Happiness & Sustainability Around the Earth

SDSN
United States of America

www.sdsnusa.org
Kerry Kennedy, JD
President, RFK Human Rights
Happiness & Sustainability Around the Earth
24hr Webinar
April 22, 2020

The Role of Universities in Fighting Covid-19, Achieving Sustainable Development, and Addressing Social Inequalities

Dr. Jeffrey Sachs
SDSN President and Director of the Columbia University Center for Sustainable Development

Dr. Kristina M. Johnson
State University of New York System Chancellor

Dr. Wayne A. I. Frederick
Howard University President

Dr. Peter Salovey
Yale University President

Dr. Neeli Bendapudi
Yale University President
Jeffrey Sachs, PhD
President, SDSN
Director, Columbia University Center for Sustainable Development
Happiness & Sustainability Around the Earth

The Role of Universities in Fighting COVID-19, Achieving Sustainable Development, and Addressing Social Inequalities

Presented by
Wayne A. I. Frederick, M.D., MBA, F.A.C.S.
Earth Day 2020
HOWARD UNIVERSITY: In the beginning

- **March 2, 1867:** Charter approved by the 39th United States Congress, Named for General Oliver O. Howard, a Civil War hero

- Intent: The University was established on the principle that it would be open to all ethnicities, both sexes, and all social classes

- Charter: The following departments were specified: normal and preparatory, collegiate, theological, medicine, law, and agriculture
HOWARD UNIVERSITY: Today

- 13 Schools and Colleges
- 9 schools within Academic Affairs
- 4 schools of the Health Sciences
- 6,000 employees including 1,000 faculty
- 256-acre main campus
- New $70 million Interdisciplinary Research Center opened in 2016
In January 2019, after a year-long development process, that involved representatives from the entire campus community, Howard unveiled its new five-year strategic plan, **HOWARD FORWARD**.

- **Enhance Academic Excellence**
- **Inspire New Knowledge**
- **Serve our Community**
- **Improve Efficiency & Effectiveness**
- **Achieve Financial Sustainability**
HISTORICALLY BLACK COLLEGES AND UNIVERSITIES DIVERSIFYING THE PIPELINE

Join the conversation on social media @HUPrez17 #HowardForward
CRITICAL ROLE OF HBCUS

- 300,000 students attend HBCUs
  - Of this population 80% are African American

- HBCUs represent 3% of all four-year institutions

- HBCUs produce 17% of bachelor’s degrees awarded to African Americans

Source: National Center for Education Statistics
HBCUS PRODUCE 28% OF AFRICAN AMERICANS IN THE STEM FIELDS*

- 34% of African Americans who received bachelor’s degrees in physics, chemistry, astronomy, mathematics and biology earned them from HBCUs*

- Of the top 10 colleges whose African American graduates went on to get PhDs in science and engineering, the top eight were HBCUs**

*National Center for Education Statistics  
**National Science Foundation
TOP 50 U.S. BACCALAUREATE-ORIGIN INSTITUTIONS OF
BLACK SCIENCE AND ENGINEERING DOCTORATE
RECIPIENTS
(2002–11)

1. Howard University  220
2. Spelman College  175
3. Florida A & M University  154
4. Hampton University  150
5. Xavier University of LA  126
6. Morehouse College  106
7. Morgan State U.  102
7. NC A&T State U. 102
9. Southern U. 100
10. Tuskegee U.  80
10. U. Maryland, Baltimore County 80
12. U. Maryland, College Park 76
13. U. Michigan, Ann Arbor 73
14. U. Virginia, 72
15. Harvard U. 71
16. Jackson State U.  69
17. U. California, Berkeley 64
18. U. Illinois, Urbana-Champaign 62
18. U. North Carolina, Chapel Hill 62
20. Tennessee State U.  61
21. Yale U. 60
22. Brown U.  55
22. Massachusetts Institute of Technology 55
24. U. Florida 54
25. Cornell U. No 51
26. Alabama A&M U. 50
29. Princeton U. 47
29. Rutgers, State U. NJ, New Brunswick 47
31. CUNY City C. 46
31. Georgia Institute of Technology, 46
31. Michigan State U. 46
34. Clark Atlanta U. 45
34. Florida State U. 45
34. Prairie View A&M U. 45
37. Tougaloo C.  44
38. U. Pennsylvania 43
39. CUNY, Hunter C.  42
39. Pennsylvania State U. 42
41. Norfolk State U. 41
42. Louisiana State U. 40
42. North Carolina Central U. 40
42. U. California, Los Angeles 40
45. Grambling State U. 39
45. U. South Carolina, Columbia 39
47. Stanford U. 36
47. Texas A&M U., 36
47. U. Georgia 36
50. Dillard U.  35
50. Fisk U.  35
50. Temple U. 35
### TOP 10 UNDERGRADUATE INSTITUTIONS SUPPLYING BLACK OR AFRICAN AMERICAN APPLICANTS TO US MEDICAL SCHOOLS 2016-17

