

Bachelor of Science in Atmospheric Science

Howard University

College of Arts & Sciences

Catalog: Fall 2025 – Present

Quick Summary - What You Need to Graduate

Total Credits 120	Minimum GPA 2.0	Major Credits 43	Last 30 Credits At Howard
-----------------------------	---------------------------	----------------------------	-------------------------------------

Your Degree Breakdown:

- Major Requirements: 61 credits (approximately 15 courses)
- General Education: 30+ credits (approximately 15 courses)
- Chemistry: 4 credits (1 course)
- Physics: 7 credits (3 courses: 2 lecture and 1 lab)
- Math Requirements: 4 credits (1 courses)
- Free Electives: Remaining credits to reach 120 (varies by track)
- Complete all 7 ELOs (can overlap with courses)
- COAS Experiential (1 course) & COAS Innovative Learning (1 course)
- Undergraduate Comprehensive Exam

Important: Double-Dipping Made Simple!

One course can fulfill BOTH a General Education requirement AND an Essential Learning Outcome (ELO) at the same time. You don't need separate courses for each! This helps you graduate efficiently without taking extra classes.

Major credits **cannot** be double dipped with minor credits. While students are not required to declare a minor, those who choose to do so must complete **15–18 credits that are not applied toward their major requirements**. Minor coursework must remain distinct and separate from major coursework.

University-Wide Requirements

- **Minimum GPA:** 2.0 for all undergraduate coursework
- **Residency:** Complete last 30 credits at Howard University
- **Exit Requirement:** Undergraduate Comprehensive Exam
- **Total Credits:** 120 credits required

General Education Requirements (30+ Credits / ~15 Courses)

Essential Learning Outcomes (ELOs)

Students must complete courses covering all seven outcome areas. Remember, these can overlap with other requirements!

- **ELO 1:** U.S. and Global African Diasporic Developments
- **ELO 2:** Human Cultures and Creative Expression
- **ELO 3:** The Physical and Natural World
- **ELO 4:** Intellectual and Practical Skills
- **ELO 5:** Social Responsibility and Political Institutions
- **ELO 6:** Leadership and Applied Learning
- **ELO 7:** Comprehensive Wellness Practices

Note: ELO courses are tagged in Bison Hub under the course description

Freshman Experience (1 Credit / 1 Course)

- **FRSM 001** - Freshman Seminar (1 credit)

Core Writing & Communication (12 Credits / 4 Courses)

4 courses needed (each 3 credits)

- **ENGW 101, 102, or 104** - First-Year English Writing I (3 credits)
- **ENGW 103 or 105** - First-Year English Writing II (3 credits)
- **Third Writing Course** - Upper-level writing (3 credits)
- **Principles of Speech (AS)** - (3 credits)

Health & Wellness (2 Credits total/ 1-2 Courses)

1-2 courses needed

- **One/Two Credit HHPL Course** - Health, Human Performance, and Leisure

Cultural and Global Awareness (12 Credits / 4 Courses)

- **African American Cluster Course** - 1 course (3 credits)
- **Foreign Language** - 3 courses (9 credits total, same language)
(3 credits can be an intercultural knowledge)

Humanities & Social Sciences (12 Credits / 4 Courses)

- **Two Humanities Courses** - 2 courses (6 credits)
- **Two Social Science Courses** - 2 courses (3 credits each)

Mathematics Requirements (12 Credits / 3 Courses)

Required Course (3 courses):

- **MATH 156** – Calculus I (4 credits)
- **MATH 157** – Calculus II (4 credits)
- **MATH 159** – Differential Equations (4 credits)

Chemistry Requirements (4 Credits / 1 Course)

- CHEM 003** - General Chemistry I (4 credits)

Physics Requirements (7 Credits / 3 Courses)

- PHYS 013** - Physics I (3 credits)
- PHYS 023** – Physics I Lab (1 credit)
- PHYS 014** - Physics II (3 credits)

COAS Special Requirements

Experiential Learning (1 course required)

Examples of COAS Experiential Learning Course but are not limited to:

- Any 890 course
- EEED 470 or 302
- Internships
- Study abroad

Innovative Learning Requirement (1 course required)

- Complete at least one course marked as 'innovative'

Quantitative Reasoning (1 course required)

- EEED 320- Computer Programming for Environmental Science (3 credits)

Note: COAS Special Requirements courses are tagged in Bison Hub under the course description

Total Atmospheric Science Major Requirements (43 Credits / 15 Courses)

Foundation Courses (16 Credits / 5 Courses)

- **EEED 101** – Intro to Environmental Studies (3 credits)
- **EEED 180** – Global Climate Change (4* credits)
- **EEED 204/POLS 134** – Science & Public Policy (3 credits)
- **EEED 199/SOCI 199** – Environmental Inequality (3 credits)
- **EEED 103** – Intro to Atmospheric Science (3 credits)

