

## Science Undergraduate Laboratory Internships (SULI)

Summer 2022 - Application for: Emily Marie Garl

### APPLICANT PROFILE

#### General Applicant Information

First Name: Emily

Middle Name: Marie

Last Name: Garl

Previous Last Name(s):

Primary Email Address: emgarl19@students.desu.edu

Alternate Email Address 1: emily.garl41801@gmail.com

Alternate Email Address 2:

ORCID: [0000-0002-1874-1793](https://orcid.org/0000-0002-1874-1793)

#### Current Address

Primary Phone Number: 484-797-0588

Alternate Phone Number:

#### Citizenship/Languages/Eligibility Information

I will be 18 years of age or older by the time the internship begins: Yes

Are you a U.S. Citizen? Yes

## Science Undergraduate Laboratory Internships (SULI)

Summer 2022 - Application for: Emily Marie Garl

### EDUCATIONAL BACKGROUND

#### Academic Information

Are you currently attending a community college or 2-year college?

No

Current academic status:

Junior

If you are selected as a participant in this DOE program, will you receive academic credit from your university/college for participating?

Yes

#### Undergraduate Institution Information

College/University Country: United States and U.S. Territories

College/University State/Province/Territory: Delaware

College/University Name: Delaware State University

College/University Address: 1200 N. Dupont Highway

College/University City: Dover

College/University Zip Code: 19901-2275

Expected/Declared Major: Physical Sciences - Chemistry

Expected Degree From This College/University: Bachelor's

Expected/Completed Graduation Date: May / 2023

Transcript: Academic Transcript em.pdf

Does this institution provide grades? Yes

GPA Scale: 4.0

Total Attempted Credits: 80.00

Total Earned Credits: 73.00

Total Quality Points: 235.00

GPA: 3.22

#### Science, Technology, Engineering and Mathematics (STEM) Courses

Course Title: Biochemistry

Course Number: 403

Enrollment Status: Recently Completed

#### Awards or Honors

Award Title: Deans list

Month & Year Received: December / 2021

Awarding Institution: Delaware State University

## Science Undergraduate Laboratory Internships (SULI)

Summer 2022 - Application for: Emily Marie Garl

### High School Graduation or GED

Date of High School Graduation or GED:	May / 2019
Country:	United States
City:	Reading
State/Province/Territory:	PA

## Science Undergraduate Laboratory Internships (SULI)

Summer 2022 - Application for: Emily Marie Garl

### WORK EXPERIENCE & SKILLS

#### Work Experience

<b>Name of Place of Employment or Activity:</b>	The Heritage of Green Hills
<b>Dates of Employment or Activity:</b>	From 7/23/2017 To Present
<b>Hours Per Week:</b>	20.0
<b>Primary Duties:</b>	I serve residents and buss tables.
<b>Tasks Performed:</b>	Serve residents meals in retirement community as well as provide assistance with any further needs in daily life.

#### Professional Associations

<b>Are you a member of any professional organizations?</b>	Yes
<b>Professional associations you are affiliated with:</b>	American Chemical Society, Nat'l Org. for the Professional Advancement of Black Chemists and Chemical Engineers

#### Computer Skills

<b>Computer related skills:</b>	I understand how to use Microsoft Excel and other Microsoft office applications including Word, and PowerPoint.
---------------------------------	---

## Science Undergraduate Laboratory Internships (SULI)

Summer 2022 - Application for: Emily Marie Garl

### PROGRAM INFORMATION

#### Eligibility

Have you previously participated in 2  
SULI appointments? No

#### Previous DOE Internship/Fellowship Experience

Have you ever had an  
internship/fellowship with the  
Department of Energy or any of its  
National Laboratories? No

#### Availability

What is the earliest date you can  
begin your internship? 5/16/2022

When do you need to complete your  
internship? 8/8/2022

#### First Choice Host DOE Laboratory

DOE Laboratory: Brookhaven National Laboratory (BNL)

First Choice Research Area: Biochemistry

Second Choice Research Area: Molecular Biology

Third Choice Research Area: Genetics/Genomics

#### Second Choice Host DOE Laboratory

DOE Laboratory: Thomas Jefferson National Accelerator Facility (TJNAF)

