

#### GEORGIA TECH'S OEP, 2016-2020

## SERVE-LEARN-SUSTAIN



## **KEY ACCOMPLISHMENTS**

"Amplifying Impact Since 2016"

### **EDUCATION FOR SUSTAINABLE DEVELOPMENT**

"SLS has changed my life. I came to Georgia Tech with a passion for the environment, but no clear idea about how to combine that passion with my skill set in a way that would truly be effective. [SLS] has taught me that creating sustainable communities means first listening to the actual needs of those communities, being willing to let go of preconceptions and ego to really figure out what the problems are and what solutions are actually viable."

- Rachel Dekom, HTS



#### AFFILIATED COURSE HIGHLIGHT: MGT 3770 BUSINESS DECISIONS FOR SHARED VALUE

#### **Professor:**

#### Ravi Subramanian

Scheller College of Business; SLS 2019 UN SDG Faculty Fellow Research Project: Effects of Incentive Programs for Workplace Safety - SDG8 Decent Work and Economic Growth; SDG 12 Responsible Consumption and Production

#### Partner:

#### **Garry Harris**

Center for Sustainable Communities

#### **Course Description:**

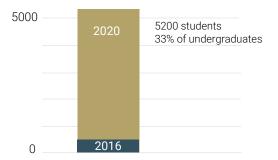
At the heart of the concept of "business sustainability and shared value" are interconnections among the economic, environmental, and societal dimensions of business performance. This course uses the World Economic Forum Global Risks Report and the United Nations Sustainable Development Goals as frameworks to establish the role of fundamental human needs (food, water, shelter, energy, wages, and community) in shaping long-term business value and overall economic progress. The course partner is the Center for Sustainable Communities and EcoDistrict Hampton Roads in Virginia. In Spring 2019, student teams researched, developed, and proposed creative development plans for the neighborhood of over 5,000 homes and 17,000 residents, focused on building community resilience through economic development, small business cultivation, and local health and wellness.

## **EDUCATION FOR SUSTAINABLE DEVELOPMENT**

## **Key Accomplishments**

#### 1. 33% of Undergraduates Enrolled in SLS-Affiliated Courses in 2020

Student Enrollment Growth in SLS-Affiliated Courses, 2016-2020



The Affiliated Courses Program launched in Spring 2016 with just 11 courses, primarily in Liberal Arts, enrolling just under 300 students. In AY2020, we offered 137 courses across all six colleges, taught by 100 faculty and enrolling approximately 5200 students (33% of the undergraduate population). Through the program, faculty request affiliation for any course that covers a topic related to the SLS theme, "creating sustainable communities." SLS then provides faculty - approx. 100/ year - with support to deepen content related to sustainability and/or community engagement, through workshops, 1:1 advising, and an online Teaching Toolkit with over 50 original tools. SLS has awarded over \$500,000 in faculty course development grants (8% of the QEP budget).

#### 2. SLS Partners with SCaRP to Launch New Sustainable Cities Minor



The Sustainable Cities Minor was first launched in 2016 by SCaRP, with a letter of support from SLS. In 2019, with IUCC approval, a new version of the minor was launched, co-run by SLS and SCaRP, with a stronger focus on equity, community engagement, and integrated problem-solving. The most multidisciplinary minor on campus, it comprises 68 courses across 12 schools and all six colleges, including three study abroad programs (pictured: Spain).

#### 3. Service-Learning Surpasses AAU Cohort in 2020

**NSSE Survey** 

		2014 (QEP Baseline)		<b>2020</b> (Final QEP Year)	
		GT	AAU	GT	AAU
Service- Learning	FY	32%	43%	48%	41%
	SR	37%	46%	50%	48%

The NSSE survey (National Survey of Student Engagement) Service-Learning item was identified as a key benchmark question reflecting QEP goals. Results show a significant increase in students participating in service-learning, with participation now surpassing the Association of American Universities (AAU) cohort.

Note: FY=first-year students, SR=seniors

#### 4. Affiliated Courses Program Receives 2020 AASHE Campus Sustainability Achievement Award



The Association for the Advancement of Sustainability in Higher Education (AASHE) selected SLS to receive this award for its Affiliated Courses Program as Best Case Study from a Four-Year or Graduate Institution with More Than 10,000 Full-Time Students. AASHE says, "By raising the visibility of high-impact sustainability projects and pioneering research, the awards program shares innovations and inspires continued progress toward a sustainable future."

