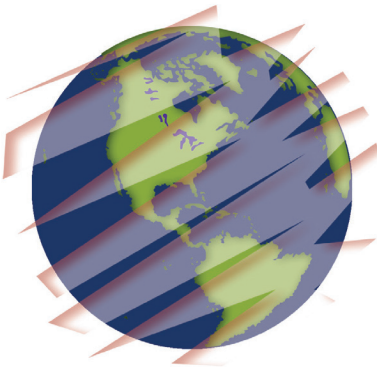


ENVIRONNEWS

Waste Management Institute

UNDER THE LEADERSHIP OF THE COLLEGE OF AGRICULTURE AND ENVIRONMENTAL SCIENCES - GODFREY UZOCHUKWU, PH.D, DIRECTOR



The Interdisciplinary Waste Management Institute (WMI) - enabling waste management sustainability education and environmental sciences at North Carolina Agricultural and Technical State University.

WMI Mission: To enhance awareness and understanding of waste management issues and develop programs that protect the environment and improve the quality of life.

INTERDISCIPLINARY ACADEMIC AFFILIATE UNITS

- ANIMAL SCIENCES
- AGRICULTURAL EDUCATION
- AGRICULTURAL ECONOMICS ARCHITECTURAL ENGINEERING
- BIOLOGY
- BIOLOGICAL ENGINEERING
- BUSINESS MANAGEMENT
- CHEMICAL ENGINEERING
- CHEMISTRY
- CIVIL ENGINEERING
- COMPUTER SCIENCE
- CRIMINAL JUSTICE
- BUILT ENVIRONMENT
- EDUCATION
- ECONOMICS
- ELECTRICAL ENGINEERING
- HISTORY
- FAMILY & CONSUMER SCIENCE
- INDUSTRIAL SYSTEMS ENGINEERING
- JOURNALISM AND MASS COMMUNICATIONS
- LIBERAL STUDIES
- MATHEMATICS
- MECHANICAL ENGINEERING
- NANOSCIENCE
- NANOENGINEERING
- NATURAL RESOURCES
- NURSING
- POLITICAL SCIENCE
- PHYSICS
- PSYCHOLOGY
- SOCIOLOGY/SOCIAL WORK

Inside...

Elected Chancellor	1
Memorandum of Understanding	1
WMI Certificate Recipients	2
Career Paths	3
Collaborative Projects	3
Noteworthy	4
Sustainability Leadership	4
MOU Workgroup	4
Committee and Faculty Affiliate	4

James Martin II, Ph.D.
Elected Chancellor of North Carolina Agricultural and Technical State University



James Martin II, Ph.D., an accomplished civil engineer who has led engineering and STEM initiatives at three large public research universities, was elected chancellor of North Carolina Agricultural and Technical State University today by the University of North Carolina Board of Governors. "James Martin is the right leader to engineer North Carolina A&T's continuing rise, Dr. Peter Hans, UNC System President said. "Martin II believes in what he calls 'impatient optimism,' a productive sense of possibility in what can be achieved when people think across disciplines, feel a sense of shared purpose, and commit to an ambitious vision, said President Hans. "It is exactly the kind of mindset that will help affirm the university's status as one of the nation's best research institutions and engines of social mobility" said President Hans.

Press Release, UNC Board of Governors June 21, 2024

Memorandum of Understanding Between North Carolina Agricultural and Technical State University and the United States Environmental Protection Agency

North Carolina Agricultural and Technical State University (N.C. A&T) and the United States Environmental Protection Agency (US EPA) signed a Memorandum of Understanding (MOU) on December 8, 2023. The purpose of this Memorandum of Understanding (MOU) is to increase cooperation between North Carolina Agricultural and Technical University (N.C. A&T) and the United States Environmental Protection Agency in areas of mutual interest. Implementation of the program activities in this MOU should advance the development of the full human capital of this Nation, promote equal opportunity in higher education, contribute to N.C. A&T's capacity to provide high-quality education, and encourage the participation of N.C. A&T in EPA programs. Activities in the MOU include:

- Inviting N.C. A&T faculty and student participation in scientific and/or public policy forums, presentations, seminars, and other public events at EPA.
- EPA participation in career fairs and other outreach to students, faculty, and alumni regarding EPA employment opportunities. Collaboration on methods of increasing interest incareers focused on protecting human health and the environment, as well as awareness about publicly available recruitment and environmental education opportunities. This may include the appointment of an EPA Campus Liaison.
- EPA may aid N.C. A&T for the advancement of environmental education by distance learning technology.
- EPA staff may voluntarily participate in lectures, webinars, conferences, and other events at N.C. A&T with approval from the employee's supervisor and consistent with federal ethics rules and EPA's supplemental ethics regulations.
- Collaboration on environmental justice issues.
- N.C. A&T and EPA may agree to work to enhance cooperation in other areas without amending this MOU.

