

2024 HAWKS MUREP PRECOLLEGE SUMMER INSTITUTE

SUMMER RESIDENTIAL EXPERIENCE PLAN

Grant Number: 80NSSC23M0090

Report Name: Summer Residential Experience Plan

START DATE: SUNDAY, JULY 14, 2024

END DATE: FRIDAY, JULY 26, 2024

Reporting Period: 3/28/2024 – 1/28/2025

Performance metrics for the high school student participants:

- Number of Registered Students: 16 (8 Male & 8 Female)

Their Demographics:

- African American/Black: 10
- Asian American: 5
- White: 1

MALE													
	Males	Males	Males	Females	Females					Males		Females	
Grade	Asian	Black or African-American	White	Asian	Black or African-American	White	Two or more Races		Hispanic	Non-Hispanic	Hispanic	Non-Hispanic	D F E
9th			1	1	2					8		8	
10th	2	4			3								
11th	1			1	1								
12th													

SCHEDULE OF ACTIVITIES

Sunday, July 14. 2024			
Participants Arrive on UMES Campus and checked into University Terrace from 5:00 p.m.			
Week 1			
Monday, July 15, 2024			
	Activity	Location	Assigned to
6:00 AM – 7:30 AM	Wake-Up & Personal Grooming	University Terrace	Residence Assistant
8:00 AM – 9:00 AM	Breakfast	SSC	Resident Assistant
9:30 AM – 11:00 AM	UMES Campus Tour, Facilities & Laboratories	UMES	Dr. Dabipi & Dr. Zhang
11:00 AM – 1:00 PM	Lunch	SSC***	Student Assistant
1:30 PM – 4:00 PM	IOS Development with Swift	EASC**	Dr. Stone
4:30 PM – 6:00 PM	Dinner	SSC***	Student Assistance
6:30 PM – 9:00 PM	Reflection on day's activities and briefing for next day's activities	ATC* 1162	Dr. Dabipi & Dr. Zhang
9:30 PM – 6:00 AM	Retire to Rooms for the Night.	University Terrace	Residence Assistant

Week 1**Tuesday, July 16, 2024**

	Activity	Location	Assigned To
6:00 AM – 7:30 AM	Wake-Up & Personal Grooming	University Terrace	Residence Assistant
8:00 AM – 9:00 AM	Breakfast	SSC***	Residence Assistant
9:30 AM – 10:30 AM	SAT Preparation - English Session	ATC* 1162	Kareen Carroll
10:30 AM - 11:30 AM	SAT Preparation - Mathematics Session	ATC* 1162	Mohammed Salih
11:30 AM – 1:00 PM	Lunch	SSC***	Student Assistant
1:30 PM – 4:00 PM	IOS Development with Swift	EASC***	Dr. Stone
4:30 PM - 6:00 PM	Dinner	SSC***	Student Assistant
6:30 PM – 9:00 PM	STEM Mentoring	EASC***	Drs. Dabipi, Zhang & Dodoo
9:30 PM- 6:00 AM	Retire to Rooms for the Night	University Terrace	Resident Assistant

Week 1**Wednesday, July 17, 2024**

	Activity	Location	Assigned To
6:00 AM - 8:00 AM	Wake-Up & Personal Grooming	University Terrace	Residence Assistant
8:00 AM – 9:00 AM	Breakfast	SSC***	Residence Assistant
9:00 AM – 10:00 AM	NASA Wallops Flight Facility Tour	NASA WFF****	Ms. Benner
10:15 AM – 11:00 AM	NASA WFF Internship/Student Employment Opportunities Session	NASA WFF****	Ms. Benner
11:00 AM – 11:30 AM	STEM Mentoring by NASA WFF Scientists & Engineers	NASA WFF****	NASA WFF
11:30 AM – 1:00 PM	Lunch	TBD	Dr. Dabipi
1:30 PM – 4:00 PM	Job Shadowing with NASA WFF Scientists & Engineers	NASA WFF****	NASA WFF
4:00 PM – 6:00 PM	Dinner	SSC***	Student Assistant
6:00 PM – 9:00 PM	Reflection on day's activities and briefing for next day's activities.	EASC**	Drs. Dabipi, Zhang & Dodoo
9:30 PM – 6:00 AM	Retire to Rooms for the Night	University Terrace	Residence Assistant