### **PARTNERSHIPS**

"Maximize every day and opportunity you have to work with the community — listen and learn from them, while also thinking of ways, no matter how small, of how you could contribute and help them in their goals."

- Rey Angeles, M.S. Supply Chain Engineering



#### PARTNERSHIP HIGHLIGHT: CENTER FOR CIVIC INNOVATION (CCI)

#### **Partnership Description:**

CCI has been supporting social entrepreneurs in Atlanta since 2014 to eliminate inequality through community-driven solutions. SLS's partnership with CCI demonstrates the type of long-term, mutually beneficial relationships we strive to develop. It provides students with training in community-based social innovation advanced by female entrepreneurs and entrepreneurs of color. In return, through CCI, GT is able to support these entrepreneurs. This timeline demonstrates how the partnership has grown, from one-off activities to co-running programs and shepherding entrepreneurs' projects across multiple programs.

"Universities around the country often struggle to connect the campus to the community. But because of SLS, Georgia Tech students are able to experience the brilliance and complexity of Atlanta. They are an exemplary partner that listens and contributes back just as much as they expect. They show love and respect for community leaders in Atlanta. We are a better organization because of SLS."

- Rohit Malhotra, CCI Executive Director

#### **CCI/SLS Partnership**:

2016-2017	CCI hosts Smart Cities Faculty Fellows workshop
2018-2019	CCI teaches Social Innovation "Buzz Course" boot camp Executive Director guest lectures in SLS course CCI joins the SLS Partnership Advisory Council
2019-2020	CCI co-teaches Buzz Course Buzz Course features CCI entrepreneurs' projects
2020-2021	CCI co-teaches Internship Program CCI and entrepreneurs host interns Entrepreneurs' work is featured in GT public event One project enters GT Ideas to Serve competition CCI offers P/T employment to intern CCI becomes SLS's first "Signature Partner"

## **Key Accomplishments**

#### 1. 25 Long-Term Partner Relationships Established



SLS has developed strong, long-term relationships with approx. 25 partner organizations who work in our key focus areas: community health, green infrastructure, equitable and sustainable development, climate change and energy, and social innovation. We have ongoing relationships with approx. 15 additional organizations, in Atlanta, across Georgia, and beyond. We have developed structures to grow and support collaborations between these partners, faculty, and courses, including teaching tools and mini-grants. Faculty trainings are often held in communities and feature partners sharing stories of how they are working to improve neighborhood quality of life. This photo (left) captures one such training held in Grove Park in 2016. This work has led to a significant increase in the number of courses incorporating service-learning and community engagement.

#### 2. Partnership Advisory Council (PAC), Strategy, & Principles Established

#### SLS Partnership Principles

- 1. Start with Assets
- 2. Focus on Equity and Justice
- 3. Champion Systems Change
- 4. Support Community Innovators
- 5. Prioritize Process Before Outcomes
- 6. Contribute to the Neighborhood
- 7. Apply Technology in Social Context

In Fall 2018, SLS established a Partnership Advisory Council (PAC) to advise us on our partnership strategy and programs and strengthen our role as a central entry point for partners. The 18 member PAC includes nonprofit, business, and community partners. In Spring 2020, with PAC assistance, SLS released a formal Partnership Strategy, which includes seven principles that are key to building partnerships for sustainable communities. In consultation with partners, we also developed compensation guidelines. As a result, SLS - and Georgia Tech - have gained a reputation across the region as a welcoming, authentic, and transparent collaborator.

"[SLS is] the only place on campus where all input is valued."

- GT PAC member

#### 3. 86 Students Support 65 Partners Through Summer Internship Program, 2018-2020



THERE ARE MULTIPLE SIDES TO EVERY STORY AND IT'S IMPORTANT TO HEAR EVERY SIDE TO TRULY UNDERSTAND WHAT HAPPENED. COFFEE COUNTY MEMORY PROJECT

Kara Vaughn 3rd Year Biology Major Co-host: Coffee County Historical Society Supervisors: T Cat Ford & Tom Johnson



This program provides sustainability partners throughout Georgia with support, while offering students practical experience working on real-world community projects. The program has grown from 15 students in 2018 to 44 in 2020. Students take an accompanying SLS seminar on grassroots sustainability innovation, which facilitates expanded learning and deep reflection. In the 2020 closing session, each student presented one "lesson learned" (one example is pictured). Isabelle Musmanno, who interned at the refugee farming organization Global Growers, shared: "Different cultures have multitudes of knowledge to share - listen, learn, then take action!"