MOU POINT OF CONTACT



N.C. A&T University
Dr. Godfrey Uzochukwu - Director
 Interdisciplinary Waste Management Institute
 uzo@ncat.edu

Dr. Clayton Clark - Associate Dean
 College of Engineering
 cjclarkii@ncat.edu

EPA Office of Research and Development
Lara P. Phelps - Director
 U.S. Environmental Protection Agency
 phelps.lara@epa.gov

EPA Region 4
Jeanne Williamson - Coordinator
 U.S. Environmental Protection Agency
 williamson.ieannieepa.gov

INTERDISCIPLINARY WASTE MANAGEMENT INSTITUTE



DIRECTOR
 Godfrey Uzochukwu, Ph.D
PROVOST
 Tonya Smith-Jackson, Ph.D
CHANCELLOR
 James Martin II, Ph.D

University of North Carolina System General Administration (UNC-GA) Mandate

"...This office has reviewed your request to establish a Waste Management Institute. We conclude that the proposed unit, as described, will be an academic support unit with more limited research and public service functions... Establishment of a Waste Management Institute is hereby approved..."
 - C. D. Spangler Jr. '94 President

N.C. A&T's Chancellor's Mandate

"...Coordination of waste management and environmental efforts (instruction, research and outreach of the university which now exist in individual departments; implementation of certificate programs in waste management...advisement of students who are interested in environmental and waste management careers; and clearing house for the university's environmental/waste management activities..."
 - Edward B. Fort, '95 Chancellor



DR. UZO



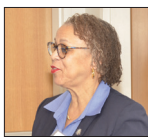
DR. GIDDINGS



DR. SMITH-JACKSON



PHELPS



DR. HYMON-PARKER

Interdisciplinary Waste Management Certificate Recipients (2023/24)

Graduating seniors (B.A./B.S.) and graduate students (M.S./Ph.D.) received Waste Management Certificates at special ceremonies in December 2023 and May 2024. The students completed their degree and certificate requirements. The keynote speaker for May 2024 ceremony was Lara Phelps of the United States Environmental Protection Agency. The Waste Management Certificate highlights the training of students in environmental sustainability, security and waste management issues and signals to employers that N.C. A&T graduates are ready to broadly advance waste management and sustainability in their fields. The certificate adds value to the undergraduate and graduate training at N.C. A&T.



Undergraduate WMI Certificate Conferred (2023/24)

Name	Major
Zavier Avery	Environmental Studies
D'Nylah Danielle Beaty	Biological Engineering
Alyse Charleron	Biology
Cori Davis	Architectural Engineering
Lajona Ferrell	Environmental Studies
Sierra Franco	Biological Engineering
Jailyn George	Biological Engineering
Anthony Lamont Hairston	Environmental Studies
Tiairra Jhane Chisholm Holmes	Biology
Dream Hayward-Thomas	Psychology
Ashund Kanu	Environmental Studies
Gabrielle Elysse King	Environmental Health and Safety
Kenene Lee	Environmental Studies
Victoria Lanier	Industrial & Systems Engineering
Jazmin Mahoney	Professional Theatre
Khursten Kyle Mclean	Business Management
Destiny Alexis Monroe	Architectural Engineering
Dakota Nicholas Moore	Environmental Studies
Taylor A. Peele	Food & Nutritional Sciences
Timothy Michael Ptak	Civil Engineering
Shane Rice	Biological Engineering
Taylor Riley	Environmental Studies
Alexis Robertson	Environmental Studies
Dana Roebuck	Mechanical Engineering
Ariana Shevack	Marketing & Supply Chain Mgmt
Jordan D. Washington	Biological Engineering
Justin Ryan Wirbelauer	Biological Engineering

