

# An Environmental Scan of Healthcare Pathways Programs in Delaware

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## Introduction

In order to better understand the programming landscape of Delaware for individuals interested in going on to careers in the sciences, The Delaware Academy of Medicine | Delaware Public Health Association (Academy/DPHA) has conducted an environmental scan to identify the available programs for youth and young adults throughout the state. The programs of particular interest were those that engaged in activities in the fields of Science, Technology, Engineering, and Mathematics (STEM), with a special focus in the health sciences.

The environmental scan identified 52 different youth and undergraduate programs. Data on these programs were compiled and categorized using several factors:

- By hosting organization;
- Program Life;
- Duration and frequency of program sessions;
- Participation eligibility;
- Current demographic composition;
- Location of program; and
- Program cost to participants.

To achieve research objectives, the Academy/DPHA contacted each program in order to generate the most accurate depiction. It is important to note that not all programs responded, and thus data compiled was that of public availability (i.e. program website).

## Statewide Programs

### [Delaware Mini Medical School](#)

Delaware Mini Medical School (Mini Med) was created in 2009 as a way for adults and high school students to gain insight to current trends in medicine. Participants learn the process by which health care providers diagnose and treat illnesses by attending in-depth lectures. From 2009 to 2021, the program was held in person every spring, in partnership with the Delaware Academy of Medicine/Delaware Public Health Association and ChristianaCare. Beginning in 2021, Mini Med switched to entirely virtual and expanded to six cohorts per year. The six-week program has no cost to the participant. Participants who attend all six sessions are given a Certificate of Achievement.

There is no specification of recent demographic composition; however, the majority of participants are either aged 16-19 or over 50 years. Participants are made up of all races and ethnicities, men and women, and two participants listed as “other” gender since option became available.

### [Delaware Institute for Medical Education and Research](#)

Since 1969, the Delaware Institute for Medical Education and Research (DIMER) has provided an alternative to an in-state medical school for Delawareans. DIMER initially offered 20 admission slots for Delawarean medical students at Jefferson Medical College—now the Sidney Kimmel Medical College (SKMC) at Jefferson University. In 2000, the program expanded to the Philadelphia College of Osteopathic Medicine (PCOM) with five admission slots. As of 2021, both medical schools had increased the number of available admission slots: SKMC to 31 and PCOM to 18.<sup>1</sup>

DIMER offers a unique advantage as Delaware resident applications are pulled from the general medical school application pool and evaluated only against other Delaware applicants. This process proves fruitful: compared to all the 2021 SKMC and PCOM applicants, DIMER students had a higher acceptance rate than the general application pool (see Table 1). At SKMC, 35% of DIMER applicants were accepted in comparison to the 4.4% of the general pool. The difference in acceptance rates is even more evident at PCOM, as DIMER applicants had a 61.01% acceptance rate and the general pool was only 5.06%.

Table 1. 2021 DIMER Matriculant Demographics

	Count	% of Total
<b>Total # of participants</b>	<b>49</b>	<b>100</b>
<b>Sex</b>		
Female	30	61.22
Male	18	36.74
Not Disclosed	1	2.04
<b>Race/Ethnicity</b>		
Caucasian/White	20	40.82
African American/Black	6	12.24
Asian	22	44.9
Not Disclosed	1	2.04
<b>Participants by County</b>		
New Castle	39	79.6
Kent	6	12.24
Sussex	4	8.16

In addition to admission slot program, DIMER partners with the Delaware Health Sciences Alliance (DHSA) in creating health panel events. Each event is curated to engage high school and undergraduate students with an interest in the health and medical professions. Panelists consist of experts among DIMER leadership, DIMER program alum, current medical students, medical education partners, and DHSA members. Attendees are provided information on the DIMER program, and the medical school application process. Discussions on loan opportunities and financing medical school are also available.

### [Delaware Pathways](#)

Delaware Pathways is an education and workforce partnership that provides opportunities for youth to gain work experience and hone their academic and technical skills. Currently, Delaware Pathways offers 89 different middle and high school pathway programs with a total enrollment of 23,009 students. All programs are free, however students may be expected to purchase extra expenses (i.e. new scrubs, shoes), depending on the program. To view all available health science programs, please see Appendix A.

### [Girl Scouts of the Chesapeake Bay](#)

Open to all girls in grades K-12, the Girl Scouts of the Chesapeake Bay (GSCB) offers a variety of activities to develop life and technical skills. Participants are divided into groups by grade level: Daisies (K-1), Brownies (2-3), Juniors (4-5), Cadettes (6-8), Seniors (9-10), and Ambassadors (11-12) (see Table 2). GSCB serves 14 counties throughout Delaware and the eastern shores of Maryland and Virginia. Membership to GSCB costs \$40 per year, with an extra \$0-60 fee depending on the program. Summer camp program registrations range from \$215-650. Financial aid is available to those who qualify.

