

Applying to PhD Programs in Economics: An Extensive Guide*

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June 2021

*We are thankful to Ilisa Goenka, Ashwin Nair, Sabareesh Ramachandran, and Kartik Srivastava for their comments on various aspects of the document. We are also thankful to our mentors and guides who helped us all along the Ph.D. application process.

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Contents

1	Introduction	4
2	Academic Background	5
3	Research experience before applying	6
3.1	What do I do as an RA?	7
3.2	What are some of the technical skills I should equip myself with?	8
3.3	Where can I find RA opportunities and when should I apply?	8
4	Components of the application process	9
4.1	Picking Schools	9
4.2	CV/Resume	11
4.3	Statement of Purpose	12
4.4	Writing Sample	14
4.5	Letters of Recommendation	15
4.6	GRE	16
4.7	TOEFL-iBT	18
4.8	Application Costs	19
4.9	Transcripts	20
4.10	Other application components (specific to certain programs)	21
4.10.1	Personal History Statement	21
4.10.2	Course Forms	21
4.10.3	Interviews	22
5	Timeline	22
6	Conclusion	24
7	Appendix	26
7.1	Costs involved in the application process	26
7.2	Templates For Organizing Applications	26

7.3	Visa Application for the United States (F-1 Visa for students)	26
7.4	Getting transcripts from Delhi University	27

1 Introduction

If you are reading this, it means you have made up your mind to pursue a PhD in Economics, in which case we have tried our best to make your job easier. Pursuing a PhD in any field requires three things - likeness for the particular subject (at least), passion to do research relentlessly, and patience. And fortunately, all these things are in your control.

We've put together this guide based on our personal experience to give you more clarity on what will be required of you to get admitted to an Economics PhD program. Great advice for PhD applicants already exists - and we encourage you to refer to Chris Blattman's [Frequently asked questions on PhD applications](#), Alvin Christian's [Applying to Economics PhD Programs Memo](#), and Susan Athley's [Advice for Applying to Grad School in Economics](#).

This guide aims to provide you with detailed information and advice on the various components of the application process, particularly as an international applicant. All of us applied in the 2020-21 application cycle, and have tried our best to put together learning from our experience and conversations with mentors and graduate students leading up to the applications. As international applicants, we realise that otherwise straightforward application components such as research experience, courses, transcripts, English proficiency, etc may not be as straightforward when you do not have a degree from the United States, and have thus tried to include information on such components as well.

The usual caveats apply: bear in mind that what worked for us may not work for you, and the advice outlined here is meant to be customized to suit your background and your working style. The information in the guide applies to Econ PhD programs in the United States, and others that follow a similar structure (such as the University of Toronto, University of British Columbia, London School of Economics, Warwick University, ETH Zurich, etc). Programs that require you to submit detailed research proposals, and match with your advisor before starting your PhD have a very different procedure, and none of us have any experience with applying to those programs.

The structure of the guide is as follows - we start with a section on the academic background of most successful applicants, then why obtaining research experience prior to the PhD can help, move to the sections on the various application components (including the statement of purpose, writing sample, letters of recommendation, GRE and TOEFL,

application costs, transcripts, and other miscellaneous requirements), and conclude with a timeline you could consider following.

2 Academic Background

Your academic grades play an important role in your overall application. They kind of provide a signal about your ability to handle the workload of first-year doctoral studies. Doctoral studies in Economics require you to study Ph.D. courses for the first two years. In the first year, you take theory courses on Macroeconomics, Microeconomics, and Econometrics, and then appear for qualifying exams, after which you enter into the second year and take elective courses. These courses, as you all know, are math-heavy in nature and require you to have intermediate-level exposure to Mathematics and Economics. Most universities (especially the top 30) look at your academic background and if they see that you have completed semester-long courses on calculus, linear algebra, real analysis, and optimization, and have done well in them (minimum B+ is a safe mark), it sends a positive signal. Apart from that, your grades in intermediate level macro and micro matter more than your grades in elective courses, but that doesn't mean you will ignore the electives. The minimum requirement for someone who is applying even from a non-econ background is:

- Three semester-long courses - differential calculus, integral calculus, linear algebra
- Semester-long courses in intermediate macro, micro, and statistics¹

Apart from that, a course in real analysis and experience with writing proofs definitely gives you a slight edge, and some universities like Boston University, University of Wisconsin - Madison, Boston College, etc, emphasize your exposure to courses which require you to write proofs like real analysis, measure theory, linear algebra, optimization, graph theory, etc. But this doesn't mean that you need these courses for sure - students get in even if they haven't

¹Program websites routinely mention that people with any background can apply because Math background is given considerable weightage. There are cases where people get in without any Econ experience, but those students are generally the ones who did their undergrad from the USA. For international students (especially from India), we have rarely seen anyone who gets in with just a degree in Mathematics. If you find anyone like that, you should consult them on how to approach the application.

taken these courses. Also, if you are keen on doing a course in Mathematics and if you're going to start a pre-doc, you can do an advanced Maths course and get a good grade to send a positive signal.

