

# CIVIL AND ENVIRONMENTAL ENGINEERING & ARCHITECTURE



## About the Academy

*Improving our world through thoughtful building design and development!*

The Civil Engineering and Architecture Academy is a NAF academy that includes rigorous, industry-focused curricula, integrated industry partnerships, and work-based learning experiences. Students learn important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3-D architectural design software.

### SAMPLE COURSE OF STUDY

Grade 8				
Dream Team Planning and Summer Bridge				
Grades 9-12				
Course	Year 1	Year 2	Year 3	Year 4
NAF Academy Course	Intro to Engineering Design	Principles of Engineering	Civil Engineering and Architecture	Engineering Design and Development and Environmental Sustainability Capstone and Internship
English	Pre-AP English I	Pre-AP English II	AP Language Composition	AP Literature and Composition
Mathematics	Pre-AP-Geometry w/Statics or Pre-AP Algebra I	Pre-AP Algebra II or Pre-AP Geometry w/Statistics	Algebra II or AP Statistics	Pre-Calculus or Calculus
History	DC History& Elective	AP World History I	AP World History II & US Government	AP US History
Science	Pre-AP Biology	Pre-AP Chemistry	AP Environmental Science	Physics
World Language	Spanish/Latin*	Spanish/Latin	AP Spanish Language and Culture/AP Latin	AP Spanish Literature Culture
Elective	Pre-AP Visual and Performing Arts/Physical Education	Pre-AP Visual and Performing Arts/Physical Education	AP Art or Music and Health	Internship/Elective

3:30-6:00 Enrichment Block  
 Students can participate in Study Hall and a variety of arts, academic and athletic after school clubs and teams  
 \*Course offered online. Subject to change due to availability.

### ALIGNED CAREERS

The aligned occupation for this career pathway is Civil Engineers. In the DC region, there are 741 annual openings (growth and replacement). Other career opportunities include but not limited to:

- **Architects** (Except Landscape and Naval): This job plans and designs structures, such as private residences, office buildings, theaters, factories, and other structural property. In the DC region, there are 146 annual job openings in this field with a median salary of \$91,034.
- **Architectural and Engineering Managers:** This job is responsible for planning, directing, or coordinating activities in such fields as architecture and engineering or research and development in these fields. In the DC region, there are 100 annual job openings in this field with a median salary of \$148,901.
- **Marine Architects:** This job is responsible for the design and overseeing construction and repair of marine craft and floating structures such as ships, barges, tugs, dredges, submarines, torpedoes, floats, and buoys. In the DC region, there are 65 annual job openings in the field with a median salary of \$120,080.

### CERTIFICATIONS

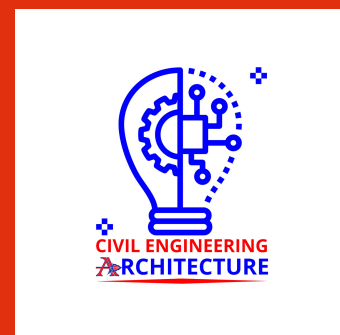
- AUTODESK CERTIFIED USER (ACU) IN AUTOCAD
- AUTODESK CERTIFIED PROFESSIONAL (ACP) IN REVIT ARCHITECTURE

### PARTNERSHIPS

- DEPARTMENT OF ENERGY AND ENVIRONMENT
- UNIVERSITY OF DISTRICT OF COLUMBIA
- HOMELAND SECURITY
- ANACOSTIA PARK
- ANACOSTIA WATERSHED
- DC WATER

### UNIFORMS

- ANA POLO SHIRT
- ACADEMY SHIRT
- KHAKI PANTS/SKIRTS
- PE UNIFORM
- DRESS SLACKS/SKIRT (REQUIRED 11TH/12TH)
- ANA LONG SLEEVE SHIRT (REQUIRED 11 & 12TH)



#WhyAna