Table 2. Current Participant Demographics

	Count	Percent of Population
<b>Girl Scout/ Grade Level</b>		
Daisies (K-1)	563	17.02
Brownies (2-3)	850	25.71

Juniors (4-5)	761	23.01
Cadettes (6-8)	675	20.41
Seniors (9-10)	232	7.02
Ambassadors (11-12)	221	6.68
Unknown	5	0.15
<b>Total youth membership</b>	<b>3,307</b>	<b>100</b>
<b>Race/Ethnicity</b>		
White	4398	62.32
African American/ Black	733	10.39
Asian	90	1.275
American Indian or Alaskan Native	12	0.17
Hawaiian or Pacific Islander	5	0.07
Two or More Races	208	2.95
Other Races	229	3.245
I Choose Not to Share	784	11.11
Not Reported	598	8.47
<b>Total membership (youth, adult &amp; lifetime)</b>	<b>7057</b>	<b>100</b>

All groups are eligible to participate in “[Journeys](#),” which consists of earning three to four related badges and then creating a “**Take Action Project**.” Through the project, participants identify a problem, create a sustainable solution and team plan, and then put their plan into action. Finally, they present what they learned and what future steps they may take.

The [Girl Scout Leadership Experience](#) is an annual one weekend-long program, open to girls in grades 6-12. The program begins on a Friday at 7pm and ends on Sunday at 10 am. Throughout the weekend, participants will engage in four key activity areas: STEM, outdoors, life skills, and entrepreneurship.

Another program of interest is the GSCB’s [Program on the Move](#). This program is entirely free to the participants and is a mobile program that brings all the necessary materials to a location of the troop’s choosing. The troop also may choose any topic from the available list: circuits, robotics, color exploration, content creation leadership basics, environmental stewardship 101, and virtual reality/augmented reality. Every scout will receive one free patch per year of participation. Each session is approximately one hour and a half and is available October—December and February—May.

### [Million Women Mentors Delaware](#)

Million Women Mentors Delaware (MWM-DE) is a program designed to connect girls and young women with female leaders in STEM across the state. MWM-DE partners with many Delaware corporations on community events and mentoring programs. Some programs of note are **The Future is Female: Girls in STEM** camp, **DigiGirlz Day**, the **Science and Technology Career Fair**, and **Engineering Your Tomorrow**. MWM-DE runs throughout the year and has no cost to the participant.

### [Delaware HOSA](#)

Delaware HOSA- **Future Health Professionals** is a student-led program that provides opportunities for students to gain knowledge and skills related to the health sciences. Through various competitive events and workshops, students are able to develop, practice, and refine their leadership and teamwork skills. Participants are also prepared for higher education and entry level certification (i.e. EMT, CNA, etc.). HOSA is open to students in grades 6-12 and meets approximately once a month throughout the year (see Table 3). Prior to the COVID-19 pandemic, 1400-1500 students participated in the program throughout the state. The total cost of program membership is \$150: \$10 national fee, \$40 state conference, and \$100 for the national conference.

Table 3. National HOSA Participant Demographics

	<b>% of Total Population</b>
<b>Sex</b>	
Female	81
Male	19
<b>Race/Ethnicity</b>	
White	49
Non-white	51

Delaware HOSA also heads the **Fusion Program** which is open to students in grades 9-12. Fusion is a student organization geared towards students not enrolled in a health science program of study but demonstrate interest in a healthcare career. The total cost of program membership is \$200: \$10 national fee, \$90 state fee, and \$100 for registration into the state conference.

### **Delaware Department of Education & TeenSHARP**

Since 2009, [TeenSHARP](#) has been dedicated to serving the low-income, unrepresented student population in Delaware. Every year, the Delaware Department of Education and TeenSHARP partners to host the Delaware Goes to College Academy. This week-long program is open to students in grades 9-11. Participants are educated about the process of applying to college and financial aid through several workshops. The program also offers the opportunity to meet with representatives from many in and out-of-state colleges. The program is entirely virtual and has no cost to the participants.

### **[Del-Mar-Va Council's Boy Scouts of America \(BSA\)](#)**

The Del-Mar-Va Council's BSA is open to both boys and girls aged 5-20 years. BSA is divided into three main groups: Cub Scouts (ages 5-10), Scouts BSA (ages 11-17), and Venturing & Exploring (ages 13-20) (see Table 4). All sections include the opportunity to earn STEM-related badges and engage in STEM activities. The annual membership fee for Scouts BSA is \$148 for new scouts, and \$123 for returning scouts. Extra costs for uniforms, activities, and camping trips are included but may be alleviated through fundraising initiatives.

