



# NJIT Supports the SUSTAINABLE DEVELOPMENT GOALS

2023 Times Higher Education Impact Ranking - 101-200



2023 Sustainability Progress Report

# Sustainability is in Practice at NJIT



**Dr. Teik C. Lim**  
President

In 2015, the 193 member states of the United Nations adopted the Sustainable Development Goals (SDGs) that reflect “the world’s shared plan to end extreme poverty, reduce inequality, and protect the planet by 2030.” The SDGs call on governments, industries, and organizations like ours to actively engage in efforts ensure the prosperity of our planet and its people by addressing global challenges through international collaborations at both micro and macro scales.

As an active supporter of this ambitious agenda, the New Jersey Institute of Technology persists in advancing development in our campus and community through research, teaching and learning, innovations, and partnerships. Our 2025 Strategic Plan lists sustainability as one of the core pillars. We recently signed a carbon neutrality agreement and plan to be carbon neutral by 2040. Attaining carbon neutrality is the first phase of transforming our institution. NJIT is making sustainability an institutional learning goal to ensure that every program at NJIT contains some aspect of sustainability as an assessed student learning outcome so that our students will graduate as global citizens.

As of 2022, NJIT has also registered for the Sustainability Tracking, Assessment & Rating System (STARS). STARS, a program of the Association for the Advancement of Sustainability in Higher Education, to measure their sustainability progress. Being a part of this program has enabled our institution to not only benchmark with our peers but also meet our sustainability goals. After an extensive collection of details through the help of our faculty, staff, and students, [NJIT successfully submitted its 2023 STARS Report](#), the first of many, we expect.

NJIT recognizes that for there to be development, there must be improvements in all three dimensions of sustainability—economic, social, and environmental. The SDG targets guide NJIT’s course of action in addressing all three areas.

This report offers a glimpse into our efforts to build a strong foundation for the future. NJIT has been and will continue to work towards an equitable world where all humans can thrive. We believe that if we join and remain steadfast in our resolve to meet the goals set by the UN, the future we envision isn’t far off.



**1** NO  
POVERTY



**10** REDUCED  
INEQUALITIES



**2** ZERO  
HUNGER



**3** GOOD HEALTH  
AND WELL-BEING



**4** QUALITY  
EDUCATION



**5** GENDER  
EQUALITY



**6** CLEAN WATER  
AND SANITATION



**7** AFFORDABLE AND  
CLEAN ENERGY



**8** DECENT WORK AND  
ECONOMIC GROWTH



**9** INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



**11** SUSTAINABLE CITIES  
AND COMMUNITIES



**12** RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



**13** CLIMATE  
ACTION



**14** LIFE  
BELOW WATER



**15** LIFE  
ON LAND



**16** PEACE, JUSTICE  
AND STRONG  
INSTITUTIONS



**17** PARTNERSHIPS  
FOR THE GOALS



# SUSTAINABLE DEVELOPMENT GOALS

## NJIT and the UN Sustainable Development Goals

The United Nations [Sustainable Development Goals](#) (SDGs) were adopted by all of the UN Member States in 2015 as part of the 2030 [Agenda for Sustainable Development](#) with a plan to achieve each of the 17 goals in 15 years. Although progress has been made in that time, the UN launched the [A Decade of Action](#) initiative to drive more ambitious actions to achieve the goals by 2030. The initiative calls for all sectors of society to mobilize to achieve the goals across three levels: global action, local action, and people action.

Each SDG is a blueprint for achieving a more sustainable future for everyone by addressing the global challenges we face together and sets targets to be achieved by 2030. You can learn more about each SDG by clicking each of the icons to the left, or by visiting: [un.org/sustainabledevelopment/](http://un.org/sustainabledevelopment/)

If the SDGs are to have the greatest impact, according to the UN's [Higher Education Sustainability Initiative](#) (HESI), they must be interwoven into the strategies, plans, and curricula of institutions of higher education. Colleges and universities are hubs for innovation, critical thinking, and preparing the next generation of leaders, scientists, and educators. When institutions of higher

education commit to sustainability and embrace the SDGs, they are laying the foundation for a more sustainable future for all.