First Choice Research Area: Engineering Chemical

Second Choice Research Area: Nuclear Science

Third Choice Research Area: Physical Chemistry

#### Relatives Employed at DOE Laboratories

Are you a relative of an employee at  
the proposed host DOE laboratories? No

## Science Undergraduate Laboratory Internships (SULI)

Summer 2022 - Application for: Emily Marie Garl

### ESSAYS

<b>Research Experience:</b>	<p>During my time at Delaware State University, I had the opportunity to research and talk about the current pandemic we are facing, Covid19. In Biochemistry, our professor, Dr. Kelley had our class conduct research on the virus itself. We researched how the virus infected ones body and the way that it moved throughout the body. We also discussed the way the virus attacks healthy immune systems as well as weaker immune systems. Thankfully we also were able to get data about Paxlovid and Molnupiravir. We dabbled into the genetic code and how Molnupiravir worked in ones body. At the end of our research with Covid19, we were tested on our skills based on the knowledge we possessed as a group.</p> <p>Another opportunity I was able to be a part of was with my Biology in the Media course this past semester along side the Biochemistry course. I was paired with classmates to conduct a research based project for teaching a freshmen course about a basic biology topic. The research had to include structural topics included in biology. For our research, we delved into the subject of plants. The structure of a plant, the impact that a plant can have on society and nature, as well as what the future holds for plants and nature. More specifically, we included, climate change, GMO based foods and plants, as well as alternatives for farming for the future. We presented our research at the end of the course through PowerPoint.</p>
<b>Research Interests:</b>	<p>There are several research interests that I would love to take part in at the Brookhaven Laboratory. My top choice would be the Targeted Cancer Therapy. After I achieve my Bachelors Of Science in Chemistry, I will be applying for PhD programs in the northeast under the interest of cancer research or genetic research. I would also love the privilege of learning more about the research in catalysts at Brookhaven Laboratory. Seeing how the program has already conducted research for converting carbon dioxide to sustainable fuels. Another interest I would like to take part in would be Plant science. I have already took part in research myself that included plant science and how plants capture, convert, and store carbon so I would love to further my knowledge on the subject.</p>
<b>Personal Experience:</b>	<p>Currently I am a part of the bowling program at Delaware State. We have a rigid and demanding schedule from October to April. We workout 4 days a week and some weeks bowl 7 days a week. I have learned to become a leader while on this team as well as become an organized and quick learner. I have to always be adapting to what our coach throws at us as well as the changes we have had to face during the pandemic. I work well with others in a team environment and I thrive off of learning from others. I have made deans list twice while in school and I am always participating in class discussions. Growing up in a single parent household has taught me to always work hard for what I want and that I can achieve anything I put my mind to. Many people in my life find me a determined individual and know I can be a workaholic at times.</p>
<b>Professional Goals:</b>	<p>I have many professional academic long term goals I would like to achieve throughout my life. In a previous part of my application, I stated I will be applying for PhD programs in the fall, specifically to achieve a degree in biomedical sciences or genetic sciences. I also would like to achieve a masters degree in nutrition afterwards. I love learning and pushing myself to the highest extent and I believe applying for programs such as the ones I stated above can help reach my goals. Being a part of the SULI Program would really assist in the building of my knowledge for these programs I want to apply for after my undergraduate degree. At the end of the day, I want to learn more in order to help the country and world achieve science what once was thought to be impossible.</p>

### RECOMMENDATIONS

<b>Recommendation 1:</b>	<p><b>First Name:</b> Cynthia  <b>Last Name:</b> Van Golen  <b>Email:</b> cvangolen@desu.edu  <b>Status:</b> Received 1/12/2022</p>
<b>Recommendation 2:</b>	<p><b>First Name:</b> Franck  <b>Last Name:</b> Yehiri  <b>Email:</b> fyehiri@desu.edu  <b>Status:</b> Received 1/12/2022</p>
<b>Recommendation 3:</b>	<p><b>First Name:</b> Patrick  <b>Last Name:</b> Kelley  <b>Email:</b> pkelley@desu.edu  <b>Status:</b> Received 1/6/2022</p>

## Display Transcript

D10628738 Emily M. Garl  
Jan 05, 2022 03:12 pm



This is NOT an official transcript. Courses which are in progress may also be included on this transcript.

[Institution Credit](#) [Transcript Totals](#) [Courses in Progress](#)

### ***Transcript Data***

#### **STUDENT INFORMATION**

**Birth Date:** [REDACTED]

#### **Curriculum Information**

##### **Current Program**

**College:** Agriculture, Science & Tech.

**Major and Department:** Chemistry/Pre-Professional,  
Chemistry

##### **Secondary**

**College:** Agriculture, Science & Tech.

**Major and Department:** Chemistry, Chemistry

\*\*\*Transcript type:UNOF is NOT Official \*\*\*

#### **DEGREES AWARDED**

**SOUGHT:** Bachelor of  
Science **Degree Date:**

#### **Curriculum Information**

##### **Primary Degree**

**Major:** Chemistry

**SOUGHT:** Bachelor of  
Science **Degree Date:**

**Curriculum Information****Primary Degree****Major:** Chemistry/Pre-Professional**INSTITUTION CREDIT** [-Top-](#)**Term: Fall 2019**

