- 2013-14 Founder and Executive Director of Fairy Tale Games
  - Founded and organized gaming tournaments for more than 100 witches
  - Secured sponsorships from Hogwarts and local businesses
- 2012-14 President of Harvard Spells Club
  - Responsible for organizing the largest intercollegiate magic spell tournament in North America, hosting more than 30 schools and 400 participants
  - Managed international exchange program with Mahou University in Japan

## TEACHING EXPERIENCE

- Spring 2016 Teaching Fellow – Harvard Magic 46: Everyday Spells
- Spring 2015 Teaching Fellow – Harvard Magic 46: Everyday Spells
- Spring 2014 Course Assistant – Harvard Introductory Chants and Spells

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# GRE AND TOEFL

## GRE:

GRE stands for **Graduate Record Examination**. It is a standardized computer-based test that is required for admissions into graduate schools worldwide. It is mandatory for universities in the USA, Canada, Australia, Singapore, and some countries in Europe.

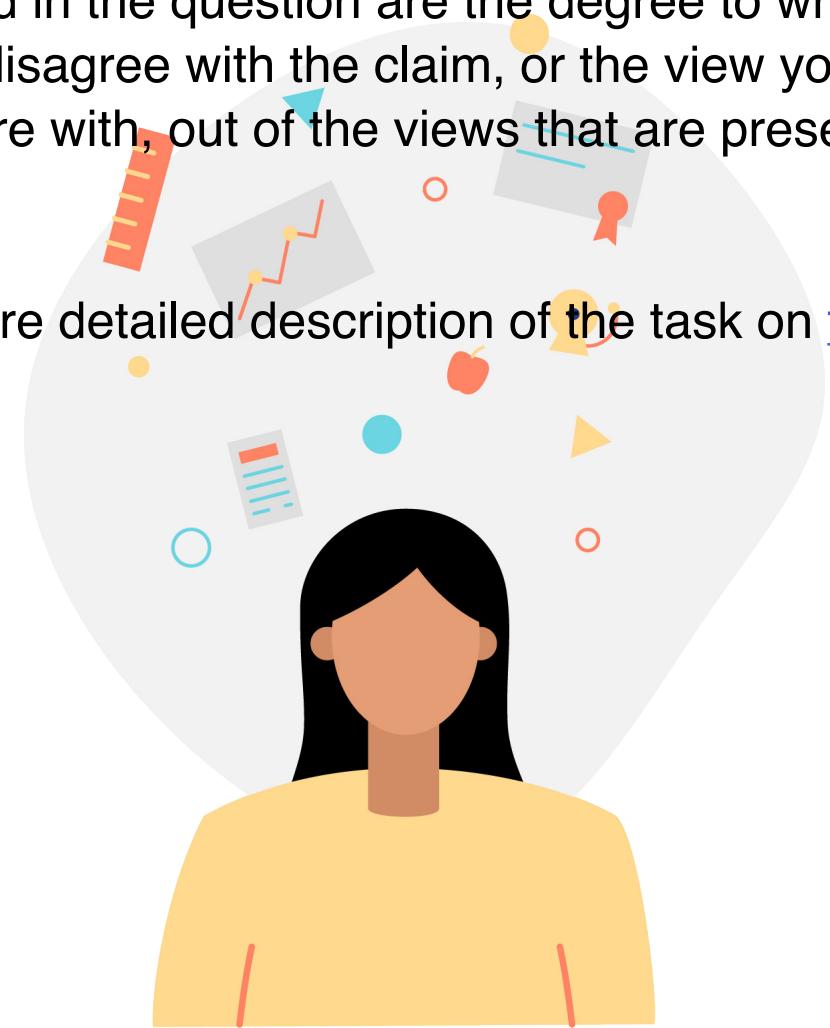
The test has 3 parts:-

- 1. Analytical writing:** It has two questions. Time allotted for this section is (30 + 30 = 60 minutes).
- 2. Verbal Reasoning:** It has 20 questions and the allotted time is 30 minutes.
- 3. Quantitative Reasoning:** It has 20 questions and the allotted time is 30 minutes.

Overall there are six sections in the test. There is one Analytical Section, and two sections each of Verbal Reasoning and Quantitative Reasoning. There is one Survey Section, which can be either Quantitative Reasoning or Verbal Reasoning. This section is not counted towards your score but instead, it is used by ETS (the organization that conducts GRE) to gauge the difficulty level of a question. They use this information in the scoring of each question (a peculiar method that is employed in GRE, explained later). But the catch is that this Survey Section can be any of the five objective sections that you attempt. After the first section, that is the Analytical Writing section, the next five sections can come up in any order and hence you can not put your guard down in any of the sections, assuming that it is the Survey Section.

## In the **Analytical Writing** section, there are two tasks.

In the first one that is the '**Analyze an Issue**' task, you are given a general topic. The topic makes a claim that can be discussed from various perspectives and can be applied to different contexts. Your task is to firstly take a position concerning the claim and then express your thoughts clearly in writing. You are assessed based on your critical thinking as well as your proficiency in putting your thoughts into writing. Generally, the positions that are offered in the question are the degree to which you agree or disagree with the claim, or the view your position aligns more with, out of the views that are presented in the claim.



Find a more detailed description of the task on [this link](#).

In the second task, which is the '**Analyze an Argument**' task, a passage is given to you where the author makes a particular conclusion (which can be a course of action or an interpretation of the passage) based on some evidence. Your task is to critically examine the validity of the author's case by analyzing the reasoning made and the evidence presented by him. Remember that you are not supposed to take a stand or present your views. You have to discuss the logical soundness of the author's arguments. So basically, you have to identify the evidence that has been presented, the assumptions that have been made without any justification, and the facts that are unstated but are facts within the premise and how these things link to give the conclusion. You then have to discuss the legitimacy of each of the above and hence challenge or support the conclusion drawn by the author.

Find a more detailed description of the task on [this link](#).

There isn't any prescribed way to attempt the section. In each of the tasks, you have to write a comprehensive, well structured, to the point essay. To understand what your answer should look like, you can read a few sample answers which are available online. It is advisable to make pointers before you start writing, jotting down what you'd be covering in the essay briefly. You should also note down the evidence and the assumptions as you read the passage in the second task. To practice, you can attempt a few examples that are available on the ETS website (link mentioned below).

You should make sure that you can understand the question and answer it within 30 minutes (each part). To complete the task successfully within the given time, be prepared with a template that you can follow for this section before entering the test. By template, we mean you can have a basic skeleton prepared for starting the essay, presenting your perspective, starting a new paragraph, building your point in a paragraph, concluding a paragraph, connecting different paragraphs, and concluding your argument. You have to think on the spot according to the question that you have been presented with, but having a template in your head makes the task a whole lot easier.



Appear for at least 3-4 practice tests before the actual GRE. If you don't perform well in these practice tests, don't get disheartened. You can score a couple of more points in the actual exam if you have studied hard.

Moving on to the objective sections, there are five sections, two each of Quantitative Reasoning and Verbal Reasoning and one Survey Section which is either Quantitative Reasoning or Verbal Reasoning. A Verbal Reasoning section has three parts:-

### 1. Text Completion

### 2. Reading Comprehension

### 3. Sentence Equivalence

The two sections, **Text Completion**, and **Sentence Equivalence** are quite similar. In both the sections, some words are omitted from a passage and you are supposed to conclude how the passage should be completed based on that partial information. In the Text Completion questions, two or more words from a passage are omitted and you are supposed to choose the option that contains the words (or phrases) completing the blanks.

