Email application: cesachoward1**@gmail.com**

MENTORS application

The Pre-College for Engineering Systems (PCES) Mentor Application

Center for Energy Systems and Control (CESaC(

College of Engineering and Architecture (CEA)

2300 6th St NW

Howard University Washington DC 20059

June 18-July 3, 2023

1. **Personal Information:**
   Name: _____
   Last Mi First
   Phone:_____ email: _____

   Address:_____
   Social Security No._____ US citizen? Yes/No:_____

   If No: Visa Type_____
   Ethnic origin:: Black/African America_____ African_____ Hispanic_____Other_____

2. **Education Information**
   School Name: _____

   Phone:_____ Email: _____

   School address: _____

   Major{_____ Classification: _____
   Expected Graduation year:_____
3. **List briefly your program related experience (e.g. courses, work experience, languages, other):**_____
4. **List your extra-curricular activities(e.g sports, clubs, team hobbies, other**_____
   _____

5. **Write an essay**
   Briefly explain your reasons to participate in the PCES outreach program

6. Attach your resume

E-mail application to: cesachoward1@gmail.com

Mailing address

Howard University Residential Pre-College STEM Program for Engineering Systems

Center for Energy Systems and Control

Howard University

2300-6th St NW Suite 1105

Washington, DC 200

For more information, please call us at 202-806-5350,

or e-mail us at **cesachoward1@gmail.com**

Professor Recommendation Form

Student Name: _____

(last middle first)

Professor Name:_____Prof. Phone no._____

Prof. e-mail:_____

Please evaluate the applicant listed above by completing the information below by checking 5= exceptionally high, 4 = above average, 3 = average, 2 = below VEWRAGE, 1 = POOR, 0 = no basis for evaluation

Ability and personality traits

		5	4	3	2	1	0	
1	Personal integrity							
2	Social and emotional							
3	Ability to work with pears							
4	Leadership qualities							
5	Oral communication skills							
6	Analytical skills							
7	Written skills							
8	Promise of academic growth							
9	Creativity							
10	Ability to work with teachers							
11	Honesty							
12	Manners							

Indicate strength of your overall endorsement by checking the appropriate:

Not recommended_____ Recommended with reservation _____

Recommended_____ Highly recommended_____

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Howard University Residential Pre-College STEM Program for Residential Engineering Systems

Outreach Program Outline

1. Introduction to engineering disciplines, ethics, time management, and professional requirements
2. Electrical engineering foundations involving:
    - Ohm;s law
    - Kircoff's laws
    - Techniques of circuit/network analysis
    - Control system
    - Other
3. Hans on exercise, introduction to MATHLAB, computing software, and programming tools, use of consumer electronics.
4. Tinkering and understanding of basic principles of engineering laws of Ohm's, Kirchhoff's laws, semiconductor diode applications
5. Introduction to engineering labs for verification of Ohms and Kirchhoff's Laws
6. Nanotechnology, MEMS and wireless communication, digital systems
7. Special topics: entrepreneurship, e-commerce
8. Energy systems (i.e photovoltaic, windmill, power systems, other, smart grid, microgrid, energy storage
9. General Science and Mathematics
    - Introduction to mechanics
    - Pre-calculus
    - Basic application of mechanics
    - Probability and statistics
10. Study of Artificial Intelligence concepts
    - Fuzzy logic
    - Expert Systems
    - Artificial neural networks
    - Cybersecurity
11. SAT preparations

12. Design project. Involves design of several projects using prici applications of artficil intelligence, neral networks, nanotechnology, fuzzy logic, expert systems, and control

13. Mini and major projects presentation

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