Table 4. Del-Mar-Va Council BSA Participant Demographics as of October 2022:

	<b>Count</b>	<b>% of Total</b>
<b>Total # of participants</b>	<b>3,964</b>	<b>100</b>
<b>Sex</b>		
Female	570	14.38
Male	3,394	85.62
<b>Race/Ethnicity</b>		
Caucasian/White	3,136	79.11
African American/Black	217	5.47
Asian	141	3.56
Hispanic	205	5.17
Native American	9	0.22
Pacific Islander	8	0.20
Alaska Native	1	0.03
Other	148	3.73
Not provided	99	2.5
<b>Program Participation</b>		
Cub Scouts	1,916	48.34
Scouts BSA	1,966	49.6
Explorers	29	0.73
Venturers	22	0.55
Sea Scouts	31	0.78

**Venturing** is a youth-led program aimed to improve leadership and teamwork skills. Through venturing, young adults are able to advance their skills in various areas including but not limited to: arts, religion, sports, outdoors, hobbies, and Sea Scouting. **Exploring** is a work site-based program where youth and young adults learn about the day-to-day activities and responsibilities of various careers (see Table 5). Del-Mar-Va Council's BSA currently offers exploring opportunities in law enforcement, fire & emergency services, and health care. Other programs such as aviation and engineering are in development and may become open in the future. Generally, the exploring programs meet once a month and cost \$45 per participant annually.

Table 5. Exploring Program Demographic Composition as of January 2020

	Count	Percent of Total
<b>Total # of participants</b>	<b>250</b>	<b>100</b>
<b>Sex</b>		
Female	172	68.8
Male	78	31.2
<b>Race/Ethnicity</b>		
Caucasian/White	112	44.8
African American/Black	35	14
Asian	28	11.2
Hispanic	9	3.6
Other	10	4
Not provided	56	22.4

The ChristianaCare **Explorer Post 2613** is a Co-Ed program which is open to high school and college students aged 14-20 years (see Table 6). The program is a part of the Learning for Life section of the *Del-Mar-Va Council, Boy Scouts of America Exploring Program*. For 35 years, the program has offered volunteer and shadowing opportunities along with leadership and life skills development at both Christiana Hospital and Wilmington Hospital. The program meets every second Sunday of the month and each session is two hours long. Program fees are free to the participant.

Table 6. Current Explorer Post 2613 Participant Demographics

Race/Ethnicity	Sex		Total
	Female	Male	
Asian	5	5	10
African American/Black	5	0	5
White	2	1	3
<b>Total participants</b>			<b>18</b>

### **Delaware INBRE Summer Scholars Program**

The Delaware IDeA Network of Biomedical Research Excellence (INBRE) Summer Scholars Program is a 10-week, summer research program open to full-time undergraduate rising sophomores or above. Participants must be a Delaware resident or attend a Delaware college/university. Each participant creates an independent research project while studying full-time under a mentor and learning about research techniques. All Delaware INBRE events are mandatory and participants must participate in an oral or poster presentation of their findings at the Research Symposium. Program participants are given stipends ranging from \$4300 to \$5600, depending on the institution where the mentor is located.

From 2002 to 2020, Delaware INBRE has served a total of 811 students. Of the past participants, 85% of them are currently employed in science or health-related fields. Over 300 of all participants have gone on to pursue graduate degrees. In 2020, there were 74 participants, 30 of whom were categorized as an underrepresented minority (URM) in biomedical fields.<sup>2</sup>

## [United Way of Delaware](#)

The United Way of Delaware (UWDE) is an organization dedicated to maximizing educational resources in Delaware communities. During the COVID-19 pandemic, UWDE opened 27 learning pods—after-school programs geared toward improving reading and math scores. Additionally, the organization gave away 70,000 free books and 6,000 literacy kits to 14 different elementary schools across the state. UWDE also leads the **Career & College Success program** which works in partnership with Delaware Pathways.

## [Stand By Me](#)

United Way of Delaware and the State of Delaware are judiciary partners of financial coaching program Stand By Me (SBM). **Stand By Me NexGen** is a school-based program available to Delaware high school students who want to improve financial literacy and seek support in completing college financial aid applications. NexGen offers two sub-programs: [College, Careers & Cash](#) (CCC) and the [College Funding Project](#) (CFP). All SBM programs are entirely free as they are underwritten by a grant from the Delaware Department of Education Higher Education Office.

The CCC program is open to ninth and tenth graders and provides them with a custom-designed curriculum. Participants engage in classroom workshops that help to improve financial literacy and build connections between higher education and career pathways. Financial literacy is tested through student-developed budget plans and understanding of credit and its consequences. In the 2021-2022 period, CCC served 22 public and charter schools and a total of 3,500 students.

Through the CFP program, participants are educated on how to complete Free Application for Federal Student Aid (FAFSA) and apply for scholarships. Participants may also utilize personal step-by-step coaching, with each session ranging from 30 minutes to one hour. In 2021, the program hosted 190 in-school and virtual events and 380 FAFSA completion appointments.

