

# SUMMER OPPORTUNITY FOR HIGH SCHOOL STUDENTS



# C O S M O S

CALIFORNIA STATE SUMMER SCHOOL FOR MATHEMATICS AND SCIENCE

UC SANTA CRUZ • UC DAVIS • UC IRVINE • UC SAN DIEGO

COSMOS is a four-week residential program for talented and motivated students completing grades 8-12. Students work side-by-side with outstanding university researchers and faculty to explore advanced topics in science, technology, engineering and mathematics (STEM) using curriculum that is hands-on and lab intensive. COSMOS alumni have exclusive opportunities for internships, college scholarships, mini research grants, and special events.

## 2009 DATES

**UCI** June 28 - July 25

**UCD/UCSC/UCSD** July 5 - August 1

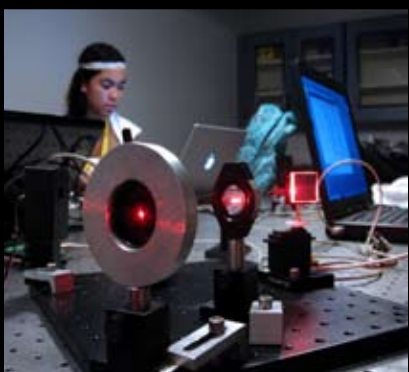
## FEES

**\$30 Application Fee** (non-refundable)

**\$2,425 Tuition Fee** (includes room & board)

Full and partial financial assistance is available. Students who receive free or reduced lunch at their school will automatically qualify for full financial assistance. A family of four with a combined yearly income of \$76,400 would qualify for full financial assistance. Out of state students must pay the unsubsidized fee of \$6,500 and are not eligible for financial assistance.

[www.ucop.edu/cosmos](http://www.ucop.edu/cosmos)



## WEBSITES

Statewide	<a href="http://www.ucop.edu/cosmos">www.ucop.edu/cosmos</a>
UC Davis	<a href="http://www.cosmos.ucdavis.edu">www.cosmos.ucdavis.edu</a>
UC Irvine	<a href="http://www.cosmos.uci.edu">www.cosmos.uci.edu</a>
UC San Diego	<a href="http://www.cosmos.ucsd.edu">www.cosmos.ucsd.edu</a>
UC Santa Cruz	<a href="http://epc.ucsc.edu/cosmos">epc.ucsc.edu/cosmos</a>



## ACADEMICS

We offer a variety of academic clusters that consist of two science and/or math courses, and a science communication course. Courses are taught by active faculty and researchers. Students participate in hands-on labs, field activities, lectures, and discussions. Students also work on a related research project. Cluster sizes vary from 18-24 students and the student to academic staff ratio is typically 5:1. COSMOS is an academic enrichment program and is not meant to replace a yearlong high school course; therefore we do not grant high school or college academic credit.

## RESIDENTIAL

Students are required to live on campus for the duration of the program. Living on campus allows students ample opportunities to form lasting friendships with like-minded peers who share the same interests in mathematics and science. On weekends, students may attend additional recreational field trips.

## APPLICATION

Each campus can only accommodate approximately 160 participants so selection is competitive. A typical COSMOS student has a GPA of 3.5 or above. Students must have achieved academic excellence. Preference will be given to 9th-11th graders. The application will be available online February 1st. The following factors are taken into consideration:

- Grades, especially in Math and Science courses
- Math/Science teacher recommendations
- Participation in math/science activities
- Responses to short-response questions

## ALUMNI NETWORK

Once students have successfully completed the program they are eligible for COSMOS Alumni only opportunities such as scholarships, internships, and special events. Previous internships sponsors have been CISCO Systems, Inc., Qualcomm, Inc., and Gilead Sciences, Inc. Each year, in conjunction with the Consulate General of Sweden, Los Angeles, host a Gala honoring California's Nobel laureates.

## CLUSTERS OFFERED SUMMER 2009

### UC DAVIS

1. Biotechnology □
2. Physics in Electro-optics & Nuclear Technology ✕
3. Intro to Engineering Mechanics ◆▲
4. Anatomy of Global Climate Change
5. Computers in Biophysics & Robotics
6. Mathematics ✕
7. Biomedical Sciences
8. The Chemistry of Life ✕\*
9. Introduction to Astrophysics ✕

### UC SANTA CRUZ

1. Logic, Cryptography & Number Theory \*
2. Engineering the Future ++
3. Under the Sea □
4. Everyday Chemistry ★
5. Video Games ✕
6. Chemistry & Mathematics \*\*
7. Points in Space: Astronomy & Linear Algebra
8. Marine Mammals & Oceanography
9. Particle- & Astrophysics

### UC IRVINE

1. Robots to Rockets ○✕▲
2. Astronomy & Astrophysics ○
3. Tissue/Tumor Biology & Mathematical/Computer Modeling ✕\*
4. Global Change Chemistry & Biology ✕□★
5. Computers & Games ✕\*
6. Mathematics of Music \*
7. Special Topics in Marine Biology □\*
8. The World of Molecules ★

### UC SAN DIEGO

1. Computers in Everyday Life ✕\*
2. Engineering Design & Control of Kinetic Sculptures +
3. Living Oceans & Global Climate Change ++
4. Earthquakes in Action ✕
5. Bright Ideas: Light at Work ▲
6. Exploring the Cosmos ✕◆
7. Biological Motivations for Tensegrity Structures □
8. Molecular Biology Revolution □

#### Prerequisite(s):

+ Algebra	✕ Algebra II	□ Biology	▲ Physics
○ Geometry	◆ Trigonometry	★ Chemistry	* Other

*“Not only was I taught by well-respected professors and the finest scientists in their fields, but I was surrounded by other self-motivated students that are also working hard to achieve what they want in life.”*

-COSMOS Alumnus

