

BULLIS

CARING

CHALLENGING

COMMUNITY



Signature Programs

Bullis offers three Signature Programs— Entrepreneurship; Science, Technology, Engineering & Mathematics (STEM); and Visual & Performing Arts (VPA).

Complementing our rigorous core academics, Bullis Signature Programs offer students unique opportunities for interdisciplinary study, experiential education, faculty mentoring, and research-based and creative Capstone experiences.

The programs, each with a dedicated director, demonstrate the connectedness between education in the classroom and daily life. Faculty mentors encourage students to dream big, take risks, and think deeply. Students develop confidence, as well as presentation and leadership skills, which fully prepare them for experiences in college and beyond.

In **Lower School**, exposure to the programs weaves seamlessly through the grades with emphasis on providing experiential hands-on learning opportunities.

In **Middle School**, students continue to explore the programs through



coursework, field trips, club time, and majors and minors. Majors allow 8th grade students to dive deep into an area of interest while minors provide students with an opportunity to explore a new area of interest or one to which they have had minimal exposure.

Signature Programs continue to build through the **Upper School**. By 10th grade, students can choose from a wide array of electives and specific foundational courses to prepare them for the Honors Capstone experience. These foundational courses include STEM Research: Design and Methods; Business Model Design; and Entrepreneurial Finance. The culminating experience, the Honors Senior Capstone class, allows interested students time and space to design and pursue a unique project in a guided, year-long course of study.



ENTREPRENEURSHIP

The Entrepreneurship Program focuses on developing an entrepreneurial mindset in students. Learning and applying the entrepreneurial mindset promotes resilience, grit, creativity, and critical thinking.

We encourage students to think like entrepreneurs, establish a strong grasp of business fundamentals, and promote ethical decision-making. The program develops leadership skills and confidence and enhances students' ability to think innovatively as they progress through the future stages of their academic and professional lives. The goal is for students to develop into active community and business leaders.

Lower School students are introduced to diverse professions through guest speakers. Creativity and innovation skills are continuously developed and combined with practical applications across the grades. In the 5th grade, students showcase their acquired skills during an Entrepreneurship Fair and Shark Tank.

Middle School students can elect to take Entrepreneurship in 8th grade. They can choose



between an Entrepreneurship major, which is offered for three trimesters, and a minor which is offered for two trimesters. Both programs end with a Shark Tank, in which students demonstrate their entrepreneurial skills. The Major also introduces concepts in personal finance at the end of the third trimester. Middle schoolers can also participate in clubs such as Girls Who Start and Business Gives Back.

Upper School students can take a wide array of courses such as Entrepreneurship Principles, Entrepreneurship Accounting Principles, Personal Finance, Leadership, and Economics. During the Honors Senior Capstone, students collaborate in teams



and work with faculty and outside mentors to design, create, build, and launch a real business. These start-ups are then presented during a Shark Tank competition where a \$10,000 prize is awarded to the most viable business. Upper School students also have opportunities to participate in external pitch competitions with support from faculty and mentors.



“Having the opportunity to participate in the entrepreneurship capstone has given me so many opportunities to expand my mind and go deeper into the world of business. I have learned how to problem solve effectively by fixing problems the everyday consumer struggles with. Capstone really allows us to use our brains and express creativity while learning important skills about the behind the scenes of a successful business.”

—Sophia Benaim '23

SCIENCE, TECHNOLOGY, ENGINEERING, & MATHEMATICS (STEM)

STEM students investigate real world problems and design solutions through an inquiry-based approach. Students ask, imagine, plan, create, present, evaluate, and improve as they engage in the disciplines of STEM to make a positive impact in their community.

The **Lower School** STEM program uses hands-on investigations to expose students to natural phenomena in the earth, life, and physical sciences. In design courses, students learn computer science and robotics through fun and creative projects. Students tackle engineering challenges designed to enhance their critical thinking skills,

creativity, and knowledge application. Students harness all of their knowledge and skills by making using the technology in the BITlab. Throughout their time in the Lower School STEM program, students are exposed to STEM role models throughout the school, including teachers, parents, Middle and Upper School students, and external speakers.

In **Middle School**, students are exposed to a broader range of STEM topics and given the freedom to explore their interests. In





In addition to the traditional core science curriculum, students take technology courses, such as Design Thinking, Connected Technology, and Creative Design. These courses focus on building students' collaboration and critical thinking skills through group design challenges, such as creating a video game, robot petting zoo, or a promotional video. Students have the opportunity to participate in an afterschool Robotics club and, in their last year of Middle School, they are able to enroll in a STEM-focused major or minor program.