Now, many of you would have a question - my university doesn't give good grades but my grade is good relative to my batch, just that it doesn't look good on paper, how would I get into a good university? Well, the answer lies in the letter of recommendation (about which we discuss in detail later in the application section) - the professor from your university from whom you're taking the letter can explain the grading system used in your university and hence it can be taken care of easily.

3 Research experience before applying

Research experience before beginning your PhD is an excellent way to familiarise yourself with the entire academic research spectrum. [Schlauch and Startz \(2018\)](#) finds that 39% of students who finished their degree from the top 50 ranked American universities worked as research assistants (RAs) before their PhD.

RA-ships also ensure strong letters of recommendation from academic researchers with whom you establish steady working relationships. These researchers (also referred to as Principal Investigators, or PIs) often mentor you on various aspects of your PhD application - from giving feedback on your application essays (statement of purpose, writing sample, etc) to helping you sail through the ridiculously stressful application season. However, it is always advised to speak to former RAs to better understand individual experiences.

There are multiple types of pre-doctoral jobs, from working in the field and supervising data collection, to working with think tanks and financial institutions. If you are reading this guide a few years before applying to a PhD and will be looking for a relevant pre-doc/RA role, you might want to consider if the role will give you exposure at the following:

1. Data Skills
2. Field Experience
3. Writing/Presentation skills

In the section below, we describe in more detail what each of the above responsibilities might entail on a day-to-day basis. Field-based positions may involve less time spent on study design and analysis (depending on which stage the project is on). Speaking to professors or managers during the hiring stage can help you understand better the nature of data tasks you will be undertaking.

3.1 What do I do as an RA?

- Data Management
 - This ranges from data gathering, cleaning, to analysis. The first two coupled with exploratory analysis are typically conducted in the early stages of a research paper.
 - It is common to have daily or weekly calls with your PI(s) regarding the results you produce. Exploratory results include summary statistics and anomalies - essentially trying to understand the dataset as thoroughly as possible. It is important to know what fraction of the data is missing, whether the data is skewed, what are the median, 75th percentile values, and deviation from the mean of the data, etc. You might be asked to produce line and bar graphs, histograms, or maps based on the nature of the data. The calls would also include discussions on results produced by papers that have used similar data.
 - For data visualization, you can check out Jonathan Schwabish's [An Economist's Guide to Visualizing Data](#)
 - You will need to conduct brief literature reviews and re-work on the data as described by your PI(s) for your next call.
- Administrative responsibilities
 - Your responsibilities will often include field-work - this is a great way to get acquainted with ground realities and barriers to research in developing countries
 - You will often need to work in close liaison with policy stakeholders or government organizations - those working in collaboration with your research team
 - You will help draft grant proposals and presentations

- You will be responsible for research interns hired for a short-term basis on the project

3.2 What are some of the technical skills I should equip myself with?

- The typical RA working on empirical projects would need some level of familiarity with Stata or R.
 - Check out Germán Rodríguez’s [tutorial on Stata](#). He also has a similar project that serves as an [introduction to R](#).
 - Jake Blundell’s [course on Applied Econometrics](#) is an excellent resource that begins with an introduction to Stata. It goes on to discuss data cleaning, plotting data, regressions, and causal inference techniques like difference-in-difference and synthetic control!
- Familiarity with the following texts should also help
 - [Scott Cunningham’s Mixtape](#) is a wonderful way to get started with probability, regressions, and causal inference mechanisms. You can also read Rohan Alexander’s [Telling Stories with Data](#) which provides a detailed guide on working with data using case studies (suggested by Scott Cunningham as a prerequisite to Mixtape)
 - Basic statistics and/or econometrics, intermediate microeconomics, linear algebra, multi-variable calculus

We should take a minute to emphasize that **even if you feel you do not have good grades in these courses, do not hesitate to apply!** A wonderful aspect of RA-ships under academic universities is that they often enable you to take additional coursework. These courses are often useful when you apply for your PhD!

3.3 Where can I find RA opportunities and when should I apply?

Although RA positions are circulated throughout the year, you want to start applying early for positions starting summer. Vacancies typically open up in the Fall (around Septem-

ber/October) for positions beginning in May/June of the following year. Many websites consolidate academic RA positions. A few of them include:

1. [Econ RA Listings](#) on Twitter
2. [Pathways to Research and Doctoral Careers \(PREDOC\)](#)
3. [National Bureau of Economic Research](#)
4. [Econ Job Market \(EJM\)](#)'s page on RA and predoc positions
5. [American Economic Association](#) website for mentoring and professional development

J-PAL's [advice for landing an RA-ship](#) is an insightful piece on how to identify and apply for RA positions. Alvin Christian's [memo on pre-docs](#) is also an amazing resource for RAs and PhD applicants. Lastly, we suggest going through the extremely thorough [Econ RA guide](#) by Coly Elhai, Quan Le, Kai Matheson, and Carolyn Tsao, as well as [Insights From a Survey of Research Associates/Assistants in Economics and Development in India](#) by Anahita Karandikar and Prashansa Srivastava.