## **New Castle County Programs**

### **University of Delaware Student Clubs**

Of the total 52 programs acknowledged, 19 are student-led clubs available to undergraduate students at the University of Delaware. All clubs run throughout the academic year (September to June). Program participation fees range from \$0 to \$12. Program demographic composition is varied, and similar to the make-up of the University of Delaware. Please see Appendix B for a list of the programs and their related information.

### **Medical Society of Delaware (MSD) & the Delaware Youth Leadership Network (DYLN): Apollo: Youth in Medicine**

The [Apollo: Youth in Medicine \(YIM\)](#) program is an entirely student-led non-profit that exposes high school juniors and seniors to the medical profession. Since 2018, the program has offered in-person physician shadowing along with special education sessions involving information on medical pathways, and hands-on medical education such as cadaver labs. Students are admitted in the fall and given access to 4-hour shadowing slots offered by the program during three seasonal sessions (Fall, Spring, and Summer) throughout each year, each lasting for 2- to 6-weeks. Apollo offers shadowing in 17 different specialties: students are required to take one slot in primary care during their first session in the program, and are encouraged to explore a breadth of specialties of their choosing during future slots. Apollo has offered 1,082 shadowing slots since its inception.

To date, the program has served 32 high schools and a total of 189 students, both matriculating and graduated. Apollo is an application-based program and, over the last 5 years, it has enrolled more female than male participants. Fully supported by the work of student volunteers and grant funding from Delaware Medical Education Foundation (DMEF), the program is free to the participating students.

## Walnut Street YMCA

The Walnut Street YMCA located in Wilmington, DE offers many programs for youth engagement and building life skills. Two programs of note are the Black Achiever program and the Teen Workforce Development.

Since 1989, the [Black Achiever Program](#) has provided college readiness and career awareness to African American teens aged 14-18 years. The teens meet with African American mentors from various career fields who prepare the participants for future success. The program meets every Saturday except for holiday weekends, and each session is two hours long. The program has no cost to the participants. The program currently comprises of 60% females and 40% males, all of whom identify as African American/Black.

The [Teen Workforce Development Program](#) engages teens aged 15-18 in workshops designed to improve job readiness and the associated life skills. Workshop topics may include financial literacy, public speaking, resume writing, and more. Each session is two hours long and has no cost to the participant. The program has run since 2017, and offers four cohorts per year. The current demographic composition is 50% females and 50% males, all of mixed-race backgrounds.

## [Junior Achievement of Delaware](#)

Junior Achievement (JA) of Delaware offers a variety of programs open to grades K-12. Programs offered include financial literacy, entrepreneurship, and career readiness. Although there is no specific health science program, JA students have the opportunity to learn from role models who work in the health sciences and their experiences in said career. Program cost varies from \$15-65 per participant and experience; however, costs are usually covered through public and private contributions.

## [Year Up Wilmington](#)

Year Up is a 3-step training program that takes up to one year to complete. The program has provided opportunities for internship placement, and the development of professional and personal skills since 2017. Additionally, participants may utilize staff guidance throughout the program. The program has no cost to the participant.

## Dawn Career Institute

The Dawn Career Institute (DCI) is a private, post-secondary educational institution. In 2002, DCI began offering two health science-related programs: The Nursing Assistant and Medical Assisting Diploma Programs, both of which are available to ages 17 and up (see Table 7). Both programs have a rolling enrollment and include career success coaching.

Table 7. Dawn Career Institute Student Body Demographics

Data Collection Report July 1, 2020 thru June 30, 2021	Total Served	Percent of Demographic Served
<b>Sex</b>		
Male	40	17
Female	202	83
Did Not Self Identify	0	0
<b>Age</b>		
14-21	39	16
22-29	151	62
30-54	51	21
55+	1	1
<b>Race/ Ethnicity</b>		

American Indian/Alaskan Native	0	0
Asian	0	0
African American	117	49
Pacific Islander	0	0
White	66	27
Did not Self Identify	0	0
*More than one Race	59	24
<b>All Hispanic</b>		
Hispanic	38	16
Not Hispanic	204	84
Did Not Self Identify	0	0
<b>All Disability</b>		
Disabled	0	0
Not Disabled	242	100
Participant Did Not Disclose	0	0

The [Nursing Assistant Diploma Program](#) includes a combination of qualified instruction and relevant medical equipment and instruments. The program has seven to eight cohorts per year, with each cohort running for six weeks. The total for tuition and fees is \$3,213; however, tuition-free grants are available based on eligibility.

The [Medical Assisting Diploma Program](#) teaches participants the technical knowledge required to perform key medical office procedures and protocols. The program is 36 weeks long, and includes a six-week externship. This program is offered both in-person and virtually. The total program cost is \$16,352.61 before financial aid.