Interdisciplinary Graduate Level Environmental Certificates Conferred (2024)

Shadajah R. Ballard	Environmental Health and Safety
Joshua Best	Environmental Sciences
Damien Avery Cain	Environmental Justice
Taweh Jane Wede	Environmental Justice

40 Hour Hazmat Training Certificates Awarded

Anuoluwapo Adelabu	Agricultural and Environmental Systems
Ebenezer Aning-Dei	Food and Nutritional Sciences
Oluwabunmi Apalowo	Animal Science
Tyler Davenport	Food and Nutritional Sciences
Anthony Hairston	Environmental Studies
Odinaka Iwozo	Agricultural and Environmental Systems
Edmond Kwekutsu	Agricultural and Environmental Systems
Anthonia Nwabudike	Civil and Environmental Engineering
Olatunde Oderinwale	Animal Science
Neema Olagbemi	Social Work
Samuel Pierre	Interdisciplinary Environmental Certificate
Sushmita Roy	Agricultural and Environmental Systems
Sk Sadman Sakib	Civil and Environmental Engineering
Olabisi Somefun	Agricultural and Environmental Systems
Sumaya Tabassum	Agricultural and Environmental Systems
D'Nylah Beaty	Biological Engineering
Nicholas Chance	Biological Engineering
LaJona Ferrell	Environmental Studies
Jailyn George	Biological Engineering
Ashud Kanu	Environmental Studies
Camille McEachern	Environmental Studies
Jordan Washington	Biological Engineering



N.C. A&T MOU Workgroup

Advanced WMI Certificate Recipients and Faculty (2023/24)



Esther Foluso Iwayemi	Food and Nutritional Sciences
Md Redowan Rashid	Civil Engineering
Dominae Antwan Smith	Agriculture and Environmental Systems
James Pinkney Jr	Agriculture and Environmental Systems
Kathy L. Johnson	Clinical Mental Health Counselor
Deborah Olabisi Okedoyin	Integrated Animal Health Systems
Sk Sadman Sakib	Civil Engineering
Md Redowan Rashid	Civil Engineering



Career Paths for Graduates Who Received WMI Certificates

MAJOR / CAREER PATH

Animal Science

Environmental Animal Health and Specialist

Biology

Environmental Biology

Business

Environmental Business

Chemistry

Environmental Chemistry

Communication

Environmental Communication

Construction Management

Environmental Safety

Criminal Justice

Environmental Crimes

Economics

Environmental Economics

Education

Environmental Education

Environmental Studies/Science

Environmental Scientists/Consultants/Specialists

Engineering

Environmental Engineering

Journalism

Environmental Journalism

Landscape Architecture

Environmental Design/Visual Resource Specialist

Mathematics

Environmental Mathematics/Statistics

Nursing

Environmental Health/Occupational Safety

Occupational Safety and Health

Environmental Safety

Other

Environmental Consultants

Physics

Environmental Physics

Political Science

Environmental Policy/Politics

Psychology

Environmental Psychology

Sociology

Environmental Sociology

Social Work

Environmental Social Justice

Environmental and Waste Management Guest Speakers (Big Ideas and New Perspectives)

Hackley and Associates:

Lloyd Hackley

US EP, RTP:

Kelly Witter, Hillary Ward, Goodwin Reginald, Tonisha Dawson, Lamont Baldwin, Toni Jones, Amanda-Jean Blackburn, Tiffany King and Gloria Gaines

EPA Region 4:

John Sheesley, Sheryl Good, Caroline Freeman and Rajeevah Martin,

Gates:

Abiola Fabunmi and Jennifer Dominick

Collaborative Environmental and Waste Management Funded Projects

– WMI Affiliates, Source: DORED

*Mitigation of PFAS in Landfill
Leachate with Coal Fly Ash*
- Zhao, Renzun

*Mitigation of PFAS in Landfill
Leachate with Coal Fly Ash*
- Yun, Yeo Heung

*Interactions between Engineered
Nanomaterials and Biological System*
- Aravamudhan, Shyam

*UAS Remote Sensing for Flood
Modeling and Management
Applications*
- Hashemi Beni, Leila

*UAS Remote Sensing for Flood
Modeling and Management
Applications*
- Hashemi Beni, Leila