NJIT has committed to sustainability by incorporating it into the university's [values](#) and [Institutional Learning Goals](#) (ILGs). NJIT's [2025 strategic plan](#) weaves sustainability as a guiding principle across each priority, providing the framework for measurable progress through key performance indicators. In joining [AASHE](#) and participating in [STARS](#) (see pg. 15), NJIT will be able to measure, celebrate, and empower sustainability efforts across the university and build upon the successes highlighted in this report.

Each of the following pages is dedicated to an SDG and includes a collection of highlights from the last year, sourced from across the institution. In addition, NJIT's scores for each SDG from the [2023 Times Higher Education \(THE\) Impact Rankings](#), in which NJIT was ranked between 101 and 200 among global institutions of higher education, are highlighted along with the progress made since NJIT's 2020 THE rankings.

**1** NO  
POVERTY



**End poverty in all its forms  
everywhere**



## Progress Data

**2023 Ranking**

101-200

**2023 Score**

67

**Improvement  
Made Since 2020**

+19.6

## INSTITUTIONAL HIGHLIGHTS

### Financial Aid Available for New Jersey Dreamers



New Jersey passed a law on May 9, 2018, that allows New Jersey Dreamers enrolled in eligible New Jersey colleges to apply for state financial aid. Students must complete the New Jersey Alternative Financial Aid Application. You can learn more about eligibility criteria, how to apply, and find other helpful links and resources [via NJIT's Student Financial Aid Services](#).

### Unemployment Tuition Waiver Available to Qualified Students



The State of New Jersey has a program that allows certain unemployed individuals to attend a public institution of higher education in the state of New Jersey tuition-free on a space available basis. Individuals who qualify for this program may have certain fees waived or reduced. You can learn more about eligibility criteria, how to apply, and find other helpful links and resources [via NJIT's Student Financial Aid Services](#).

### School of Management Provides Financial Literacy Program



Martin Tuchman School of Management's [Financial Literacy program](#) targets underprivileged high school students in Northern New Jersey. It is designed to build financial management skills and prepare students to pursue a bachelor's degree at NJIT and other universities.

# End hunger, achieve food security and improved nutrition and promote sustainable agriculture

2 ZERO HUNGER



## INSTITUTIONAL HIGHLIGHTS



### NJIT Participates in Global “Food Forest” Trend

NJIT’s new Sarabjit Singh '02H MS '04 and Maneet Kaur Family Urban Food Forest, opened in May, was [featured in national news](#) as one of two highlights of a global trend to cultivate native regional fruits and vegetables. The food forest was proposed, designed, planted, and is maintained by students in two BIOL 498 Special Topics in Biology courses: Food for a Hot Planet and Climate Change and Food Security.

### NJIT Food Pantry Raises Funds to Replenish its Stocks

The NJIT Food Pantry [leveraged last year's “Giving Tuesday”](#) to raise over \$14,000 that will be used to support NJIT community members who are struggling to afford or access a healthy diet. The Food Pantry also provides suit sets for professional events. You can support the NJIT Food Pantry's mission by donating unexpired, unopened, and non-perishable food items, such as those found on [this Amazon Wish List](#).



### Progress Data

#### 2023 Ranking

=72

#### 2023 Score

69.8

#### Improvement Made Since 2020

+42.5

### NJIT Food Pantry “GivingTuesday”

\$14,203

### Americans Living in Food Deserts

18.8 Million

# 3 GOOD HEALTH AND WELL-BEING



**Ensure healthy lives and promote well-being for all at all ages**



## Progress Data

**2023 Ranking**

601-800

**2023 Score**

48.7

**Improvement  
Made Since 2020**

+23.5

**NJIT's 2023 NJBIZ Healthcare Heroes**

3 Honorees

## INSTITUTIONAL HIGHLIGHTS

### NJIT Healthcare Heroes Recognized by NJBIZ



NJBIZ recognized NJIT professors Saikat Pal and Tara Alvarez, as well as NJIT's Healthcare division, as part of their 2023 list of healthcare heroes that made "a significant impact on the quality of health care in New Jersey." You can learn more about [NJIT's honorees](#) here, and the healthcare heroes program and other honorees as a whole [via NJBIZ here](#).

