

UCSC Physics, Astrophysics, and SCIPP Outreach Programs

For Elementary/Middle School Students

- Science Impacting Society (SIS) with Women in Science and Engineering (WiSE)
 - Day long event filled with hands-on science exploration for middle school students. Students are typically brought to UCSC's campus to engage in fun and active scientific investigations. This event continues currently in a virtual fashion!
 - Find more information and sign-up at **scienceimpactingsociety.org**
- Math and Science Tutoring Support
 - Free tutoring available for limited number of students. Open to high school and middle school students for math and science homework help or even introduction to advanced material. Tutoring provided by undergraduate UCSC physics students.
 - For more information, contact Amishi Sanghi asanghi@ucsc.edu

For High School Students:

- Science Internship Program (SIP)
 - SIP is a summer-long (10 week) research internship program for high school students in STEM fields. UCSC faculty, graduate students, and post-doctoral researchers provide one-on-one mentoring of these high-school interns. The research projects are *real* in that they are *not* made up just for the high-school students; instead, students are inserted into existing research projects here at UCSC. Also available for graduating eighth graders!
 - Find more information and apply at **ucsc-sip.org**
- Particle Physics Masterclasses
 - See what it's like to be a particle physicist for a day! The day will begin with an introduction to particle physics by particle physicists at SCIPP, who are directly involved with experiments at CERN. The students will then work in groups to analyze actual data from LHC (Large Hadron Collider) and later discuss their results with masterclasses being held around the world. They will be supervised the entire day by mentors trained to lead these classes and will provide assistance throughout.
 - Find out more and apply at **quarknet.org/page/masterclass-uc-santa-cruz**
- California State Summer School for Mathematics and Science (COSMOS)
 - COSMOS is a 4-week summer residential program for high school scholars with demonstrated interest and achievement in math and science. The program is also open to exceptionally advanced and emotionally mature 8th graders capable of participating in a one-month program away from home. COSMOS provides students with an unparalleled opportunity to work side-by-side with outstanding researchers and university faculty, covering topics that extend beyond the typical high school curriculum.
 - Find out more and apply at **cosmos.ucsc.edu**

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For College Students:

- Research Experience and Internship Support
 - Targeted at community college students, get help finding research opportunities, as well as advice from students that have gone through the process already. There are available workshops, scheduled in the Winter Quarter. Also available are drop-in hours to ask questions and get feedback on your applications.
 - For more information, contact Lillian Santos at lsantoso@ucsc.edu
- No-Jargon Talks
 - In partnership between Cabrillo Community College and UC Santa Cruz, students gather in a virtual setting and hear short presentations from graduate students, targeted to the undergraduate level. Talks not only talk about the science being investigated, but also focus on the day-to-day aspects of the student's role in studying such science. All are welcome, and it is a great space to join and build an interschool community.
 - For more information, contact Patrick Labarre at pglabarre@gmail.com
- Cal-Bridge – A CSU – UC STEM Bridge Program
 - UC Santa Cruz Faculty and Graduate Students participate as mentors and tutors to selected CalBridge Scholars from CSU campuses. The program offers assistance in funding, as well as guidance in the application process to support student transitions into graduate STEM programs.
 - Find out more about the program at cpp.edu/calbridge/
 - Or contact UC Santa Cruz affiliate at baschumm@ucsc.edu
- ACCESS Summer Research Institute
 - The ACCESS Summer Research Institute is an intensive eight-week introduction to research methods and tools with an emphasis on biomedical sciences. Selected student participants work under a UCSC faculty mentor on a project that focuses on current research in an area of interest indicated by the student.
 - Find out more and apply at access.ucsc.edu
- Maximizing Access to Research Careers (MARC) Program
 - MARC students receive an initial eight-week summer laboratory-training program. Students receive intensive laboratory and lecture courses in the methodology and concepts of modern biology and chemistry. MARC Fellows can also choose to participate in extramural research during the summer.
 - Find out more at stemdiv.ucsc.edu/marc or email yuli@ucsc.edu

For Teachers:

- Remote Schooling Support with WiPA
 - A team of students associated with UCSC's Women in Physics and Astrophysics (WiPA) is on standby, ready to support you in achieving your remote schooling vision. Need fun science demo videos to compliment your lesson plans? Need advice on what technology to use to make your plans work? Need a webpage or web interactive to enhance student engagement, but you have no idea where to begin? We are a team of eager physicists and educators, and we are here to help!
 - For more information, contact Hava Schwartz at herschwar@ucsc.edu
- Meet the Scientist Demonstration Videos
 - Suitable to middle school and high school students, videos of live physical demonstrations of science concepts are prepared. Additionally, undergraduate and graduate STEM students share their experiences and illuminate the day-to-day life of a scientist. If you're looking for a short supplement to your lesson plan or a longer memorable experience to turn your students into scientists, we may have the thing for you. Special requests accepted.
 - For more information, contact Hava Schwartz at herschwar@ucsc.edu
- Exciting Virtual Science Lesson Plans
 - Great for an extra-special class or an extracurricular activity, remote curricula have been developed for exploring some exciting science concepts, such as exoplanets, condensed matter physics, and even biology. Students are guided through online projects in a crafted and easy-to-use online notebook. Curricula can also be passed off to teachers to be used in chunks or as desired.
 - For more information, reach out to Gabriela Huckabee at ghuckabe@ucsc.edu
- Custom Mail-Out Science Kits
 - Women in Science and Engineering (WiSE) are ready on deck to serve as your elves and package kits to be mailed to students for class or extracurricular activities. This is the perfect opportunity to enact those lesson plans that you haven't had the time or resources to implement.
 - To find out more, contact Pam at pschleis@ucsc.edu

For Community Members:

- Science on Tap with Women in Science and Engineering (WiSE)
 - Come one, come all to the "science café" in Santa Cruz. Hosted monthly over Zoom, this event is designed to connect the Santa Cruz community to the latest research happening just up the hill at U.C. Santa Cruz. It is not an exclusive "club meeting" for scientists and science majors and aims to appeal to all audiences. So come, grab a beer, relax and hear some interesting cutting edge science that's happening near you!

- Find out how to connect at <https://wiseucsc.wixsite.com/wise/science-on-tap>
- Python and Research Tutorial (PyaR)
 - Join UC Santa Cruz PhD students and an astronomy professor for a FREE online Python programming workshop set in the context of astronomical research. The workshop is open to high school students, undergraduates, and even graduate students who do not yet have fundamental Python coding experience. There will be three separate sessions, and each builds on the previous, so you should sign up only if you can attend all three.
 - Find out when the next sessions are scheduled by contacting pquhatha@ucsc.edu
- Project for Inmate Education Program (PIE)
 - UCSC PIE is an organization founded by members of the UCSC astronomy and physics departments that is dedicated to providing free education to inmates in local jails. We started operating in spring 2009 with an algebra class for inmates at the Santa Cruz County Jail.
 - For more information, contact pquhatha@ucsc.edu
- Girl Scouts and Women in Science Society (WSS)
 - If you're in need of girl scout cookies or you are part of a girl scout troop that would like to partner with UCSC, WSS is ready to support you. Helping to increase sales and to share the training to earn STEM badges, WSS volunteers are taking the opportunity to connect with youth and share STEM exposure.
 - To find out more, contact Women in Science Society at wss.ucsc@gmail.com