

INTERDISCIPLINARY ACADEMIC UNITS

ANIMAL SCIENCES AGRICULTURAL EDUCATION AGRICULTURAL ECONOMICS ARCHITECTURAL ENGINEERING BIOLOGY **BIOLOGICAL ENGINEERING BUSINESS MANAGEMENT** CHEMICAL ENGINEERING CHEMISTRY CIVIL ENGINEERING COMPUTER SCIENCE CONSTRUCTION MANAGEMENT & SAFETY CURRICULUM & INSTRUCTION ECONOMICS ELECTRICAL ENGINEERING HISTORY HUMAN ENVIRONMENT & FAMILY SCIENCE INDUSTRIAL ENGINEERING JOURNALISM AND MASS COMMUNICATIONS LIBERAL STUDIES MATHEMATICS MECHANICAL ENGINEERING NATURAL RESOURCES NURSING POLITICAL SCIENCE PHYSICS PSYCHOLOGY SOCIOLOGY/SOCIAL WORK

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Interdisciplinary Waste Management Institute

Dr. Godfrey Uzochukwu, Director Academic Deans Dr. Joe B. Whitehead Jr., Provost Dr. Harold L. Martin Sr., Chancellor

ENVIR®NEWS Waste Management Institute

UNDER THE LEADERSHIP OF THE COLLEGE OF AGRICULTURE AND ENVIRONMENTAL SCIENCES



NC 17 site operates two monitoring networks: the National Trends Network (NTN) and Mercury Deposition Network (MDN). North Carolina Agricultural and Technical State University (N.C. A&T) students are the site operators. Atmospheric deposition and its effects are monitored at these sites. NADP data is critical to public safety, ecosystem services and environmental policies.

(L-R) Miranda Jackson, Ronnie Blakeney and Emmanuel Oleka at NADP NC 17 site at North Carolina Agricultural & Technical State University.

UI GreenMetric Ranks N.C. A&T In The Top 7 Percent Internationally for University Sustainability



For the fourth consecutive year, North Carolina Agricultural and Technical State University is ranked among the top 7 percent of universities in the world for university sustainability according to Universitas Indonesia's GreenMetric Ranking of World Universities.

Four hundred and sixty universities were ranked in 2016. The University of California, Davis was ranked as the world's best green campus. N.C. A&T was ranked No. 36.

The 2016 GreenMetric results were computed from information provided by universities online under six categories — infrastructure, energy and climate change (21 percent), waste management (18 percent), water usage (10 percent), transportation (18 percent) and education (18 percent).

The following units contributed information for the 2016 survey: Office of Enrollment Management, Division of Human Resources, Facilities Department, Budget Office, Division of Research and Economic Development, Parking Services, Center for Energy and Training, Campus Enterprises, Energy and Environmental Systems, University Farm and The Interdisciplinary Waste Management Institute (WMI).

"Water, waste, transportation, energy, climate, infrastructure and education challenges present an opportunity for North Carolina Agricultural and Technical State University to mobilize resources and capabilities for developing effective sustainable solutions," said Godfrey Uzochukwu, Ph.D., director of the WMI. ■

Professional Certificate in Campus Sustainability Leadership



The University of Vermont recognized Godfrey Uzochukwu, Ph.D., senior professor and director of N.C. A&T's Interdisciplinary Waste Management Institute (WMI) for successfully completing all the requirements for the Professional Certificate in Campus Sustainability Leadership and granted the Professional Leadership Certificate on June 16, 2017. The primary areas of focus of Sustainability at N.C. A&T include infrastructure, energy, water, waste, transportation and education. "These are what AGGIES DO to achieve environmental goals and efficient campus operations in different impact units of the university and community," said Uzochukwu. ■



The WMI Awards Waste Management Certificates To Students

Fifty four graduating seniors (B.A./B.S.) and graduate students (M.S. and Ph.D.) received the Waste Management Certificate and Advanced Waste Management Certificate in December 2016 and May 2017 at special ceremonies. The students completed their degree and certificate requirements. The keynote speakers were Doris Maxwell, Management Analyst, United States Environmental Protection Agency (Retired) and Desiree Gordon, Program Manager, National Oceanic and Atmospheric Administration (NOAA). The Waste Management Certificate highlights the training of students in environmental 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 training at NC A&T.

