



Health Science Immersion Program (HSIP)

Program Snapshot of Curriculum Structure
Summer 2024

Location: Zoom Virtual Classroom
9 Saturdays – June 8th to August 3rd

Session A: 11 am – 2 pm PST // Session B: 2 pm – 5 pm PST

Summer 2024 Health Science Immersion Program (HSIP)

Throughout the health sciences field, working professionals within science industry, academic research and medical practice are making an impactful difference on health outcomes. This Summer, our Health Science Immersion Program (HSIP) will give high school students an introduction to the academic, research and professional aspects of the health sciences field. Students will hear talks from experienced professors, graduate students, and health professionals about their work. There will also be a group research project where we will experience how college level science coursework will look like. During leadership workshops, students will learn about how their unique personality types affect how they function within teams. Throughout the program, we will explore pathways to various college experiences and career outcomes as students learn more about their personal and professional goals. Summer 2024 HSIP will be a transformative opportunity to learn more about your potential future in the health sciences field and beyond!

Health Science Professionals Speaker Talks & Discussions

During HSIP, students will hear directly from the professors and graduate students who are researching groundbreaking developments in the health sciences as well as the health professionals who are working to improve medical care outcomes.

Research Journal Article Group Projects

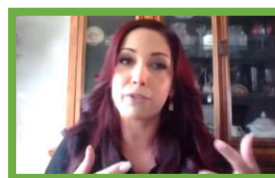
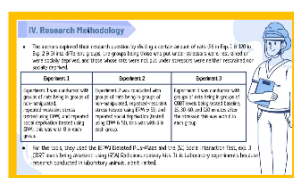
Students will gain an early exposure to college science coursework by preparing a small group research project and presentation related to a health science topic (neuroscience, human anatomy, cancer research). They will practice active reading, critical thinking and collaborative teamwork skills that are essential to excel in science.

Personal Development Leadership Workshops

High school students are undergoing critical development as they prepare to enter adulthood. HSIP students will learn more about how their personality strengths and communication style can be aligned to create smart goals for their education, career future as well as life outcomes.

College Admissions & Experiences / Career Pathways & Outcomes

As students learn more about their interests and personal strengths throughout HSIP, we will discuss how students can connect their personal goals to tangible outcomes. We will explore college admissions as well as how to create an enriching college experience afterward. We will also explore career pathways and outcomes related to the health sciences and beyond.



Program Snapshot of HSIP Weekly Curriculum

Evenings of June 6th (15 Minute Group Timeslot Assigned Between 5-7 pm)

Small Group Meetings: “Getting to Know Each Other and the Program”

During the evenings of June 6th, we want to meet individually with students in their research project groups of 4-5 students. This optional 15-minute meeting will give every student the chance to connect personally with staff members as well as their fellow group members in a small environment before the program starts. Students will learn about their group project, meet fellow group members, and learn more about 9 weeks together before we begin the main session on June 8th.

SATURDAY, June 8th



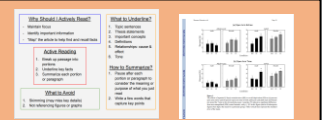
Scene from Fall 2022 HSIP Start

11 am / 2 pm: Orientation for the Health Sciences Immersion Program

The program begins as all students meet their fellow students and HSIP staff as we learn about the basic structure of our Health Science Immersion Program. We will cover our core curriculum and provide an overview of these transformative 9 weeks. The students in our program will be from different backgrounds and perspectives, but for this program we will be brought together as a team. We will review our HSIP program goals and expected student outcomes. There will also be a presentation about basic aspects of the health sciences field that will provide a background to the research, academic and professional aspects of the field.

12:25 pm / 3:25 pm: Introduction to Group Projects

Many 1st year college students are often surprised by how different and challenging their college science coursework is compared to high school. Independent reading, article annotation as well as information processing are key skills that college students need to develop before, not after, entering college. Through the HSIP group project we aim to help students develop these skills before college. Students will be assigned to one of three topics (neuroscience, cancer research & human anatomy). Working with their groups they will annotate and process their articles to create a 15-minute group final presentation. During this week, we will introduce students to their assigned research articles.



HSIP Group Project Materials Examples

1 pm / 4 pm: “My Journey to Medical School” - Finding Success Inside and Outside of the College Classroom as a Science Student

High school students often think a lot about how to get into a great college, but do not always receive information about how to have a great college experience once they reach higher education. Opportunities such as internships, study abroad semesters, networking with professors or visiting a college career center can change the course of a student’s personal and professional life. Amanda Leon is a 4th year medical student at the UC San Francisco School of Medicine who will be delivering a talk about her extracurricular, study abroad and research experiences during her undergrad years at Pitzer College and after graduation. She will discuss her study abroad experiences in Central America and Botswana as well as how she participated in public health research, education, and outreach during college. After graduating, Amanda completed a Fulbright Fellowship in the Galicia Region of Spain teaching English and serving as a community health educator. Amanda’s talk will cover how students can find accessible, extracurricular opportunities in college that can help in achieving life and career goals.



