

CHS' ANNUAL

SUMMER SCIENCE CAMP 2020

College of Health Sciences

June 22nd-26th, 2020



Summer Science Camp 2020

Criminal Arrest vs. Cardiac Arrest- The Case of Jimmi the Jerk

Lead Instructors: Lael McAuliffe and Joanie Block of KIMS Seattle

CNU+KIMSSeattle's have partnered together to create an immersive forensic science experience intended to maximize student's hands-on time with authentic laboratory equipment and skill-building activities to solve a fictitious, yet realistic, crime scene simulation. Evidence is collected from a recreated crime scene for laboratory analysis involving more than seven different fields of study in forensic science. Some of these labs include: ABO blood typing, toxicology, hair morphology, fingerprinting, cardiac dissection (pathology), and DNA gel electrophoresis.

Morning Session - Appropriate for middle and high school students!

Microbiology- Discovering the World Around Us

Lead Faculty: Dr. Damon Meyer

Examine the incredible world of microbiology by exploring the abundance and diversity of microorganisms found all around us. Participants will learn to use standard microbiology laboratory techniques to identify and characterize a variety of microorganisms.

Morning Session - Appropriate for middle and high school students!!

Computational Small Molecule Pharmaceutical Discovery

Lead Faculty: Dr. Nicholas Valley

Pharmaceuticals – whether over-the-counter or prescription – are a very common and sometimes essential part of many people's lives. The road to generate a pharmaceutical is a long, varied, and arduous one - full of pitfalls. Often, to help streamline the process, computers can help guide scientist's efforts to sets of molecules that have a better chance of success. Small molecule pharmaceuticals are used in a broad range of applications from fighting cancer to relieving pain and inflammation. In this summer experience, you will learn some of the properties that make a pharmaceutical viable and how to use various computer simulations and databases to predict those properties for novel molecules. Attendees will choose a biologically relevant target, draw viable molecular structures, and determine the binding affinity of the molecular structures to the intended target.

Morning Session - Appropriate for high school students!

Get Bright with Biotech: The Biology of Fluorescence

Lead Faculty: Dr. Heather M. Brown

Learn about the exciting field of biotechnology through hands on laboratory experiences! Students will engage in lab techniques commonly used in academic and industry labs while exploring applications in biomedical and agricultural fields! These activities include: CRISPR-Cas9 gene editing, Disease diagnosis, DNA transformation (we will make bacteria glow!) and identifying GMO's in food using PCR!

Afternoon Session - Appropriate for middle and high school students!

Skulls & Bones: Investigating human mysteries, solving wildlife crimes, and exploring orthopedics.

Lead Instructors: Lael McAuliffe and Joanie Block of KIMS Seattle

Participants of the Skulls & Bones Summer Camp will learn about physical, biological, evolutionary, and paleo anthropology to take on roles like: anatomist, osteologist, mammologist, forensic anthropologist, orthopedic surgeon, and facial reconstruction artist. By exploring a particular career cluster in this way, participants will be exposed to a broad category of occupations grouped by knowledge and skills required – to connect learning to life goals. Activities include: Stature estimation from long bones, sex estimation from pelvises and skulls, geographic affiliation (ancestry, or continent of origin), knee replacement simulation and suturing, wildlife skull identification, and forensic facial reconstruction.

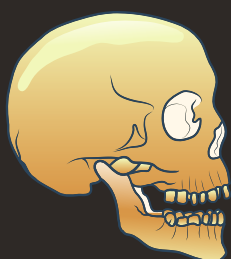
Afternoon Session - Appropriate for middle and high school students!

Phun-Physics!

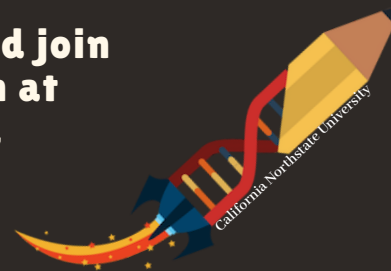
Lead Faculty: Dr. Armela Keqi

Are you fascinated by the concept of projectile motion? Do you have an interest in building circuits? Are you interested in measuring the speed of sound? Dive in head first as we explore the wonderful world of physics, with topics that include mechanics, electricity, and fluid dynamics, and more! Student's will end the week by designing their own experiment in one of the areas we explore!

