SAMUEL SARZEN

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EDUCATION

UNIVERSITY OF CALIFORNIA- SANTA BARBARA

September 2023 - Expected June 2027

Bachelors of Science in Physics and Bachelors of Science in Applied Mathematics

- *GPA*: 3.64/4.00, College of Letters and Sciences
- Honors: UCSB Honors Program (September 2024 present), UCSB Deans Honors (Winter 2024)
- Relevant Coursework: Python Programming, Vector Calculus, Differential Equations, Linear Algebra, Electrodynamics, Thermodynamics, Optics, Circuitry, Newtonian Mechanics, Proof-Writing

MANASQUAN HIGH SCHOOL

September 2019 - June 2023

Advanced Diploma

- GPA: 4.0/4.0 (Unweighted) 4.3/4.0 (Weighted)
- Academy of Finance (9-12), National Honor Society (11 & 12), Honor Roll (9-12), Key Club (9-12), Hockey Team (9), Surf Team (10 & 11)

PROFESSIONAL EXPERIENCE

UCSB DEPARTMENT OF PHYSICS

March 2025 - Present

Learning Assistant

- Lead discussions and clarify concepts in Physics 7B, focusing on electric fields, Gauss's law, and DC circuits.
- Collaborate with instructors to enhance student engagement and improve comprehension through interactive learning strategies.

CHANNEL ISLANDS SURFBOARDS

February 2024 - November 2024

- Sander
 - Experience refining and polishing surfboards for a large scale manufacturer with a strong focus on consistency and precision.
 - Sanded 100+ surfboards in a fast-paced manufacturing setting, ensuring high-quality finishes.

MENCEL SURFBOARDS

August 2021 - August 2024

Sander

- Progressed from factory cleaning duties to surfboard repair, fin installations, routing, airbrushing, laminating, and more.
- Completed and worked on 500+ surfboards and repaired 400+ by working 40+ hours weekly while attending school.
- Developed a complex understanding of multiple composite materials, such as polyesters and polyurethanes through working hands-on, in a team oriented environment.

HAGER RICHTER GEOPHYSICS

July 2024

Summer Intern

- Assisted with soil resistivity and ground-penetrating radar (GPR) surveys ultimately used for civil and environmental engineering development projects across New York City.
- Collected and analyzed geophysical data for engineering applications.

SPRING LAKE OCEAN RESCUE

May 2023 - August 2024

Beach Lifeguard

- Enforced beach rules, educated visitors about safety, became skilled in emergency first aid, and maintained physical readiness for emergency response.
- Conducted 40+ open-water rescues and enforced beach safety regulations.

ZETA PSIMay 2024 - December 2024

Treasurer

 Managed fraternity finances (\$30,000+ per UCSB quarter), including budgeting, expense tracking, and dues collection, ensuring financial stability and transparency.

V.P. Social Events
Plan and organize all fraternity events between sororities and other fraternities.

November 2024 - Present

EXTRACURRICULAR EXPERIENCE

UCSB SOCIETY OF PHYSICS STUDENTS

September 2024 - Present

Member

GAUCHO ROCKET PROJECT

October 2024 - Present

Team Member

- Collaborate on a team of other undergraduate scientists and engineers to design, build, and launch a robust model rocket.
- Member of the design team, responsible for using CAD to develop and design various parts of the rocket.

UCSB PHYSICS ORGANIZATION FOR INNOVATION AND TECHNOLOGY

January 2024 - Present

Member

- Active member of an engineering-focused, project-based physics club; currently developing and constructing a drone.
- PHYS 150 (Winter 2025 Final Project/POINT): Designing and implementing a high-precision scanning device utilizing photon detector technology for advanced optical measurement and analysis, alongside Prof. Dave Stuart UCSB.

UCSB SURF TEAM

September 2023 - Present

Member

VOLUNTEERING

SEA GIRT HOMEWORK CLUB (GRADES 11 & 12)

September 2021 - June 2023

Founder & Lead Tutor

Provided an outlet for younger elementary students to learn in an encouraging environment through free tutoring.

SKILLS

- Technical: Soldering, Electronics (Arduinos, Accelerometers), CNC, subtractive and additive manufacturing, oscilloscopes, etc.
 - Programming Languages: Proficient: Python, Java, JavaScript, and CAD | Novice: MATLAB
- Languages: Proficient: Spanish