Week 1**Thursday, July 18, 2024**

	Activity	Location	Assigned To
6:00 AM – 7:30 AM	Wake-Up & Personal Grooming	University Terrace	Resident Assistant
8:00 AM – 9:00 AM	Breakfast	SSC***	Resident Assistant
9:00 AM – 4:00 PM	Field Trip to Smithsonian Air & Space Museum	Washington DC	Drs. Dodoo & Zhang
4:30 PM - 6:00 PM	Dinner	SSC***	Student Assistant
6:30 PM – 9:00 PM	Reflection on day's activities and briefing for next day's activities	EASC**	Drs. Dabipi, Zhang & Dodoo
9:30 PM- 6:00 AM	Retire to Rooms for the Night	University Terrace	Resident Assistant

Week 1**Friday, July 19, 2024**

	Activity	Location	Assigned To
6:00 AM – 7:30 AM	Wake-Up & Personal Grooming	University Terrace	Resident Assistant
8:00 AM – 9:00 AM	Breakfast	SSC***	Resident Assistant
9:30 AM – 10:30 AM	SAT Preparation - English Session	ATC* 1162	Ms. Carroll
10:30 AM - 11:30 AM	SAT Preparation - Mathematics Session	ATC* 1162	Mohammed Salih
11:30 AM – 1:00 PM	Lunch	SSC***	Student Resident
1:30 PM – 4:00 PM	Virtual Reality Laboratory & Development Training	EASC**	Dr. Zhang
4:30 PM - 6:00 PM	Dinner	SSC***	Resident Assistant
6:30 PM – 9:00 PM	Beginners Guide to Aerodynamics	EASC**	Drs. Dabipi,& Dodoo
9:30 PM- 6:00 AM	Retire to Rooms for the Night	University Terrace	Resident Assistant

SATURDAY, JULY 20, 2024

Activity:

**BUILDING A BETTER LIFE – CONCRETE STEPS TO SUCCESS
WORKSHOP**

Time:

8:00 AM – 4.00 PM

Venue:

ATC* 1162

SUNDAY, JULY 21, 2024

Activity:

CRITICAL THINKING THROUGH CHESS

Time:

12:30 PM – 4: 00 PM

Venue:

ATC* 1162

Week 2**Monday, July 22, 2024**

	Activity	Location	Assigned To
6:00 AM – 7:30 AM	Wake-Up & Personal Grooming	University Terrace	Resident Assistant
8:00 AM – 9:00 AM	Breakfast	SSC***	Resident Assistant
9:30 AM – 10:30 AM	SAT Preparation - English Session	ATC** 1162	Karen Carroll
10:30 AM - 11:30 AM	SAT Preparation - Mathematics Session	ATC** 1162	Mohammed Salih
11:30 AM – 1:00 PM	Lunch	SSC***	Student Assistant
1:30 PM – 4:00 PM	IOS Development with Swift	EASC	Dr. Stone
4:30 PM - 6:00 PM	Dinner	SSC***	Resident Assistant
6:30 PM – 9:00 PM	Reflection on day's activities and briefing for next day's activities.	EASC**	Drs. Dabipi, Zhang & Dadoo
9:30 PM- 6:00 AM	Retire to Rooms for the Night	University Terrace	Resident Assistant

