A summer of learning, growth, and fun!

Upward Bound Math and Science is dedicated to our local high school students who have a passion for STEM and an interest in college. Our scholars are first generation students who are highly motivated to spend their summer learning and preparing for the school year. Each day of the program, UBMS scholars take four courses: in English, mathematics, science, and Spanish. These courses prepare UBMS scholars for the courses they will take in the upcoming school year. UBMS students enjoy utilizing college campus facilities and being taught by seasoned teachers, University of Delaware faculty, and college RA/tutors to help the students understand their homework and work as mentors. Every aspect of the UBMS program is designed to empower our students with the necessary tools for college-going success. In addition to the classes we also had biology and engineering labs, field trips, workshops, SAT Prep, college tours, and fun activities!
New York City Trip

The first week of the program was spent exploring everything New York City has to offer! We were able to take in the fantastic views of the city and learn about the history and spirit of New York. We visited the Empire State Building observatory, Times Square, the 9/11 Museum and Memorial, the National Museum of Mathematics, and the Schomburg Center for Black Culture. We ate at famous restaurants, toured colleges in the heart of the city, and attended two broadway shows!

Other favorite experiences were visiting the Intrepid Sea Air & Space Museum, exploring the New York Hall of Science, purchasing beautiful clothes from the Harlem market, and marvelling the city through bus tours of Manhattan, Harlem, and the Bronx. This trip was the perfect beginning to a wonderful summer and created a community among the scholars, tutors, and staff.
After completing a lab involving the physics of zero gravity and its relationship to weight, UBMS Scholars were given the opportunity to work with and prove the theory, then enter a chamber to experience the feeling of zero gravity. Led by trained skydiving professionals, UBMS Scholars experienced a personal thrill of being propelled in the air by large gust of wind.

Biology Lab

The ninth and tenth graders took Biology Lab with UD Biological Sciences Department professor, Dr. Nuenebel. They learned techniques that real biology researchers use on the job, such as pipetting and quadrant streaking. The students also learned how to transform bacterial populations with plasmids that contain fluorescent proteins from jellyfish. The students also got the opportunity to work with the famous immortal cell line Henrietta Lacks (HeLa).
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Engineering Lab

In the University of Delaware's Spencer Laboratory, eleventh and twelfth graders were taught by a team of Mechanical Engineering majors—led by renowned professor, Dr. Buckley—to design and conceptualize products as if they were engineers working for a company with deadlines and stringent rules. This was accomplished using the latest software used by mechanical engineers, called SolidWorks, where the students were able to design and model objects that are later transformed into real products using the University of Delaware’s 3D printing lab. This engineering lab demonstrates to students how creativity and science come together to give rise to innovation and overall scientific excellence.

Workshops

Workshops were a great opportunity to learn outside of the traditional classes. We discussed professionalism and how to compose and present oneself in front of an employer or potential employer. We learned about local, affordable colleges and how to find your best fit, secure financial aid, and make college work for you. We had fun learning about marketing and creating our own commercials. We heard from Dr. Jalaal Hayes, named the Top Influential Chemist of the Year, who graduated from high school at 15 years old, received his Bachelor’s in History and Science from Lincoln University at 18, and got his Doctorate in Chemistry from Delaware State University at the age of 22. He gave an inspirational talk about motivation, success, and navigating being a minority in STEM. We also had the treat of having the YWCA come in to help us create vision boards and work on soft skills necessary in life and future careers such as setting SMART goals and boundaries, and creating time for mental health and self-care.
Delaware Biotechnology Institute

We had the opportunity to tour the Delaware Biotechnology Institute where we did a lab extracting DNA from a strawberry and learned how biology and technology meet. We heard from the scientists at DBI who are conducting research and molecular sequencing on treating plant diseases to help agriculture in the US, microbes as an energy resource to sustain the environment, and into treating cancer.

Star Tower Tour

We had the amazing opportunity to tour the University of Delaware’s brand new, cutting edge Star Tower for health sciences. We saw how their labs operate where they are educating nurses and conducting research on physical therapy, speech and language, and patient care. We explored the design lab, one of the only labs in the world that is renowned for combining clothing design, technology, and health sciences to create adaptive clothing for people with disabilities and health problems.