**SOURCE:** Association of American Colleges

<table>
<thead>
<tr>
<th>UNDERGRADUATE INSTITUTION</th>
<th>BLACK OR AFRICAN AMERICAN APPLICANTS</th>
<th>TOTAL APPLICANTS FROM THE INSTITUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOWARD UNIVERSITY</td>
<td>111</td>
<td>126</td>
</tr>
<tr>
<td>Univ. of Florida</td>
<td>95</td>
<td>854</td>
</tr>
<tr>
<td>Xavier Univ. of Louisiana</td>
<td>84</td>
<td>91</td>
</tr>
<tr>
<td>Spelman College</td>
<td>76</td>
<td>76</td>
</tr>
<tr>
<td>Univ. of N. Carolina Chapel Hill</td>
<td>63</td>
<td>473</td>
</tr>
<tr>
<td>Univ. of South Florida</td>
<td>62</td>
<td>366</td>
</tr>
<tr>
<td>Florida State Univ.</td>
<td>59</td>
<td>338</td>
</tr>
<tr>
<td>Cornell Univ.</td>
<td>58</td>
<td>530</td>
</tr>
</tbody>
</table>
HUMS MS
(2)
Howard University Middle School of Mathematics and Science
STUDENT PROFILE

62% of students exceeded proficiency in ELA on PARCC
51% of students exceeded proficiency in Math on PARCC
100% of students performing at an 8th grade level or higher, upon graduation, as measured by NWEA Measures of Academic Progress
KARSH STEM SCHOLARS PROGRAM
COHORT-3

- Average GPA  3.8
- Average ACT  30
- Average SAT  1384
- 15 women and 14 men
All have committed to pursuing a Ph.D., or a combined MD/Ph.D.
KARSH STEM SCHOLARS PROGRAM
COHORT-4

• Gender: Male – 21
  Female – 19

• Race: Black – 36
  Black & Latinx – 3
  Asian – 1

• Major: Biology – 11
  Physics – 7
  Chemical Eng. – 6
  Computer Science – 5
  Mechanical Eng. – 5
  Computer Eng. – 3
  Chemistry – 3

• Average GPA: 3.92
• Average Combined SAT: 1410
• Average SAT Math: 724
• Average Composite ACT: 30
Howard University Students
- 27 Computer Science Majors
- 2 Information Systems Majors
- 1200 SAT score

Students took a selection of applied Computer Science Courses from HBCU/HSI Faculty including:
- Machine Learning
- Product Management
- Cloud Computing
- Mobile Applications
- Database Systems

<table>
<thead>
<tr>
<th>Institution</th>
<th>Students Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Howard University</td>
<td>29</td>
</tr>
<tr>
<td>California St. – Dominguez Hills</td>
<td>5</td>
</tr>
<tr>
<td>Dillard University</td>
<td>3</td>
</tr>
<tr>
<td>Florida A&amp;M University</td>
<td>5</td>
</tr>
<tr>
<td>Morgan State University</td>
<td>5</td>
</tr>
<tr>
<td>New Mexico State University</td>
<td>5</td>
</tr>
<tr>
<td>Prairie View A&amp;M University</td>
<td>3</td>
</tr>
<tr>
<td>Spelman College</td>
<td>3</td>
</tr>
<tr>
<td>University of Puerto Rico-Mayaguez</td>
<td>5</td>
</tr>
<tr>
<td>University of Texas-El Paso</td>
<td>5</td>
</tr>
</tbody>
</table>
Tech Exchange
(Howard West)
Google Partnership

- Average GPA for current students: 3.61
- Average SAT Scores for current students: 1200
- Current Gender Breakdown: 12 Female/17 Male
### Tech Exchange COHORT II STATISTICS

<table>
<thead>
<tr>
<th>Institution</th>
<th>Students Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Howard University</td>
<td>29</td>
</tr>
<tr>
<td>California St. – Dominguez Hills</td>
<td>5</td>
</tr>
<tr>
<td>Dillard University</td>
<td>3</td>
</tr>
<tr>
<td>Florida A&amp;M University</td>
<td>5</td>
</tr>
<tr>
<td>Morgan State University</td>
<td>5</td>
</tr>
<tr>
<td>New Mexico State University</td>
<td>5</td>
</tr>
<tr>
<td>Prairie View A&amp;M University</td>
<td>3</td>
</tr>
<tr>
<td>Spelman College</td>
<td>3</td>
</tr>
<tr>
<td>University of Puerto Rico-Mayaguez</td>
<td>5</td>
</tr>
<tr>
<td>University of Texas-El Paso</td>
<td>5</td>
</tr>
</tbody>
</table>