Amanda Leon
UC San Francisco
4th Year Medical
Student

SATURDAY, June 15th

11 am / 2 pm: “Bench to Bedside” - Translating Science into Medicine

Many scientific discoveries are made in laboratories every day, but scientists and doctors alike must work together to turn those discoveries into real treatments for patients. The evolution of scientific knowledge into practical, targeted treatments is a complex process, fraught with its unique challenges and conflicts. Amy Yu, a student in both medicine and research, will discuss this evolution from the perspectives of both the researcher and the doctor, highlighting how their roles differ but converge on the one goal of helping patients. She will cover how basic biology and chemistry is applied towards new treatments, imaging techniques, and diagnostics that empower doctors and allow patients to live longer and better lives.



Amy Yu
8th Year MD/PhD
Graduate Student,
UCLA

Medical School Roadmap

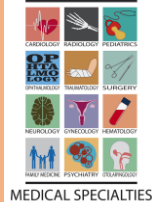


11:50 pm / 2:50 pm: Exploring the Medical School Roadmap

The journey to becoming a medical doctor can last over 11 years, a long but rewarding journey. There are steps to prepare and be successful in medical school and beyond beginning in high school. What activities should you be doing in high school, college, and in the summers in between to help you prepare for admission to medical school? In this workshop, we will learn how to prepare for medical school, navigate the medical application process, learn about the American Medical College Application Service® (AMCAS), and who should you ask for letters of recommendation. Lastly, we will review the standard timeline for obtaining an MD.

12:15 pm / 3:15 pm: What is a Medical Specialty and How to Choose One ?

Have you always wanted to be a pediatrician, surgeon, or neurologist? Did you know that The American Association of Medical Colleges (AAMC) lists more than 160 medical specialties and subspecialties? Each requires a residency of three to eight years, and some fields require additional years of fellowship. How do you choose one? In this workshop, you will begin exploring your specialty by reviewing the profiles of the specialties and subspecialties available in the United States, then complete an online assessment to help you determine which specialty is best suited for you based on your strengths, interests, abilities, and personality.



1 pm / 4 pm: Becoming a Doctor & Integrating Medicine with Technology: Perspectives of a Physician Innovator

Dr. Kevin Xin is a diagnostic radiology resident at the University of California, Irvine. He completed his undergraduate degree in biomedical engineering at the Johns Hopkins University. Afterwards, he attended medical school at the Johns Hopkins University School of Medicine. As a medical student, Kevin conducted research on the use of artificial intelligence in interpreting medical imaging. Kevin later co-founded IIAM Health, a tech start-up that streamlines the new patient referral process. Kevin's talk will discuss his journey to becoming a physician, his current medical residency experience as well as his involvement in the technology side of medicine.



Dr. Kevin Xin
Radiology Medical
Resident, UC Irvine

SATURDAY, June 22nd

11 am / 2 pm: “My Journey to Opening My Own Pharmacy.”

Dr. Michel Daher is a pharmacist and the owner of Pax Pharmacy in Duarte, California. At Pax Pharmacy, Dr. Daher helps train student pharmacists alongside a team of fellow pharmacists as well as pharmacist technicians. Pax Pharmacy specializes in diabetes management and education as well as oncology care. As part of their operations Pax Pharmacy works closely with City of Hope hospital as well as local nursing homes. During his presentation Dr. Daher will talk about his journey into the world of pharmacy from college, to graduate school, residency as well as the experience of operating his own pharmacy. He will focus on the relative advantages and disadvantages of the Pharmacy field as well as what steps students can take if they would like to like to enter the Pharmacy field for a career.



Dr. Michel Daher, PharmD
Owner of Pax Pharmacy

12:15 pm / 3:15 pm: Exploring Opportunities to Join a Health Care Team

When we receive medical care in a 21st century hospital setting, it is now common for patients to work with professionals of different backgrounds. Physician Assistants, Nurses as well as Respiratory Therapists are common examples of professionals who support physicians in providing care to patients who enter the health care field each day. Desiree Frank is a Medical Aesthetician at Kaiser Permanente who also completed her respiratory therapist credential. Desiree has worked in clinical settings providing medical care at Long Beach Memorial Hospital and Redlands Community Hospital as she completed her academic training at San Joaquin Valley College. During this discussion, Desiree will talk about her career as a Medical Aesthetician as well as what motivated her decision to train to become a respiratory therapist. She will also discuss the practical considerations that come in a medical care environment. She will also share questions students who want to enter health care should be asking as they consider the number of years of education and work responsibilities required.