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
BIOL	101	UG	GENERAL BIOLOGY I	B	4.000	12.00		
CHEM	101	UG	GEN & ELEM ANALYTICAL CHEM I	A	1.000	4.00		
CHEM	101	UG	GEN & ELEM ANALYTICAL CHEM I	B	3.000	9.00		
CHEM	191	UG	UNIV SEM I-CHEMISTRY	A	1.000	4.00		
ENGL	101	UG	ENGLISH COMPOSITION I	B	3.000	9.00		
MTSC	122	UG	TRIGONOMETRY	C	3.000	6.00		

**Term Totals (Undergraduate)**

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
<b>Current Term:</b>	15.000	15.000	15.000	15.000	44.00	2.93
<b>Cumulative:</b>	15.000	15.000	15.000	15.000	44.00	2.93

Unofficial Transcript

**Term: Spring 2020****Additional Standing:** Dean's List

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
BIOL	102	UG	GENERAL BIOLOGY II	B	4.000	12.00		
CHEM	102	UG	GEN & ELEM ANALYSIS CHEM II	A	3.000	12.00		
CHEM	102	UG	GEN & ELEM ANALYSIS CHEM II	A	1.000	4.00		



CHEM	192	UG	UNIV SEM II-CHEMISTRY	A	1.000	4.00
ENGL	102	UG	ENGLISH COMPOSITION II	A	3.000	12.00
KINE	101	UG	LIFETIME FITNESS AND WELLNESS	A	2.000	8.00
MUSC	100	UG	INTRODUCTION TO MUSIC	A	3.000	12.00

**Term Totals (Undergraduate)**

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
<b>Current Term:</b>	17.000	17.000	17.000	17.000	64.00	3.76
<b>Cumulative:</b>	32.000	32.000	32.000	32.000	108.00	3.37

Unofficial Transcript

**Term: Fall 2020**

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
CHEM	210	UG	ORGANIC CHEMISTRY I	C	3.000	6.00		
CHEM	210	UG	ORGANIC CHEMISTRY I	A	1.000	4.00		
CHEM	305	UG	ANALYTICAL CHEMISTRY	F*	1.000	0.00		E
CHEM	305	UG	ANALYTICAL CHEMISTRY	F	3.000	0.00		E
MTSC	251	UG	CALCULUS I	B	4.000	12.00		
PHYS	201	UG	GENERAL PHYSICS I	A	4.000	16.00		

**Term Totals (Undergraduate)**

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
<b>Current Term:</b>	16.000	12.000	12.000	12.000	38.00	3.16
<b>Cumulative:</b>	48.000	44.000	44.000	44.000	146.00	3.31

Unofficial Transcript

**Term: Spring 2021**

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
ART	101	UG	INTRO TO ART	A	3.000	12.00		
CHEM	211	UG	ORGANIC CHEMISTRY II	A	1.000	4.00		
CHEM	211	UG	ORGANIC CHEMISTRY II	C	3.000	6.00		
HIST	203	UG	AFRICAN-AMERICAN HIST TO 1865	B	3.000	9.00		
MTSC	252	UG	CALCULUS II	C	4.000	8.00		
PSYC	201	UG	INTRO TO GENERAL PSYCHOLOGY	F*	3.000	0.00		

**Term Totals (Undergraduate)**

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
<b>Current Term:</b>	17.000	14.000	14.000	14.000	39.00	2.78
<b>Cumulative:</b>	65.000	58.000	58.000	58.000	185.00	3.18

Unofficial Transcript

**Term: Fall 2021****Additional Standing:** Dean's List

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
BIOL	349	UG	BIOLOGY IN THE MEDIA	A	4.000	16.00		
CHEM	305	UG	ANALYTICAL CHEMISTRY	C	3.000	6.00		I
CHEM	305	UG	ANALYTICAL CHEMISTRY	B	1.000	3.00		I
CHEM	403	UG	BIOCHEMISTRY	B	3.000	9.00		
CHEM	403	UG	BIOCHEMISTRY	A	1.000	4.00		
SCCJ	101	UG	INTRO TO SOCIOLOGY	A	3.000	12.00		

**Term Totals (Undergraduate)**

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	15.000	15.000	15.000	15.000	50.00	3.33
Cumulative:	80.000	73.000	73.000	73.000	235.00	3.21

