DUKEENGAGE IN ORANGE COUNTY, CA
Empowering girls through STEM education

Dates: June 15 - August 9, 2020
(Dates subject to change up until the point of departure.)

Service Themes
- Children & Youth services
- Education & Literacy
- Science and Engineering
- Women’s Advocacy & Women’s Empowerment

Program Focus
Empowering girls participating in Girls Inc. of Orange County summer programming by giving them tools to help navigate social, economic and gender barriers to help them to grow into healthy, confident adults, with a focus on personal development, health, and STEM education.

Program Leaders
- Marlee Krieger, M.S., Program Co-Director, Research Program Manager, Center for Global Women’s Health Technologies, Duke University, marlee.krieger@duke.edu. Marlee’s work and interests are in issues of women’s empowerment, retention of women in STEM, program evaluation, and women’s global health.
- Nimmi Ramanujam, PhD, Program Advisor, Professor of Biomedical Engineering, Duke University, nimmi@duke.edu. Dr. Ramanujam is a pioneer in the intersection of women’s health and engineering. Her work focuses on issues of education and the retention of women and minorities in STEM fields. She loves teaching undergraduates and graduate students.

Program Overview
The theme of this program is women’s empowerment through education. DukeEngage-Orange County students will volunteer full time with Girls Incorporated (Girls Inc.) of Orange County – an affiliate of the long-standing national organization dedicated to teaching at-risk and underserved girls to be self-sufficient, successful adults. Specifically, their mission is “to inspire all girls to be strong, smart, and bold.”

Students will volunteer at Eureka! Summer Camp for girls of various age groups (those entering 7th-10th grades) by being mentors and leaders of classes and activity sessions dedicated to personal and career development, as well as health, and science, technology, engineering and math (STEM) enrichment. The majority of these girls are underrepresented minorities whose families make less than $30,000 annually. In addition, most of the campers are from Santa Ana, a California city with the highest degree of urban hardship as well as high rates of poverty, unemployment, and minimal education according to the Public Policy Institute of California. During the time leading up to Eureka! Summer Camp, participating DukeEngage students will create their own STEM curricula, which will be taught and implemented once camp begins. Previously implemented curricula include how to build a microscope, how to remove foreign objects from the ear, and how a periscope works. Students will also learn National Girls Inc. curricula then co-facilitate those lessons to campers. Such programming includes college preparation, health awareness and reproductive health.

Goals for Students
By the end of this DukeEngage program, we expect Duke students will:
- Have increased ability to work independently in a new environment
• Have increased knowledge of the challenges faced by other socio-economic classes
• Gain a sense of meaning and accomplishment through service
• Learn first-hand about service-related careers
• Gain self-confidence in learned skills through teaching
• Understand the importance of targeting the “whole girl” to help her make the best life choices
• Understand the profound impact that the appropriate environment and support can have on a girl’s future

By the end of this DukeEngage program, we expect that Girls Inc. will:
• Have benefitted from program leaders and volunteers with experience in STEM fields – particularly engineering – who implemented fun and effective activities for their summer programs
• Have new, tested curricula that can be reused during other student classes and workshops

By the end of this DukeEngage program, we expect that underserved girls of Orange County will:
• Have gained positive, accessible role models
• Have increased self-esteem
• Been exposed to science and engineering in a fun and appealing way
• Be inspired and encouraged to attain a college education in any field that interests them
• Be confident in their ability to be successful in any career they choose

Partnership Opportunities
All students who participate in the DukeEngage-OC program will be partnered with the Orange County affiliate of Girls Incorporated. The Girls Inc. Eureka! Program is a 4-week program intended for girls entering grades 7 through 10 that includes a curriculum of 25% health, 25% personal and career development, and 50% STEM content. Mon- Thurs consist of workshops held on a local community college campus, and Fridays are devoted to a field trip related to the week’s theme. Student participants working at Eureka! can act as session leaders or support staff to work directly with the girls.

Prior to traveling to Orange County, students will attend information sessions and discussions with the Program Director and Girls Inc. to identify the camp-specific service opportunities and lesson plans that most interest them. Together, the students, the Program Director and Girls Inc. will craft individual experiences that meet both student interests and Girls Inc. programming requirements. Students can expect to volunteer between 8 and 10 hours daily with Girls Inc.