Texts Completions have one correct option. On the other hand, Sentence Equivalence questions have only one blank, but you have to choose two options out of the given options that fit the blank. In attempting these sections, having a good vocabulary is helpful. Of course, there are a lot of words out there and you cannot learn all of them. There are books and mobile applications that compile frequently appearing words in GRE. Using flashcards is one of the most promising ways of learning words. There is no sugar coating it, having a good vocabulary gives you the best possible chance of solving a question. The questions in these two sections are independent.

1. It is refreshing to read a book about our planet by an author who does not allow facts to be (i) \_\_\_\_\_ by politics: well aware of the political disputes about the effects of human activities on climate and biodiversity, this author does not permit them to (ii) \_\_\_\_\_ his comprehensive description of what we know about our biosphere. He emphasizes the enormous gaps in our knowledge, the sparseness of our observations, and the (iii) \_\_\_\_\_, calling attention to the many aspects of planetary evolution that must be better understood before we can accurately diagnose the condition of our planet.

Blank (i)	Blank (ii)	Blank (iii)
(A) overshadowed	(D) enhance	(G) plausibility of our hypotheses
(B) invalidated	(E) obscure	(H) certainty of our entitlement
(C) illuminated	(F) underscore	(I) superficiality of our theories

Select the **two** answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole *and* produce completed sentences that are alike in meaning.

1. Although it does contain some pioneering ideas, one would hardly characterize the work as \_\_\_\_\_.
- A. orthodox
  - B. eccentric
  - C. original
  - D. trifling
  - E. conventional
  - F. innovative

Questions 1 to 3 are based on this passage.

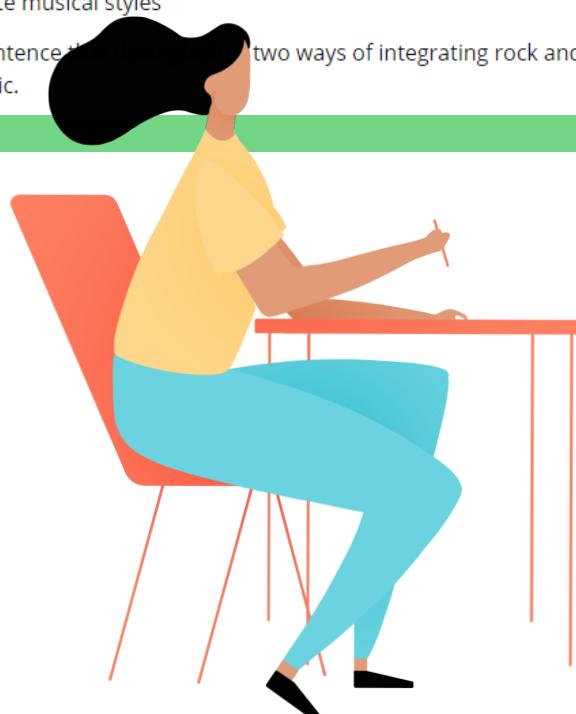
Reviving the practice of using elements of popular music in classical composition, an approach that had been in hibernation in the United States during the 1960s, composer Philip Glass (born 1937) embraced the ethos of popular music in his compositions. Glass based two symphonies on music by rock musicians David Bowie and Brian Eno, but the symphonies' sound is distinctively his. Popular elements do not appear out of place in Glass's classical music, which from its early days has shared certain harmonies and rhythms with rock music. Yet this use of popular elements has not made Glass a composer of popular music. His music is not a version of popular music packaged to attract classical listeners; it is high art for listeners steeped in rock rather than the classics.

Select only one answer choice.

1. The passage addresses which of the following issues related to Glass's use of popular elements in his classical compositions?
  - A. How it is regarded by listeners who prefer rock to the classics
  - B. How it has affected the commercial success of Glass's music
  - C. Whether it has contributed to a revival of interest among other composers in using popular elements in their compositions
  - D. Whether it has had a detrimental effect on Glass's reputation as a composer of classical music
  - E. Whether it has caused certain of Glass's works to be derivative in quality

Consider each of the three choices separately and select all that apply.

2. The passage suggests that Glass's work displays which of the following qualities?
  - A. A return to the use of popular music in classical compositions
  - B. An attempt to elevate rock music to an artistic status more closely approximating that of classical music
  - C. A long-standing tendency to incorporate elements from two apparently disparate musical styles
3. Select the sentence that best describes the two ways of integrating rock and classical music.



On the other hand, in the third section, that is the Reading Comprehension, the questions appear in sets, that is several questions based on one passage. Each passage can have one to six questions based on it and about half of the questions in a Verbal Reasoning Section are Reading Comprehension questions. To be honest, the directions are quite straightforward, read the passage, then read the questions and answer. But the questions are not so straightforward. Note that these are not those reading comprehension questions where you can read a question and locate the answer from the passage straightaway. You need to pass thoroughly once and then go to the questions, read the question properly, and then go back to the passage and find the answer from there. DO NOT rush into answering a question, because all the answers seem correct from the overview. This section tests your ability to extract information from a passage and simultaneously requires you to keep your personal biases aside.

Several options might seem correct in a question (sometimes all), but you have to make sure that you only choose the answer(s) that can be inferred from the passage. You should practice a lot of passage-based questions before the main exam. You should not take this for granted at all, because firstly, it takes a good part of the 30 minutes allotted to the section and practicing will help you in planning how to attempt these questions faster. Secondly, finding the correct answer(s) out of the seemingly similar options requires a great amount of practice so that you are aware of how the options might be twisted to confuse you.

Read more about the Verbal Reasoning Section [here](#).

The Quantitative Reasoning section tests the understanding of rudimentary mathematical concepts and basic mathematical skills. The section assesses you on four areas which are:-

- 1. Basic Arithmetic**
- 2. Algebra**
- 3. Geometry**
- 4. Data Representation and Analysis (graphs, mean, median, mode, standard deviation, etc.)**

Questions are mostly based on high school mathematics and statistics. You should be more concerned about your accuracy because ETS is quite smart in setting booby traps. The questions are quite simple to solve but the options are quite tricky, so if you're reckless, you might end up messing up some questions. Therefore it is mandatory to practice this section before entering the test because there are some common ways by which candidates get fooled.

Read more about the Quantitative Reasoning Section [here](#).



While taking practice tests, never skip the analytical writing section. This will help you to get accustomed to writing essays in a small time frame.

## **HOW TO PREPARE**

There are numerous online resources that you can use for studying for GRE. There are books published by ETS, Princeton Review, Manhattan Prep, Kaplan, etc., which contain a great description of each of the sections and subsections along with several examples and sample question papers. One of the highly recommended sources for practicing vocabulary is 'Magoosh Flashcards' application and 'Magoosh Vocabulary Builder' for revision. Other than these, ETS itself gives two free practice tests. You should use these tests once you are through the preparation phase. DO NOT waste these free practice tests by flipping through them lazily, find a place where you can sit for the entire 5 hours or so (which is the usual length of the test). The scores that you gain from these tests are very accurate representations of your final score, and the practice is very helpful.