4 Components of the application process

This section focuses on components of the application process, and we have tried to be as comprehensive as possible about the entire process - starting from picking schools to essays to test scores and even interviews.

4.1 Picking Schools

One of the most important aspects of the application process is deciding which schools and programs to apply to. If you're interested in applying to PhD programs in Economics, you may also be considering some public policy programs, or more specialised programs, such as agriculture and resource economics, urban economics, etc. The advice below assumes you know the programs you wish to apply to, and we hope will be useful for various programs.

- **Start with a broad list.** For a starting point you may pick, say the top 50 (*depending on the lower bound of your school choice*) schools from the field of your interest. Some of the resources you can use for rankings are:
 - [US News](#)
 - [Ideas RePEc](#)
 - [American Economic Association](#)

- **Browse websites** of each school in detail. Some factors to consider:
 - Broad department strengths
 - Faculty in your field of interest
 - Have students from your alma mater been accepted in the past?

- **For faculty**, go over the website of all faculty members in your area of interest. While browsing through faculty websites, put more weight on their work-in-progress and working papers for the sake of relevance. Going over their websites in detail can also be useful for your SoP (more on this later). Your decision to attend or apply to a school should not be based on one faculty member you want to work with - they may not be looking to advise students by the time you get to your 3rd year (or they may move), and you might change your research interests. Try to get a sense of how the school is overall in the field you are interested in (by looking at the number of faculty researching that field, placements in that specific field, research centres, etc)

- **Browse through recent placement records.** Depending on your preference between academic and non-academic career paths, you might want to pick a school with strength in the placement type of your interest. For those who are unsure about the career path to choose post-PhD, pick schools with steady records in both academic and non-academic placements. Sometimes, schools show only top placements on their website (not all) and if you even have an ounce of doubt, you should contact current students, preferably fourth year and job market candidates to get a clearer picture about the same. Make sure you are not drawn towards the university just by looking at the top placements- look at the median ones and take it as the realistic scenario.

- **Consider other factors.** You could also consider factors such as location, stipend, Indian students are already present or not, and most importantly placements after graduate study.
- **Categorize the schools.** Based on the above factors, bring the list down to 30-35 schools. Then, start to think about where the schools fall in terms of three broad categories:
 - Reach: Schools you definitely want to apply to but would be a hard shot for you to get in
 - Target: Schools where you have a competitive application
 - Safety: Schools you have a reasonably high shot at

These categories will be very personal - my *target* schools might just be *safety schools* for someone else. There will also be variation within the categories - a school could be a *high target* or a *low reach*. To figure this out, you can speak to your professors to get a sense of how your application might fare at various schools. Look at the GRE score requirements at programs, and use it to set a target score for yourself (if you do not already have a score that corresponds to the requirements at schools you wish to attend)

- **Shorten the list.** Once you have a list of 30-35 schools, think about how many schools from each category do you wish to apply to? For instance, if you are relatively risk-averse, you may want to keep your target category - the largest and reach category - the smallest. Only apply to schools you *will* go to - for each school *imagine you don't get in anywhere else - would you still accept the offer?*
- **Get your list reviewed.** Send your school list to professors, and seniors if you are finding it difficult to cut down.

[Here](#) is a template you can use to organise your applications.

4.2 CV/Resume

We all know why this is important - this gives an idea of everything relevant you have done in your past. Starting with your Bachelor's degree, then Master's (if applicable), then research

experience (if any), to your skills, research papers, other experiences, etc - you should mention all of this in a concise manner. Sounds hectic? Depends on person to person but remember - this one page is very important. A cursory read of your CV tells a lot about your overall experience and fit with the program, and your presentation skills. As far as possible, you should make your resume on Latex, although we don't believe that it will hamper your chances.

Here are some resume templates you could use:

1. Lakshya's word [template](#)
2. Prerna's Latex [template](#)
3. A [collection of different templates](#) by the Department of Economics, University of Wisconsin - Madison.

