

Some Tips for Your REU Application

Most REU applications will require

- List of your college mathematics and science courses
- One or two letters of recommendation
- Personal statement
- Transcripts (usually unofficial but some programs require official transcripts)

Below are some tips on putting together your application.

“DOs”

- Start assembling your application early. An application cannot be done in one night.
- If you have a question about a portion of the application, write to the program director.
- Apply early! Some programs have more than one round of acceptance and it is definitely better if you are in the first round of selection.
- Ask for letters of recommendation at least two weeks ahead of the deadline and provide faculty with all the necessary information to write and send the letter. Follow up with a reminder three days before the letter is due. e.g.,

Dear Professor Gauss,

I wanted to thank you for agreeing to write a letter of recommendation for me for the REU program in Göttingen. I also want to send you a friendly reminder that the deadline is February 10. If it's not too much of a bother, it would be great if you could send me an e-mail letting me know that the letter has been sent that way I can be assured that my application is complete.

Thanks,

- Be specific in your personal statement about why you want to participate in that particular program. e.g., *Having already had algebraic structures, a class in which we studied group theory, I find that the topic of elliptic curves is well-suited for my mathematical background and also intrigues me. Indeed, I know that this topic is of paramount importance in the solution of Fermat's Last Theorem and also is being used in applications like cryptography...*

or

I am drawn to this REU because of it focuses on applied mathematics which is my major. My applied math classes like differential equations, numerical methods, etc. are the ones that I have found most interesting because...

Your personal statement for all your REU apps can be mostly the same, but you should have 1 – 2 paragraphs that are specific to each program.

- Be specific in your personal statement about your passion and interests in mathematics. e.g., *One of my favorite and most fascinating classes that I have taken at LMU is Methods of Applied Mathematics. It was so interesting for me to see that waves can be superimposed (Fourier series) to form essentially any function. I also was so inspired to learn how this tool is being used in everyday applications like signal processing and information compression. ...*
- If you have weak grades in a class or received weak grades during a semester, explain it in your personal statement. You do not have to dwell on it, but you should explain it. e.g., *One of the biggest challenges I had in college happened in the spring of sophomore year when my family was going through a difficult time. My educational focus suffered because of it, and I did not perform to the best of my ability the entire semester. Hence my grades suffered. But the following fall, I was able to get on track and do very well in the three upper-division mathematics courses in which I enrolled. ...*
- If a teacher, professor or individual has inspired your educational goals/dreams, mention it in the personal statement and be specific.
- Make sure that someone edits your personal statement. A second pair of eyes will catch things that you have missed.

- Write about post-graduation plans. e.g.,
I have yet to decide on the specific mathematical field that I will pursue in graduate school, but I am certain that a Ph.D. in the mathematical sciences is in my future. I would eventually like to work in a national research laboratory and hence it is likely that my graduate degree will be in applied mathematics or statistics...
- If you have other interests (especially academic ones) that you would like to combine with mathematics or a future academic career, write about them. e.g.,
I also am fascinated by computer science and see myself working at the intersection of it and mathematics. ...
- Most REUs require you to work as part of a research team. In your personal statement, write a paragraph about your willingness to work as part of a team. If possible, include a sentence or two about your past experience working as part of a research/academic team.
- If possible, write about an experience in which you have had to work hard academically to achieve something that at first seemed extremely difficult or unattainable.
- If the program application guidelines ask you answer a specific question in your personal statement, then answer it.

“DON'Ts”

- Do not request a letter of recommendation from a high school teacher. REU directors want to know about your mathematical ability at the university level.
 - Do not request a letter of recommendation at the last minute.
 - Do not use the phrase “I love math” in your essay. The phrase has little meaning. You can instead write e.g.,
*I am fascinated by mathematics because ...or
Mathematics has for my entire educational career been the discipline that has intrigued and motivated me most because, ...*
You then should be specific with your reasons for mathematics being your favorite discipline.
 - If you write about the origins of your interest in mathematics, do not spend too much time writing about grammar school and high school. The focus of your personal statement should be your mathematical interests at the university level.
 - Don't send the exact same, generic personal statement to all programs to which you apply. e.g.,
I am applying to your program because I love math and want to spend my summer learning more mathematics and doing undergraduate research...
 - Do not submit a personal statement that has not been read/edited by someone else.
 - Do not try to be cute in your personal statement. Aim for being professional.
 - If the application asks for “official transcripts,” do not submit an unofficial copy. (Most programs accept an unofficial topic.)
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Once you are accepted to a program(s),

- Adhere to all deadlines.
- Promptly send in all requested information to the program director and always respond promptly to emails from the program.
- If you are admitted to more than one program, talk to a faculty at your institution and former REU students to help you decide on which program is best for you.
- Once you commit to a program, you cannot go back on your word.