

Suggestions for your CSUSB REU application

Hi, if you're reading this, you're probably interested in the Research Experience for Undergraduates at California State University, San Bernardino. This will help you to see what sorts of things we look for in most of our applicants in hopes that it will help you put together a more competitive application.

1 Our Goals

What we look for are applicants that will help fulfill our main goals, which are these, in no particular order:

- Have each and every participant enjoy an authentic research experience.
- Disseminate each participant's research findings in a variety of mediums to a variety of individuals and groups.
- Actively encourage those who are underrepresented in mathematics and science to become involved.
- HAVE FUN!!!!

2 Participant Qualifications

In order to meet our goals, each of our participants will need to have *some* mathematical background. What exactly that background is, however, varies depending on the project the participant chooses. For that reason we do not have any specific background requirements, but overall we would like to see something like the following:

- Some “mathematical maturity” that indicates that you could benefit from 8 weeks of constant mathematical research (and fun). This could be an intro to proofs class, an analysis or abstract algebra course, or perhaps even a letter of recommendation that could speak to your abilities and mathematical maturity in the absence or in addition to those.

- A record of mathematical enthusiasm. In the “Additional Comments” section you might let us know if you’ve done any mathematical reading (out of textbooks but perhaps also something less academic), or if you’ve taken it upon yourself to solve puzzles like a Rubik’s Cube, or anything else along those lines. Our program is built on mathematical enthusiasm and we’d like to know how enthusiastic you are!
- An eagerness to solve problems. What drives you to solve problems?

For these reasons, we encourage those who might have otherwise decided not to apply to rethink that decision, especially if you come from an institution that does not offer research opportunities or if you otherwise feel as though you have not had any experience in research.

If you’re selected for the program, we also don’t suggest that you should have to do any extra reading or studying: the first week of the program is devoted to teaching you all of the math you’ll need to do research in either field. **Please also note:** your descriptions of these things needn’t be particularly long unless you need to describe them in that detail. We just want to get an idea as to what motivates you.

3 Some Suggestions

- We look for people with great preparation and great letters of recommendation.
- We also look for people who we know will have a FUN time and who have an enduring enthusiasm for learning and doing mathematics.
- We especially encourage those who do not necessarily have access to research at their home institution to apply.
- While all applications are given equal preference, we always hope to invite a diverse group of individuals who are underrepresented in mathematics. It is typical that we would invite 4 women and 4 men each year.
- We do not necessarily try to invite those people with advanced background in differential geometry or knot theory. Although, if you do have that background, or some interest in one (or both) of these subjects specifically, please do let us know.

4 Other things to keep in mind

The review of applications can sometimes take quite a while. Although you’re probably well aware of this, keep in mind that if you don’t hear from us for a little while, that can have absolutely no bearing on your application, but rather, sometimes other factors that are not worth discussing here. We will contact you the instant we have anything certain to

say about your application, or in extreme cases, we might send out a notice to the entire applicant pool in the event the review process is significantly delayed.

We look forward to reading your application! Should you have any questions about the program, feel free to contact either Dr. Corey Dunn at cmdunn@csusb.edu or Dr. Rollie Trapp at rtrapp@csusb.edu. If you would like to hear a student's perspective on the program, we suggest that you visit the "Student work" tab and pick a paper that looks interesting to you. Each author's contact information appears in that paper—feel free to contact any of them if you would like to know more about their experience in the program.