Unofficial Transcript

TRANSCRIPT TOTALS (UNDERGRADUATE) [-Top-](#)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Total Institution:	80.000	73.000	73.000	73.000	235.00	3.21
Total Transfer:	0.000	0.000	0.000	0.000	0.00	0.00
Overall:	80.000	73.000	73.000	73.000	235.00	3.21

Unofficial Transcript

COURSES IN PROGRESS [-Top-](#)

Term: Spring 2022

Subject	Course	Level	Title	Credit Hours	Start and End Dates
BIOL	210	UG	GENETICS	4.000	
ENGL	123	UG	RHETORIC AND SPEECH	3.000	
MTSC	241	UG	ELEMENTARY STATISTICS	3.000	
PHIL	322	UG	BIOETHICS	3.000	
PHYS	202	UG	GENERAL PHYSICS II	4.000	

Unofficial Transcript

RELEASE: 8.7.1

© 2022 Ellucian Company L.P. and its affiliates.



# SULI PROGRAM APPLICATION RECOMMENDATION FOR EMILY MARIE GARL

## Recommender Contact Information

- **First Name:** patrick
- **Last Name:** kelley
- **Title:** Biochemistry Instructor
- **Department:** Chemistry
- **Institution/Organization:** Delaware State University
- **Telephone:** 302-494-7597
- **Email:** pkelley@desu.edu

## Applicant Information

### Association

Describe your relationship to the applicant, including how long you've known the applicant, where, and in what capacity.

I have known Emily for six months as her Biochemistry instructor (both a Lab and Lecture) at Delaware State University.

### Applicant Comments

Please provide substantive comments about the applicant's education, training, aptitude, or promise relevant to the SULI program. Include any relevant additional detail or perspective regarding the applicant's research experience or equivalent experience on complex projects, including the level of independence or other factors that would contribute to the applicant's ability to make an excellent contribution to the SULI program.

Emily has several attributes that would allow her to contribute to the SULI program:

- 1.) She is dilligent, punctual and willing to put extra time into preparing for lab.
- 2.) She has a pleasant demeanor, is accomodating and would be a reliable member of a team.
- 3.) She demonstrated impressive academic capabilities in my (fairly difficult) Biochemistry class.

## Applicant Rating

In comparison to other undergraduate students, please rate the applicant relative to his/her peers on the following qualifications:

	Do Not Know	Below Average	Average	Above Average	Superior
Analytical and Mathematical				X	
Experimental Research				X	
Overall Academic					X
Initiative and Self Reliance					X
Motivation toward Scientific Career					X
Originality of Thought				X	
Emotional Maturity				X	
Ability to Work with Others					X
Potential for Leadership			X		
Oral Communication Skills					X
Written Communication Skills					X

# SULI PROGRAM APPLICATION RECOMMENDATION FOR EMILY MARIE GARL

## Recommender Contact Information

- **First Name:** Cynthia
- **Last Name:** Van Golen
- **Title:** Associate Professor
- **Department:** Biological Sciences
- **Institution/Organization:** Delaware State University
- **Telephone:** 610-470-6402
- **Email:** cynthiasmidlifecrisis@gmail.com

## Applicant Information

### Association

Describe your relationship to the applicant, including how long you've known the applicant, where, and in what capacity.

I met Ms. Garl when she joined my Biology in the Media class this past year. This was a small, project-based class, so I got to know all of the students, and their work ethic, very well. Ms. Garl is currently enrolled in my Genetics class this term.

### Applicant Comments

Please provide substantive comments about the applicant's education, training, aptitude, or promise relevant to the SULI program. Include any relevant additional detail or perspective regarding the applicant's research experience or equivalent experience on complex projects, including the level of independence or other factors that would contribute to the applicant's ability to make an excellent contribution to the SULI program.

Emily is a passionate and dedicated student. I had the pleasure of serving as her professor for a junior level Biology in the Media class. During this class, we had many group discussion, during which Emily consistently and confidently contributed to the discussion. She worked very well with other members of her project group, which ensures me that she would make a great addition to any research team. All of her work for each project assigned was exemplary. In addition to class, Emily also met with me outside of class to discuss future plans. She plans to pursue graduate studies, and I am confident that she will do well in both summer research programs and a Ph.D. program.

## Applicant Rating

In comparison to other undergraduate students, please rate the applicant relative to his/her peers on the following qualifications:

	Do Not Know	Below Average	Average	Above Average	Superior
Analytical and Mathematical	X				
Experimental Research					X
Overall Academic					X
Initiative and Self Reliance					X
Motivation toward Scientific Career					X
Originality of Thought					X
Emotional Maturity					X
Ability to Work with Others					X
Potential for Leadership					X
Oral Communication Skills					X
Written Communication Skills				X	