## **UN SUSTAINABLE DEVELOPMENT GOALS (SDGS)**

"Over the past two years, SLS's active and collaborative engagement with CIFAL Atlanta and RCE on this project from its inception to development and implementation is greatly appreciated. Our sustained collaborative partnership serves as a sterling example of implementing SDG 17 (partnerships for the goals)." - Dr. Binbin Jiang, Director, CIFAL Atlanta, KSU



#### PROJECT HIGHLIGHT:

#### UNITAR YOUTH AND THE SUSTAINABLE DEVELOPMENT GOALS E-LEARNING COURSE

#### **Partners**:

RCE Greater Atlanta, CIFAL Atlanta at KSU

#### **Project Description:**

In Fall 2018, RCE Greater Atlanta received a Turner Foundation grant to support the design of an online SDG course, by and for youth. SLS collaborated with CIFAL Atlanta, a UNITAR-affiliated center at KSU, to oversee 12 undergraduate and graduate student fellows from eight higher education institutions across the region to develop the course. Fellows developed modules for seven SDGs, each including local and global case studies highlighting nonprofit and business partners. At the end of the course, students design and implement an action project. Upon completion, students receive a UNITAR Certificate. The course was launched in May 2020 with a virtual showcase (pictured above). Hosted on the UNITAR platform, the course has already reached over 450 youth from over 70 countries.



## **UN SUSTAINABLE DEVELOPMENT GOALS (SDGS)**

# **Key Accomplishments**

# 1. RCE Greater Atlanta is Officially Acknowledged by the United Nations University in 2017 as One of 6 RCEs in the U.S. and 166 Worldwide



The RCE Greater Atlanta launch event, held at the National Center for Civil and Human Rights in October 2018, drew over 150 people from the nonprofit, community, government, business, and education sectors. The network advances the SDGs through education and training, from an equity and justice lens. In 2019, the RCE received two United Nations University Awards for Innovative Projects on Education for Sustainable Development.

#### 2. Advancing SDG Awareness, Action, Research, and Teaching at GT



UN Young Leaders for the SDGs presented at GT as part of the AY2018 SLS Event Series, "Putting the SDGs into Action," which began introducing the SDGs to the GT campus through 17 speakers, workshops, competitions, and community service activities, held at GT, Emory, KSU, and in surrounding communities. In 2019, SLS spearheaded the RCE Track at the Atlanta Global Studies Symposium, featuring guest speakers from RCEs around the world. In 2020, with CTL, SLS is launching an SDG teaching project through the RCE Higher Education Action Group.

#### 3. Nurturing Youth to be SDG Change Agents, Across the Atlanta Region



Photo courtesy of Nicole Kennard

As part of a trip to visit RCE Borderlands Mexico-USA, GT alum Nicole Kennard plants seeds with students at a school garden in Chihuahua, Mexico, after facilitating a social-emotional development workshop with student translators. Nicole shared this photo in a column she wrote for Saporta Report, in which she emphasizes three partnership strategies that she learned from SLS that have been influential in her life: Asset-based Community Development (ABCD), citizen science, and Education for Sustainable Development (ESD).

# INCLUSIVE INNOVATION IN TEACHING AND RESEARCH

"SEI has been pursuing research on 'Energy in a Carbon Constrained World,' as a 'technology problem.' We decided to apply for a MacArthur grant and the focus shifted to community engagement and economic opportunities to improve social equity. The proposal is a triumph of the infusion of SLS thinking into the research agenda of Georgia Tech brought about through the engagement of SLS staff and faculty."