Desiree Frank
Medical Aesthetician,
Respiratory Therapist

1 pm / 4 pm: “Making a World Class Difference for Others While Making Dentistry Fun”

Dr. Jack Von Bulow is a Dentist and the founder of Temple City Dental Care. He is a longtime columnist and has written for various Southern California newspapers and blogs. He is also the author of three books, *Can We Smile* (2003) *Molar Jockey Memoirs* (2007) and *The Most Interesting Dentist in the World* (2018). In this talk, Jack will cover his personal journey into Dentistry and his vision of total dental health. He'll share a journey that began as a kid in the 10th grade who went on to be the first in his family to attend college. He will share how he found a career that became a calling for a life vision that extended beyond the confines of the dental office. Jack will share why looking for fun, following your passion, as well as serving patients, co-workers, and the community like family can make all the difference in being happy, staying young, and fulfilled. Today, being a dentist can mean transforming and saving lives. Who knew the masterpiece smile you would create would be your own?



Dr. Jack Von Bulow, DDS
Dentist & Founder of
Temple City Dental Care

SATURDAY, June 29th

11 am / 2 pm: Who We Are and How We Work – Leadership Development Workshops

We will take a full session away from our usual curriculum of speakers, to have a series of interactive workshops related to personality types, communication, teamwork skills as well as setting smart goals. Regardless of where life takes students, understanding how we work with others and what are core life missions is a critical part of developing as a young adult. After taking the Myers-Briggs Personality Type Indicator, students will review their personality strengths and weakness in the program and how they can help plan for success based on their unique traits. We will review various models and theories of leadership as well as how they relate to HSIP students' lives. We will also discuss how students can form SMART goals that allow them to make progress in pursuing life goals.

Slideshow scenes from leadership workshops

1:10 pm / 3:10 pm: “Presenting Your Best Self” – Sharing Your Story During the College Admissions Process

Throughout the program, we will be hearing from our speakers about their unique journeys through high school and college as they pursued ambitious goals in the health sciences. After we reflect upon our unique identities in our leadership workshops, we will discuss how our personal goals can relate to our ideal college experience and the admissions process. In a holistic college admissions process where narrative essays are required, such as at the University of California (UC system) or private research universities that use the Common Application, the way a student presents their background can make a key difference. We will review various essay prompts for the UC and common application processes, and how students can present their best self as they seek out their future opportunities for a great college experience.

SATURDAY, July 6th

11 am / 2pm: Exploring Our Group Research Topics & Beginning Discussion Slides

We will begin the first half of the group project. Students will come in having completed a brief, at home assignment to review their research articles. Our HSIP staff group project coordinator will give an overview of how students will discuss articles with group members to answer the discussion questions that form the final presentation. We will then have two breakout room sessions when students will complete the introduction, research question, hypothesis and methods sections of their presentations working with the project coordinator.

HSIP Group Project Template

SATURDAY, JULY 13th



Jamil Momand, PhD
Professor of Chemistry, Cal State Los Angeles

11 am / 2 pm: What Causes Cancer and Why is it so Difficult to Defeat?

Most families have been touched by cancer, a disease that accounts for about 25% of deaths in the US. The word cancer conjures in our mind's tragedy, sadness, indignation; but the reality is more hopeful as new treatments offer the possibility of managing cancer so that it does not dominate our lives. Dr. Momand, a cancer researcher for over 30 years, will present an overview of the molecular underpinnings of cancer and explain why it is so difficult to treat. His talk will end on a hopeful note as he explains how prevention and new treatment strategies are defeating cancer.

12 pm / 3 pm: “My Unique Path in Pharmacy & Medical Communication”

Pharmacy is commonly viewed as a profession strictly within the expertise of medicine and drugs, but there are more facets to the profession than one would commonly view it as. It is a profession that largely involves education and collaboration that becomes integrated in the day-to-day work. Dr. Thach, a pharmacist by training and a Medical Communications Manager for a pharmaceutical company, will speak to the profession of pharmacy and share the many opportunities that lie within. In addition, he will expand on the non-traditional path he took that allows him to impact millions of patients indirectly through education and collaboration, all while working remotely from home. He will share his journey as well as provide insight to those looking to pursue a career in the sciences by impacting patients on a global scale.