4.3 Statement of Purpose

The statement of purpose tells the admissions committee about why you want to attend a grad school, why this particular grad school, and how your experience prepares you for a successful career as an academic researcher. The goal should be to write something that is not mentioned in your CV/resume and presenting a cogent and unique narrative. You should have three things clear in your mind before writing SoP - your research interests, your motivation for a PhD (as it is a 5-6 year affair), and why that particular university. We strongly suggest looking at the structure proposed by Chris Blattman [here](#), advice put together by Alvin Christian [here](#) and the guide by the University of California Berkeley [here](#). Below is some extra advice from us (over and above the structure proposed in the resources linked in the previous sentence):

- Before you start writing your SoP, it is important to finalise what your research interest is. While going over faculty pages when choosing schools, you could read papers that match your interests and use this as a starting point to think about the focus of your SoP.
- A way to push yourself to start is to put down a long list of everything you've done in the last 3-4 years and everything that interests you (in bullets). Start using that information

to give structure to paragraphs that describe your professional and academic experience. Here you could add a few lines about your academic training - the advanced courses you took, your performance in those courses (or in the degrees you have completed)

- For the section on research ideas - we would recommend picking a clear research theme that interests you and writing about why it interests you and what kinds of questions you would be interested in exploring during your PhD. You want this to be relatively broad (you do not necessarily need to propose a very specific research question and what methodologies you would use to answer it) and also comfortably link with a clear field (eg - development economics or applied microeconomics). You could also read papers in the Journal of Economic Perspectives and other journals (or papers) that compile literature to understand your field of interest more deeply and look for open questions.
- We recommend making each SoP cater to the college you are applying to by linking faculty research and why it is relevant for your specific research interests ²
- Proofread your SoP, and have a friend go over it to spot sneaky errors you may have missed! (Very important if you customize your SoPs - you do not want to submit an SoP to a college with the name of another college hidden in the essay). Be mindful of the word limit if it is specified, and make sure you stick to it.

Do's while writing your SoP:

- Clearly mention your research experiences, especially the ones related to the topic which interests you. If you have worked with a particular dataset, or you assisted in a primary data collection, or you wrote code to scrape the data from the web, or any other thing which was important to that project, mention it. All skills that you think are relevant and might help the committee make a better decision about your application should find a place in your SoP.

²There can be differing advice on this, and some might suggest not going into detail about why a particular college would be a good fit for you. While our suggestion is to customize your SoPs, you should speak to other graduate students about this

- If you are not submitting a separate document about your Maths courses, dedicate a paragraph about your Math background in your SoP. We can't recommend enough how important the Math background is for the admissions committee.
- Show it to as many people as possible so that you can refine it, improve it, and submit the best version of it.
- Always proofread the SoP before submitting it, always!

Dont's:

- Avoid mentioning what the admissions committee already knows - how good is the department, how diverse is the faculty, etc. Your SoP has a word limit and you want to convey more and avoid things that don't matter.
- SoP doesn't send a signal about your writing ability, so make sure you use simple language - too many adjectives and little info might work as a negative signal.
- Do not write very broad or "no single" interests - you must have one or two specific areas mentioned in your SoP. Having said that, you are not binding on your word, you can always change your interest after getting admission, but till then a particular area of interest is important, even better if it aligns with the research you have previously done.

4.4 Writing Sample

A writing sample gives a signal to the admissions committee about how you think, how you approach, and how you explain a research problem, especially about your academic writing. It can be anything including a master's dissertation, a working paper (this could be an extension of an old term paper or your undergraduate thesis), or a published paper. It is not a compulsory requirement in all grad applications, but recently, many schools have been including it as a part of their application, so it would be a positive point if you have a good writing sample. You should send your writing sample to all your letter writers and take feedback before submitting it in an application. If you have a master's degree or are planning to pursue

one, writing a dissertation is recommended. If you do not have a dissertation, a term paper you wrote for a course can be a good starting point, but do not submit it as it is, improving it to a level where it looks like a well thought argument with comprehensive writing will add value to your application profile. You do not need to write something ready to be published, but one that necessarily demonstrates your ability to identify an interesting research question, arrive at a potentially valid empirical strategy, and write a cogent narrative.

4.5 Letters of Recommendation

This might be the most important thing in the application and probably the only thing that is out of your control. Frankly speaking, you need really good letters of recommendation. By good, we mean that the letter writer should know you in and out, should be able to write cogently about you, and the letter writer must be an active researcher in any of the fields including Economics, Public Policy, Finance, Mathematics, and Statistics. An active researcher has more chances of being known to the admission committee of top programs and this aspect is very important. If you are a Master's student, you can take two letters from someone with whom you took a course, but the third letter is recommended from your dissertation advisor (if you have written a Master's dissertation). You can diversify your letter writers (get one from your masters, one from your RA position, one from undergrad, and so on) if you have worked with (or been taught by) active academic researchers at various stages

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Fortunately, the part that is in your control is making a good rapport with your letter writers. If the letter writer is your professor, your focus should be to make a good impression and get good grades in their course. If you can do these things well, your path becomes easier. Letters from designated professors hold more weightage than recent PhD grads and assistant professors, but it's not a hard and fast rule. A good letter from someone who knows you in and out carries more weight than a professor who knows you only as a student who took

