

Siena Smania

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RESEARCH INTERESTS

Geomicrobiology, astrobiology, extreme environments, microbial ecology, environmental microbiology

EDUCATION

MS, Geological Sciences

Arizona State University - *School of Earth and Space Exploration (SESE)*

In Progress
Tempe, AZ

BS, Astrobiology & Biogeosciences

Arizona State University - *School of Earth and Space Exploration (SESE)*

Minors: *Biological Sciences, French*

May 2023
Tempe, AZ
GPA: 3.81/4.00

High School Diploma

Chaparral High School - GPA: 4.19/4.00

May 2019
Scottsdale, AZ

TECHNICAL SKILLS

Python	R	Excel	MacOS	Windows	Unix	Photoshop
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LAB SKILLS

DNA extractions	Micropipetting	Culturing	Light Microscope	Ion chromatography
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RESEARCH EXPERIENCE

Senior Thesis, SESE

Arizona State University - *Dr. Everett Shock*

Aug. 2022 - May 2023
Tempe, AZ

- Extracted DNA from Yellowstone hot spring sediment samples
- Characterized 16s rRNA sequences from hot spring sediment samples using R
- Compared microorganism communities across a geochemical gradient

Space Grant Intern, NASA

Arizona State University - *Dr. Everett Shock*

Aug. 2022 – May 2023
Tempe, AZ

- Used a python program to calculate and compare energy supplies of Yellowstone hot springs across a geochemical gradient
- Participated in scientific outreach aimed towards students and the general public

IRES Intern, National Science Foundation

Gobabeb Research Institute - *Dr. Heather Throop*

Summer 2022
Gobabeb, Namibia

- Lead field experiments in the Namib desert pertaining to carbon and nitrogen cycling in dryland ecosystems
- Analyzed field data using R
- Presented research for science committee at Namibia University of Science and Technology (NUST)

Research apprentice

Arizona State University - *Dr. Maitrayee Bose*

Aug. 2021 - May 2022
Tempe, AZ

- Worked with meteorite accretion models to look at the trends and impacts the Late Heavy Bombardment period had on Earth's volatile inventory
- Read and critically analyzed literature to apply to the project; organized and ran data through spreadsheets while using python to model data

Astrobiological Research Collaboration
Arizona State University - *Dr. Jordan Okie*

Fall 2021
Tempe, AZ

- Collaborated with a group of 13 students to write a paper on the limitations to the complexity of life in the universe (limits on temperature, energy, space, and time)
- Created and ran a discord server to organize meetings and writing sessions with collaborators

OUTREACH

Outreach Officer, Students for the Exploration and Development of Space (SEDS) Aug 2022 - May 2023
Arizona State University - *Dr. Jim Bell* Tempe, AZ

- Organized and ran various outreach events for space exploration and development with a wide range of audiences

Psyche Inspired Intern, NASA Aug 2020 – May 2021
Arizona State University - *Dr. Cassie Bowman* Tempe, AZ

- Developed [four art pieces](#) to aid in outreach about the NASA Psyche Mission

LEADERSHIP EXPERIENCE

Student Mentor, Exploring SESE (SES191) Fall 2021, Fall 2022
Arizona State University - *Dr. Karen Knierman, Dr. Tom Sharp* Tempe, AZ

- Led discussions on majors, research, and careers
- Led team-building exercises with over 70 freshmen
- Mentored over 50 freshmen in their Introduction to SESE class

VOLUNTEERING

Paw Placement, *Kitty Caretaker* Sept. 2017 - May 2019

- Cleaned cages, fed and played with cats, and aided in adoption processes of rescue

CLUBS

SEDS (Students of the Exploration and Development of Space) - ASU Aug. 2019 - May 2023
GSA (Gay-Straight-Alliance) - Chaparral HS Aug. 2015 - May 2019
Girls Who Code - Chaparral HS Aug. 2015 - May 2019

HONORS & AWARDS

Best Cosplay Craftsmanship Award (Saboten Con 2022)
Dean's List (Fall 2019 - Spring 2023)
New American University Scholar (Fall 2019 - Spring 2023)

RELEVANT COURSES

Biology I & II + Chemistry I & II + Physics I & II
Mineralogy
Geochemistry
Genetics
Ecology
Biology of Microorganisms + Microbiology Lab
Geomicrobiology