## **WHEN TO GIVE THE TEST**

A GRE score is valid for five years. So, if you plan to apply for a graduate school right after your graduation or within the two years after that then you can attempt the test if you are anywhere beyond your fourth semester. Students usually take around 1 - 1.5 months to prepare, so one can plan accordingly. If one has the slightest of inclination towards going for higher education then finding the next free spot that fits your schedule might be a great thing to do. Waiting till the end is not a good idea because in the latter stages, things start piling up and taking out time at that time is too much to ask from yourself. Additionally, it is better as you will have time to reappear for the test if you are not satisfied with your earlier score.

**Note:-** After the GRE is over, you can select upto 4 universities to send your scores to for free. After that you have to pay for sending your GRE score to each university because all the universities require you to send the official scores from ETS. So keep in mind what universities you are going to send your score to before the exam. You don't need to remember the code for the university, you can browse.



Do not worry if you get a score lower than what you expected in GRE or TOEFL. GRE is just one small part of your application, and definitely not the deciding one.

## **TOEFL /IELTS:**

TOEFL, or **Test of English as a Foreign Language** is an exam meant for students wishing to apply to English speaking universities and originally are not native English speakers. IELTS, or International English Language Testing System also functions on the same aim and both exams have similar testing methodology and scope. What is a primary differentiator between the two exams is the languages they cater to and hence, the universities that accept their scores. TOEFL is conducted by California based ETS organisation and demands command in American English and is more relevant to American Universities while IELTS requires British English and is relevant for British and Australian Universities.

Both examinations test the candidate in four sections; reading, writing, listening and speaking within a stipulated time and a numerical (for TOEFL) or band (for IELTS) score is provided within a week from the examination for the students to use for their application. It is available in two modes: the internet-based test (iBT) and the paper-based test (pBT).

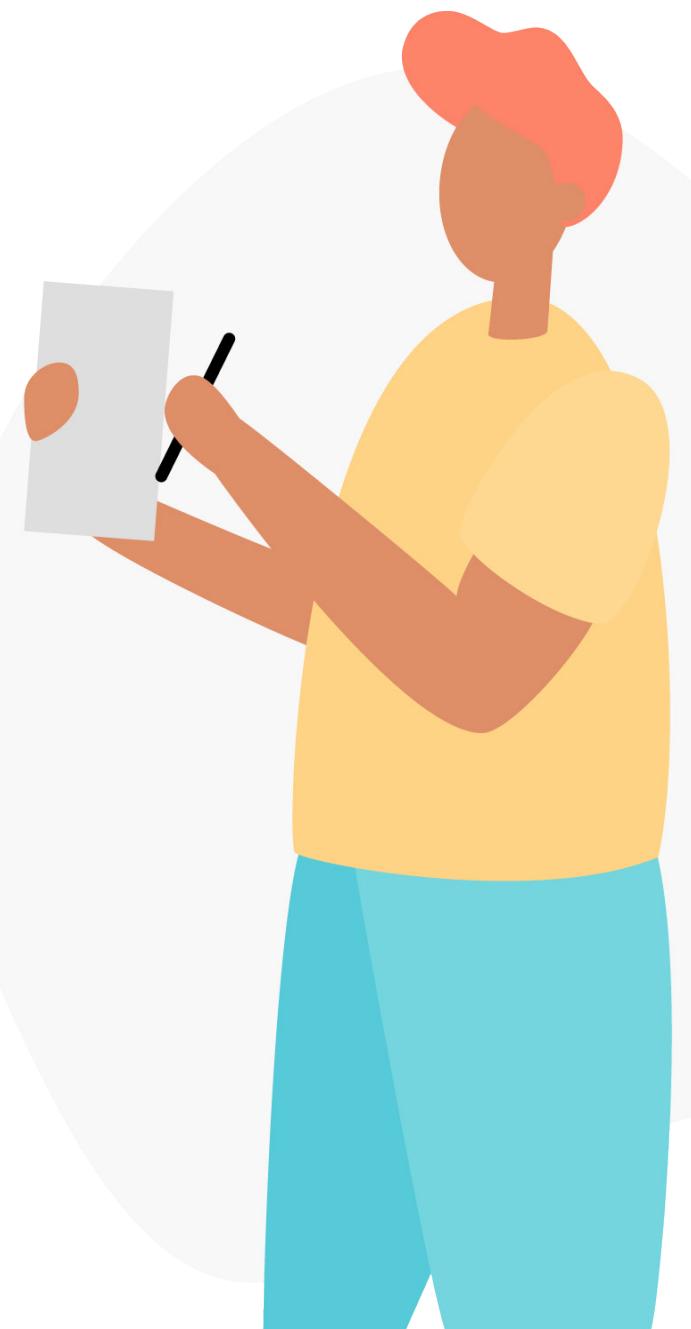
**Following is a table with a quick overview of the examination structures:**

Section	TOEFL		IELTS	
	Questions	Time Given	Questions	Time Given
Reading	36-56	60-80 minutes	40	60 minutes
Listening	34-51	60-90 minutes	40	30 minutes
Speaking	6 tasks	20 minutes	2 tasks	60 minutes
Writing	2 tasks	50 minutes	3 tasks	11-14 minutes

Each section is worth 30 points each. Each university sets a minimum cut off score for TOEFL. Most universities have their cut-offs around 80-90, very few have as high as 105 for engineering students. Coming to it's preparation, the vocabulary used is quite straightforward and the reading and writing sections are much easier than those in GRE. Spend some amount of time practicing the speaking and listening sections.

Most universities keep decent requirements from these examinations with the exception of some keeping higher cutoffs than the rest. Both examination scores remain valid for a period of 2 years from test date.

These examinations are meant for students who have not had exposure to English as a medium of instruction in prior education. Students at IIT Kanpur usually do not find TOEFL and IELTS to be very difficult as the medium of instruction at the institute is English. Vocabulary used is quite straightforward and reading writing sections of the examination is relatively easier than GRE. Most students only need to spend time preparing for the listening and speaking sections and are able to do that in a far less period than preparing for GRE.