### "We like to sit close to windows. Are they good for us?"



Prof. Won Hee Ko (HCAD) found that with windows, people feel more comfortable, happier and have better cognitive performance. It implicates energy saving potentials and positive effects on people's wellbeing and productivity in buildings. [Based on the findings](#), Prof. Ko is working on the development of building design guidelines that can improve occupant health and wellbeing, and environmental sustainability.

### Employing Augmented Reality to Train Caretakers for the Elderly



Future Embodied Virtual Geriatric Patient (VGP)  
- Appearance with visual and sound realism  
- Awareness of the environment  
- Ability to control the environment  
- Attitudes and intelligence

NJIT's Professor Salam Daher and her students are prototyping an [augmented reality patient simulator](#) to help aspirant nurses and caretakers get a virtual hands-on experience of learning how to interact with and support elderly patients. Their goal is to create a new generation of intelligent and aware virtual patients.



# Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

## INSTITUTIONAL HIGHLIGHTS

### NJIT Hosts Elementary STEM Challenge

NJIT's Center for Pre-College Programs hosted [this year's NJIT Elementary STEM Challenge](#) with the theme of solving environmental problems using Micro Bit microcontrollers. Over 100 elementary school students took part in the competition and also had the opportunity to tour NJIT's Makerspace and meet the Baja racing and SAE Flylanders clubs. Next year's challenge may feature AI and virtual reality.



### NJIT Assists Newark's Shabazz H.S. Makerspace Initiative

[NJIT's Makerspace assisted educators](#) at Newark's Shabazz High School to support their initiative to establish a Makerspace with funding support from the Victoria Foundation. The new Makerspace will support the school's STEM programs and clubs while providing students with hands-on education and experiences. The school is calling for a lab leader, mentors, and virtual reality and [can be contacted here](#).



### NJIT Students Mentor Newark H.S. Students in Robotics

NJIT's [robotics club is mentoring students](#) at local high schools and teaching students about hands-on experimentation and teamwork. The club has also developed [online educational and technical resources](#) to further support the students' learning experience.



### Progress Data

#### 2023 Ranking

401-600

#### 2023 Score

56.5

#### Improvement Made Since 2020

+11.1

#### Elementary STEM Challenge Participants

100+

# 5 GENDER EQUALITY



## Achieve gender equality and empower all women and girls



### Progress Data

#### 2023 Ranking

401-600

#### 2023 Score

45.6

#### Improvement Made Since 2020

+3.7

#### 30x30 Pledge Goal

30% of women in police recruit classes

#### SHE in ECE Attendees

80+

### INSTITUTIONAL HIGHLIGHTS

#### Female School Children for Electrical & Computer Engineering



The Electrical and Computer Engineering Department hosted eighty students for a “One-Day Summer Camp for Female High School and Middle School Students” called [Soaring High-powered Excellence in ECE](#), or “SHE in ECE,” on June 27, 2023, in collaboration with IEEE EDS and IEEE CASS. The focus of the event was to encourage female students to pursue electrical engineering and/or computer engineering degrees.

#### NJIT Conference Explores Environmental Justice Impact of AI



[Murray Center conference](#) speakers included: Rebecca Hui, Roots Studio CEO, who described how data technologies can support rural communities in the Global South; Jungwon Kim who explored the promise and peril of climate AI; and Dr. Margarita Vinnikov (NJIT Informatics) and Sunny Murphy (Wolf Conservation Center) who showed how AI is used to protect the endangered Red Wolf population.

#### NJIT Police One of the First to Take the 30x30 Pledge



The NJIT Police Department [signed on to the 30x30 Pledge](#), a series of low and no cost actions police agencies can take to improve the representation of women in law enforcement. The activities help police agencies assess the current state of a department regarding gender equity, identify factors that may be driving any disparities, and develop and implement strategies eliminate barriers and advance women in policing.