Afternoon Session - Appropriate for middle and high school students!



Bring some science to your summer and join us for a week of exploration and fun at California Northstate University, College of Health Sciences!



For more information and to register online,
visit www.healthsciences.cnsu.edu or email CHS.Sciences@cnsu.edu



Summer Science Program Registration

Final date to apply is June 15th, 2020. Payment is due at time of registration. Any cancellations must occur before the deadline date. After the deadline, medical/bereavement issues can only be settled for a full refund with a physician's note.

PLEASE PRINT

Name: _____ Age: _____
Last First

Address: _____
Street

City State Zip

E-mail: _____

Home Phone: (____) _____ Cell Phone: (____) _____

How did you hear about our program: ☐ website ☐ friend/family ☐ school ☐ other _____

Medical conditions we should be aware of: _____

School currently attending: _____ Current grade level: ☐ 7th ☐ 8th ☐ 9th ☐ 10th ☐ 11th ☐ 12th

Program Session:

- | | |
|---|--|
| <input type="checkbox"/> Criminal Arrest vs. Cardiac Arrest
June 22-26 th , 9:00 am – 12:00 pm | <input type="checkbox"/> Get Bright with Biotech: The Biology of Fluorescence
June 22-26 th , 1:00pm – 4:00 pm |
| <input type="checkbox"/> Microbiology: Discovering the World Around Us
June 22-26 th , 9:00 am – 12:00 pm | <input type="checkbox"/> Skulls & Bones
June 22-26 th , 1:00pm – 4:00 pm |
| <input type="checkbox"/> Computational Small Molecule Pharmaceutical Discovery
June 22-26 th , 9:00 am – 12:00 pm | <input type="checkbox"/> Phun-Physics!
June 22-26 th , 1:00pm – 4:00 pm |

Program Fee: \$250.00 for half-day or \$475.00 for full-day

Parent/Legal Guardian Signature Print Name Date

NOTE: PLEASE VISIT www.healthsciences.cnsu.edu AND COMPLETE ALL REGISTRATION FORMS FOUND AT THE SUMMER SCIENCE PROGRAM LINK. PLEASE MAKE CHECKS PAYABLE TO: **CNU SUMMER SCIENCE PROGRAM 2020**

MAIL ALL REGISTRATION FORMS AND PAYMENT TO:

CNU College of Health Sciences
ATTN: Katie Caswell
Summer Science Program
2910 Prospect Park Drive
Rancho Cordova, CA 95670

If you have any questions, please email
CHS.Sciences@cnsu.edu or call 916-686-7674

California Northstate University Summer Science Camp Waiver and Release

In consideration for the services of California Northstate University, its faculty, officers, agents, employees, trustees and all other persons associated with the University (collectively, "the University"), I, _____ do hereby consent to my or my child's participation in the University Summer Science Camp and related activities (herein after, the "Camp"). I understand that the camp is a 5 day program designed to encourage scientific interest and will involve hands-on activities and laboratory experiences. I understand that the camp commences each day at 9:00am and ends at approximately 5:00pm, and that it is my responsibility to ensure my or my child's care and custody at the latter time unless prior arrangements have been made with the University to extend the pickup time to 5:00pm, which will incur an extra fee of \$10 per day. Camp organizers and their agents shall not be responsible for my or my child's safety and supervision before or after the time that the camp is in session unless prior arrangements have been made.

In consideration of my or my child's attendance at the Camp, I hereby assume all responsibility for any injury to or accident involving my child or me which occurs while my child or I is participating in the Camp(s) or related event(s). I make this assumption of the risk of injury with the understanding that the camp [program includes hands-on, laboratory, or mechanical work. I give permission to the Camp and the University to obtain reasonable emergency medical care for my child or me if it is deemed reasonably necessary by the Camp or University.