Undergraduate Interdisciplinary Certificate Recipients



Faisal Abdullah S. Albaqami Mechanical Engineering Cameron Armbrester Chemical Engineering Fahad Mubarak Al Ati Mechanical Engineering Environmental Studies Janna Joellen Bailey Juwan Trevette Lewis Byers Food Science- Nutrition Shykeria L. Collier **Civil Engineering** Kamaria Chanel Ellerbe Applied Engineering Techonology Daniel Komla Folley **Civil Engineering** Taylor Hawkins **Civil Engineering** Hashim L.A Hazelwood **Bio Engineering** Briana L. Holness Agricultural Education Samantha Jasmine Hylton Agricultural & Environmental Systems Nnenna Ihbuzor **Environmental Studies** Shannon Ivey General Electronic Music Miranda L. Jackson **Environmental Studies** Isaiah Sebastian Long Environmental Studies Jade Elizabeth Candeah Louallen **Civil Engineering** Amanda Justine Ezinne Mbata Social Work Myesha Nebria Huntley McElveen Food Science Daryin Lashon Medley **Environmental Studies** Marcus Vernon Miller Accounting Rochelle M. Mesubed **Biological Engineering** Rina Kiyangu Mudanyi Chemical Engineering Heather Newman **Chemical Engineering** Raheem Outlaw Landscape Architecture Isaac N. Scarlett **Civil Engineering** Arreon Jaycle Scruggs **Environmental Studies** Psychology Ciara A. Smith Charles Christopher Mathew Stanback Architectural Engineering Hannah Rose Talton Urban & Community Horticulture Joshua C. Tilley **Civil Engineering** Tiara Kiana Thomas **Civil Engineering** Marcus Tongue Music Performance Darren J. White **Civil Engineering Business Management** Antonia Wilder Leimonte Rasean Wilson Industrial & Systems Engineering Agribusiness John Gilbert Wrenn Alicia Rose Wright **Civil Engineering**



Desiree Gordon and Chancellor Harold Martin

Doris Maxwell

Erin Hart

Graduate Students Receive Advanced Waste Management Certificates

Helga Osei Aku Agribusiness & Food Industry Eric Appah Chemistry Dominic Bekoe Natural Resources & Environmental Systems Michael Tochkwu Emeakaroha Physics Kevin Jovan Fisher Technology Management Vicki Smith Foust Energy and Environmental Systems Amamchukwu Bernard Ilogebe Mechanical Engineering McDonald Osatohanmwen Isere Information Technology Olusola Jeje Natural Resources & Environmental Systems Emmanuela Ebele Ndikwam Chemistry Emmanuel Oleka Electrical Engineering Olapeju Dasola Olujide Agribusiness & Food Industry Adeyinka Olufunso Olurin Information Technology



Chinwe Pamela Onyeagoro Agribusiness & Food Industry Tcha-Bebou Ouro-Bagna Civil Engineering Oladele Benard Oyewole Mechanical Engineering Mariama Oumarou Sidibe Computational Science



Tour of Landfill Gas Facility



Environmental and Waste Management Guest Speakers – New Ideas and Perspectives

• O'Brien & Gere Ltd

MA IOR

- Environmental Remediation Joseph Perry
- Waste Industries USA
- Biogas Reactors and Landfill Gas Monitoring Field Trip (Bryan Wuester)
- Environmental Protection Agency Region 4 Emergency Response (Tony Moore)
- City of Greensboro
- Waste Reduction and Recycling (Sheldon Smith, Carle Tori)

 Hackley and Associates
- Ethics, Character and Leadership (Dr. Lloyd Hackley)
- Teach For America
 Teaching Opportunities in Public Schools Joshua Thomas

Pre college Environmental Security and Waste Management Workshop

Thirty nine high school students and teachers participated in the Environmental Security and Waste Management Workshops in June and July 2016. The workshops highlighted challenging environmental issues such as climate change, energy security, food security, water security and education.