- Matthew Realff, ChBE/SEI



#### PROGRAM HIGHLIGHT: SLS RESEARCH PROGRAM

#### **Program Description:**

SLS engages faculty through their research interests, focusing on sustainable communities topics of interest to large funders such as NSF. We use a transdisciplinary Communities of Practice approach, bringing together faculty across disciplines and with community partners to teach and learn from each other. This program has prompted new Affiliated Courses, influenced existing research projects, and nurtured new research. For example, after participating in the 2015 SLS conference on social sustainability, Adjo Amekudzi-Kennedy (CEE) started a new, multi-disciplinary research project, "Institutions, Infrastructure and the Socio-economy," which is still ongoing today.

"We are having interdisciplinary conversations [in SLS] that are unlike any other I've had in the nine years I've been at Tech, about the social value and impact of our work. This hasn't happened before."

- Carl DiSalvo, IC

#### **SLS Research Activities:**

2015-2016	"Big Ideas" online interactive tool
2016-2017	INSS Conference #1: Social Sustainability (Integrated Network for Social Sustainability NSF Research Coordination Network led by UNC-Charlotte) Faculty Fellows Programs: FEWS, Smart Cities NSF Broader Impacts Workshops for Faculty
2017-2018	INSS Conference #2: Smart Communities Faculty Fellows Programs: Energy Systems, Climate Change
2018-2019	UN SDGs Faculty Fellows Program
2019-2020	Kendeda Building Teaching Fellows Program VIP Building for Equity and Sustainability

# INCLUSIVE INNOVATION IN TEACHING AND RESEARCH

## **Key Accomplishments**

#### 1. Spurring Transdisciplinary & Action-Oriented Research & Teaching



Dennis Creech from The Kendeda Fund uses a VR program developed by John Taylor's CEE research team to explore the Kendeda Building before it was built. This research project stemmed from SLS engagement (see quote). Faculty across GT view SLS as a place that pushes their work in innovative directions - and helps students do the same. Our Capstone Program supports SLS-related projects by pairing student teams with an SLS adviser, a partner, and a faculty SME. In Spring 2020, an SLS ISyE team working with the Georgia World Congress Center on a waste diversion system was named a top three finalist in the Institute of Industrial and Systems Engineering Capstone Award competition.

"SLS significantly impacted my research, encouraging me to develop projects connected to the Kendeda Building, to consider the associated equity implications, and to situate that research into the SDGs, which has had a spillover impact in my development of a Smart and Sustainable Cities interdisciplinary undergraduate course."

- John Taylor, CEE

#### 2. Expanding Number of Opportunities for Deep Sustainability Learning



Allen Hyde from HSoC leads iGniTe summer session students participating in the Sustainable Communities Track on an Atlanta BeltLine tour during their first week of class (2018). Coordinated by SLS, the track focuses on equitable and sustainable development. Using an educational innovation called "Linked Courses," the track brings together courses from different disciplines to explore problems and solutions through a common interdisciplinary framework and joint workshops and field trips with community partners.

#### 3. Immersing Students in Collaborative Learning Beyond the Curriculum



A student and partners conduct research at a local farmers market as part of the SLS Universal Design for Sustainable Communities Buzz Course (Fall 2017). "Buzz Courses" - the name chosen by a student for SLS's short courses - bring together students and partners - and sometimes faculty and staff - for two months to learn about a topic and conduct action research projects with partners. SLS offers one Buzz Course per year, now focused on social innovation. All participants - including partners - receive a GT digital badge from GTPE upon completion.

Emily Weigel (BIOS), who ran a Buzz Course with SLS on stream monitoring and citizen science, calls SLS a "curricular maker space."

## **LEAD BY EXAMPLE: EQUITY & JUSTICE**

"As a Latina, I know firsthand what it is like to be in a space where you don't feel welcome. Especially as an engineering student, I usually find myself one of the only women of color in a room. [....] I hope that we use this building as a standard in our society for not only environmentally sustainable building practices but also for how we want to make all kinds of people feel in communal spaces. Let it set a precedent and create memories of acceptance and peace for all who walk through its doors, perfectly mirroring nature." - Angelica Acevedo, LMC, Living Building Equity Champion, from "Equity Petal: When is a ramp not just a ramp?"