Atmospheric Science Electives (24 Credits / 8 Courses)

- **EEED 302** – Weather Observations & Instrumentation (3 credits)
- **EEED 323** – Synoptic Weather Analysis & Forecasting (3 credits)
- **EEED 205** – Atmospheric Dynamics I (3 credits)
- **EEED 206** – Atmospheric Dynamics II (3 credits)
- **EEED 423** – Numerical Weather Prediction (3 credits)
- **EEED 325** – Mesoscale Meteorology (3 credits)
- **EEED/ATMS XXX**- Atmos Elective
- **EEED/ATMS XXX**- Atmos Elective

Environmental Studies Electives

- **One Environmental Studies Course (1-3 credits)**

Free Electives

Remaining credits to reach 120 total (varies based on math track and elective choices)

Sample Degree Progress Checklist

Always consult with your academic advisor for personalized guidance

Freshman Year (31 Credits)

Fall Semester (15 Credits)

- FRSM 001 - Freshman Seminar (1 credit)
- ENGW 101/102/104 - First-Year Writing I (3 credits)
- EEED 103- Intro to Atmospheric Science (3 credits)
- PHYS 013- Physics I (3 credits)
- PHYS 024 Physics I Lab (1 credit)
- MATH 156- Calculus I (4 credits)

Spring Semester (17 Credits)

- ENGW 103/105 - First-Year Writing II (3 credits)
- EEED 101- Intro. to Environmental Studies (3 credits)
- CHEM 003 - General Chemistry I (4 credits)
- PHYS 014- Physics II (3 credits)
- MATH 157- Calculus II (4 credits)

Sophomore Year (31 Credits)

Fall Semester (16 Credits)

- EEED 199 – Environmental Inequality (3 credits)
- MATH 159- Differential Equations (4 credits)
- EEED 180 – Global Climate Change (3 credits)
- Foreign Language I (3 credits)
- Humanities Course (3 credits)

Spring Semester (16 Credits)

- EEED 320- Computer Programming for ES (quantitative skills)
- EEED 302- Weather Observation & Instrumentation (3 credits)
- Foreign Language II (3 credits)
- MATH 009- Intro to Statistics

Junior Year (31-32 Credits)

Fall Semester (17-18 Credits)

- Foreign Language III/ Knowledge & Cultural Course (3 credits)
- EEED 205- Atmospheric Dynamics I (3 credits)
- Technical Writing (3 credits)
- EEED 323- Synoptic Weather Forecasting (2 credits)

Spring Semester (14 Credits)

- EEED 206- Atmospheric Dynamics II (3 credits)
- Principles of Speech (3 credits)
- African Diasporic Cluster (3 credits)
- EEED 204- Science & Public Policy (3 credits)
- EEED 423- Numerical Weather Prediction (3 credits)

Senior Year (27-28 Credits)

Fall Semester

- EEED 325- Mesoscale Meteorology (3 credits)
- EEED/ATMS Elective (3 credits)
- Gen. Ed (3 credits)
- Take Undergraduate Comprehensive Exam

Spring Semester

- EEED/ATMS Elective (3 credits)
- Gen. Ed (3 credits)
- Gen. Ed (3 credits)

Key Requirements Summary

- **Minimum Overall GPA:** 2.0
- **Credits in Environmental Science:** 43 minimum
- **Residency:** Last 30 credits at Howard University
- **Laboratory Science:** Extensive lab requirements.

Important Notes for Success

- **Experiential Learning:** Can often be satisfied through 890 courses, internships, etc. Please speak with your advisor for all options.
- **ELO Requirements:** Many built in general electives will automatically satisfy ELO requirements.
- **Advisor Consultation:** Consult with your academic advisor each semester for course planning.
- **Scholarship Requirements:** Students are required to successfully pass a minimum of 15 credits each semester. There is an exception for students in their final term to take less than 15 credits and still be awarded their scholarship.
- **Freshman** 0-29 completed credits
- **Sophomore:** 30-59 completed credits
- **Junior:** 60-89 completed credits
- **Senior:** 90 or more completed credits

Resources & Support

- **Academic Advisor:** Contact Office of Undergraduate Studies for assignment
- **Department Office:** Earth, Environment, and Equity Department, College of Arts & Sciences
- **Pre-Health Advising:** Available for students interested in medical/dental/veterinary school.
- **Research Opportunities:** Speak with faculty about laboratory research positions

Howard University - College of Arts & Sciences

Earth, Environment and Equity Department | Catalog: Fall 2025 - Present

Always consult with your academic advisor for personalized guidance