**1200 SAT score**

**2** Computer Science Majors

**2** Information Systems Majors

Students took a selection of applied Computer Science Courses from HBCU/HSI Faculty including:

- Machine Learning
- Product Management
- Cloud Computing
- Mobile Applications
- Database Systems
Pre-Health Scholars 2019 Program Participants

The average GPA is 3.42

The average MCAT practice score increase: +5 points
The average DAT score Increase: +4.4 points

Of the 25 members, 17 - females; 8 - males

Major Breakdown

Biology (13)
HHPL/Sport Medicine (7)
HHPL/Community Health (1)

Chemistry (1)
Math (1)
Nutritional Sciences (1)
Neeli Bendapudi, PhD.
President, University of Louisville
Who we are:

- Established 1798 as one of the oldest city universities
- 12 schools of study, 22,000+ students
- ONE of only 69 Universities in the World
  - One of 131 Carnegie R1s
  - One of several hundred Carnegie Community-Engaged
- 40% of our students are Pell-eligible
- UofL Health consists of 5 hospitals and 4 ambulatory care centers with more than 10,000 employees
Delivering coronavirus testing to KY

Diagnostic Testing
Key Researchers: Julio Ramirez and Ruth Carrico

• UofL has ramped up its efforts to combat the deadly pandemic;

• Delivered thousands of results to all 15 major area hospitals and others across the state, and processing drive-through testing for UofL Health;

• Testing capacity has increased to more than 1000/day and will continue to grow.

Manufacturing PPE
Key Researchers: Sundar Atre and Ed Tackett

• UofL created a 3-D printed swab made of a pliable resin material;

• Promising solution for the shortage of swabs in COVID-19 test kits in Kentucky;

• Collaboration: UofL’s Additive Manufacturing Institute of Science & Technology (AMIST), Schools of Dentistry, Engineering and Medicine.
Research Impact

Seeking new drugs using computers in Kentucky schools

DNA tech for fighting novel coronavirus

Tobacco compounds as therapeutic agents
Seeking new drugs using computers in Kentucky schools

Key Researcher: John Trent

- UofL using the computing power of thousands of computers in classrooms across the state to identify drugs to treat COVID-19;

- Part of the DataseamGrid, a network of computers housed in classrooms of 48 Kentucky school districts;

- Computers at work 24/7 to identify the most promising drugs and compounds to fight SARS-CoV-2 and its disease, COVID-19
DNA tech for fighting novel coronavirus

Key Researchers: Paula Bates, John Trent and Kenneth Palmer

- UofL technology is believed to block the novel coronavirus SARS-CoV-2 from infecting human cells;

- Based on a piece of synthetic DNA -- an “aptamer” -- which targets and binds with a human protein that viruses hijack to replicate inside the body;

- Leverages Center for Predictive Medicine for Biodefense and Emerging Infectious Diseases (CPM) and Regional Biocontainment Lab;

- Licensed by a commercial partner and planning clinical trial.
Tobacco compounds as therapeutic agents

Key Researchers: Kenneth Palmer and Donghoon Chung

• UofL exploring COVID-19 therapeutic agents that could be grown quickly in host tobacco plants;

• Compound is known as Q-Griffithsin;

• Co-owned by the university with the National Cancer Institute and the University of Pittsburgh;

• Strain could be the key to quickly mass-producing a preventive agent, treatment or vaccine for COVID-19;

• Leverages UofL’s Regional Biocontainment Laboratory (RBL), housed in the CPM.
Christina Lee Brown Envirome Institute

Key Researchers: Aruni Bhatnagar and Ted Smith
Envirome Institute Community Co-Immunity Project

- Town-Gown Partnership
- https://louisville.edu/envirome/covidstudy
• 2008 – Signed Carbon Commitment & established university-wide Sustainability Council
• 2009 – Established annual Green Threads: Sustainability Across the Curriculum faculty workshop
• 2010 – Released Climate Action Plan
• 2010 – First recognized as Tree Campus USA
• 2011 – 10th school in nation submit for a STARS sustainability rating (Silver) from the Association for the Advancement of Sustainability in Higher Education (AASHE)