# Ensure availability and sustainable management of water and sanitation for all

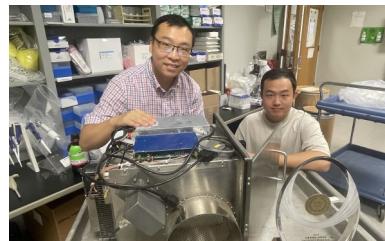
6 CLEAN WATER AND SANITATION



## INSTITUTIONAL HIGHLIGHTS

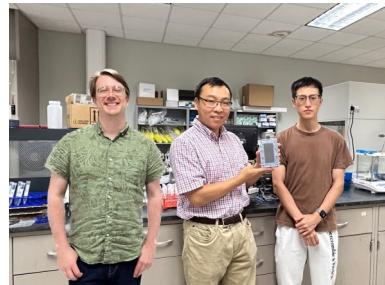
### Revolutionizing Water & Air Filtration with Microwaves

Wen Zhang's team at NJIT has showcased an [award-winning microwave-activated membrane filtration system](#), catering to water treatment and air purification. It effectively eliminates a range of pollutants, including PFAS and viruses. This technology has been licensed for commercial deployment in settings like schools, hospitals, train stations, and airports.



### Research Innovation: Wastewater to Fertilizer Solution

Dr. Wen Zhang and Dr. Joshua Young spearheaded a project at NJIT that [transforms nitrate-laden wastewater into ammonia fertilizer](#) using novel catalyst materials and electrochemical processes. This innovative endeavor, supported by NSF-BSF funding, reimagines sustainable wastewater management by converting waste into vital agricultural assets.



### NJIT Uses Green Engineering to Tackle Water Pollution

NJIT leads a [\\$788k NJDEP grant](#) to restore and protect polluted ponds and lakes. Part of a \$10M American Rescue Plan allocation, it tackles pollution, algal blooms and stormwater. Distinguished Professor Michel Boufadel will identify sources and implement green-engineered mulch rain gardens to filter phosphorus. The project also educates communities and engages high school students in green infrastructure.



### Progress Data

2023 Ranking

=86

2023 Score

69.6

Improvement  
Made Since 2020

+38.3

NJ Funding for  
Water Quality  
Improvements

\$10 Million

# 7 AFFORDABLE AND CLEAN ENERGY



**Ensure access to affordable, reliable, sustainable and modern energy for all**



## Progress Data

**2023 Ranking**

201-300

**2023 Score**

57.5

**Improvement  
Made Since 2020**

-6.6

**Possible Wind  
Turbine Cost  
Reduction**

\$15 million in NJ

## INSTITUTIONAL HIGHLIGHTS

### Research and Training for Clean and Affordable Energy



The NJIT Center for Building Knowledge (CBK), with support from the New Jersey Board of Public Utilities, created and delivered [a new clean energy manager training program](#) for state facility managers. CBK manages the [Clean Energy Learning Center](#), an energy-efficiency training platform created for New Jersey's Clean Energy Program. The training covered the skills needed to optimize building energy performance.

### Advancing Clean Energy: NJEDA Fellowship - Wind Technology

PhD candidate and NJEDA wind institute fellow Akhyurna swain has developed [a unique co-simulation platform](#) for modeling of wind turbine drive trains that could save \$15 million O&M costs/year for New Jersey's offshore wind turbines. The results were presented in Wind Institute Research Symposium 2023 where she is pictured with adviser Dr. Philip Pong and students Sindhu, Salma and Ivan.



# Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

8 DECENT WORK AND ECONOMIC GROWTH



## INSTITUTIONAL HIGHLIGHTS

### NJIT is New Jersey's No. 1 Public University for ROI

Hands-on learning that prepares students for in-demand careers earned NJIT this distinction. Government-sourced data identified NJIT as one of two NJ universities to crack the top 100. [Degree Choices](#) evaluated 2,200 colleges on how educational costs measure up to additional earnings a student can expect to make after graduation and how this earning potential compares to that student's peers.



### High Marks for Value and Career Placement

The Princeton Review ranked NJIT No. 11 on its list of the [Top 20 for Best Career Placement](#) and No. 35 on its list of the [Top 50 Best Value Colleges](#) in its [2023 rankings](#) of public universities. The university's career fair (pictured) routinely attracts thousands of students and hundreds of employers. Also, for the sixth straight year, NJIT was featured on The Princeton Review's master list of [Best Value Colleges](#).