*Nanostructured porous and
laminar coatings for biodegradable
magnesium-based implants with
tunable water permeability and
improved mechanical properties*
- Sankar, Jagannathan

*Water Quality at the Edge-of-field
and In-stream in the Lower Mississippi
River Basin*
- Aryal, Niroj

*Plant and rhizosphere processes that
prevent groundwater contamination
from metals and nitrates*
- Aryal, Niroj

*Enhancing teaching and learning of
ecological engineering science and
data science using hands-on and
project-based learning strategies*
- Aryal, Niroj

*Improving fertility applications for
sustainable pest management, weed
management, and soil health*
- Bhowmik, Arnab

*System-based integrated program
for enhancing the sustainability of
antibiotic-restricted poultry production*
- Liang, Chyi Lyi

*Wastewater COVID-19 screening in
Guilford County School zones*
- Deng, Dongyang

*Environmental Justice and the
Multigenerational Persistence of
Environmental Exposure*
- Li, Huan

*Next Generation Sustainable
Technologies for Small-Scale Producers*
- Uzochukwu, Godfrey

Wastewater Surveillance Funding
- Deng, Dongyang

*North Carolina Collaboratory
Wastewater Surveillance NC Collab*
- Deng, Dongyang

*Biotreatment of GenX using
combined attached growth
anaerobic digester sludge reactors*
- Deng, Dongyang

*The Wellspring Coalition Project:
Promoting Research Experiences for
Black American Undergraduates in
the Environmental Sciences*
- Gloster, Clay S, Godfrey
Uzochukwu and Niroj Aryal
\$500,000.00

*Geospatial analysis of
environmental data to support
mapping and the identification
of vulnerable areas for erosion
and runoff to support agricultural
stewardship programs*
- Jha, Manoj K

*A Biofilter-Microalgae Symbiotic
System for the Attached Culture
of Microalgae in Agricultural
Wastewater*
- Wang, Lijun

*Renewable Resources Extension Act
at North Carolina State University*
- Dari, Biswanath

*Hydrothermal Liquefaction of
swine manure to liquid fuel*
- Shahbazi, Abolghasem

*Developing Sustainable Curriculum
in Civil, Architectural and
Environmental Engineering*
- Moon, Hyosoo

*Toward Culturally Responsive
Disaster Management for Limited
Resources Producers: The Role
of Person, Place of Professional
Agencies*
- Eley, Michelle L \$23,000.00

*UAS Remote Sensing for Flood
Modeling and Management
Applications*
- Hashemi Beni, Leila

*Developing a Robust, Distributed,
and Automated Sensing and
Control System for Smart
Agriculture*
- Karimodini, Ali

*Understanding environmental
adaptation by elucidating the*

*underlying changes in
molecular mechanisms
associated with genetic
selection in two-component
response systems.*
- Thomas, Misty

*Understanding environmental
adaptation by elucidating
the underlying changes
in molecular mechanisms
associated with genetic
selection in two-component
response systems.*
- Thomas, Misty

*Research Initiation Award:
Plant and rhizosphere processes
that prevent groundwater
contamination from metals
and nitrates*
- Aryal, Niroj

*Soil fertility applications for
sustainable pest management,
weed management, and soil
health*
Bhowmik, Arnab

*Innovation Lab on Sustainable
Intensification*
- Aryal, Niroj

*Integrated Social, Economic
and Environmental Impact to
Support SFRLs*
- Liang, Chyi Lyi

*Coupled Atmospheric Storm
Surge Modeling for Hurricane
Florence 2018*
- Liu, Liping

*Outreach Assistance to
Beginning Farmers, Ranchers,
and Veterans to Promote
Sustainable Operations and
Productivity*
- Yeboah, Osei-Agyemang

*Climates Smart Sheep for
Sustainable Production*
- Estrada Reyes, Zaira M

*TiO2 Catalyst and Soil
Microbiome Synergy: Targeting
GenX Degradation Using Soil
from Nearby PFAS-Affected
Sites*
- Deng, Dongyang

*Renewable Natural Gas from
Carbonaceous Wastes via
Phase Transition CO2/O2
Sorbent Enhanced Chemical
Looping Gasification*
- Wang, Lijun