³If you plan on taking a letter from professors who taught you during your undergraduate degree, ensure that they have a PhD and are involved in active academic research (this is important for international students, such as those applying from Delhi University). If you are an undergraduate, you should opt for RAships so that you kill two birds, in fact, three, with one stone - research experience, a good writing sample in the form of a working paper, and an amazing letter.

their course and that you did well in that. For most grad schools, you will require 3 letters, each having a unique contribution to your application. But you should talk to at least 4-5 people because it might be the case that something uncertain happens and one of your three "primary" letter writers is not able to submit the letter. Ensuring that all the letter writers are on the same page as you is your sole responsibility.

All your letter writers should know/have four things about you - your research interests, your statement of purpose, your CV/resume, and the list of your target schools. Reach out to them as soon as possible because it's very likely that many others are already reaching out or will soon reach out to them. If a letter writer is not from your university, then you can ask them to mention some aspects of your university which they might not know about, like your Math background, your coding skills other than the programming language you are using in their project, your grades in core economics courses, etc. Your job is to be as transparent with them as possible, so that they can mention all the good things about you (ideally your letter writer should be able to describe qualities that make you a good PhD candidate through specific examples)

Note: Professors are busy people and usually the application deadline coincides with the end semester in their universities, so feel free to send them reminder emails so that your letters are submitted on time.

4.6 GRE

It is required by almost every PhD program you apply to and is an essential part of the application. The GRE test has three parts: Quant, Verbal, and Analytical Writing. Quant and Verbal are scored out of 170 each and Analytical writing is scored out of 6. You can get more info about the test when you buy the official guides by ETS, the organization that takes this test around the world. The score is valid for 5 years, but most universities demand the score to be not more than 3 years old. It is advisable to ask the admissions committee/point of contact beforehand regarding GRE requirements. If you have not written the GRE before (or have an old score that is about to expire), take the first attempt latest by July because sometimes people take it again to get a perfect score and so you need to leave room for retakes. You can take the test again after 21 days and 6 times in a calendar year.

Our recommendation would be to aim to score above the 90th percentile (167 or above) if possible. Note that a GRE score may not make or break your application but it is a component that is under your control and a high score can be achieved through timely preparation (and some retakes). For international applicants, we would not recommend neglecting the verbal and writing sections completely (aim for 160 or above in Verbal, and at least 4.0 in the writing section). Given all that, you should check each department's website for the GRE requirements.

Below are some tips for preparing for the GRE (based on our personal experience):

- Magoosh has a free app to learn words for verbal, which are the backbone of half of the verbal section. It's a nice interactive app that makes you learn all the words. In our experience, one should start preparing for words at least one month before learning various tricks and tips for cracking the verbal section of the exam. Directly attempting the verbal questions might give you hope but usually, it doesn't help. TLDR, words are very important.
- Magoosh packages are widely used for preparation and offer a one-month and six-month plan (details [here](#)). The six-month plan gives you plenty of time to prepare. Additionally, you can pause and un-pause your plan in case you were planning to study for the GRE and find yourself busy with other things. The lessons are pretty nice, there are lots of practice questions, and their diagnostic feature gives you estimated scores based on your gradual practice. Magoosh also has several free resources you can refer to even if you are using other methods to prepare, including [study plans](#) to set schedules for yourself, math and verbal flashcards which you can download on your phone
- If you are relatively more familiar with concepts and wish to spend as much time practicing questions as possible, the [Kaplan question bank](#) can be useful as well. There are around 2500 questions (inclusive of Quantitative and Verbal Reasoning questions), and you can pick your level of difficulty and any topics that you need to work on. ⁴

⁴Other test prep resources for the GRE include the ETS official material (books, practice tests), [The Princeton Review](#), [Manhattan Prep](#), and [GregMat](#)

- It is really important to just practice a lot of questions so that the whole process of solving questions becomes a little bit like muscle memory. If you struggle a bit in the quantitative section, then it might be a good idea to learn the formulae that are commonly used, however, what works best is just solving more and more questions. Take a lot of mock tests to get used to the long hours and sectional shifts.
- Try to take out two months to prepare because even though the improvements in the quantitative section are fairly quick, the improvements in the verbal section take some time. Flashcards can be a great way to brush up on your vocabulary. One sectional mock test a week should give you enough practice
- Try to take one mock exam at the end of each week to keep track of your progress. When you take mock exams, make sure you do all sections - including the writing section, so that you are used to getting to the math after (slightly tiring) writing.

