Applying to Research Experiences for Undergraduates (REU) Programs

and other similar programs

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About me

- I directed the Computational Astronomy & Physics (CAP) REU program for five years
- I co-chaired UNC's Graduate Admissions committee for three years
- As an REU Director, I was involved in two networks of REU Directors in astronomy & computer science
- I have personally advised >40 undergraduates including 12 REU students

Why do an REU (or similar) program?

- Try a type of research you can't do at UNC
- Take a deeper dive by working full time – produce conference-grade or publication-grade research
- Enjoy the cohort experience – sense of community and scientific identity
- Get to know a senior scientist who can write you recommendation letters from an outside perspective
- Benefit from writing/computing/speaking/career panel workshops and more
- No cost to you! A typical REU covers housing, food, and travel costs *plus* pays you $500 per week
- Key to getting into grad school (or choosing another path)

Some of your options

- Traditional NSF REUs are all here: http://www.nsf.gov/crssprgm/reu/reu_search.jsp
- The NSF IRES (International Research Experiences for Students) program is another resource: https://nsf.gov/awardsearch/advancedSearchResult?ProgEleCode=079Y,080Y,7727&BooleanElement=Any&BooleanRef=Any&ActiveAwards=true&#results
- Major labs/telescopes often have one-off programs (STScI, NASA JPL/Goddard, LIGO...) plus there are internships for science writing, policy, etc. (SPS internships, National Academies Berkner program...)
- Useful compilation (including some programs open to foreign students, post-baccalaureates, etc.): https://reulist.herokuapp.com/
- Deadlines range from January-March, so start now!

Applying for REUs

- You'll be up against:
  - 300:10 odds
  - Students from institutions with *limited opportunities for research* – the NSF requires these to be 50% of every cohort!
- You'll need:
  - Grades/Transcript (may be post-check)
  - CV/Resume (may go in a web form)
  - Letters of Recommendation (1-2)
  - Personal Statement

General Prep

- Ask for letters 1 month ahead; send reminders
- Make a googledoc with deadlines and submission info for you & letter writers; apply to 20+ places
- Give letter writers your unofficial transcript, CV, and draft essay early to get feedback
- If there's a weak spot – say a bad semester when you had a family crisis – talk with a letter writer you know well to see if they can address it
- Include all experiences/skills – not just scientific
- Letters/CV should fit with & reinforce your story; get advice on this from letter writers

The Personal Statement

- See handout "Writing the Personal Statement" (https://users.physics.unc.edu/~sheila/PersonalStatementHandout.pdf)

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- your "story" ≠ your life story
- overcoming weakness is a strength ("grit")

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- Include everything REUs are looking for:

Why you? Why now? Why this research? Why this REU?
Can you claim "Limited Opportunities for Research" for any reason *(economic/timing/interest)* ?

Customize for the programs you really want.