Eureka! programming is broken down into discrete modules or “theme weeks.” DukeEngage students will work as a group in advance of the trip to create one full week of STEM curricula. Development of this curricula requires students to apply skills that they have learned inside and outside the classroom to leave the girls of Orange County with a new set of skills, interests, and abilities that will allow them to pursue careers they may never have been exposed to otherwise.

Students will also assist Girls Inc. with developing and implementing other STEM curricula over the course of the four weeks, and will co-facilitate additional Girls Inc. programing with other staff or volunteers around topics such as healthy relationships, mind/body health, and college prep.

Program Requirements
Language: None

Course Requirements: None

Other Skills: Girls Inc. has identified engineering as a topic that they would like to include in their curriculum but do not have enough experience to implement. Therefore, we are seeking students who are interested in helping develop engineering and STEM-related programming. However, an extensive background in engineering or STEM is not a requirement. We welcome applications for students in all fields and find that diversity enhances the group experience.

All Girls Inc. summer volunteers and staff are required to participate in a training program that familiarizes them with the
organization’s goals and approach. Two to three days of the training are specific to the Girls Inc. national curriculum, and include information on developmental stages of the girls participating, learning methods and teaching tips, techniques for classroom management, all necessary rules and regulations, as well as the content of the programming itself.

Finally, all volunteers working with the girls are required to participate in Live Scan fingerprinting in the state of California for Girls Inc. of Orange County.

Personal Qualities: We are looking for students of any gender who have a strong interest in service, education, and the role of girls and women in society. Students who are eager to serve as positive, accessible, role models that will inspire girls to pursue college careers in any field and want to work directly with at-risk girls are encouraged to apply. The successful applicant will be able to effectively and respectfully communicate and interact with girls of different ages, races, religions, and cultures. Girls Inc. feels strongly about providing positive male role models as well female ones.

The successful student in this program will be able to bring high energy and enthusiasm to camp with them every day, and will remain vigilant about the image they portray to campers. A high level of maturity is imperative as Girls Inc. programming includes subjects that can be difficult or uncomfortable for campers to talk about, such as teasing and bullying, staying safe in the modern world, recognizing and avoiding domestic violence/abuse, sexual harassment, and avoiding teen pregnancy and STDs.

Program Details
Description of Community: Students will reside in Orange County, and will work in several cities and towns in the area, including Costa Mesa, Santa Ana and Huntington Beach. Girls Inc. is located in Santa Ana, so much of the students’ time will be spent there. Santa Ana is located in the Santa Ana Valley in southwestern California on the Santa Ana River. It is close to the Santa Ana Mountains and the Pacific Ocean. The Orange County area is generally considered to be urban/suburban and has a large Hispanic population.

Housing and Meals: Students will live in a nearby university dormitory. Dorms are typically apartment style, with single rooms, shared bathrooms, and kitchen facilities. Wireless internet, cellular service and laundry facilities will be available.

Students will receive a stipend to purchase groceries and prepare their own meals. Transportation will be provided for weekly (or more frequent) grocery store runs.

Local Safety, Security, and Cultural Norms: If you have special needs related to health, cultural, or religious practices, please contact the DukeEngage office, dukeengage@duke.edu, to discuss whether or not your needs can be reasonably accommodated in this program.

For information related to how your religion, race, sexual/gender identity, ability or other aspects of your identity might impact your travels, we recommend starting with the Diversity, Identity and Global Travel section of the DukeEngage website.

Reflection and Enrichment: Students will reflect on their experiences by completing weekly blogs as well as keeping notes regarding successes, suggestions, and feedback on their curricula. They will also reflect on the history of the area, the impact of the program, and the mission of the organizations they are serving in.

The work and reflection is supplemented by cultural enrichment activities such as a visit to Mission San Juan Capistrano (the birthplace of Orange County); regional arts, science, and history museums/exhibits; and learning more about local nonprofits.

Curricular Connections
While all students are welcome to apply, this program may be of particular interest to students studying science, engineering, mathematics, education, and women’s health. Students who enjoy their experience in Orange County are

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encouraged to pursue other opportunities with Duke’s Center for Global Women’s Health Technologies. These activities may include completing an independent project in the area of women’s health and empowerment, serving as a student mentor to the next group of DukeEngage students by sharing their experiences in curriculum development, or utilizing the Center’s connections to other local Durham groups (such as Student U) to continue working with girls. The Center also offers classes within the Biomedical Engineering and Global Health departments.

More Information:
- Duke’s Center for Global Women’s Health Technologies: http://gwht.pratt.duke.edu/
- Girls Inc.: http://www.girlsinc.org/