I understand that during Camp my child or I will be asked and permitted to use me or my child's laptop computer to access the internet regarding Camp projects and activities. I understand that access to a computer allows the user to access some material that may not be considered appropriate in a youth camp setting. While camp staff will make reasonable efforts to restrict the access to questionable material, the possibility of intentional or inadvertent access still exists. Repeated violations of accessing inappropriate content will lead to disciplinary actions, such as parental phone call and possible removal from Camp without monetary reimbursement. The University has notified me that it will attempt to monitor attendees' use of computers to restrict access to controversial materials, and I will not hold the university responsible for materials my child or I acquire from the internet. There are additional rules regarding cell phone usage, to which all students are expected to follow.

I hereby _____ give permission/ _____ do not give permission (please place your initials before your response) for my child or me to be photographed or videotaped in conjunction with Camp activities, which made be shared over electronic or other media.

I have read and understand the terms and conditions of the Camp. I acknowledge that the Camp organizers and the University reserve the right to cancel the Camp due to lack of funds, inadequate number of Camp registrants, or any other reason at their discretion and, upon doing so, will refund the entire tuition amount. I acknowledge that they further reserve the right to refuse participation to any participant for rule infractions, objectionable behavior, or attire. I agree that the Camp is a professional education event, that medically sensitive material of a non-sexual but graphic nature may be presented, and that mature and respectful behavior is a reasonable expectation.

I, for myself, my child if applicable, and my assigns, heirs, and executors, hereby release and forever discharge the University, Camp organizers, sponsors, promoters, and each of their respective agents, employees, representatives, successors and assigns, and all other persons associated with the University and Camp, for all damages, injuries, expenses, costs, claims, liabilities, and actions which my child and/or I may have against them arising out of or in any way connected with me or my child, without regard to its cause by negligence, acts, omissions, or other wrongdoings by any of the released persons or entities; this release shall also act as a waiver of all such claims, liabilities, and actions.

I have carefully read, understand, and hereby accept the terms and conditions stated herein, and acknowledge this agreement shall be effective and binding upon myself and my children, assigns, heirs, and executives.

Signature of Camp Attendee (Required of All)

***Signature of Parent or Legal Guardian
(Required if Child is Under 18 Years Old)***

Name of Camp Attendee (Please Print)

Name of Parent of Legal Guardian (Please Print)

Birthdate (MM/DD/YYYY): _____

Date Signed (MM/DD/YYYY): _____

Date Signed (MM/DD/YYYY): _____



MEDIA CONSENT

I hereby grant to California Northstate University College of Health Sciences and its agents and assigns the unlimited right to use my name and images and recordings of me in any format or medium chosen by California Northstate University College of Health Sciences for any purpose whatsoever in the sole discretion of the College, including but not by way of limitation for purposes of announcing and publicizing the College, its programs, and its affiliates. I hereby consent to the production and distribution of any and all such information, recordings, and images by publication, broadcast, and any other means of distribution.

I hereby agree that I neither have nor shall have any right of approval, claim for compensation, or any other claim against California Northstate University College of Health Sciences, its agents, or its assigns for any claim arising out of the use of my information, recordings, and/or images described in this Media Consent Form. I hereby further agree to indemnify and hold harmless California Northstate University College of Health Sciences and its employees, agents, and assigns for any and all damages, judgments, expenses, and costs, including but not limited to court costs and attorneys' fees, for any claim asserted by a third party as a result of my assignment or other transfer to such third party of the rights I am granting in this Media Consent Form.

I understand and acknowledge that California Northstate University College of Health Sciences may not be able to control how news media organizations and others may use, publish, and distribute information about me once it has been released; notwithstanding this understanding I nevertheless grant to California Northstate University College of Health Sciences the rights described herein.

{Please check one}

- | | |
|--------------------------------------|--|
| <input type="checkbox"/> Faculty | <input type="checkbox"/> CHS Prospective Student |
| <input type="checkbox"/> Staff | <input type="checkbox"/> CNU Guest |
| <input type="checkbox"/> CHS Student | |

Print Name

Student ID#

Signature

Date