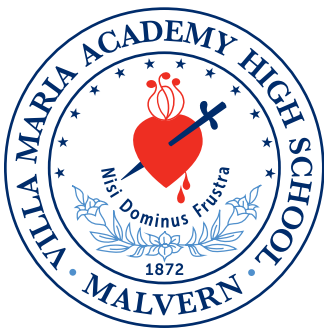


SENIOR CAPSTONE

2024



The Senior Capstone is a year-long, experiential learning project that utilizes critical thinking, sharpens research skills, and facilitates career exploration and mentorship, resulting in industry experience and professional development.





Essent

Business and Cybersecurity

Ariana Butler spent her Capstone experience at Essent, shadowing Marty Nebel, Chief Security Officer. Her essential question was, "What are the steps necessary in creating a business?" Throughout two weeks, she saw the importance of cybersecurity and privacy in a business and the role the company plays in securing the data of consumers. Ariana learned about different terms commonly used in the cyber world, such as TCP/IP, which describes the way the devices connect to the network and the internet to send and receive data. She attended a security meeting, learned about the third-party protocols Essent uses when connecting with other companies, and shadowed a member of the security team as he traced different cyber-attacks. Ariana intends to have a career in cybersecurity and/or own a business in the future.



National Catholic Bioethics Center

Catholic Bioethics

Mackenzie Duffy shadowed Dr. Jozef Zalot at the National Catholic Bioethics Center (NCBC). Her essential question was, "What are the Catholic and secular bioethics regarding brain death?" Her research delved into the history of brain death and its current bioethical dilemmas, and she was able to examine brain death from secular and Catholic perspectives, past and present. Mackenzie gained a holistic view of bioethics in action as she listened in on consults dealing with end-of-life issues. The center also creates many publications and certification courses, which aim at educating health care professionals and the general public on current bioethical dilemmas facing the healthcare system. This experience will certainly influence Mackenzie's future career within scientific research and healthcare.



Merck Pharmaceuticals

Law/International Relations

Hazel Walker shadowed Isabel Duffy, Senior Vice President of Compliance at Merck Pharmaceuticals, for her Capstone experience. Hazel's essential question was, "How is international law practiced in a constantly changing world?" She discovered how law is practiced in a corporate setting where different laws, governments, and cultures must be accommodated in order for the company to comply with local and international laws. Her shadowing mentor set up meetings with various people in the company who have experience working internationally, who described in great detail how they were able to adapt to the changing political and social climate in all parts of the world in order to meet the needs of hundreds of millions of people who need the pharmaceuticals that Merck supplies. These conversations helped her understand how international law is practiced to accommodate different governments, regulations, and cultures.



Fox 29 News Station

Public Relations/Advertising

For her Capstone experience, **Ava Meyers** shadowed Jenn Frederick, a reporter for Fox 29 News. She observed many different live news reports, set up by the brand's PR team, to promote attraction and interest. Her essential question was, "How does psychology promote brand loyalty?" She was struck by the way constant exposure promotes engagement in the brand and learned that using resources, such as news stations, is how local businesses get the word out about new upcoming events or openings they want to market. Ava also participated in PR meetings with businesses planning upcoming events. Ava's experience has helped her determine what she wants to do with her professional career. She was invited to work with her mentor again during the summer after graduation.



Paoli Hospital

Nurse Anesthesia

Elizabeth Dougherty spent her Capstone experience at Paoli Hospital alongside Ms. Andrea Williamson, Certified Registered Nurse Anesthetist. Elizabeth's research question was, "How does anesthesia affect the brain?" She observed several surgeries, including two gallbladder removals, hip and knee replacements, a lymph node removal, a septoplasty, and a cranioplasty. The experience allowed her to deepen her understanding of the complex dynamics of the operating room and the critical role of a nurse anesthetist. She observed the entire process of anesthesia administration—from putting patients to sleep, to monitoring them throughout the surgery, to waking them up post-surgery. Her time at Paoli expanded her knowledge and appreciation of the field of nursing and overall healthcare.



GlaxoSmithKline

Pharmaceutical Industry

Megan Isabelle Ronan shadowed Ms. Cris Agonoy, a senior supply and relationship manager at GlaxoSmithKline, who works with clients, both domestic and international, to help them produce vaccines. Megan's essential question was, "How does the pharmaceutical industry determine the efficacy and commercial feasibility of projects?" Ms. Agonoy helped Megan delve into the research process and commercial side of the industry. Megan learned about the importance of collaboration to ensure a project runs smoothly, and realized that excellent communication skills are required when negotiating with peers and clients of different backgrounds. Megan's experience opened her eyes to an industry and career she hopes to pursue during and after college!



NovaCare Complex

Sports Media/Philanthropy

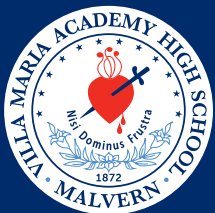
Allie Lange shadowed Ryan Hammond, Executive Director for the Eagles Autism Challenge, at the NovaCare Complex in Philadelphia. Her essential question was, "How does sports media affect philanthropy?" This question was answered as soon as she stepped into the center. She discovered that the Eagles Autism Challenge is the number one social media foundation in the NFL and that this year's event would likely raise more than 8 million dollars. Working with Ms. Hammond's all-women team, Allie explored different areas of event coordination, including sponsorship deals, social media, and fundraising. This experience has confirmed Allie's interest in the communications field and has made her more eager to serve her community.



Timothy School

Autism and Healthcare

Maahi Sharma spent her Capstone experience at the Timothy School in Berwyn, PA. Her essential question was, "How does early support and understanding contribute to the well-being of children with autism during their early years of development?" Maahi observed teachers and students in classes and went on a field trip with students to the YMCA. She saw how instruction and therapies vary among grade levels, including observing how the students express themselves by playing a variety of instruments in music therapy. She was also present for the class performance at the annual spring show. Ultimately, by observing instruction of children with autism at different levels, she saw the importance of early support and understanding.



Where will your
CAPSTONE
take you?

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Villa Maria Academy High School admits young women of any race, creed, and national or ethnic origin to all programs, privileges, and activities offered to its students.

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Animation Sports-Broadcasting OBGYN
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Data Analytics *Publishing* Microbiology