Career Paths for Graduates Who Received the WMI Certificates

CAREER PATH

Animal Science Environmental Health and Science Biology **Environmental Biology Business Environmental Business Environmental Chemistry** Chemistry Communication **Environmental Communication Environmental Safety Construction Management Criminal Justice Environmental Crimes Environmental Economics Economics** Education **Environmental Education** Environmental Studies/Science Environmental Scientists/Consultants/Specialists Environmental Engineering Engineering Journalism Environmental Journalism Landscape Architecture Environ Design/Visual Resource Specialist Environmental Mathematics/Statistics **Mathematics** Nursing Environmental Health/Occupational Safety Occupational Safety and Health **Environmental Safety** Other Environmental Consultants **Environmental Physics** Physics Environmental Policy/Politics **Political Science** Psychology Environmental Psychology Sociology **Environmental Sociology** Social Work **Environmental Social Justice**

Global Outreach 🔻 🔍 🔻

Dr. Godfrey Uzochukwu conducted a workshop on Ethics, Leadership and Waste Management for students and teachers at St. Anthony's High School in Nkpor, Anambra State, Nigeria in May 2017 in Nigeria.





Environmental Leadership at A&T

North Carolina Agricultural and Technical State University has a history of providing leadership in addressing environmental sustainability issues through interdisciplinary centers, institutes and academic programs at all degree levels. These interdisciplinary collaborations have made the university a major contributor to understanding sustainability on a global scale. The university has taken advantage of the Higher Education Sustainability Bill (The Higher Education Opportunity Act-PL. 110-315) signed by President George W. Bush in 2008. In March 2011, Chancellor Harold Martin Sr. launched a robust recycling program and encouraged everyone to recycle. The goal of the recycling program is to improve the quality of life now and in the future.



Hazmat Training



Students are addressing the convergence of physical science, social sciences, engineering, technology and life sciences for accelerating environmental solutions.

🔥 REUSE REDUCE RECYCLE REDESIGN REIMAGINE 🐔

University of Nigeria (UNN)



(L-R) Professors Eze, Uzo and Uawuoke

Godfrey Uzochukwu, senior professor and director of WMI at N.C. A&T participated in a round table discussion of cocoyam disease and bitter kola production at the University of Nigeria, Nsukka in May 2017. Cocoyam is an important food crop in the continent of Africa. Bitter kola production is underdeveloped as

a food crop in Nigeria. The round table discussion was hosted by professors Edwin Igbokwe (Agricultural Extension), Simon Eze (Crop Sciences) and Kevin Ugwuoke (Crop Protection. Collaboration and cooperation between UNN and N.C. A&T were discussed.



Noteworthy

• Best performing professors and students are affiliated with WMI • Campus-wide resource for faculty and students. • Facilitated top 7 percent overall Green Metric – University Sustainability Ranking for N.C. A&T. Selected No. 1 by the Environmental Careers Organization. • Recognized by the Greensboro Chamber of Commerce as an innovative environmental program. Top 28 interdisciplinary institute/center in the nation (2013 NCSE report). 360 were profiled. • Enhances student retention and graduation – scholarships and internships. Forum for Big Ideas – created EES Ph.D. program and facilitated Campus Sustainability. • Forum for exchange of ideas among students from different disciplines. Forum for exchange of ideas among faculty members from different disciplines. • Brings environmental industry leaders to campus. • Promotes economic growth for the City of Greensboro through national conferences. Offers best interdisciplinary support courses. • Promotes Green Campus – recycling, energy conservation and water conservation.



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 • FAX: 336 334-7399

• Email: uzo@ncat.edu

North Carolina A&T State University is a land-grant doctoral/research university and AA/EEO employer

From the Editorial Staff:

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WMI Mission: Enhance awareness and understanding of waste problems and their management in our society and develop programs to improve the quality of life and protect the environment.

REDUCE RECYCLE

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 and Waste Management issues.

INTERDISCIPLINARY WMI PROGRAM COMMITTEE

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REDESIGN

College of Agriculture and Environmental Sciences College of Business and Economics College of Engineering College of Arts, Humanities and Social Sciences College of Agriculture and Environmental Sciences College of Engineering College of Agriculture and Environmental Sciences College of Agriculture and Environmental Sciences College of Agriculture and Environmental Sciences College of Science and Technology College of Health and Human Sciences College of Arts and Humanities College of Science and Technology College of Engineering College of Arts, Humanities and Social Sciences The Center for Academic Excellence College of Education College of Business & Economics Interdisciplinary Waste Management Institute



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