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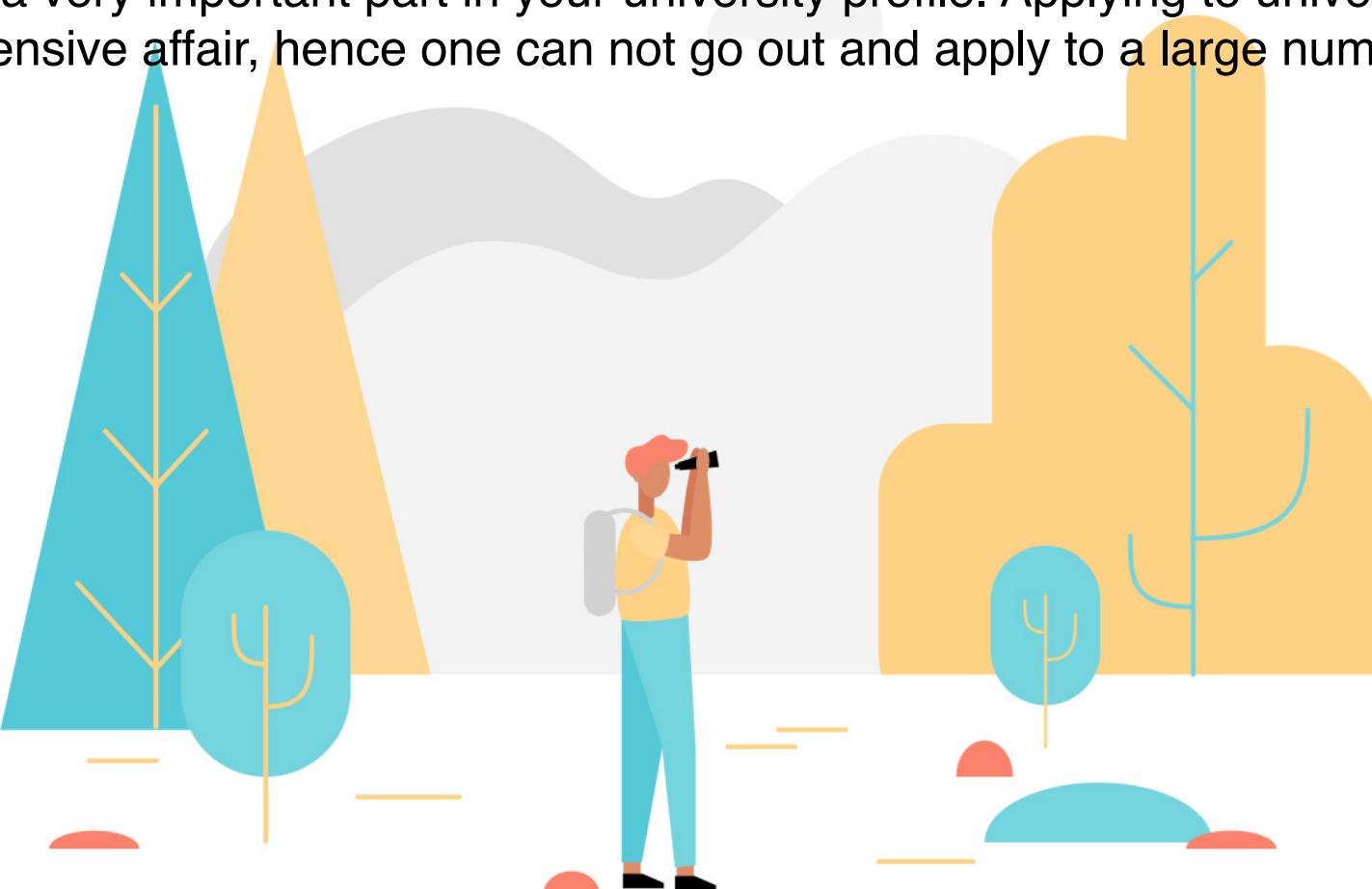
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# **UNIVERSITY HUNT**

University Hunt is a vital part of the application process. There are several hundreds of universities out there offering the course or research area of your interest and applying to each of them is not feasible. There are various factors that one should consider while making a list of the universities that they would finally apply to. The presence of the university in that research field, the professors, course curriculum, ranking and location are some major factors that require thorough understanding.

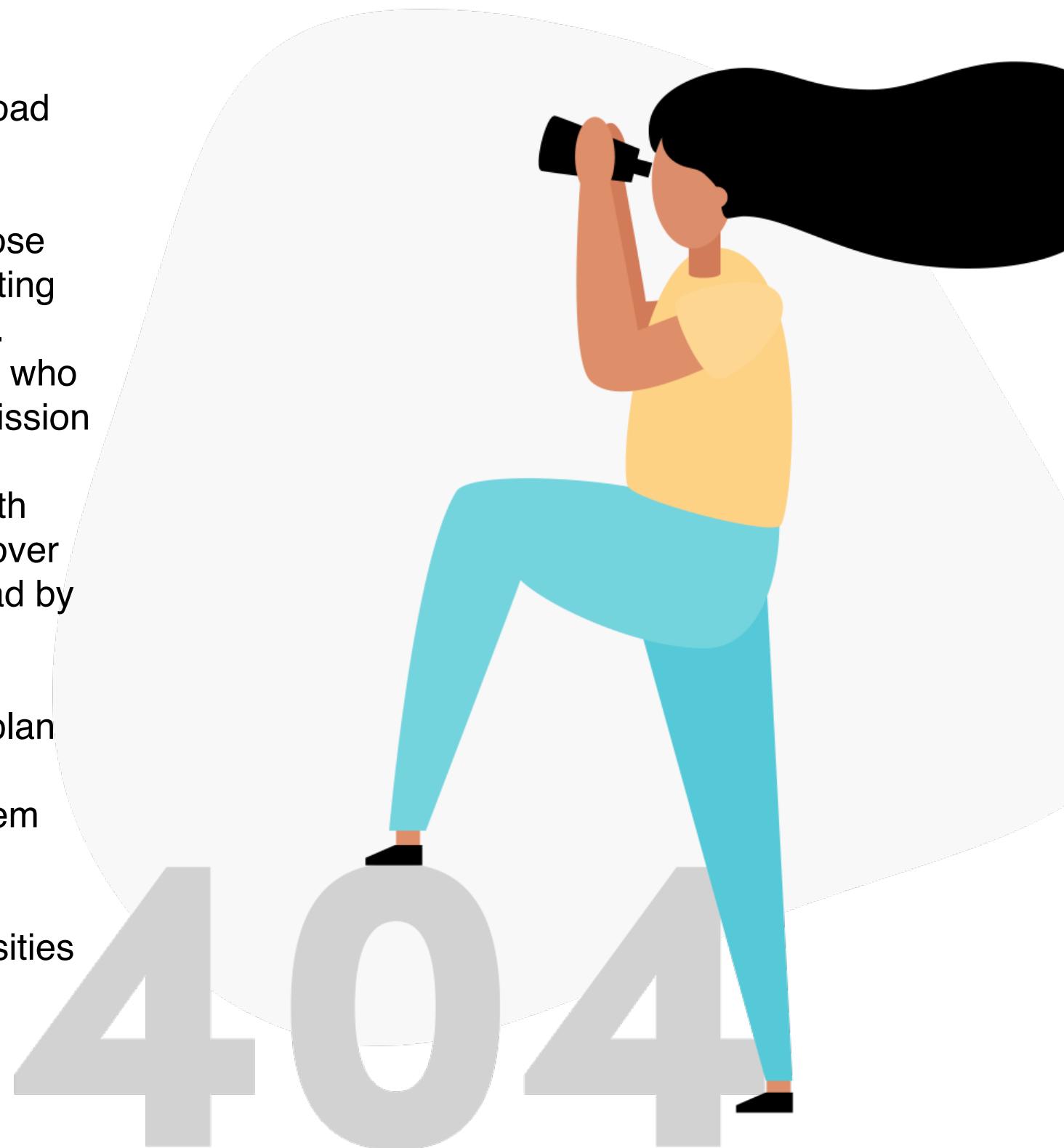
Apart from the academics, the financial aspect is the most important aspect to consider while preparing your application list. How are you going to finance your stay (i.e. tuition fee, accommodation, food, stationery supplies, etc.) in a foreign land should hold a very important part in your university profile. Applying to universities is also an expensive affair, hence one can not go out and apply to a large number of universities.