Main Event, Movie Tavern, UDairy, Basketball

Other fun things we did throughout the program were go to Main Event, try out the movie tavern, eat at Udairy, and play some basketball! The summer was a good balance between hard academic work to propel the students forward, trips to meet professionals in STEM fields, workshops to teach practical skills, and fun!
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Words from our Scholars

Andrew Hernandez  
1st Year in UBMS  
9th grade at Perryville HS  
“UBMS is very beneficial for college, I am more interested in STEM now”  
About UBMS - “you should do it!”

Taha Mouhoud  
1st year UBMS  
10th Grade at MOT Charter  
“Upward Bound is a really fun experience, it’s been really good so far. I can see that it’s helping us. I feel like I’m going to be ahead because of this program.”

Victoria Wiley  
2nd year in UBMS  
10th Grade at MOT Charter  
“Upward Bound has helped me advance ahead of my peers. I think everybody should do this program, I tell all my friends about it.”

Tyrique Grant  
1st year in UBMS  
11th Grade at Newark HS  
“Upward Bound is a fun experience, it prepares me for the next year so I can be a step ahead of everyone else in my classes.”

Sarah Qasim  
2nd year in UBMS  
10th grade at Glasgow HS  
"UBMS is a great introduction to the next school year and gets you prepared. I like the math classes and the field trips”

Rebecca Tedla  
1st year in UBMS  
11th Grade at Newark HS  
“I like the program because it’s good for people who want to work in STEM to focus on those subjects. I love the labs and meeting interesting people who are actual doctors and scientists.”
Anal Almowallad
1st year in UBMS
Christiana High School
Colleges applying to: Del Tech
Major - Chemistry, minor in French
“I like UBMS because I’m spending my summer learning many different things”

Charleese Carter
3rd year in UBMS
St. Georges Technical High School
Colleges applying to: Drexel, Towson, UD, University of Pennsylvania
Major: Pre-med
“UBMS has opened up a lot of opportunities for me and has given me a better idea of what I want to do. It establishes a good place for your future.”

Jazlynn Church
4th year in UBMS
Charter School of Wilmington
Colleges applying to: North Carolina A&T, University of Pittsburgh, Virginia State
Major: Forensic Science
“UBMS prepares you so you can get ahead and don’t have to worry about falling behind, and I really liked the field trips and college tours.”

Reginald Hankins
3rd year in UBMS
Elkton High School
Colleges applying to: Morgan, Fordham, Towson, Villanova
Major: Business Management
“This is a good program for people that take their academics seriously, it will have a great impact on your life.”

Isaiah Humphries
3rd year in UBMS
Elkton High School
Colleges applying to: UMD College Park, UM Baltimore County
Major: Environmental engineering, English, Political Science
“UBMS has helped me organize my college search and realize how important it is to think about where to go next with my education.”
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Amira Neville
1st year in UBMS
Glasgow High School
Colleges applying to: Indiana University, Cecil College, UD, University of Maryland
Major: Nursing
“I like the classes and the RAs. UBMS has helped me learn new things, especially the SAT prep”

Tahira Neville
1st year in UBMS
Glasgow High School
Colleges applying to: UD, Del Tech, Temple, Indiana University
Major: Pre-med
“UBMS is a good program for all students to give us a chance to study outside of school”

Hoda Qasim
2nd year in UBMS
Christiana High School
Colleges applying to: UD, Wilmington University, Stanford, Del Tech
Major: Pharmacy, Computer Science
“This program is a great advantage. It does not take away from your summer, it was an opportunity for me.”

Makayla Randolf
3rd year in UBMS
St. Georges Technical High School
Colleges applying to: UD, DSU, Del Tech
Major: Biotechnical Engineering, Chemistry, Biology
“The field trips are fun, you meet a lot of interesting people. UBMS gets me prepared for the classes I’m going to take next year. It also helped me find out what I’m interested in majoring in.”

Erich Van de Bogart
3rd year in UBMS
Elkton High School
Colleges applying to: UD, University of New Hampshire, also interested in going abroad
Major: arts, coding, computer science, history
“UBMS gives you something to do during the summer, it is very beneficial and helps with your future.”