### [Charter School of Wilmington](#)

The Charter School of Wilmington (CSW) (see Table 8) opened in 1997 and is one of the first independent public charter schools in the United States. In addition to a traditional high school curriculum, CSW offers a college preparatory program with a special focus in STEM. Once students reach their junior year, they are required to participate in the **Junior Research Program**. Through this program, students acquire knowledge and skills in experimental design, data collection, and data analysis. Students are then required to present their findings to their mentors and judges at a final symposium. Overall, the school consistently ranks in the top 1% of math and reading proficiency, and testing rank among Delaware schools.<sup>3</sup>

Table 8. 2021 Charter School of Wilmington Student Body Demographics

	Count	Percent of Total
<b>Total # of students</b>	<b>965</b>	<b>100</b>
<b>Sex</b>		
Female	502	52
Male	463	48
<b>Race/Ethnicity</b>		
Caucasian/White	504	52.2
African American/Black	71	7.4
Asian	286	29.6
Hispanic	65	6.7
Two or More Races	35	3.6
American Indian/Alaska Native	4	0.4
<b>Student: Teacher Ratio</b>		<b>20:1</b>



## Conrad Schools of Science

Opened in 2001, the Conrad Schools of Science is a life science magnet school for grades 6-12 (see Table 9). Students are able to take advanced placement and dual enrollment courses throughout their time at the school. Various career pathways and programs are offered at Conrad including, but not limited to nurse technology, physical therapy, and athletic health care. Students are also given the opportunity to earn certification and licensing in CPR/First Aid, Nurse Assistants (CNA), and ACSM Certified Personal Training.<sup>4</sup>

Table 9. 2021 Conrad Schools of Science Student Body Demographics

	Count	Percent of Total
<b>Total # of students</b>	<b>1,178</b>	<b>100</b>
<b>Sex</b>		
Female	589	50
Male	589	50
<b>Race/Ethnicity</b>		
Caucasian/White	663	56.3
African American/Black	139	11.8
Asian	74	6.3
Hispanic	263	22.3
Two or More Races	36	3.06
American Indian/Alaska Native	3	0.3
<b>Student: Teacher Ratio</b>		19:1

## FAME, Inc.

FAME Incorporated of Delaware has a variety of STEM programs open to grades K-12. Programs include the STEMulate® Change Outreach Initiative, Core STEM Initiative, Summer Enrichment Program, School Year Program, and the Talent Engagement Connection (TEC) initiative. FAME is also currently in development of **The Learning Lab** which will be located in Wilmington, Delaware. The Learning Lab will be a multi-level building with study/work spaces, classrooms, laboratories, and a rooftop garden and lounge. The Learning Lab will only admit students under the age of 18 years.

The **STEMulate® Change Outreach Initiative** encourages interest in STEM among grades K-6. Classes are project-based and explore cross-curricular topics through experiments and engineering problem-solving prototypes. Additionally, students are exposed to various STEM careers through each project.

The **Core STEM Initiative** is a four to six-week summer curriculum that includes over 220 hours of exhaustive, innovative STEM instruction for grades 7-12. Students in grades 7-10 take classes at John Dickinson High School for six weeks. Students in grades 11 and 12 live on-campus at University of Delaware for four weeks. Through the program, students are exposed to robotics and offered test awareness, college prep, peer counseling, and job readiness.

The **School Year Program** is an extension program of the CoreSTEM Initiative that takes place at John Dickinson High School. The program meets the first and third Saturday of each month, October through May. In addition to CoreSTEM activities, participants will engage in academic planning, test taking, and maintenance. The program fee is \$500 per student, with a discount of \$250 for a sibling in the same household.

The **Summer Enrichment Program** is an intensive six-week program open to students in grades 1-12. The program runs Monday through Thursday from 8:00 a.m. to 3:00 p.m. The first half of the day is geared toward STEM and Communication/English skills, and the second half includes business and cultural tours along with group-based engineering/STEM projects for grades 1-10. Eleventh and twelfth grade students are offered the opportunity to experience college life in a four-week fast-paced program at the University of Delaware. High school juniors take course work in Algebra II, Pre-Calculus, Geometry, Chemistry, and Engineering. Seniors

take two college-level courses in Pre-Calculus/Calculus and Physics and have two additional courses in computers and engineering research design.

The [Talent Engagement Connection \(TEC\) Initiative](#) connects high school and college students with Delaware colleges and companies. TEC utilizes the Tallo platform to create a workforce pipeline for employers to track and communicate with qualified talent. Students are also able to view eligibility for scholarships along with direct messaging and easy application to job opportunities.

## Kent County

### Delaware State University

The [Howard Hughes Medical Institute \(HHMI\) Inclusive Excellence \(IE\) Initiative](#) emphasizes first generation and “non-traditional” college student engagement in STEM. Non-traditional students are those who:

- Did not enroll high school;
- Attend college part-time;
- Work full time;
- Are financially independent;
- Are a single parent;
- Have a GED;
- Are a veteran;
- Transferred from a 2-year college; and/or
- Have dependents other than a spouse.