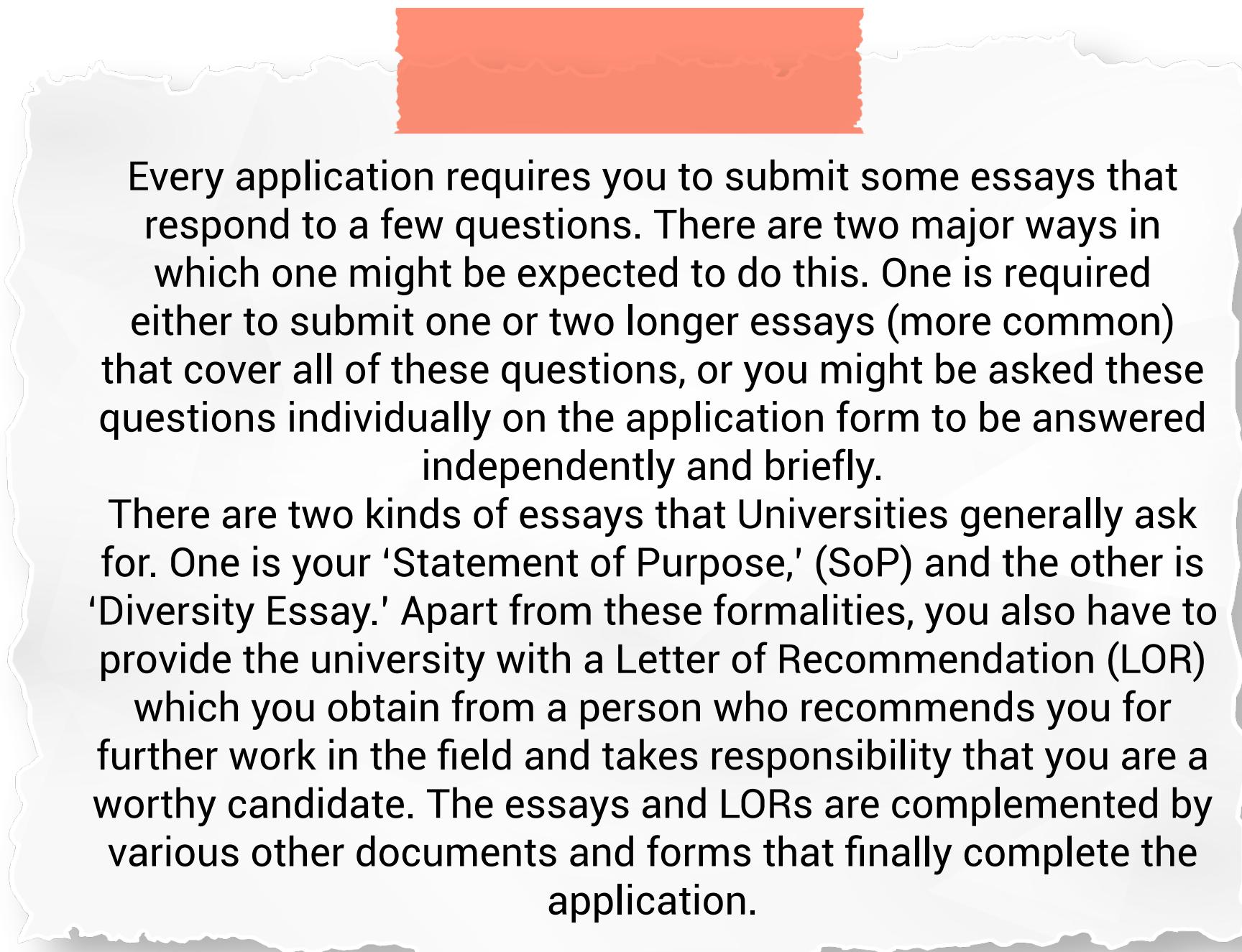
You should categorize a number of universities into 3 broad slabs:

- 1. Ambitious:** Also can be termed as dream schools, those schools which you would pick over any others and getting into them would literally be a dream come true for you.
- 2. In reach:** These schools are ones that select students who have similar profiles as yours and chances at the admission are pretty much even.
- 3. Safe:** The schools, which on average pick students with slightly weaker profiles than yours. This gives you an over average chance to get in and these schools are not bad by any means.

Having about 3-4 universities in each slab will help you plan better and also personalize your application better after narrowing down the list based on the priority you rate them in. Better planning at this stage of the process ensures a smoother pathway ahead. You can reach out to those 'ambitious' universities with much safety from the universities in the latter categories.



# APPLICATION PROCEDURE



Every application requires you to submit some essays that respond to a few questions. There are two major ways in which one might be expected to do this. One is required either to submit one or two longer essays (more common) that cover all of these questions, or you might be asked these questions individually on the application form to be answered independently and briefly.

There are two kinds of essays that Universities generally ask for. One is your 'Statement of Purpose,' (SoP) and the other is 'Diversity Essay.' Apart from these formalities, you also have to provide the university with a Letter of Recommendation (LOR) which you obtain from a person who recommends you for further work in the field and takes responsibility that you are a worthy candidate. The essays and LORs are complemented by various other documents and forms that finally complete the application.

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# STATEMENT OF PURPOSE

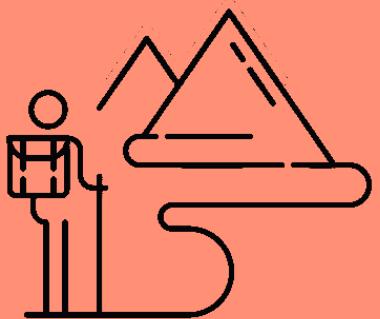
An SoP is a representation of your personality to the admission committee, however, you want to portray yourself. This is where you can highlight the traits of yours which aren't covered in other documents. An SoP is where you tell the committee your life story and whatever led you to apply to their university and in the field that you are applying in.

All universities have some upper limit to the number of words that should be used in an SoP. Generally, it is 500 words or 1000 words. This means one needs to be judicious about what goes into the SoP and you have to make sure that you present the best case for yourself by including all the strong points as well as do justice in describing them most convincingly. In an SoP, everything that is mentioned needs some explanation and some conclusion. One should not just mention something and leave it because firstly, that might render that point rather less impressive and less believable (and we want them to believe you), and secondly, your resume is serving that purpose anyway. SoP is where you pick the major events from your resume and describe your experience and how those events affected you.

SoP is mostly supposed to cover your life and growth in the academic sphere. However, one should briefly mention their extra-curricular achievements and volunteer work and how those things influenced you as a person. But mostly, you should present your academic background as thoroughly as possible.



# Universities seek the following information from an SoP



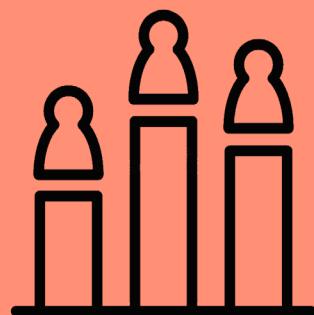
## Your interests and experiences that have motivated you to the career path

You should describe the major events that have led you to the stage in your life, where you are, and have influenced your decision regarding your career path. Your SoP should contain your projects, internships, and courses and explain how those events helped you make the decision. You should describe briefly, the purpose and the achievements of the projects and internships along with what you learned from those and the challenges that you faced.



