UNIVERSITY OF Redlands

APPLICATION FOR THE YEAR 2023
SUMMER UNDERGRADUATE RESEARCH PROGRAM
June 5, 2023- August 9, 2023
APPLICATION DEADLINE: Friday, February 24, 2023 to Dr. Eric Hill, AHN 127

REQUIREMENTS:

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

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

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.)

		your ranking
_____		☐
Print Name	**Signature of faculty**	
_____		☐
Print Name	**Signature of faculty**	
_____		☐
Print Name	**Signature of faculty**	
_____		☐
Print Name	**Signature of faculty**	

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 27, 2023.**

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.

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".

SUMMER RESEARCH FACULTY 2023

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; Silveira, Linda; Olson, Lisa*]

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)

Blauth, Jim…….. Monitoring wildlife and human visitation in open space reserves in Redlands using game cameras and GIS tools. Contributing to a grassland restoration experiment through soil sample analysis and native seed collection

Blauth, Sue…….. Cloning galactouronic acid catabolism genes in S. meliloti mutant. Must have completed BIOL-239.

Forristall, Caryl..... Using Xenopus embryos to investigate hormonal pollutants

Ryan, Bryce……. Studying the impacts of environmental pollutants on the physiology and behavior of mice

Vanoverbeke, Dustin .….Contributing to a grassland restoration project through monitoring pollinators and ground-dwelling arthropods

- Biomedical research at Loma Linda is possible for four students. Those interested in applying should talk to Bryce Ryan

CHEMISTRY

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

Ferracane, Michael.....Synthesis and evaluation of opioid cyclic tetrapeptides for treatment of pain and addiction. Students need to have taken Chem 232.

Lyons, Rebecca.....The Lyons research group is investigating the uptake of environmental pollutants into medicinal plants. We are interested in the effect of these pollutants on the safety and efficacy of herbs as medicine. We analyze active constituents of the plant material and relate that to the amount of pollutant present in the soil and plant. Researchers work closely with the SURF garden as we install raised beds for medicinal plant research, engage in experimental design, and run analysis in the laboratory. Applicants must have at least two years of chemistry and an interest in medicinal plant chemistry.

Environmental Science

➢ [These environmental science faculty will **NOT** be taking students this summer: *McIntyre, Wendy; Jenkins, Hilary*]

Rountree, Valerie..... Interdisciplinary research involving social and natural science methodologies. Interviews with environmental staff in municipalities across California about their experience implementing residential composting programs as part of SB 1383 to reduce GHG emissions from food waste and a survey of U.S. state green waste and compost policies. Natural science field work will involve measuring the effects of residential lawn vegetation on ambient air temperature in Redlands neighborhoods. Preference for students with natural and social science coursework, especially policy, and experience using GIS. Coursework in climate science, responses to climate change, human-environment interactions, and energy technologies and environmental impacts are also strongly preferred.

Math/CS

➢ [These math/CS faculty will **NOT** be taking students this summer: *Beery, Janet; Jim Bentley; Bieri, Joanna; Chakrapani, Pani; Cornez, Trish; Cornez, Rick; Morics, Steve*]

Physics

➢ [These physics faculty will **NOT** be taking students this summer: *DeWeerd, Alan; Hill, Eric*]

Martin Hoecker-Martinez...Fluid-flow projects with rotating tank