### NJIT to Develop Economic Strategy for Airport City Newark

NJIT's [Airport City Newark project](#) is set to revitalize Newark's underserved area near the airport. Thanks to a USEDA grant and the NJEDA, they'll develop a Comprehensive Economic Development Strategy. Led by Colette Santasieri and Darius Sollohub, this initiative aims to transform a 37-acre district into a thriving economic hub, addressing unemployment and low income in the Dayton neighborhood.



### Progress Data

#### 2023 Ranking

101-200

#### 2023 Score

67.9

#### Improvement Made Since 2020

+19.2

#### NJIT Best Career Placement Rank

11

#### NJIT Rank in Best Value Colleges

35

# 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



## Progress Data

### 2023 Ranking

401-600

### 2023 Score

42.3

### Improvement Made Since 2020

-5.9

### I-CORPS Mini-Grants

Up to \$3,000

### NJIT National Academy of Inventors Fellows

12

# Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

## INSTITUTIONAL HIGHLIGHTS

### Call for Innovation, Partnership in Sustainability



Innovation, collaboration, legislation and recognizing the implications of our actions are key to achieving sustainability, according to Shawn LaTourette, commissioner of the N.J. Department of Environmental Protection. LaTourette (pictured), a speaker at an [April 2023 sustainability symposium at NJIT](#), sees a symbiotic relationship between nature and humans, with an investment in one benefitting the other.

### NSF I-CORPS Entrepreneurial Training and Mini-Grants

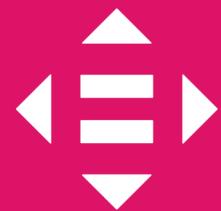


Martin Tuchman School of Management [provides training and mini-grants](#) to students and faculty who want to explore the commercial viability of their ideas. Since 2015, 175 teams have formed, securing \$3.8 million in commercialization grants. This program promotes entrepreneurship among underrepresented groups, as 86% of teams in the program were led by minority individuals.

### Student Inventions Energize NJIT's Summer Campus



A rapid point-of-care device with a unique electrode structure to identify toxins in humans was the top winner for the [Undergraduate Research and Innovation \(URI\) Symposium](#) at NJIT. URI programs give students opportunities to identify topics, conduct research and present findings. Higher education experts agree that applied research brings theory students learn out of the classroom and into the real world.



## Reduce inequality within and among countries

### INSTITUTIONAL HIGHLIGHTS

#### NJIT Earns Minority-Serving Institution Designation

NJIT has qualified as an Asian American Native American Pacific Islander Serving Institution with more than 20% of undergraduate students identifying in this group. The federal designation opens the door for additional support levers such as federal grants and increased research opportunities. Earning the MSI designation comes as NJIT intensifies its efforts to deepen diversity and ensure equity, inclusion and belonging.



#### New Jersey Equity in Commercialization Collective Project

NJIT is a lead partner in the NJECC PROJECT, funded by the National Science Foundation (NSF) to increase the diversity of STEM faculty researchers who participate in New Jersey's entrepreneurship and innovation ecosystem. NJECC's first annual conference — "Innovation for Impact: Commercializing Academic Discovery"—took place on the NJIT campus on 27 October 2022.



#### NJIT Deepens Diversity on Campus

NJIT is intensifying efforts to promote diversity, equity, inclusion and belonging. This includes hiring a Chief Diversity Officer and implementing initiatives like college prep programs, diversity leadership training and research into various issues, all focused on serving students. These efforts have already yielded results, with underrepresented minorities comprising 42% of the 2026 class.