## Your research interest

Your SoP should convey the field that you are interested in. This part should be the heart of your SoP because this is what you are applying in. You have to show all the credit that you have accumulated in the field and how that has made you desire a deeper knowledge in the field. You should also explain how the opportunity will help you in shaping your career in the future. You should also include the kind of research you want to proceed in and how you as an individual are a fit for the same.



## What sets you apart from the other candidates

An SoP is the only subjective aspect of your application. This is where you can describe your abilities and traits and what makes you a better candidate than the others. As you describe your achievements in the respective courses, projects, and internships, make sure to highlight your performance, personal achievements, and how the experience prepared you for more difficult challenges, personally and professionally. This is the place where you can explain any sort of uncommon terminology of your university that is relevant because here you are allowed to be descriptive (a little).



## Why you chose the University and the program

This answer will vary for every University that you submit an SoP to. A committee wants to know if you have done your research properly. For this, you should go to the websites of every University on your list and read about its history, reputation, and accolades. You should also go to the departmental websites and read about your specific department and field. This will help you add more specific points in your SoP for this answer which is more impressive than writing some generic stuff. Write about the research facilities and faculty and what sets the University apart from the other Universities. You should also read about some faculty members in your field. You can try to read some research papers by them and learn about their work and if something intrigues you, you should mention it in your SoP. The amount of effort you put in answering this shows the University your dedication and hence, you should make sure that you do all sorts of research before answering this.



## Your proficiency with the language

An SoP also presents your writing ability to the University. Hence, you should ensure that your SoP is grammatically intact and lucid enough for the committee to understand. Don't get tempted to show off your vocabulary because that might render many sentences redundant and difficult to comprehend. Also, you should try to mention events as a sequence as one thing that led to the next and eventually to the stage where you applied to the university. So try to connect sentences and paragraphs and keep the story continuous.



## Why the University should choose you

Your SoP should include things about you that make you more of an asset to the University. You should mention your personality traits and your experience in extra-curricular activities, volunteer work, teaching experience, or anything else that you can replicate to add value to the university other than being a student.

You should start by shortlisting what you want to include in your SoP and put them in a chronological sequence firstly. Figure out the points which strengthen your application the most. You should build your SoP around these points. Then, firstly explain all the events that led you to these selected events (the stronger points). Follow it with a thorough description of these events. Since these are the points that you expect to get you the admission, you should make sure that you explain these in the best possible manner. After this, you should explain how these events helped you in deciding the future course of action (which is joining a graduate school) and why you chose to apply to that particular university. You should make two general SoPs, one 500 words long and one 1000 words long leaving some space for ‘why you want to join the University.’ Since this is a formal, and academic document, keep the font style and language as formal as possible (Use Times New Roman or Liberation Serif). Some Universities have guidelines regarding how you should submit your SoP (including the format, title, subtitle, header, footer, etc.). Make sure you follow each accurately.



Getting the SoP verified from other people is a necessary step. Find people who are willing to spend nearly as much time on it as you are. Keep going back to them and ask them for edits. They will basically become co-authors of your SOP, and that's okay (if they're okay with it). Know that you will soon develop tunnel-vision, and so you will need fresh eyes often. Writing an SoP is not a one-shot thing, you may go through multiple SoP drafts until you finally get the one you feel is perfect.

**If not provided with any such guidelines, you can follow the following:**

- **A 500-word essay usually covers one A4 sized page and a 1000-word essay should lie within one and a half A4 sized pages (font size 11). The title should say ‘Statement of Purpose’ and the subtitle should include your name and student ID number (if provided by the University you are applying to).**
- **Additionally, compile the points for the final paragraph for each university in a doc with appropriate headings. You should try to be prepared with these two documents around the beginning of your seventh semester so that you have enough time before the application deadlines proofread the entire essay a few times and to reconcile your SoP according to the respective universities.**

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# **DIVERSITY ESSAY**

From a diversity essay, a University wants to know more about you as an individual. This is where you tell the University about your background and your experiences that have made you the person that you are. You need to convey the perspective that you bring to the table and the insights that you offer.

A diversity essay is not just about ‘diversity’. In this essay, you should describe yourself as a person. You should mention what makes you unique as an individual. Remember, you have to describe the experiences that have led you to a place rather than merely mentioning your achievements and skills. For example, if you are a good synth player (which is an impressive skill but doesn’t set you apart exactly), then rather than merely telling all that you have done as a synth player, you should explain the environment that you grew up in and how that environment led you towards becoming a great synth player. You can also write about the kinds of challenges that you (or your family) have faced in life, socially, financially, or politically, and how you overcame all those obstacles to achieve everything that you have achieved.

While writing a diversity essay, it is recommended that you find that one thing that sets you apart and write your essay on it instead of dwelling over several different topics. This is because the university wants to know the unique perspective that you would bring to the university. Again, goes without saying but still, worth mentioning, please be honest and authentic. It is never a good idea to make up a story. Apart from this, try to be clear and cogent. This too is more like a story of your life so keep it sequential and connected.

**It is recommended to have a diversity essay prepared around the beginning of your seventh semester. This gives you enough time to proofread your essay and getting it reviewed by the other people.**



**You can find a diversity essay with its critique here.**

ThoughtCo. | College Admissions Personal Essay: "Give Goth a Chance"

Resources > For Students and Parents

## College Admissions Personal Essay: "Give Goth a Chance"

A Common Application Essay on Diversity or Identity

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**Here are some more examples.**



### Examples of Successful Diversity Statements

13 JUNE 2017 on Examples, Admissions, Diversity Statements

Updated August 2020

We've been asked for examples of diversity statements many times; below are several great ones. It is important to note that diversity statements are truly optional, and not everyone should write one. Contrary to what you may have heard, it is not a missed opportunity to write more about yourself. In fact, we

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# LETTERS OF RECOMMENDATION

A letter of recommendation is usually submitted to universities by any person that you have nominated as someone who knows you (personally or professionally). As the name suggests, the recommender is supposed to advocate your case and present you as a worthy candidate based on their experience of working with you. So make sure that you are on good terms with the person from whom you are requesting an LoR. Most of the applications usually require three letters of recommendation, out of which two are supposed to be academic LoRs. However, you may be expected to submit more or less number of LoRs depending upon the University.

## What purpose does an LoR serve:

A letter of recommendation helps to bolster your profile, but more than that, it works as formal evidence of what you mention in your CV and SoP. Hence you must ensure that you get a letter of recommendation that covers your stronger points. An LoR testifies your SoP as well as presents you as a person from the eyes of someone else who has seen you working.



## **Whom to approach for an LoR**

One thing to be clarified here is that anybody can write and submit an LoR for you. What is to be covered is whose LoR can help your application the most.