Week 2**Tuesday, July 23, 2024**

	Activity	Location	Assigned To
6:00 AM – 7:30 AM	Wake-Up & Personal Grooming	University Terrace	Resident Assistant
8:00 AM – 9:00 AM	Breakfast	SSC***	Resident Assistant
9:30 AM –	Visit to NASA Goddard Space Flight Center	Greenbelt, MD	Dr. Dodoo
	Visit to NASA Goddard Space Flight Center	Greenbelt, MD	Dr. Dodoo
	Visit to NASA Goddard Space Flight Center	Greenbelt, MD	Dr. Dodoo
4:30 PM	Visit to NASA Goddard Space Flight Center	Greenbelt, MD	Dr. Dodoo
4:30 PM - 6:00 PM	Dinner	SSC***	Student Assistant
6:30 PM – 9:00 PM	Reflection on day's activities and briefing for next day's activities.	EASC**	Drs. Stone, Zhang & Dodoo
9:30 PM- 6:00 AM	Retire to Rooms for the Night	University Terrace	Resident Assistant

Week 2**Wednesday, July 24, 2024**

	Activity	Location	Assigned To
6:00 AM – 7:30 AM	Wake-Up & Personal Grooming	University Terrace	Resident Assistant
8:00 AM – 9:00 AM	Breakfast	SSC***	Resident Assistant
9:30 AM – 10:30 AM	SAT Preparation - English	ATC 1162*	Karen Carroll
10:30 AM - 11:30 AM	SAT Preparation - Mathematics	ATC 1162*	Mohammed Salih
11:30 AM – 1:00 PM	Lunch	SSC***	Student Assistant
1:30 PM – 4:30 PM	The Basic Concepts of the Physics of Electricity and Magnetism	Hazel Hall, UMES	Dr. Das
4:30 PM – 6:00 PM	Dinner	SSC***	Student Assistant
6:30 PM – 9:00 PM	Reflection on day's activities and briefing for next day's activities/STEM Mentoring.	EASC**	Drs. Dabipi, Zhang & Dodoo
9:30 PM- 6:00 AM	Retire to Rooms for the Night	University Terrace	Resident Assistant

Week 2**Thursday, July 25, 2024**

	Activity	Location	Assigned To
6:00 AM – 7:30 AM	Wake-Up & Personal Grooming	University Terrace	Resident Assistant
8:00 AM – 9:00 AM	Breakfast	SSC***	Resident Assistant
9:30 A.M. - 10:30 A.M.	SAT Preparation – English Session	ATC* 1162	Karen Carroll
10:30 AM - 11:30 AM	STEM College Programs & STEM Careers	ATC* 1162	Dr. Dabipi
11:30 AM – 1:00 PM	Lunch	SSC***	Student Assistant
1:30 PM – 4:00 PM	Job & Career Counselling	SSC**	Dr. Queenan
4:30 PM - 6:00 PM	Dinner	SSC***	Resident Assistant
6:30 PM – 9:00 PM	Reflection on day’s activities and briefing for next day’s activities.	EASC**	Drs. Dabipi, Zhang & Dodoo
9:30 PM- 6:00 AM	Retire to Rooms for the Night	University Terrace	Resident Assistant

Week 2			
Friday, July 26, 2024			
	Activity	Location	Assigned To
6:00 AM – 7:30 AM	Wake-Up & Personal Grooming	University Terrace	Resident Assistant
8:00 AM – 9:00 AM	Breakfast	SSC***	Resident Assistant
9:00 AM – 11:00 PM	Finalizing all Projects & Presentations	ATC	ALL SPECIALISTS
11:00 AM – 1:00 PM	Lunch	SSC***	Resident Assistant
1:00 PM – 3:00 PM	Student Presentations	EASC**	Ms. Carroll
3:00 PM - 4:00 PM	Closing Ceremony	EASC**	Dr. Dabipi
5:00 PM –	PARTIPANTS DEPART FOR HOME		
OR (For those who cannot leave till Saturday Morning)			
9:30 PM- 6:00 AM	Retire to Rooms for the Night	University Terrace	Resident Assistants