#### Progress Data

##### 2023 Ranking

101-200

##### 2023 Score

69.8

##### Improvement Made Since 2020

+29.7

##### Underrepresented Minorities in Freshmen Class

42%



## Make cities and human settlements inclusive, safe, resilient and sustainable



### Progress Data

2023 Ranking

63

2023 Score

81.1

Improvement  
Made Since 2020

+30

Athens Aqueduct  
~2,000 years old

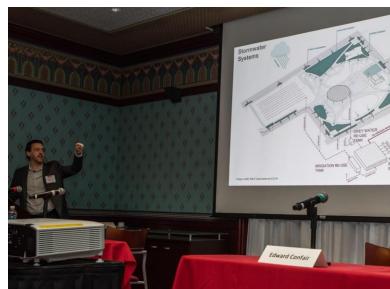
### INSTITUTIONAL HIGHLIGHTS

#### Mapping an Ancient Solution to a Modern Crisis



A 2,000-year-old [Roman aqueduct in Athens offers a solution to urban heat](#). NJIT Professor Georgette Theodore is building a toolkit with 3D models, democratizing infrastructure design, and tackling high temperatures through green spaces. It bridges ancient ingenuity with modern sustainability to help municipalities access the water flow, see how it intersects with the urban landscape and design public green spaces.

#### NJIT Hosts Inaugural Real Estate Innovation Symposium



Paul Profeta Real Estate Technology, Design and Innovation Center and the Martin Tuchman School of Management brought together academic leaders, government officials, and industry pros [to discuss innovation in real estate](#). Topics ranged from the importance of data in real estate to brownfield remediation of contaminated sites into community spaces. NJIT's engagement with industry was a central theme.

#### NJIT Leir Research Institute Fosters Sustainable Development



The Henry J. and Erna D. Leir Research Institute for Business, Technology, and Society ([LRI](#)) at NJIT supports academic research that fosters sustainable economic development, contributes resources and expertise to the development of smart cities, and tackles critical societal challenges. The three main research areas are Corporate Sustainability and Resiliency, Connected Society and Wellbeing, and Business Data Science.



# Ensure sustainable consumption and production patterns

## INSTITUTIONAL HIGHLIGHTS

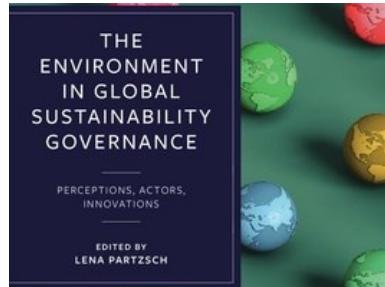
### NJIT Practices Responsible Consumption and Production

NJIT strives to ensure the responsible and efficient use of natural resources through the efforts of its Environment, Health & Safety unit, the revision of procurement guidelines, repurposing and recycling electronic waste, participating in municipal co-digestion projects, and the diversion of construction and demolition waste from landfills.



### NJIT Responsible Consumption and Production Research

NJIT faculty conduct and publish research in the area of responsible consumption and production, such as [this book chapter](#) by Maurie Cohen in “The Environment in Global Sustainability Governance” and his [keynote on digital nomadism](#) for the Systems of Sustainable Consumption and Production Knowledge-Action Network Online Conference.



### NJIT Alum Develops Breakthrough in Battery Recycling

Princeton NuEnergy, a startup founded by alum Chao Yan, is earning [acclaim for reducing li-ion battery waste](#) using a novel plasma-based purification technology. PNE's solution recycles battery components within two days, reducing CO<sub>2</sub> emissions up to 80%, water use by 70%, and cost by 50% compared to typical processes. Their new pilot line with Wistron GreenTech has a recycling capacity up to 500 tons a year.



### Progress Data

#### 2023 Ranking

201-300

#### 2023 Score

65.1

#### Improvement Made Since 2020

+36.1

### Lithium-Ion Batteries Recycled in the US

5%



## Take urgent action to combat climate change and its impacts



### Progress Data

#### 2023 Ranking

401-600

#### 2023 Score

38.5

#### Improvement Made Since 2020

+21.9

#### NJIT STARS Score

55.04

### INSTITUTIONAL HIGHLIGHTS

#### Environmental Life Cycle Assessment in Design (eLCAd 2023)



The third annual eLCAd 2023 symposium merged Life Cycle Assessment (LCA) and design, exploring policy, education, and communication roles in sustainability. Speaker sessions and workshops delved into LCA and design environmental, social, and economic impacts. The co-sponsored event by NJIT and the ACLCA fostered cross-disciplinary collaboration to improve the industrial economy's environmental profile.