4.7 TOEFL-iBT

This test is also compulsory at most programs one applies to, especially if the applicant is not from a country where English is the native language. The TOEFL test has four parts of 30 marks each - Listening, Reading, Speaking, and Writing, a total of 120 marks. Most universities have a cutoff score of 92 out of 120 and a minimum of 24 in the speaking section, but the criteria really depend on the university's guidelines. This means that one needs to be clear about the TOEFL cutoffs before they apply to a PhD Program. In some cases, the TOEFL requirement is waived if all the degrees of the applicant after secondary schooling are completed in the universities/colleges that have English as a medium of instruction. In that case, one has to submit a bonafide/affidavit from their UG and PG (if applicable) university's registrar (can be any other signatory too depending on each PhD Program's guidelines) stating that you have completed your degree requirements with English as a medium of instruction.

Before buying any preparation material for the same, one should try to give an online mock test to access themselves. If you get a minimum score (95 or above) in that, you can skip directly to the part where you keep on doing mock tests and improve yourself. You will be better off without buying any subscription in that case but if you get below 90, then taking a

subscription makes sense. Our recommendation would be to get it done within 10 days of the GRE so that you do not end up pushing it till the very end. Since the listening and speaking sections may be new test patterns, taking 4-5 mock tests can help you familiarize yourself with the test pattern. You could also try to brush up your note-making skills by listening to a podcast and making quick notes. You can access practice tests for the listening section online on [YouTube](#). If you need more help, you can consider getting a [Magoosh plan](#) for TOEFL as well.

4.8 Application Costs

The application process certainly requires a fair amount of monetary investment. Taking the GRE will cost around \$213. Now, sending each additional report via ETS will require an additional \$27. Similarly, taking the TOEFL iBT exam will cost around \$185. Moreover, sending each additional report via ETS will require an additional \$20. If you write either of these exams relatively close (1-2 months) before your application deadlines, you can send scores to up to four universities without paying any additional charge (included in the cost of the test). The Magoosh and Kaplan subscriptions will also cost you some money so that has to be included here as well. (Magoosh GRE: \$129 for one-month preparation, and \$149 for six months preparation material, Kaplan QBank GRE: \$69)

Many European universities do not have an application fee (for instance, University of Warwick, Stockholm School of Economics, Bonn Graduate School of Economics, and Paris School of Economics, Bocconi University, and ETH Zurich). The application fee at US colleges ranges from 65 USD to 90 USD and sometimes as high as 140 USD. One can assume an average of 85 USD to get a ballpark amount to allocate for the application fees. The total application cost can be very high (if you wrote the GRE and the TOEFL and applied to 20 schools, you could expect the cost to be at least Rs 2 lakhs, or approximately \$2,700). Table1 summarizes the fixed and variable costs of applications (that you could expect to incur for each school you apply to). We assume the applicant is a first-time GRE and TOEFL test-taker to list the costs. However, the cost of preparation for GRE and TOEFL/IELTS have not been accounted for, neither have costs associated with writing the GRE more than once.

Options for fee waivers exist. However, most international students are not eligible

for the waivers offered by graduate programs. We strongly encourage you to go over the eligibility and application for fee waivers for your final school list. For example, [this](#) will redirect you to the web page for the application fee and fee waiver for the Yale University - Graduate School of Arts and Sciences. In a nutshell, the application fee waiver is given based on either documented financial hardship (basically, you provide valid documents to show that you have some financial limitations which make the application fee a bit of a burden) or participation in a special program, event, fellowship, or status. Some examples of such special programs, events, fellowships, or status include, American Indian Science and Engineering Society (AISES), China Scholarship Council-Yale World Scholars Program (BBS), and The Women+ of Color Project.

To apply for a fee waiver, you will usually have a fee waiver form linked to the application portal of the university to which you are applying to. You may also be required to apply for a fee waiver separately from your main application. Getting started with this process early can be helpful. If the school does not have clear instructions on how to apply for a fee waiver, you can write them an email - you can refer to Hailey Brace's [email template](#) to request a fee waiver and Ifeanyi Okpala's detailed [Twitter thread](#) on fee waivers.

4.9 Transcripts

A transcript is a record of all the courses you have completed as a part of your degree requirements and clearly mentions the course code and grade. You are required to submit the transcripts of all the degree-granting institutions you have attended after your secondary schooling (12th class in India). For the application process, an unofficial transcript usually works, but you will have to send an official transcript (sent directly from your degree-granting institution to the grad school) once you accept an admission offer. Some universities also ask for proof of completion and in that case, one can submit the scanned image of the degree or an e-copy (if you have received an e-degree too). We can't stress how important it is to clearly go through the website of each grad program and create an excel sheet for all kinds of requirements so that you don't miss anything. Some universities like Michigan State, Indian Bloomington, University of Southern California, etc also require you to send the original hard copy of the transcripts sealed and signed by the assistant registrar of the university. In that

case, you have to send it by mail to the respective address in the USA.

