



# Academic Research Program

## Academic Research Program 9

This year-long course prepares students for skill development in problem-solving, research and writing. The students learn to apply the Design Thinking process to real-world problems in order to create better solutions. The students will learn to identify underlying needs through empathy, harness and develop the ability to creatively brainstorm and generate ideas, critically think, collaborate for meaningful solutions, prototype, test and share their products. As they engage in these activities, they will become more mindful of the process, ultimately developing confidence in their ability to successfully navigate open-ended challenges. In concert with efforts in core academic disciplines, this course will begin to equip students with the skills necessary to complete meaningful independent research and study. Students will explore the differences between intrinsic and extrinsic motivations for learning and the benefits of each. Students are expected to work to the best of their ability and adhere to high academic standards of excellence, engagement and ethical behavior. These standards will be defined as they relate to each project through discussion and actions.

## United States History 10

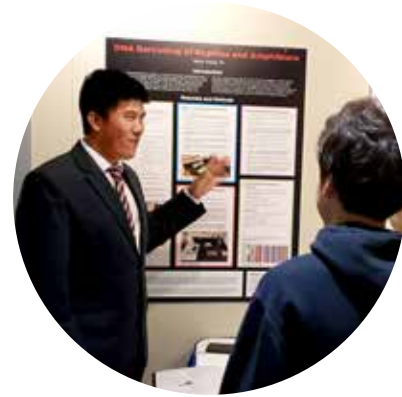
In this course, students consider the nature of the American experiment and exceptionalism by exploring the forces, themes and conflicts of United States history from the geographic and demographic origins of North America to the Cold War of the twentieth century. This examination includes close reading of source materials, artifact analysis, debates, point-of-view exercises, topical projects and essay writing. Students practice research skills throughout the course, and develop and defend a thesis in the second semester as part of a formal research paper.

## Academic Research Program 11

This semester-long course promotes dispositions of independent inquiry while developing the research and writing skills to complete an Academic Research Project prospectus. Students will initially engage in various activities to explore interests to decide on one topic that is sustainable, feasible, and fun. During the second half of the course, students will commit to deep exploration of one self-selected topic. By the conclusion of the course, all students will complete an Academic Research Project prospectus to be carried out during their senior year.

## Academic Research Program 12

In this culminating phase of the Academic Research Program, students further explore their research topic. They will engage in sustained, independent study, writing annotations and literature reviews while speaking with experts, creating products, and sharing ideas with their peers. Students will present their work periodically to the Liggett community, refine their work in consultation with their ARP advisor and mentor, and ultimately present their findings and final product to experts, peers, and members of the community at the *Celebration of Research*.



### Faculty ARP Advisors:

Liz Dann, M.S.

*Upper School Science Teacher*

Jennifer Larson, Ph.D.

*Upper School Science Teacher*

Shernaz Minwalla, M.A.

*Assistant Head of Upper School*

Michele Ondersma, Ph.D.

*Student Support Services Department Chair*

Karen Villegas, Ed.S.

*Director of Information Services*





## The Academic Research Program (ARP)

is the cornerstone of the upper school experience and is designed to engage students in developmentally appropriate thinking routines and projects in grades nine through 12 that promote independent and sustained inquiry.

With the help of their faculty advisor and mentor, Academic Research Program students refine and fulfill their project goals through intense research, robust interviews, journal writing, and field work. **The program focuses on the process of learning** rather than the end product, and supports students' **understanding** of what they learn.

To learn more about Liggett's Academic Research Program, visit [uls.org/ARP](http://uls.org/ARP) and watch our ARP video series.

Class of 2021  
**Celebration of Research**  
May 26 - 29, 2021

**Celebration of Research**  
ACADEMIC RESEARCH PROGRAM AT  
UNIVERSITY LIGGETT SCHOOL

# Celebration of Research Topics

## CLASS OF 2020 SAMPLE ARP QUESTIONS

*How can interpretations of human knowledge and the purpose of human existence be portrayed through art?*

*How can visionary fiction installation art benefit feminist activism by subverting subconscious prejudices within audiences?*

*How can DNA barcoding be used to taxonomically differentiate reptile and amphibian species?*

*Can origami folding patterns be used to improve traditional stent grafts in the treatment of aortic aneurysms and esophageal cancer?*

*How does the craft beer industry aid in the redevelopment of Detroit?*

*How can literature and art be used to develop a proper representation of anxiety and depression amongst African American children in an effort to reduce mental health stigma?*

*Can nuclear waste treatment and transmutation, bremsstrahlung converters in particular, make nuclear energy significantly more viable as a long term replacement for fossil fuels?*

*How does social media influence sports marketing techniques used by professional sports teams?*

*What is the role of Vitamin D in both the prevention of and improvement of symptoms in Multiple Sclerosis?*