#### NJIT Green Educates and Celebrates Sustainability



As NJIT Green leads student organizations on campus to put together different events on campus around education and activity for climate action. One of the featured events is the Earth Day celebration to bring together the NJIT community to appreciate the planet and practice behavior that favors the environment.

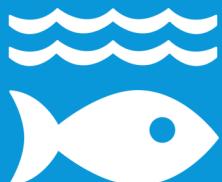
#### NJIT Earns Silver Rating for Its Sustainability Efforts



The Sustainability Tracking, Assessment & Rating System, a program of AASHE, enables NJIT to maintain full transparency in the initiatives taken to further sustainability. Employing a point-based evaluation, the program assesses institutions sustainability efforts in areas ranging from academics to operations. With a total score of 55.04, NJIT has surpassed the minimum for a silver rating and is steadfastly progressing towards gold.

# Conserve and sustainably use the oceans, seas and marine resources for sustainable development

14 LIFE  
BELOW WATER



## INSTITUTIONAL HIGHLIGHTS

### NJIT Student Organizations Team Up to Clean Up Toney's Brook

In cooperation with [Clean Ocean Action](#), two student-led organizations from NJIT - Graduate Society for Women Engineers (GSWE) and Graduates for Inclusion, Diversity, and Equity (GIDE)- cleaned up Toney's Brook, a tributary of the Second River in Essex County, New Jersey. A total of 20 NJIT students participated in the cleanup.



### NJIT Shark Scientist Dispels Shark Movie Myths

PhD Candidate Amani-Webber Schultz was recently invited by Business Insider to [break down how realistic shark movies are](#). Sharks are often portrayed as blood-thirsty animals but the movies get their behavior all wrong. Her brilliant and entertaining enlightenment is the result of her extensive shark research experience, both as a Rutgers undergrad and in the Flammang Lab at NJIT.



### Progress Data

#### 2023 Ranking

101-200

#### 2023 Score

56.5

#### Improvement Made Since 2020

+27.4



## Progress Data

**2023 Ranking**

101-200

**2023 Score**

66.8

**Improvement  
Made Since 2020**

+25.9

**Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss**

## INSTITUTIONAL HIGHLIGHTS

### Predicting the Impacts of Smoke Particles



Dr. Khalizov (Chemistry and Environmental Science) together with Dr. Gor (Chemical and Materials Engineering) are [developing a novel model](#) to describe smoke particles released by wildfires and the burning of fossil fuels. This model will help scientists to make more accurate predictions of the health and climate impacts of smoke as it evolves during long-range transport, such as during recent Canadian wildfires.

### Rooftop Therapy Garden: Benefitting People and Biodiversity



Honors students [transformed the Campus Center rooftop into a Therapy Garden](#) – with plants chosen for their visual or aromatic attractiveness. The project intends to provide some natural stress relief to garden visitors, while also promoting campus biodiversity. The Urban Ecology Lab monitors the rooftop and other Honors College gardens to measure the effects of these plantings on campus biodiversity over time.

### Winning ADHC Biodiversity Initiative: Monarchs and Milkweed



This year, among ADHC First-Year Seminar proposals for enriching the area near Summit Street Parking Garage, "[Monarchs and Milkweed](#)" claimed victory. This winning proposal emphasized the importance of introducing more native plant species to our campus and addressed the unsuitability of the existing milkweed to support endangered insect populations such as monarch butterflies and bumblebees.

# Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

**16** PEACE, JUSTICE AND STRONG INSTITUTIONS



## INSTITUTIONAL HIGHLIGHTS

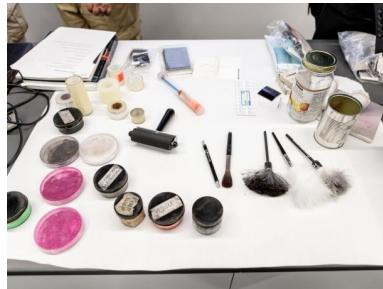
### Machine Learning to Detect COVID-19 Misinformation

Natalia Smith, a Computer Science senior, conducted research to analyze the issue of fake news surrounding COVID-19 on Twitter. Working alongside Dr. James Geller and Dr. Chih-Yuan, she developed [a fake news detection application](#) using a BERT machine-learning model trained on thousands of false and real news headlines. The app exhibits 90 percent accuracy in assessing the authenticity of COVID-related tweets.