*ATC – Arts and Technologies Center

** EASC - Engineering and Aviation Science Complex

***SSC – Students Services Center

****NASA WFF – NASA Wallops Flight Facility

Breakdown of Number of Contact Hours

ACTIVITY	Description	Proposed Contact Hours
I	Wind Tunnel Design and Testing	15
II	HAWKS MUREP & NASA WFF	5
III	Field trip to NASA Goddard Space Facility	5
IV	Field Trip to Smithsonian National Air and Space Museum	3
V	The Basic Concepts of the Physics of Electricity and Magnetism	10
VI	Guide to Aerodynamics	3
VII	IOS Development with SWIFT	5
VIII	Virtual Reality Laboratory and Development Training	5
IX	Job Shadowing	5
X	STEM Mentoring	5
XI	Building a Better Life – Concrete Steps to Success Weekend Workshop	8
XII	SAT English and Mathematics Preparation	5
	Total Proposed Contact Hours	69

AUTHENTIC STEM ACTIVITIES		
	ACTIVITY	HOURS
1	Wind Tunnel Design and Testing	5
2	NASA WALLOPS FLIGHT FACILITY	6
3	Virtual Reality and Development Training	5
4	Beginners to Aerodynamics	5
5	The Basic Concepts of the Physics of Electricity and Magnetism	5
6	IOS Development with SWIFT	5
	TOTAL	31

ENGAGEMENT OPPORTUNITIES WITH STEM PROFESSIONALS		
	ACTIVITY	HOURS
1	Field Trip to NASA Goddard Space Center	5
2	STEM Mentoring	5
3	Field Trip to the Smithsonian Air and Space Museum	3
	TOTAL	13

COLLEGE AND CAREER READINESS DEVELOPMENT		
	ACTIVITY	HOURS
1	SAT Preparation - Mathematics	3
2	SAT Preparation - English	3
3	Internship/Job Opportunity Session	2

4	Job and Career Counselling	2
5	Building a Better Life – Concrete Steps for Success Workshop	8
6	Critical Thinking Through CHESS	3
	TOTAL	21

- **Summary of Summer Residential Experiences**

1. Highlights of achievements/successes;
 - Participants were from Maryland, Georgia and California High Schools
 - Total Number of Applications: 25
 - Number Accepted: 16 (8 Male, 8 Female)

Lessons Learnt

- Recruit Undergraduate Students as Resident Assistants and Student Assistants who are free to work 40 hours a week. Students who are employed elsewhere on part-time basis will not qualify for this Project.
- Networking among students was not spontaneous. We had to engage them in some activities that encouraged them to learn each other names and exchange personal information like names and phone numbers.
- Communication with other colleagues in the Team was not seamless. This affected their effectiveness. Pre- and Post- Planning Meetings and Discussions will continue to be held to encourage them to commit to the Program.
- A designated Photographer will have helped in a more efficient collection data and photographs.
- **List and summary of partner/collaborator support; Partnership/Collaboration with NASA Wallops Flight Facility**
 - Tour of the Fabrication and Testing Lab
 - Tour of the Rocket Lab
 - Intern Career Panel Discussion
 - Range Control Center
 - Internship Information Session
 - Facilitation of Field Trip to NASA Goddard Space Flight Center

- **Description of the Culminating Event including the Student Project Showcase**
- Student/Participant Presentations
- Closing Ceremony
- Motivational Presentation
- Award of Certificates of Attendance
- Communication with other colleagues in the Team was not seamless. This - affected their effectiveness. Pre- and Post- Planning Meetings and Discussions would have helped.



(a)



(b)



(c)



(d)

Participants Playing Chess



Photo with Mr. Joel Oppenhimmer (middle)



NASA WALLOPS FLIGHT FACILITY ROCKET LAB



(a)



(b)



(c)

Participants Touring Facilities in NASA Goddard Flight Center including the Clean Room



(a)



(b)

Students watching an EARTH Observing Fleet Movie at NASA Goddard Flight Center



(a)



(b)



(c)

Participants in the PHYSICS Lab



Closing Ceremony with Parent and Program Staff