WMI NOTEWORTHY SUMMARY

- Conferred 2,455 certificates that add value to degree programs.
- Offers the best interdisciplinary supporting courses
- Selected Interdisciplinary Model for N.C. A&T – Futures Goal II (Created Interdisciplinary Energy and Environmental Systems PhD (Renamed Science and Technology PhD); Informed Interdisciplinary Leadership Studies PhD; Inspired the creation of Interdisciplinary Computational Science and Engineering PhD; Interdisciplinary Masters, Bachelors and Certificate Programs).
- Promotes Big Ideas of Sustainability – infrastructure, energy, climate, waste management, waster conservation, transportation and education.
- Forum for exchange of big ideas among faculty and students from different disciplines.
- Lead Institute for the Interdisciplinary Graduate Certificate Tracks in Environmental Engineering, Environmental Sciences, Environmental Justice and Environmental Health & Safety.
- Awarded \$1.4 million to establish interdisciplinary WMI
- Awarded \$18 million NSF Inter-institutional (A&T, NCSU, UNC -CH and UT Austin) for saving water.
- Campus-wide resource for faculty and students (awarded \$384,000 to students in different colleges, provided \$33,191 for faculty support, created core WMI course.
- WMI works with 18 academic departments to tailor WMI core and over 360 courses offered by departments to follow an interdisciplinary waste management curriculum.
- Facilitated top 2 percent in 2017 (No. 14 overall) and No. 4 in USA rankings (UI Green Metric – University Sustainability World Ranking for N.C. A&T and ranked in the top 7% for five consecutive years 2013, 2014, 2015, 2016 and 2017)
- Selected No. 1 by the Environmental Careers Organization for innovative programming and diversity.
- Recognized by the Greensboro Chamber of Commerce as an innovative environmental program.
- Top 28 interdisciplinary institute/center in USA (2013 NCSE report - 360 were profiled)
- Leader in Convergence Research Thrusts for environmental and waste management solutions involving air, soil, water, bio-energy, global climate, education and infrastructure
- Top 3 HBCU for Environmental Science – *The Advocate*, 2023

WMI Interdisciplinary Steering Committee

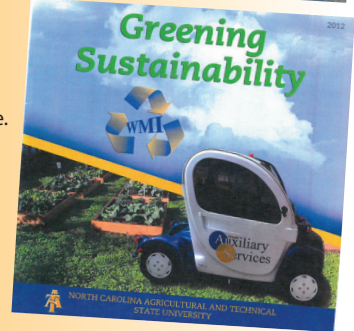
Michael Atkinson, PhD	Department of Mechanical Engineering
Renzun Zhao, PhD	Department of Civil and Architectural Engineering
Godfrey Ejimakor, PhD	Department of Agribusiness
Alesia Ferguson, PhD	Department of Built Environment
Gregory Goins, PhD	Department of Natural Resources
George Robinson, PhD	(Psychologist), Department of Psychology
Godfrey Uzochukwu, PhD	Interdisciplinary Waste Management Institute

Interdisciplinary WMI Faculty Affiliate

Uchenna Anele, Ph.D.	College of Agriculture and Environmental Sciences
Niroj Aryal, Ph.D.	College of Agriculture and Environmental Sciences
Samuel Atkinson, Ph.D.	Industrial Systems Engineering
Fafanyo Asiseh, Ph.D.	College of Business and Economics
Kory Bennett, Ph.D.	College of Engineering
Arnab Bhowmik, Ph.D.	College of Agriculture and Environmental Sciences
Clayton Clark II, Ph.D.	College of Engineering
Carla Denise Coates, Ph.D.	College of Arts, Humanities and Social Sciences
Heather Collieran, Ph.D.	College of Agriculture and Environmental Sciences
Derome Dunn, Ph.D.	College of Engineering
Godfrey Ejimakor, Ph.D.	College of Agriculture and Environmental Sciences
Alesia Ferguson, Ph.D.	College of Science and Technology
Gregory Goins, Ph.D.	College of Agriculture and Environmental Sciences
Salam Ibrahim, Ph.D.	College of Agriculture and Environmental Sciences
Manoj Jha	College of Engineering
Louis Jackai, Ph.D.	College of Agriculture and Environmental Sciences
Jianzhong Lou	College of Engineering
Blessing Masasi, Ph.D.	College of Agriculture and Environmental Sciences
Radiyah Minor, Ph.D.	College of Agriculture and Environmental Sciences
Abubakarr Mansaray	College of Agriculture and Environmental Sciences
Leotis Parrish, Ph.D.	College of Engineering
George Robinson, Ph.D.	College of Health and Human Sciences
Amy Schwartzott, Ph.D.	College of Arts and Humanities
Godfrey Uzochukwu, Ph.D.	Interdisciplinary Waste Management Institute
Tobin N Walton, Ph.D.	College of Health and Human Sciences
Renzun Zhao, Ph.D.	College of Engineering
Gregory Meyerson, Ph.D.	College of Arts, Humanities and Social Sciences