4.10 Other application components (specific to certain programs)

4.10.1 Personal History Statement

Some schools (such as the University of California campuses, Yale University, University of Michigan, etc) might require you to write a personal history statement. Below are two essay prompts of programs that require them:

- UC Davis: "The purpose of this essay is to get to know you as an individual and potential graduate student. Please describe how your personal background informs your decision to pursue a graduate degree. You may include any educational, familial, cultural, economic, or social experiences, challenges, community service, outreach activities, residency and citizenship, first-generation college status, or opportunities relevant to your academic journey; how your life experiences contribute to the social, intellectual, or cultural diversity within a campus community and your chosen field; or how you might serve educationally underrepresented and under-served segments of society with your graduate education. This essay should complement but not duplicate the content in the Statement of Purpose."
- "How have your background and life experiences, including cultural, geographical, financial, educational, or other opportunities or challenges, motivated your decision to pursue a graduate degree at the University of Michigan?"

The [Berkeley Graduate Division](#) has good tips on writing a personal history statement. Very few colleges will require such essays, and they probably do not affect your admission chances. We would not recommend spending too much time on them. That said, organising requirements early will make sure you are not caught off guard by a new essay a day before the deadline, and ensure you submit a clear and coherent essay.

4.10.2 Course Forms

Some programs might require you to list all courses you have taken (or all relevant/math courses) during your undergraduate and master's programs. You will be asked to list the

course titles, topics covered, textbooks used, and your grades. Programs typically have a set format for creating a course form, which will be available or listed on the main application.

4.10.3 Interviews

Most North American PhD programs do not have interviews. A few programs (such as the University of Houston, Arizona State University, Emory University, etc) might conduct interviews to allot funding and some programs (such as University of Warwick, Texas A&M University, Arizona State, University of Houston, and University of Georgia) conduct interviews as a part of their application process. The idea of taking the interview is twofold - to check whether you are what you have shown on paper and your English speaking ability. The questions they ask are typical HR-type questions including your motivation for PhD, why that particular university, what areas are you interested in, etc. These interviews are usually not technical but some questions on what you've done in your past research can definitely be asked, so be prepared for that. Apart from that, we feel that contacting alumni in these programs might be helpful to get a sense of what is asked in the interviews, and how to prepare for them.

5 Timeline

By now you are aware of the various components of the application process that will need your attention before you actually get to filling the application forms for individual schools. Given the volume of to-dos, it is advisable to plan ahead of time to avoid feeling overwhelmed in December! Moreover, a bulk of deadlines cluster around the same time, so having a timeline in place helps in staying organized. In this section, we detail a tentative timeline that most of us followed during the applications' season.

- **Applications window:** Applications for most schools in the US open around September of every year with some of the earliest deadlines around end-November (for instance, Ohio State University's deadline was for 30th November in 2020) and stretches into February.

- **School List:** Going through each school’s department and individual faculty websites is a time taking process. Considering you may like to deliberate your list with friends, seniors, and professors, you should account for a couple of extra weeks there. Hence, you should get started on this as soon as possible and aim to have a final list in place by early November (as the earliest deadline is around end-November).
- **GRE:** Assuming you are a first-time test taker, we would strongly advise you to take your first attempt in July to leave room for re-takes. GRE re-takes can only be taken after 21 days of the last attempt. The earlier you freeze your GRE scores, the more time you will have for your SoP and writing sample.
- **TOEFL/IELTS:** This should be the second thing on your checklist after the GRE. You should plan to take the TOEFL/IELTS within one to two weeks of the GRE while you are still in the momentum of giving exams. The verbal flashcards from your GRE preparation would be fresh in your head which will reduce the preparation time (though the level of complexity in TOEFL/IELTS is much lower than that of GRE). However, this is a very subjective timeline and will completely depend on your comfort with the English language. Things to keep in mind while planning your first attempt:
 - *TOEFL* retest policy mandates a waiting period of 3 days between two successive attempts;
 - *IELTS* does not prescribe any waiting period between two attempts.
- **Letters of Recommendation:** You must notify your letter writers about your first deadline at least 4 weeks in advance. Please account for their schedules and work commitments and refrain from making last-minute requests. As a good practice, you may share with them your list of schools along with their deadlines and provide them reminders for approaching deadlines according to their preference.

A Note on How LoR Requests are Sent in Application Forms: Each school’s application form has a separate section where you are asked to enter your letter writers’ details like their names, email IDs, and affiliated universities. Upon submitting these details, a link is sent to your letter writers’ email IDs for uploading the letters. In most

applications, you do not need to complete the entire application form for these links to be sent to your letter writers. Hence, you could send the LoR links to your letter writers well ahead of the application deadline to allow them sufficient time to upload the letters.