Your LoRs should testify to your SoP. So for academic LoRs, you should approach professors you have worked with as a part of your projects or internships. Other than that, you should ask the instructors of courses in which you performed well. For the third LoR, you have the option of going for an academic or a non-academic LoR. If you have done an industrial or a corporate internship, you should request your mentor or manager for an LoR. Make sure that the person you are requesting an LoR from knows you well and can write a more intimate LoR and highlight your qualities and skills better. One myth is that the LoR of a more renowned professor earns you more credit regardless of how well they know you. The truth is that an LoR from a professor you have worked with and who can write a more detailed and personalized LoR for you is better for your application.

Prepare a list of potential recommenders and order them according to how well they know you and the kind of work you have done with them. Make sure that you make the request a good amount of time before you start applying so that you can find other options if someone denies providing you with an LoR. Also, it is advisable to have more than three professors who agree to provide you with LoRs so that if for some reason a professor is not accessible or not able to provide you with an LoR before a University's application deadline, then you have a backup option to make up for it.

## **How to approach potential recommenders**

You should simply mail them to provide you with an appointment or simply knock at their office in their free time. But, it is recommended to meet them in person to discuss this. But the most important part over here is to ask if the professor is willing to write a **POSITIVE** LoR. This is important as generic LoR will not have a huge impact on your applications. And, most professors will tell you directly if they wish to write a positive or a neutral or generic LoR. Professors might have different criteria for deciding if they want to provide you with an LoR. But, you can be certain that they wouldn't fling stones at you or send dogs running after you just for this. As far as internship managers/mentors are concerned, it is anyway advisable to maintain friendly relations with them during your internship. In this case, it would be really helpful for approaching them regarding LoRs.

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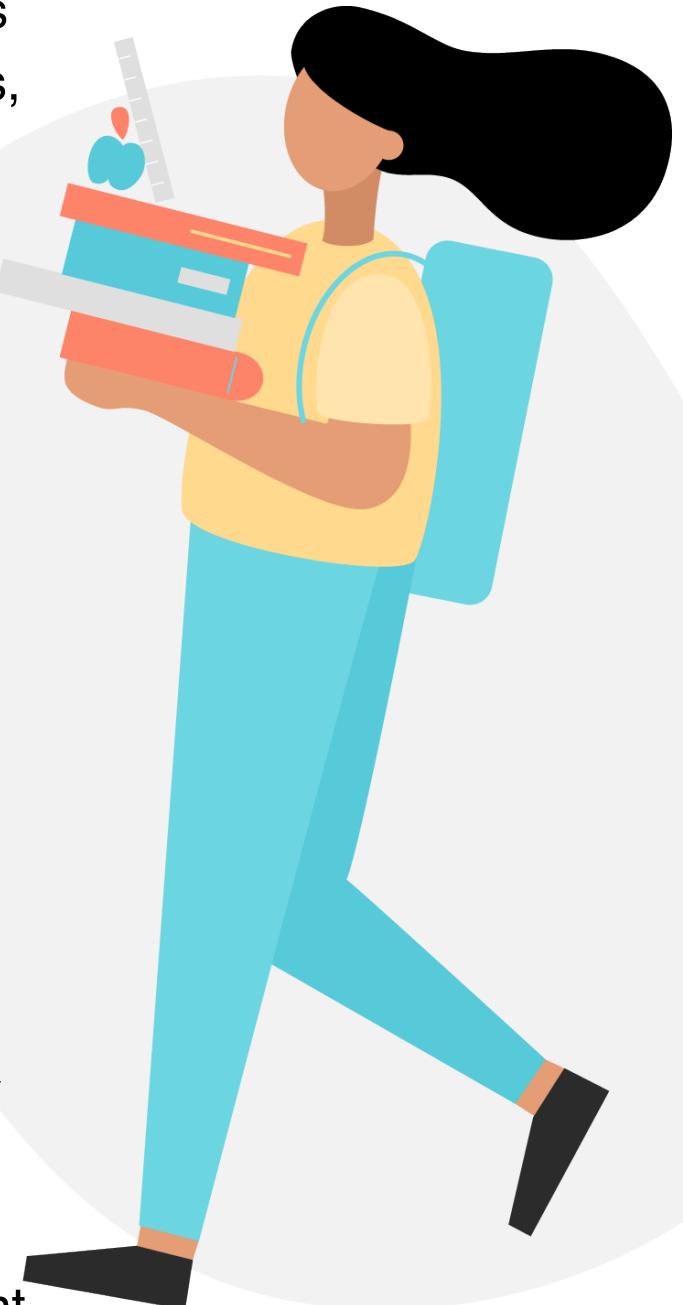


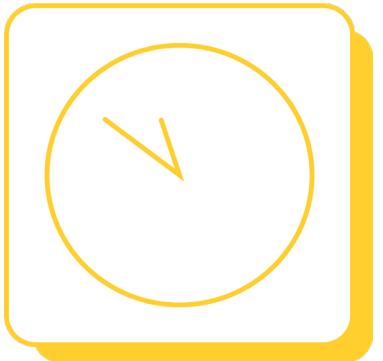
# APPLICATION FORM AND OTHER RELEVANT DOCUMENTS

This is the key step. Other steps don't make sense without this. An application form usually consists of the following sections:

- 1. Degree Program:** This section asks the program that you are applying to and the term that you are applying for (Fall/Spring semester).
- 2. Biographical Information:** This section requires the basic details of the candidate, which includes the name, family name, Date of Birth, guardian's details, contact details, citizenship details, ethnicity details, and languages spoken.
- 3. Academic History:** Here you have to fill out the details about your education. This includes details about your institution, your major, your degree type, your performance parameters, etc. Some Universities also ask your GPA scaled down from out of 10.0 to out of 4.0. Other than that, it also asks about any disciplinary misconduct from your past.
- 4. Employment History:** Here you are supposed to list down your employment history (jobs and internships) along with your designation and a brief description of your work.
- 5. Area of Interest:** Here you enter the field that you are interested in and the research work that you are willing to pursue. Usually, you are supposed to enter three choices, ranked according to your preference. Apart from this, you are supposed to provide names of a certain number of faculty members, whom you would like to make your masters advisor.

- 6. Financial Information:** Here you are asked about your tentative mode of paying your tuition fees and other expenses. There might be a section for scholarships if they are offered by the program.
- 7. Essays:** You are supposed either to upload files in one of the mentioned formats and follow all the other guidelines or to write the essays in the provided text boxes, answering the respective questions.
- 8. Letter of Recommendations:** In this section, enter the required information regarding your recommenders. Once you submit the details of a recommender, a link is sent to their Email address.
- 9. Test Scores:** Here you are supposed to enter your GRE and TOEFL scores. Please note that the scores entered by you are only nominal and do not carry any weightage in themselves. Your scores have to be sent via ETS to the University
- 10. Additional Information:** There is some miscellaneous information that universities ask, like whether you have been a student at the university earlier, or if some of your relatives have been associated with the University. You are also asked to name the other Universities that you have applied to.
- 11. Review:** This is where the information that you have entered is summarized for your review. Read it carefully to ensure that you haven't made any mistakes before submitting it. You can navigate to the previous sections to make necessary changes.
- 12. Payment and Submitting the Form:** The application fee typically ranges from USD75 (about INR 5600) to USD 125 (INR 9300). This section shows the payment modes that a University accepts. This transaction involves international payments so make sure that the account you are using has the service available.





