

Intro to REUs

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What are REUs

- **PAID** research in the summer for physics undergrad (mostly not available after graduation so take advantage now!)
- You'll go to a university, either live on campus or near there, and do research with a faculty
- Basically, it's a **paid learning vacation!**
- Other than official REUs, there are summer programs/internships that are also great options (more later).

REUs is just as good as boba

- Usually **pays at least \$3k** + housing, food, travel reimbursement
- Get to **travel** and **gain knowledge and skills** valuable in both academia (grad school) and industry (job)
- Experience what it is like to do research and find out if you want to **pursue a PhD**. If you want to do a PhD, doing 1 REU is almost essential
- **Network!** This is needed whatever you do after graduation

What to submit in applications

WHAT YOU NEED TO SUBMIT

- **Recommendation letters** (usually 2, up to 3)
- **Essay** explaining why you want to do the REU and what skills/experience/goal you have that fits the program
- Forms where you check off **software or lab skills** you have
- Other logistics stuffs: grades, CV/resume, additional short essays (not all programs)

NOTICE!!

- Most programs are **due late Jan to mid Feb**
- More selective or outside of the U.S programs have earlier deadlines (**early Dec - early Jan**)
- REUs are **very very selective**, but this doesn't mean you should not apply. It means you need to **work harder and apply to 12-20** programs
- So **prepare from the fall!** [Timeline](#) for reference

False beliefs!

- I am only a freshman, I know nothing. No program will take me so I won't apply
- I have not had any research experience so I will not get in.
- Not every candidates are evaluated the same way. Freshmen with strong interests and some skills can be very competitive if you do it right!
- These programs are here to give you experience. Talk about how you don't have lots of research at your institution because you're going to community college or not research university and convince them what you have done to prepare for this research!

Where to find these programs

Browsing these sites would give you lots of programs. These lists are not comprehensive.

- https://www.nsf.gov/crssprgm/reu/list_result.jsp?unitid=69
- <https://www.orau.org/arlfellowship/applicants/how-to-apply-summer-student-experience.htm>
- <https://www.aps.org/careers/employment/internships.cfm#undergrad>
- <https://reulist.herokuapp.com/>
- <https://aas.org/careers/internships-summer-jobs>
- <https://www.pathwaystoscience.org/>
- Cal-bridge Summer (open to all, encourage diversity, highly recommend)
- <https://docs.google.com/spreadsheets/d/1e7jKbyGcEQhxn5ZXdm2AWshC15VO75aCAIqajqX2jkw/edit?usp=sharing> (my personal lists, all open to international students!)

What if not research?

Outside of research programs, you can

- ask a professor at your university for summer research with them
- internships
 - Internships for Google, IBM, Microsofts, etc.
 - Internships on LinkedIn are ample
- educational programs/projects
 - Learn about NASA protocols for free with [L'SPACE Academy](#)
 - [Data Science for all](#) program
 - Take courses on Coursera, EdX, etc.
- If you have your own funding (i.e. you don't need people to pay for summer housing and food), email any professor at any university and ask for mentorship on a project. Keep the email short and to the point, but show that you know what they are researching. Basically condensing the REU application essay and attach resume/CV and transcript. You won't get paid but you will learn!

Summary

I hope you've found this informative. My biggest regret would be not applying to programs and do things in parallel with school work, because you learn so much in these programs/projects.

So I hope you'll work hard, build up your skills and connections, and apply!

Other resources on the repo

- Info of students to reach out for advice
- Application tips slides
- Example of email to professors about unpaid research
- Email registration (register your email so we can share future opportunities and possible workshops!)