• 2013 – Named the most Bicycle-Friendly University in Kentucky
• 2014 – Received AASHE Award for Best Case Study for Earn-A-Bike Program
• 2016 – One of only 100 schools to achieve STARS Gold sustainability rating
• 2019 – Achieved nearly 16% reduction in carbon emissions despite our growth
Empowering our communities.
Advancing our health.
Engineering our future economy.
Peter Salovey, PhD.
President, Yale University
Learning from COVID-19 and Becoming More Resilient

24-Hour Webinar for Earth Day
UN Sustainable Development Solutions Network
April 22, 2020

Peter Salovey, Ph.D.
President

Chris Argyris Professor of Psychology

Yale
Three Essential Elements

1. Create new knowledge
2. Translate new knowledge into actions
3. Educate the next generation of leaders
Contributing to the City’s and State’s Response
Looking Ahead
Kristina Johnson, PhD.
Chancellor, State University of New York
The Role of Universities in Fighting Covid-19, Achieving Sustainable Development, and Addressing Social Inequalities

Kristina M. Johnson, PhD.
Chancellor, State University of New York
Advisors to the Steering Committee in the following areas:

- Counsel
- Finance/Enterprise Risk Management
- Research Foundation
- Communications (Internal and External)
- External Agencies

SUNY COVID-19 TASK FORCE
Provides guidance to campuses, Chancellor, Board, and other relevant stakeholders

SUNY COVID-19 CHAIRS
Tod Laursen, Robert Haelen, Stephanie Fargnoli

STEERING COMMITTEE
Specialty Groups Listed Below

MEDICAL
INTERNATIONAL PROGRAMS
RESIDENTIAL/STUDENT SERVICES/STUDENT HEALTHCARE
EMERGENCY MANAGEMENT/ EH&S/ POLICE
ACADEMICS
EMPLOYMENT
**Major SUNY COVID-19 Timeline of Events**

- **Dec. 31:** First person known to have the virus identified in Wuhan, Hubei, China
- **January 6:** CDC’s first notice of a Level 1 warning
- **January 23:** SUNY Outreach to students studying in China impacted by travel restrictions.
- **January 30:** First case confirmed in United States
- **February 22:** Chancellor action planning with President Min
- **February 13:** Chancellor and Provost meet with SUNY Korea President Wonki Min
- **March 2:** Chancellor appoints SUNY COVID-19 Task Force; DOH webinar for campuses
- **March 4:** SUNY/CUNY study abroad programs suspended from Level 2,3
- **March 7:** SUNY students in Italy are evacuated; Governor signs EO 202 Declaring a Disaster Emergency in NYS
- **March 9:** SUNY students in South Korea and Japan are evacuated
- **Week of March 9:** Online communities of practice System-wide discussions

Additional notes:
- **January 27:** SUNY COVID-19 team starts regular website information posts
- **March 2:** Chancellor appoints SUNY COVID-19 Task Force; DOH webinar for campuses
- **March 7:** SUNY students in Italy are evacuated; Governor signs EO 202 Declaring a Disaster Emergency in NYS
- **March 9:** SUNY students in South Korea and Japan are evacuated
- **Week of March 9:** Online communities of practice System-wide discussions

www.suny.edu
COVID-19 Timeline of Events

March 10:
Chancellor initiates daily calls with 64 campus Presidents; All SUNY Spring 2020 study abroad programs cancelled

March 11:
First confirmed case on a SUNY campus; SUNY moves to remote instruction for remainder of Spring semester

March 16:
Governor Cuomo announces expansion hospital capacity and statewide employee reductions & school closings

March 20:
Governor Cuomo Signs NY on Pause; 100% Closure of Non-Essential Businesses Statewide

March 22:
Stony Brook and Old Westbury established as temporary hospital space

March 25:
CARES Act signed

March 27:
8,800 laptops and chrome books delivery started to SUNY students who need them

April 3:
NY State Enacted Budget signed

April 5:
SUNY Downstate University Hospital becomes a COVID-19 only facility

April 16:
Governor extends “NY on Pause” to May 15, 2020

April 17:
29 campuses affected;164 faculty/staff and students tested positive
Happiness & Sustainability Around the Earth

Dr. Jeffrey Sachs
SDSN President and Director of the Columbia University Center for Sustainable Development

Dr. Kristina M. Johnson
State University of New York System Chancellor

Dr. Wayne A. I. Frederick
Howard University President

Dr. Peter Salovey
Yale University President

Dr. Neeli Bendapudi
Yale University President

Q&A
Jeffrey Sachs, PhD
President, SDSN
Director, Columbia University Center for Sustainable Development
Wayne A. I. Frederick
President, Howard University
Neeli Bendapudi, PhD.
President, University of Louisville
Peter Salovey, PhD.
President, Yale University
Kristina Johnson, PhD.
Chancellor, State University of New York
Thank you!

www.sdsnusa.org