HHMI activities include 24/7 free online tutoring, student-centered learning, and support for degree completion and career preparation. Degree completion options consist of Advanced Placement (AP), College-Level Examination Programs (CLEP), and Defense Activity for Non-traditional Education Support (DANTES). Students are also assisted in finding STEM internships and jobs.

The [Undergraduate Research Training Initiative for Student Enhancement \(U-RISE\) program](#) goal is to develop a diverse pool of undergraduate students who earn their bachelor’s degree and pursue higher education. The program is open to sophomores who meet the following minimum criteria:

- Full-time student at DSU, with enough credits to reach upper division standing by the following fall (30 or more credits accumulated);
- At least two summers remaining before planned graduation date;
- Underrepresented minority (as defined in NIH Notice NOT-OD-18-129);
- US citizen or permanent resident;
- Demonstrated potential and interest in pursuing a graduate degree (Ph.D.) in biomedical or behavioral science;
- Both STEM and overall GPA of 3.2 or better; and
- Commitment to complete the program and related activities.

U-RISE comprises of a series of activities, course, and workshops to support the transition and success in graduate school. Additionally, participants will complete an online mentoring course and participate in implicit bias interventions.

## Sussex County

### Sussex County STEM Alliance

The Sussex County STEM Alliance is a non-profit organization committed to advocating for STEM awareness and involvement in Sussex County youth. According to the organization's mission statement, there is no official dissemination of STEM related information in Sussex County for kindergarten through higher education. In order to alleviate this issue, the organization promotes three specific programs: the Sussex County K-5 STEM Fair, Virtual STEM Socials, and Engineering Your Tomorrow.

Starting November 2022, the [Sussex County K-5 STEM Fair](#) will be held annually at the Lewes Public Library due to the support of the Carl M. Freeman Foundation FACES Grant. All children in grades K-5 are encouraged to participate regardless of schooling status (public, private, home-schooled, etc.). Participants may enter their projects as an individual or a group. Submitted projects will be judged by local STEM professionals and awarded prizes.

**Virtual STEM Socials** connect Sussex County stakeholders with the public while engaging in STEM-related discussions. Topics range from building inclusivity and equality in STEM to how the COVID-19 pandemic shaped innovation. This program is entirely virtual and at no cost to the participant.

**Engineering Your Tomorrow (EYT)** is a program that has been going on for 29 years in New Castle County thanks to its sponsors DuPont, Girls Inc and the Girl Scouts. In April 2019, EYT was brought to Sussex County through the support of the Delaware Foundation for Science and Math Education, Mountaire Farms, Delaware Technical and Community College, and the Sussex County STEM Alliance. Participants engage in hands-on STEM activities and work with female scientists to test scientific hypotheses. Parents of the participants are provided with information to guide them in preparing their daughters for higher education and careers in STEM. Engineering Your Tomorrow is open to girls in grades 6-8 and has no cost to the participant.

## Discussion

The environmental scan detailed 52 youth and undergraduate programs throughout the state. Of the 52 programs, there are 15 statewide initiatives with the other 37 divided among the three counties in Delaware. Excluding statewide programs, New Castle County (NCC) houses the most programs out of all the counties with 32 programs—19 of them being student-led clubs at the University of Delaware. The other two counties are largely underserved in comparison, with two programs in Kent and three in Sussex respectively.

Although the scan was conducted with the intent to pinpoint health science programs, any programs open to middle school to undergraduate students were considered. The breakdown of number of programs by type is:

- 29 health science-related programs,
- 17 STEM programs, and
- 17 programs for college and career readiness.

It is important to note that some programs are multi-faceted and may cover more than one program area. From the available demographics, there is a relatively even distribution of program participants that are people of color (POC) and those that are White. This is likely attributed to the programs that are specifically designed for POC youth such as those at the YMCA Walnut Street.

Recommendations for future programming include an increase in programs within Kent and Sussex County. Furthermore, providing the means for attendance and affordability should be considered especially in areas of low socioeconomic status. The majority of the programs were of little to no cost to participants, with a few exceptions. Programs with high fees may benefit from exploring funding avenues such as grant and public fundraising to alleviate the burden on participants.