### Forensics is College Path from High School

NJIT's Center for Pre-College Programs and the College of Science and Liberal Arts created [the Forensic Science Initiative](#) last year to strengthen high school teaching and provide students with a STEM college pathway. The initiative includes a conference for teachers, a forum for school leaders, on-going teacher professional development, and summer enrichment and dual credit forensic science courses for students.



### NJIT Opens Black History Month with Message to Protect One Another

NJIT's [recently appointed Chief Diversity Officer](#), David Jones, celebrated NJIT's accomplishment of becoming one of the nation's most diverse campuses by highlighting the strengths of a diverse community built on unity, empathy, and awareness of oneself and others.



### Progress Data

**2023 Ranking**

101-200

**2023 Score**

75

**Improvement  
Made Since 2020**

+16.2

**Misinformation  
App Accuracy**

90%



# Strengthen the means of implementation and revitalize the global partnership for sustainable development



## Progress Data

**2023 Ranking**

201-300

**2023 Score**

81.3

**Improvement  
Made Since 2020**

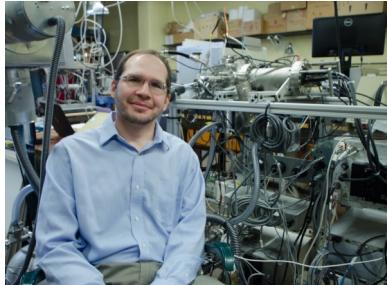
+24.6

**NJHEPS Member  
Institutions**

49

## INSTITUTIONAL HIGHLIGHTS

### Researchers Awarded \$620k to Study Climate Impact of Soot



NJIT professors, Alexei Khalizov and Gennady Gor, has begun [a three-year project](#) that aims to improve scientists' understanding of the complex microphysics that govern how soot particles travel and change their composition in the atmosphere. The results of this research could potentially help policymakers develop more effective control strategies for soot pollution.

### New Jersey Higher Education Partnership for Sustainability



The New Jersey Institute of Technology is a founding member of [NJHEPS](#), an organization dedicated to promoting sustainability within higher ed. In collaboration with representatives from other universities, our organization works to improve the practice and teaching of sustainability through collective action around student engagement, knowledge sharing, and workforce development.

### Embedding Sustainability as an Institutional Learning Goal

Sustainability
Students evidence a cross-disciplinary understanding of the concepts of sustainability and their applications locally and globally.

NJIT prioritizes sustainability as one of its six [institutional learning goals](#) (ILGs). Through an [ongoing initiative](#), academic programs will be mapping their student learning outcomes to the ILGs to facilitate their infusion and implementation across all undergraduate, graduate, certificate, and doctoral programs

# NJIT is On Track to Be Carbon Neutral

Sustainability is a priority for the NJIT community, as evident through practices such as the conservation of the campus ecosystem, the adoption of renewable energy sources, informed recycling, and more. With the recent establishment of the Sustainability Subcommittee, NJIT has initiated the coordination of collective efforts within our community. The presence of the subcommittee creates additional opportunities for individuals and groups to contribute their ideas and bring NJIT one step closer to its goal.

Our efforts in promoting sustainable practices both inside and outside the classroom has helped foster environmental consciousness among our students. We believe the impacts of this have already extended beyond our campus and into the

Newark community. We are eager to expand our reach and engage in discussions with the wider population to seek solutions for challenges that will hinder our shared future.

The 2023 Sustainability Progress Report serves as a testament of NJIT's dedication to improve itself and the world. NJIT's investments in research, as depicted in several parts of this report, is one of the core driving forces behind NJIT's sustainability progress. We embrace the U.S. EPA's sentiment that "Sustainability isn't part of our work – it's a guiding influence for all of our work" and impart this belief to all members of our community. Our achievements thus far are precursors for even greater advances.



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NJIT Supports the Sustainable Development Goals

# SUSTAINABLE DEVELOPMENT GOALS



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