The **Upper School** STEM program gives students the opportunity to pursue their passions. Once they have completed their science and math requirements, students are able to take advanced courses in STEM topics, such as Honors Molecular Biology, AP Computer Science, Epidemiology, Marine Biology, and Engineering. Students who choose to pursue the capstone take a Research, Design, & Methods course that exposes them to the necessary communication and documentation skills required for STEM research. In the Honors STEM Capstone their senior year, students are given the freedom to pursue a research topic of their choice. They are supported by both internal and external mentors

"The freedom of responsibility that the STEM Capstone program gave me was an invaluable asset to my learning experience—honing my career choices and saving me lots of academic planning time in the future."

—Christopher Yau '18



while they implement their experimental plan. This yearlong project culminates at the Signature Symposium, where students present their findings as they would at a traditional STEM conference. Students are also given the opportunity to continue their STEM exploration through afterschool programs like Robotics and Maker Studio.

VISUAL & PERFORMING ARTS (VPA)

The VPA Program endeavors to inspire and actively engage every student, from the true beginner to those with dreams of a career in the arts.

A strong academic program, coupled with robust extracurricular offerings, means that each student, from the youngest to the oldest, has the opportunity to explore, engage, discover, and grow as an artist. Students cultivate skills and techniques while building creativity, confidence, and avenues of self-expression. Student work across all divisions is showcased regularly throughout the year with an active calendar of performances, competitions, events, and shows.



Lower School students enjoy opportunities in creative movement, theatre, music, and visual art, as well as special activities, experiences, grade-level productions, and performing ensembles. Students in kindergarten through 2nd grade take general music, creative movement, and visual arts classes. Third through 5th graders also participate in creative movement and visual art, with an additional opportunity to choose an elective: Strings, Band, or Music Ensemble/Theatre. In all areas of the arts, we emphasize active engagement, skill building, and creating a joyful and positive atmosphere for exploration.

Our curriculum provides every **Middle School** student with meaningful artistic experiences and opportunities across a range of disciplines. In 6th and 7th grades, all



"I love the variety of options that allow students to explore creativity in many different ways. Students can try numerous ways to stimulate their interest with teachers who bring lots of enthusiasm."

—Tammy McKnight, P'15, '18

students benefit from a trimester class in Visual Arts each year while also enriching their skills during year-long Performing Arts courses of their choice. Eighth graders have the unique opportunity to choose two areas of study in which to deepen and broaden their artistic knowledge. They are encouraged to follow their passion as they delve into their arts major course and develop a second love or try something new in their minor class. Extra curricular offerings in musical theater, art, jazz band, rock band, and dance round out the slate of offerings. Middle School arts students may further distinguish themselves by earning induction into our junior arts honor societies.

Upper School Upper School students select from a diverse and expansive group of trimester and year-long academic electives in acting, technical theatre, dance, music, and visual arts. This wide range of opportunities makes it possible for a student to delve into areas of interest or to discover something new. As seniors,



students may participate in the Honors VPA Capstone experience. All students may also engage in extracurricular activities throughout high school by taking part in dramatic and musical productions, studio art experiences, and after-school dance. Arts students may further distinguish themselves by earning induction into the International Thespian Society, National Art Honor Society, National Society for Dance Arts, and the Tri-M Music Honor Society.

SENIOR CAPSTONE COURSE

Each Signature Program culminates in the Honors Senior Capstone. In close collaboration with their Capstone teacher and a designated mentor, 12th grade students design and pursue unique projects within the structure and pacing of a year-long class. Skill-building is a key component of the experience with an emphasis on developing resourcefulness, critical thinking, creativity and strong collaboration with their peers.

Every April, the Bullis community celebrates the intellectual growth of our Capstone students at the Signature Program Symposium where seniors present the results of their deep explorations.

Recent Capstone Projects:

- ▶ Fast Flyer: All Terrain Go-Kart
- ▶ Impact of Decreasing Dormancy on Northern Purple Pitcher Plants
- ▶ Memepocalypse Now: Differences"
- ▶ Grasping the Future: Custom 3D Printed Prosthetic
- ▶ Grease Gladiator: A new and improved grease trap for restaurants
- ▶ Skullsense: A helmet sensor that alerts to the risk of a concussion during competition
- ▶ Tom Rossi's Senior Performance Recital (trombone)
- ▶ Memoirs in Movement

"Our entire lives we've been told what to study or what to write the paper about, but this (Capstone) class breaks barriers and allows students to engage in their personal pursuits. When you give someone the freedom to do something they choose rather than something they are required to do, they do it with passion and intent rather than the mere purpose of completion for a grade."

—Gianna DeHerrera '20
HGS Capstone student

Project: Solutions, Not Stigma:
The Opioid Crisis in America

2022 CAPSTONE PROJECTS