## References

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## **Appendix A. Delaware Pathways: Health Science Program Offerings**

**Health Sciences  
Programs of Study  
As of January 2022**

<b>Biotechnology Lab Technician</b> Newark Charter School St. Georges Technical High School	<b>Medical Assisting</b> Delcastle High School Howard High School St. Georges High School
<b>Certified Nursing Assisting</b> Conrad School of Science** Delcastle High School Dover High School** Hodgson High School Howard High School Indian River High School** Polytech High School St. Georges High School Sussex Tech High School	<b>Allied Health**</b> Appoquinimink High School Cape Henlopen High School Christiana High School Delmar High School Great Oaks Charter School Indian River High School Middletown High School Milford High School Smryna High School Sussex Central High School
<b>Medical Laboratory Assistant</b> Delcastle High School	<b>Physical Therapy Health Aide</b> Conrad School of Science Polytech High School St. Georges High School Sussex Tech High School
<b>Dental Assistant</b> Delcastle High School Hodgson High School Howard High School Polytech High School Sussex Tech High School	<b>Public &amp; Community Health**</b> Appoquinimink High School ASPIRA High School Christiana High School Great Oaks Charter School Middletown High School Milford High School Lake Forest High School Odessa High School (new) Seaford High School
<b>Emergency Medical Services</b> St. Georges High School	<b>Medical Insurance Certified Coder</b> Hodgson High School St. Georges High School
<b>PLTW-Biomedical Science**</b> Brandywine High School Laurel High School Odyssey Charter School	<b>Middle School Health Sciences</b> Central Middle School McCullough Middle School Milford Central Academy Christiana Campus Honors Program
<b>Patient Care Assistant**</b> McKean High School Caesar Rodney High School Woodbridge High School Milford High School (22-23 start)	
<b>Local Programs of Study</b> Healthcare Technician-William Penn High School Surgical Technician-Delcastle High School	<b>**State Model POS</b>