- **Statement of Purpose:** Start as early as possible. If you are planning on sharing your SoP with friends, seniors, or professors/letter writers for their comments, you should budget for a few extra weeks as their response time may be slow because of their work commitments. Moreover, your letter writers may ask you to share your SoPs with them before they start writing your letter. So you should keep a basic skeleton ready by mid-October in case they ask for it.
- **Writing Sample:** If you are working on a writing sample from scratch (that is, if you do not have a paper, thesis, or term paper ready), you should start the process as soon as possible. It is challenging to write an academic piece alongside work, and doing this in the later part of the application process might get stressful. If you have worked on a term paper or a data project for a course in the past, try if you can convert that into a longer paper rather than having to start from point zero.

6 Conclusion

We hope you found the information in this guide useful. The months spent applying to programs can be stressful and difficult, and we were all grateful to have mentors, friends, and graduate students step in to advise and help us. Through this guide, we have tried to do our part to pay some of that forward and make this application year slightly less stressful for you. Feel free to contact us at aishwaryakekre@gmail.com, or prerna96.kundu@gmail.com, or lakshyanarula18@gmail.com, or torshachakravorty@gmail.com, or vaibhavojha@hotmail.com if you have any specific questions, and we will try to get back to you as soon as possible.

A final comment for those applying in the 2021 application cycle - there might be a covid effect spilling over from the 2020 cycle. A lot of schools faced funding cuts in the 2020 applications cycle - which meant smaller cohorts in some colleges and fewer funded offers in others. There is no guarantee cohort sizes will go back to pre-covid levels, so while they might

be bigger than this year's cohorts, it could be difficult to know for sure whether your chances are back to pre-covid levels. You could consider diversifying your school list a bit more, and apply to as many schools as possible, and do your best in terms of components you can control - GRE, SoP, Writing sample.

Everything being said, we should add that there is more than a fair bit of noise in the selection process. You will likely find yourself or know people with a lot of potential, receiving a lot of rejections. We strongly urge you to never read too deeply into such cases or consider these as reflections of your academic/research ability. The application process is stressful and tumultuous with its fair share of randomness. Please reach out if required to the authors, and we wish you the very best!

7 Appendix

7.1 Costs involved in the application process

Table 1: Estimated cost overview

Component	Cost (in USD)	Remarks
GRE	213	-
TOEFL	165	-
Sending GRE scores	27	GRE test fee includes cost for up to 4 schools
Sending TOEFL scores	20	Same as above
Application cost	≈ 85	Can range from USD 65 to USD 140
Miscellaneous	≈ 40	Certain schools require you to share hard copies of transcripts
Total fixed costs	(213+165 = 378)	GRE scores are valid for 5 years while TOEFL for 2 years.
Total variable costs	≈ (20 + 27 + 85 + 40 = 172)	These would roughly be incurred for every University you apply to

7.2 Templates For Organizing Applications

- [Template for organisation the application process used by Prerna](#)
- [Template for organising application and school specific requirements used by Lakshya](#)

7.3 Visa Application for the United States (F-1 Visa for students)

You need to do the following before you reach the stage at which you want to book your visa appointment:

- **Request for the I-20 form** - This is issued by your school's International Students Office. Drop them an email after accepting your offer to begin the visa process as soon as possible.
- **Note the SEVIS ID in your I-20 form** which is at the top left corner of your I-20. It should look like: N00XXXXX
- **Pay for the SEVIS ID**- This will cost \$350

- **Fill up the DS-160 form-** To do this, you will need your SEVIS ID. Once you submit the DS-160 form, you can begin your visa application here.
- **Complete your visa application and pay for the same-** If you are making the payment via NEFT, don't worry if you do not receive the receipt number. It is typically the last 12 digits of the Beneficiary account number, but will not work if you enter that. You need to wait for the payment to get processed (3 hours), post which the field will be auto-filled.

7.4 Getting transcripts from Delhi University

The sooner that you apply for the transcripts the better it will be because the university officials take a lot of time to process the transcripts. Moreover, sometimes they also make errors and mistakes while printing the transcripts so you have to urge them to correct those errors and re-print the transcripts. This means that allocating a fair amount of time, to be able to do a back and forth with the DU officials, is a good idea.

- [This link](#) will load the form that has to be filled for the transcripts. You will have to fill two forms if you want the transcripts for both B.A. and M.A. You will also have to attach a blank extra sheet at the end of the form where you will write the names of your papers. Moreover, you will require the photocopy of your Aadhar, and the mark sheets for all the semesters of that program (B.A. or M.A.)
- You can use [this link](#) in order to pay the application fee for the transcripts.
- [This](#) is the link that provides the location for the India post office that is adjacent to the DU North Campus office where you will apply for the transcripts. This post office is significant because you will have to post your transcripts from here when you send the physical copy of your transcripts to any foreign university.