Andrew Thach, PharmD
Medical Communications
Manager, Amgen



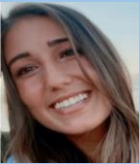
Alexander Sercel, PhD
Postdoctoral Researcher,
Columbia University

1 pm / 4 pm: “How to Begin Your Research Career”

Advances in the health sciences are enabled by research into fundamental human biology, and biology researchers make foundational impacts on health care treatment and patient medical care outcomes. But how can a student in high school or college start their journey to develop a career in research? Dr. Alexander Sercel, a Postdoctoral Researcher at the Columbia University Irving Medical Center, will discuss his path to becoming a biologist. His undergrad experience at the College of Creative Studies at UC Santa Barbara helped shaped his desire to pursue a Molecular Biology PhD at UCLA focused on engineering cells to study mitochondrial disease. After completing his PhD in 2021, Alexander is continuing his scientific career as a Postdoctoral Researcher studying how the mitochondria in our cells regulate body energy use. Dr. Sercel will draw from his own research career to give students advice on connecting with mentors and research labs as they develop their interests and career goals.

SATURDAY, July 20th

Juliana Costa
Graduate Student
UC San Francisco

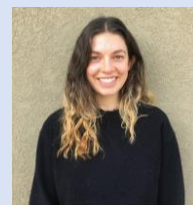


11am / 2 pm: “The World of PhD Graduate Student” – Juliana Sucharov Costa

Juliana will discuss her unique journey to science graduate school and becoming a science researcher. She will talk about her high school, college and early internship experiences that shaped her passion for science research. You will learn more about what it is like spending 6 years to complete a science research PhD as well as what her current responsibilities are. She will discuss the work-life balance of a graduate student as well as how a typical week is like. She will conclude by discussing what future career pathways could await her.

12pm / 3pm: “The World of a Research Study Coordinator”

Catherine Kelly is a study coordinator for a multi-year research study at Columbia University in New York. She will discuss the power of self-report and how we can utilize reputable questionnaires to gain meaningful insight on human subjects in research. Catherine will discuss what it is like to work as a study coordinator/research assistant and how she navigated to this role after spending two years working in elementary education.



Catherine Kelly
Research Study Coordinator,
Columbia University



1 pm / 4pm: “From Jurassic Park to Therapeutics” - A Researcher Discovers Alternative Science Careers

There are many careers in the health sciences field that exist outside of the most well-known job roles. Medical communications is a career field that is related to the development of communication materials that concern medicine and health care. Dr. Alexander Patananan will be giving a presentation about his unique journey from completing his extensive science research education at UCLA to transitioning into a career as a Medical Communications Manager at Amgen in Southern California. Alex will talk about his decision to forgo a traditional career path of becoming a professor and why he was drawn to the field of medical communications. He will speak to how students can seek out experiences and mentorship relationships during their education that can help them navigate a wide array of opportunities in the health sciences and STEM fields.

SATURDAY, July 27th

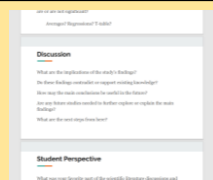
11am / 2pm: Exploring Additional Careers in Healthcare

What other healthcare careers interest you besides being a doctor? In this workshop, we will explore additional career options in the healthcare field such as a registered nurse, respiratory therapist, cardiovascular perfusionist, genetic counselor, medical physicist, medical speech-language pathologist, nurse practitioner, occupational therapist, physician assistant, and many others! This workshop will present an overview of these careers, education requirements and salary information.

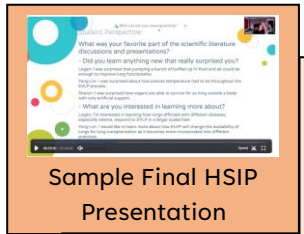


12pm / 3pm: Concluding Our Presentations & Communicating Our Findings

During this 2nd half of the group project students will complete the results, discussion, perspective and citations sections of their presentations. We will then rehearse presentations with fellow group members. We will hear a presentation from our group project coordinator about the importance of teamwork and collaborative skills in science. Most groups will finish their project on this day and will enter the following week prepared for final presentations.



Final Template Slides of Group Project



Sample Final HSIP Presentation



HSIP Completion Certificates

SATURDAY, August 3rd

Final Presentations, Mission Statement Workshop and HSIP Completion Activity

We will begin our final week by comprehensively reflecting on the speakers, workshops and activities that have defined HSIP and our time together over the past two months. We will discuss how student perspectives have shifted and how they can take concrete actions moving forward to find success with their new goals. We will then listen and engage with all of the final student group project presentations, as student learn about all three topics from peer group presentations. We will conclude the program with students sharing their personal mission statement. Students who complete the program with good attendance will receive completion certificates emailed to them. We hope to keep in touch with some of our HSIP students in the months and years to come!

Photos of slideshows, documents and Zoom rooms are from prior 2020-22 virtual HSIP sessions. Final scheduling and sequence of speakers is subject to change. Please contact us at info@impactinternships.org if you have questions about the HSIP curriculum.