Program Name	Program Description	Program Link	Program Inception	Frequency & Duration	Eligibility	Demographic Composition	Program Cost
University of Delaware Pre-Student Osteopathic Medical Association (Pre-SOMA) Society	student-led; promote and inform the public about osteopathic medical education, to increase the number of applicants to osteopathic medical schools; offer volunteering, shadowing, medical school application opportunities	<a href="https://studentcentral.udel.edu/org/association/pre-soma-society">https://studentcentral.udel.edu/org/association/pre-soma-society</a>	2010	throughout the academic year (September - June), 1 hour sessions	Undergraduate students	10 members (8 2D-2D, 2 Asian, 1 African American, rest are Caucasian, all females)	\$0 per participant
University of Delaware American Medical Student Association (AMSA)	student-led; create an open forum of discussion about the track that pre-med students follow, both in academic and extracurricular settings; host speakers and events that allow greater exposure to the medical field	<a href="https://studentcentral.udel.edu/org/association/americanmedicalstudents">https://studentcentral.udel.edu/org/association/americanmedicalstudents</a>		throughout the academic year (September - June)	Undergraduate students on pre-med track		
Health Professions Council	student-led; hosts events that will allow the students in organization to connect with upperclassmen in a mentor-mentor program; events with guest speakers from all different specialties in health care	<a href="https://studentcentral.udel.edu/org/association/thehealthprofessionscouncil">https://studentcentral.udel.edu/org/association/thehealthprofessionscouncil</a>	2020	throughout the academic year (September - June), 10 mins. to 1 hour sessions	Undergraduate students	"13k, male/female, predominantly white but a mix of most ethnicities and races"	\$5.00 one-time membership fee
Making Doctors	student-led; guides students in preparing and applying to medical school, provides volunteer opportunities	<a href="https://studentcentral.udel.edu/org/association/makingdoctors">https://studentcentral.udel.edu/org/association/makingdoctors</a>		throughout the academic year (September - June)	Undergraduate students		
Medical and Molecular Sciences Club	promote the major of the department, academic betterment, and offer networking opportunities for its members	<a href="https://studentcentral.udel.edu/org/association/medicalandmolecularsciencesclub">https://studentcentral.udel.edu/org/association/medicalandmolecularsciencesclub</a>		throughout the academic year (September - June)	Undergraduate students		
Men in Nursing	to create well-rounded, proficient and professional male nurses; have skill labs, service opportunities, and more ways to be involved	<a href="https://studentcentral.udel.edu/org/association/meninursing">https://studentcentral.udel.edu/org/association/meninursing</a>		throughout the academic year (September - June)	Male undergraduate nursing students		
Minority Association of Pre-Med Students at UD (MARS at UD)	student-led; emphasizes the importance of diversity in the health professional field through educating and building a community; include volunteer and service events, informing admission process, MCAT tips and tricks	<a href="https://studentcentral.udel.edu/org/association/mars">https://studentcentral.udel.edu/org/association/mars</a>		throughout the academic year (September - June)	pre-medical/pre-health professional undergraduate students		
Multicultural Student Nurses Organization	includes supporting, empowering, and networking all minority nursing students; volunteer opportunities & educational tips	<a href="https://studentcentral.udel.edu/org/association/multiculturalstudentnursesorganization">https://studentcentral.udel.edu/org/association/multiculturalstudentnursesorganization</a>	2006	throughout the academic year (September - June)	all nursing undergraduate students		
Nutrition & Dietetics Club	events, opportunities to help out in the community, and listen to guest speakers come in to talk about possible career paths in dietetics	<a href="https://studentcentral.udel.edu/org/association/nutritiondieteticsclub">https://studentcentral.udel.edu/org/association/nutritiondieteticsclub</a>		throughout the academic year (September - June)	undergraduate students		
of TEM at UD	identify, address, and advocate for the needs of LGBTQ+ students in the fields of STEM; fulfill student needs through mentorship connections, networking opportunities, strategic collaborations, and professional/leadership development	<a href="https://studentcentral.udel.edu/org/association/otem">https://studentcentral.udel.edu/org/association/otem</a>		throughout the academic year (September - June)	undergraduate students		
Phi Delta Kappa International Medical Fraternity (PhiDK) at UD	speakers relating to the medical profession, and community service; fundraiser for the Children's Hospital of Philadelphia via the Children's Miracle Network	<a href="https://studentcentral.udel.edu/org/association/philadelphiainternationalthedeltakappa">https://studentcentral.udel.edu/org/association/philadelphiainternationalthedeltakappa</a>		throughout the academic year (September - June)	undergraduate students		
Physical Therapy Interest Club	student-led; exposing and preparing students for careers in Physical Therapy; work closely with UD's STAR Campus, listen to guest speakers such as therapists and grad students, form ties with surrounding PT facilities and help prepare students for the grad school application process	<a href="https://studentcentral.udel.edu/org/association/physicaltherapyinterestclub">https://studentcentral.udel.edu/org/association/physicaltherapyinterestclub</a>		throughout the academic year (September - June)	undergraduate students		
Physician Assistant Club	informational meetings, CASPA prep, panels with PA students and practicing PAs, and advice on courses/majors at UD; provide volunteer, shadowing, and patient contact hour opportunities for undergraduate students	<a href="https://studentcentral.udel.edu/org/association/physicianassistantclub">https://studentcentral.udel.edu/org/association/physicianassistantclub</a>	2011	throughout the academic year (September - June), each session varies	undergraduate students	no specification, similar to UD student body	\$0 per participant
Pre-Dental Society	dental school prep, admissions presentations by dental schools, panels with current dental students, expert presentations	<a href="https://studentcentral.udel.edu/org/association/pre-dentalsociety">https://studentcentral.udel.edu/org/association/pre-dentalsociety</a>		throughout the academic year (September - June)	undergraduate students		
Pre-Pharmacy Society	learning about drug-related issues; help students with PCAT prep, get information on how to maximize opportunities to get into pharmacy school, discuss general and specific pharmaceutical interventions	<a href="https://studentcentral.udel.edu/org/association/prepharmacysociety">https://studentcentral.udel.edu/org/association/prepharmacysociety</a>		throughout the academic year (September - June)	undergraduate students		
Student Nurse Organization (SNO)	fundraising events, volunteer opportunities, linking students to part-time/temp nursing jobs	<a href="https://studentcentral.udel.edu/org/association/studentnursesorganization">https://studentcentral.udel.edu/org/association/studentnursesorganization</a>		throughout the academic year (September - June)	undergraduate nursing students		
UD Student Chapter of Doctors without Borders	raising awareness and knowledge about MSF's work in the field and about humanitarian issues, encouraging students to consider working with non-governmental organizations, post-graduation, supporting MSF in advocacy campaigns, and raising money for MSF, our work in the field, and specific campaigns	<a href="https://studentcentral.udel.edu/org/association/doctorswithoutborders">https://studentcentral.udel.edu/org/association/doctorswithoutborders</a>		throughout the academic year (September - June)	undergraduate students		
Loni's Hand at UD	student volunteers provide in-home supports to people with chronic illnesses like cancer, MS, Lou Gehrig's Disease (ALS), and heart failure; assist community members with grocery shopping, yard work and other tasks, while gaining valuable insight into the human experience of chronic illness... gain a understanding of the social determinants of health	<a href="https://studentcentral.udel.edu/org/association/lonishand">https://studentcentral.udel.edu/org/association/lonishand</a>	2019	continuous/throughout the year (college session during academic year)	undergraduate and graduate students	Race: 75% white, 12% Asian, 7% Black, 7% other Gender: 80% female, 13% male, 1% other Age: 97% 17 - 22, 1% 23+	\$10-12 per participant for criminal background check; financial aid available
Black Student Nurse Association (BSNA)	establish a safe space for African/African-American/Black nursing students; provide a social and academic support system to black nursing students as they endure the challenges of the nursing profession.	<a href="https://studentcentral.udel.edu/org/association/blackstudentnursesassociation">https://studentcentral.udel.edu/org/association/blackstudentnursesassociation</a>		throughout the academic year (September - June)	African/African-American/Black nursing undergraduate students		

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