Sustainability Leadership at N.C. A&T

North Carolina Agricultural and Technical State University has a history of providing leadership in addressing sustainability issues such as infrastructure, energy and climate change, waste management, water usage, transportation and education through Colleges, Facilities Department, Budget Office, Division of Research and Economic Development, Campus Enterprise, Office of Strategic Planning and Institutional Effectiveness, University Farm and Interdisciplinary Waste Management Institute (WMI). These collaborations have made the university a major contributor to understanding sustainability on a global scale. The University has taken advantage of Higher Education Sustainability Bill (The Higher Education Opportunity Act-P.L. 110315) signed by President George W. Bush in 2008. In March 2011, Chancellor Harold Martin Sr. launched a robust sustainability program and encouraged everyone to integrate sustainability into their daily operations.



Greensboro Public Library - **Conduit to Destiny**
Energy, Waste Management and Recycling Sustainability
 5 – 12 year olds
 May 8, 2024

Memorandum of Understanding EPA (MOU) Workgroup

- Lara Phelps, Director – Air Methods and Characterization Division, Center for Environmental Measurement and Modeling, Office of Research and Development, US EPA
- Louie Rivers, Social Science Lead, Office of Research and Development, US EPA
- Samuel Scott, Program Analyst (Specializing in Memorandums of Understanding), Office of Resource Management (EMD-PFTTB), Office of Research and Development, US EPA
- Rhea Jones, Deputy Director, Health and Environmental Impacts Division, Office of Air Quality Planning and Standards, US EPA
- Hillary Ward, Community and Tribal Program Group Leader, Outreach and Information Division Office of Air Quality Planning and Standards, US EPA

N.C. A&T MOU Workgroup

- Dr. Clayton Clark, Associate Dean, College of Engineering
- Dr. George Robinson, Chair, College of Health and Human Sciences
- Dr. Ben Uwakweh, Professor, College of Science & Technology
- Tamaka Coly, Lecturer, College of Engineering
- Dr. Chantel Simpson, Assistant Professor, College of Agriculture and Environmental Sciences
- Keith Coleman, Senior Lecturer and Associate Chair, College of Arts, Humanities and Social Sciences
- Dr. Godfrey Uzochukwu, Senior Professor and Director, Interdisciplinary Waste Management Institute, College of Agriculture and Environmental Sciences

North Carolina Agricultural and Technical State University (N.C.A&T) is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate, master's and doctoral degrees.

N.C. A&T does not discriminate against any person on the basis of age, color, disability, gender identity, genetic information, national origin, race, religion, sex, sexual orientation, veteran status, or any other basis protected by law. | N.C. A&T is an AA/EEO and ADA compliant institution.

WMI Mission: To enhance awareness and understanding of waste management issues and develop programs that protect the environment and improve the quality of life.

This newsletter is a publication of the Waste Management Institute of North Carolina Agricultural and Technical State University. It is intended to increase the awareness of teachers, students, industry, government and community groups about environmental, sustainability and waste management issues.

From the Editorial Staff:

For more information about the WMI call, fax or write Director, Waste Management Institute, 1601 East Market Street, N.C. A&T State University, Greensboro, NC 27411

- (336) 334-7030
- FAX (336) 334-7399
- Email: uzo@ncat.edu

We welcome creative ideas that are suitable for inclusion in the EnviroNews. Send a brief summary of your ideas to:
WMI, Carver Hall 261
North Carolina A&T
Greensboro, NC 27411
Phone: (336) 334-7030
Email: uzo@ncat.edu