



APPLICATION FOR THE YEAR 2022
SUMMER UNDERGRADUATE RESEARCH PROGRAM

June 1, 2022- August 10, 2022

APPLICATION DEADLINE: Friday, February 25, 2022 to
Dr. Eric Hill, AHN 127

- REQUIREMENTS: 1. Participation in weekly seminar/lunches, including giving one presentation. 2. Final poster report.

Name: (Please Print Legibly) Student I.D. #

Local Address: Current Local/Cell Telephone #: () -

Email Address (that is checked regularly)

Cumulative GPA: Major: Minor:

Status: First Year Sophomore Junior

Below are signatures from at least one and up to four faculty whom you have talked to, whom you would consider working with this summer, and that you match their qualifications if applicable. Once your application has been submitted, the faculty will decide, based on interest, skills, and finances, which students to accept. You should rank your choices with most preferred being #1. (Remember the FACULTY must have signed this form.)

Table with 3 columns: Print Name, Signature of faculty, your ranking. Contains 4 rows for faculty signatures and rankings.

Required Final Report: All research students must submit a poster presentation of the work accomplished. Guide sheets are available from the Office of the Director, Center for Science and Mathematics. The faculty advisor may require an additional written report as a more formal record of the work completed. A poster presentation summarizing your work and results will be posted in the glass cases in Hedco Hall by **Wednesday, September 28, 2022.**

Please answer these questions to the best of your ability, either written legibly or typed.

1. In what way would a summer research project fit into your college learning goals and/or post-college plans? What do you hope to get out of a summer research project?
2. List courses you have taken that would be useful to the research in your chosen topics and your GPA in these courses only.
3. Describe any previous experience that you think is applicable to summer research. For example: (a) a previous research experience that you have had, (b) a course you took and how it prepared or inspired you to do research, or (c) skills you have developed that could be useful to research.

<p>NOTE: You will be notified when the final selection process is complete. At that time you MUST meet with your faculty advisor to complete a “Terms of Agreement” and “Acceptance Form”.</p>
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SUMMER RESEARCH FACULTY 2022

This list contains the Science Center faculty who may take students this summer. You will see their names, a very general description of their research, and any qualifications they expect of students who apply to work with them. Please go talk to any of them who interest you before filling out the application form.

Note: Some research plans and availability may depend on pandemic conditions.

BIOLOGY

- ▶ [These biology faculty will **NOT** be taking students this summer: *Aronson, Ben; Blauth, Jim; Blauth, Sue; Forristall, Caryl; Silveira, Linda; Olson, Lisa; Ryan, Bryce*]

Stelle, Lei Lani..... Marine Mammal Behavioral Ecology, (will only consider students who have prior experience studying marine mammals (e.g. have volunteered on my project; students can begin volunteering during this Spring)

Vanoverbeke, Dustin In collaboration with Blauth and Malcolm - Comparing non-chemical methods of non-native plant control in grassland restoration; plant/animal/soil surveying/sampling / analysis, native seed collecting, and watering treatment protocols. Focus on pollinator and ground arthropod surveys. Improving pan trapping methodology for pollinator surveys. Students should have completed BIOL 238 or EVST 100 and have personal transportation.

- Biomedical research at Loma Linda is possible for two students. Those interested in applying should talk to Lisa Olson

CHEMISTRY

- ▶ [These chemistry faculty will **NOT** be taking students this summer: *Ferracane, Michael; Longin, Teri; Schrum, David; Soulsby, David*]

Lyons, Rebecca..... Collection and analysis of organic pollutants in air and water. Students need to have taken Chem 232.

Environmental Science

- ▶ [These environmental science faculty will **NOT** be taking students this summer:
McIntyre, Wendy]

Jenkins, Hillary..... Installation of piezometers and monitoring of subsurface hydrology in montane meadows in the San Bernardino National Forest, ongoing meadow vegetation measurement and monitoring, and spatio-temporal patterns of water distribution, quality, and scarcity in southern California. Students with experience in GIS are particularly encouraged to apply. Other possible projects include fire recovery in forested ecosystems of Southern California, campus sustainability, urban trees and urban sustainability, and climate change mitigation and adaptation. Must have taken at least one course with H. Jenkins in order to apply.

MATH/CS

- ▶ [These mathematics/computer science faculty will **NOT** be taking students this summer:
Bieri, Joanna; Chakrapani, Pani; Beery, Janet; Bentley, Jim; Cornez, Rick; Cornez, Trish; Koonce, Sandy; Morics, Steve; Veenstra, Tamara]

PHYSICS

Eric Hill..... Scanning Tunneling Microscopy (STM) and Scanning Electron Microscopy (SEM), or supporting other topics of your interest. Students need to have completed Phys 231-233.

Martin Hoecker-Martinez...Fluid-flow projects with rotating tank and preparing for Climate Physics FYS.

Alan DeWeerd..... Quantum Optics or Quantum Conduction. Students need to have completed Electronics Applications (PHYS 310), and programming experience is expected.