UCSD COSMOS 2011 Cal Teach Cluster Assistant Job Descriptions

All candidates must pay UC registration fees for Spring 2011 quarter. The student, under the direction of the COSMOS Cluster lead faculty, is expected to assist the lead instructor in the development of academic course content to be implemented in the during the COSMOS summer 2011 program; creating and testing lab experiences; writing a detailed course syllabus and preparing material/supply request forms to be submitted to the COSMOS Administrative Office. Works under the supervision of a high school teacher (Teacher Fellow) in order to co-facilitate the COSMOS Science Communication Course curriculum for COSMOS students. Works with COSMOS Program representatives regarding details for the assigned cluster course. Please note: A criminal background check (paid for by COSMOS) will be required prior to an offer of employment.

Cluster 3: Living Oceans and Global Climate Change

Qualifications: Student with basic training in marine biology, marine chemistry, physical oceanography, or atmospheric science including some experience in lecturing and teaching ocean or climate science, experience in data acquisition, and excellent skills in using the web and library. Needs courses in marine biology, marine chemistry, physical oceanography, or atmospheric science. Field experience in biological, oceanographic, or atmospheric measurements is a plus. Excellent understanding of statistics required, as is the ability to use Microsoft Excel. The ideal candidate needs to be mature, friendly, and considerate of students and others and needs also to be creative and enthusiastic about the high school students and COSMOS.

Cluster 4: Earthquakes in Action

Qualifications: Basic training in earth science required, including some experience in earth science education. Basic training in seismology, geology, geodynamics, remote sensing, geophysical data analysis, and statistics beneficial. Knowledge of PC (Windows) and Macintosh computing environments required. Programming experience with Unix, Shell scripts, and Matlab applications also required. Experience working as a classroom or laboratory assistant in an academic course preferred.

Cluster 5: Bright Ideas – Light at Work

Qualifications: Knowledgeable in physics, especially in the areas of waves. Familiarity with concepts covered in Physics 1CL. Waves, Optics, and Modern Physics Laboratory including experiments in waves, optics, and modern physics. Strong background in astrophysics desired. General knowledge of computer software applications to support learning in physics, basic web design and MS office applications. Experience working as a classroom or laboratory assistant in an academic course preferred.

Cluster 6: Exploring the Cosmos

Qualifications: Knowledgeable in physics, especially in the areas of waves. Familiarity with concepts covered in Physics 1CL. Waves, Optics, and Modern Physics Laboratory including experiments in waves, optics, and modern physics. Strong background in astrophysics desired. General knowledge of computer software applications to support learning in physics, basic web design and MS office applications. Experience working as a classroom or
laboratory assistant in an academic course preferred.

**Cluster 7: Bioengineering: The Amazing Red Blood Cell**

Qualifications: The candidate must have extensive experience in basic biology techniques, such as bacterial transformation, cloning and PCR. Experience working as a classroom or laboratory assistant in an academic course preferred. Knowledge of PC (Windows) and Macintosh computing environments required.

**Cluster 8: Molecular Biology Revolution**

Qualifications: The candidate must have extensive experience in basic molecular biology techniques, such as bacterial transformation, cloning and PCR. Experience working as a classroom or laboratory assistant in an academic course preferred. Knowledge of PC (Windows) and Macintosh computing environments required. Creative and enthusiastic disposition a strong plus!