### **When to start filling a form:**

You should start filling an application form at least a month before the application deadline. This is because, firstly this is a lengthy process, and secondly, at times navigating to a section remains disabled until you complete the sections before it. And the ‘Letter of Recommendations’ section is preceded by quite a few sections. So to ensure that your request reaches the recommender on time, you should reach the section in time. Sending the recommendation request should be the first checkpoint for you. You don’t have to fill the form in one sitting. You can save the progress and resume from where you had left off earlier.

### **Sending Test Scores from the ETS website:**

At the end of your GRE/TOEFL test, you are allowed to send scores to four Universities for free. You have to enter the GRE/TOEFL code that is assigned to the University. You can simply google this information before going to the test. GRE and TOEFL codes are different for the same University so make sure you take the right code with yourself. Make sure that you have the four Universities decided when you go to give the test and you have the respective codes. Locating the University otherwise will be a difficult task. Other than these four Universities, for sending any additional score reports, you have to sign in to your GRE/TOEFL account and in the ‘Scores’ section on the home page, click on the ‘Send Additional Score Reports.’ On the next page, review your details then click on the ‘Next’ button. On the next page, enter the University Code in the first column of the shown table, and choose the department in the following column. Select the score that you want to send (If you have given the test once then choose that test score, else the highest score). Add all the Universities where you want to send the scores. Once you are done entering these details click on the ‘Add to Cart and Checkout.’ Complete the payment. Once done, you can go to the home page and check the ‘View Scores and Score Recipient.’ The Universities you have sent the scores to should appear in the list. Sending a GRE score report to a University costs USD27 (about INR 2000) and sending a TOEFL score report costs USD20 (about INR 1500).



# RESULTS

Upon completing the application procedure from your end, it is time to sit back and relax.

The whole process is quite tiring and one should take the time to prepare themselves for the verdicts, good or bad. A bad result is not the end of the journey, and if you have planned well in the prior steps of the process, you are sure to receive good news. Universities do not release results around the same time, rather the results keep coming in through a fairly long duration of about 3 months. So it is crucial that one handles the acceptance and multiple acceptances situation well and makes the right decisions for themselves.

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# **ACCEPTANCES**

- Acceptances start coming from Mid-February and can continue till late April for Ph.D programs and can come even later for some other programs. If you receive a positive response from a university before the application deadlines of others, reconcile your list with your new situation (by omitting or replacing the universities at a lower priority than the one you have been accepted to).
- The procedure following acceptance varies from university to university. Your decision (whether to accept or decline the offer) usually needs to be conveyed either on some application status portal or sent via email to a specific Email-ID (information to which will be available with the statement of acceptance or the university website)
- Once you have made your decision and have accepted the offer of your desired university, further instructions to complete the admission process are conveyed..
- Some specific program applications do require interviews, and these are usually informed of in the application itself. Interviews and other communications are usually asked for by specific professors and are set up over personal email threads with them.
- To maximize the probability of getting a reply from a professor, be prompt to send out your mails near the start of the workday (according to their local time). That way, the chances they'll see your mail increases radically. Professors get tons of emails every day, so this precaution diminishes chances that your mail would be overlooked.
- If it has been very long and you haven't heard from the university yet then you should email the graduate admissions office of the university or visit sites like "Gradcafe" and see if other people who applied to that university have received an intimation or not.



# CHOOSING BETWEEN MULTIPLE ACCEPTANCES

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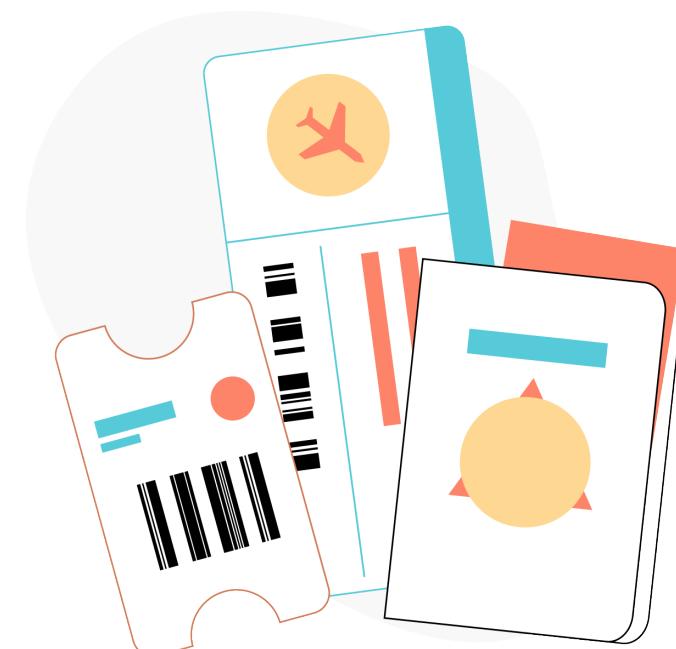
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- The approach to select a university given multiple acceptances vary from person to person but certain factors should be kept in mind while making your final decision.
- The primary factor should be the professor under whom you are going to do your research. You should see how good the professor is in his/her research in his/her primary area of interest and how closely the professor's research interests align with your own. A possibility for alternate research groups and guides should also be kept in mind.
- Another factor is the financial aid provided by the university. Most of the Ph.D programs offer financial aid but if you are applying for Masters then you can use financial aid as a gauge to choose a university.
- The next consideration, of slightly lesser importance, is the reputation and standing of the university itself. The reputation of an institute is usually a decent indicator of the quality of education, and the overall quality of students and educators alike.
- Some less important considerations can be geographical location, city, weather, and so on. These comparatively minor considerations depend on our particular interests and set of circumstances.
- You should discuss with your professors or reach out to seniors who are already enrolled in the university or the people from the labs of the professor who you have shortlisted for more information about the professor you are going to work with.



Congratulations for making it to the end of the Application Guide!

You have successfully taken your first step towards exploring academia as your next step in a flourishing career. We hope that the guide introduced the whole process in the most elaborate ways possible and we hope that the guide becomes a part of your success journey.

For more information about specific programs or the process in general, reach out to the IR team and our gracious seniors who took out time from their busy schedules to assist the team in preparing the guide.

	Devansh Saraswat	Y15	Material Science and Engineering	Cornell University (MS.)
○	Harish Rajgopal	Y16	Computer Science and Engineering	ETH Zurich (MS.)
○	Karan Jha	Y16	Mechanical Engineering	Carnegie Mellon University (MS.)
○	Pranav Kulkarni	Y15	Mechanical Engineering	Alto University (MS.)
○	Pratyush Garg	Y15	Electrical Engineering	University of California, Los Angeles (MS.)
○	Promit Chakraborty	Y16	Civil Engineering	John Hopkins University (Ph.D.)
○	Rohin Garg	Y16	Electrical Engineering	University of California (MS.)
○	Saakaar Bhatnagar	Y15	Aerospace Engineering	Stanford University (MS.)
○	Sagnik Bhattacharya	Y15	Electrical Engineering	University of Maryland (Ph.D.)
○	Shivali Agrawal	Y16	Chemical Engineering	Cornell University (Ph.D.)
○	Smit Choudhary	Y16	Physics	Delft University of Technology (MS.)

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