Living Building Challenge 4.0





#### **Program Description:**

The Equity Petal is the least developed of the seven Living Building petals - so SLS determined to push it to new heights. Early on, we formed a work group to promote a robust equity focus in design, construction, courses, and programming. Our work gained widespread recognition. It was featured in the Kendeda Fund Living Building Chronicle and as a case study in Living Building Challenge 4.0 (pictured above), which highlights the Equity Champions, an IDEI program engaging underrepresented students in equity work related to the building. Work continues through the Building for Equity and Sustainability VIP, taught by faculty and staff from four GT units and Skanska. Students are consulting with The International Living Future Institute and the NAACP to write a building case study and develop an equity rating system for capstone projects. In 2020, the course will be featured in an episode of the BBC's Building for a Better Future.





## **LEAD BY EXAMPLE: EQUITY & JUSTICE**

"Every time I wash my dishes, drink a glass of water, rinse my fruit, or eat a piece of ice, I think about those kids in Michigan. It makes me think, 'Black Lives Matter.' Not just in the frame of police brutality, but in the free flowing of water quality, air, and environmental justice."

- Student who attended Flint, MI water crisis program,

 Student who attended Flint, MI water crisis program, part of the SLS Structural Racism Series (2016)



#### PROGRAM HIGHLIGHT: SLS EVENT SERIES FOCUSED ON EQUITY & JUSTICE

#### **Program Description:**

A search on the GT website for "structural racism" reveals that SLS has been one of the primary units cultivating a learning environment that situates equity and justice as central to STEM, sustainability, and the built environment, since opening in 2016. Every semester, we host a series of events and activities focused on these issues, highlighting community perspectives. The series is designed to complement courses, and faculty can use SLS's reflection tool to guide students to reflect on events in relation to what they learn in class. Both students and faculty have emphasized the significant impact that the series has on their learning - and the campus environment. One student states,

"SLS does a great job promoting high-level discussion outside of the classroom; simple questions like "What have you been up to today?" can serve as a conversation starter for topics such as environmental justice and structural racism. This ability to get people talking about important issues is one of SLS's biggest impacts."

#### Sample Events from 2016:

A Screening of 13th

Music for Social Justice at the NCCHR

Data-driven Research for Environmental Justice (pictured above)

Taboo Talk: Dismantling Racism in a Society that Doesn't Believe in It

ASB Trip: Environmental Cleanup on FL's Gulf Coast Solar for All

Racism and Health in the

River Rendezvous: Proctor Creek Water Sampling

The Dakota Access Pipeline Challenge

Teaching Justice at Tech

## **SLS'S PARTNERS**

# **Georgia Tech Partners (Internal - 30)**

African American Student Union	History and Sociology
Atlanta Global Studies Center	iGniTe Summer Session
Brook Byers Institute for Sustainable Systems	Institute Diversity, Equity, and Inclusion
Campus Services	Institute for Leadership and Social Impact
Campus Sustainability	Institute Relations
Career Center	International Education
Center for Education Integrating Science, Mathematics, and Computing (CEISMC)	The Kendeda Building
Center for Teaching and Learning (CTL)	Literature, Media and Communications
Civic Engagement	Office of the Arts
City and Regional Planning	Ray C. Anderson Center for Sustainable Business
Climate and Energy Policy Lab	Smart Cities & Inclusive Innovation
Facilities and Design	Sponsored Programs
Global Change Program	Strategic Energy Institute
Graduate Education and Faculty Development	Student Diversity Programs
GTRI's HBCU/MI Outreach Initiative	Writing and Communication Program

# Off-Campus Partners (External - 42)

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The Asset-Based Community Development Institute at DePaul University	Groundwork Atlanta
Association for the Advancement of Sustainability in Higher Education (AASHE)	Grove Park Foundation
Atlanta Beltline Inc.	Grove Park Neighborhood Association
Atlanta Community Food Bank	International Living Future Institute
Atlanta Metropolitan State College	Kennesaw State University - Center for Teaching and Learning, CIFAL Atlanta, Student Leadership and Service
Carrie's Closet	Mad Housers
Center for Civic Innovation	NAACP - Centering Equity in the Sustainable Building Sector
Center for Sustainable Communities	National Center for Civil and Human Rights
City of Atlanta, Mayor's Office of Resilience	Park Pride
Civic Dinners	Partnership for Southern Equity
Coffee County Historical Society	PlantLanta
Collective Wisdom Group	Skanska
Corporate Volunteer Council of Atlanta	Spelman College - Environmental Studies
Emory University - HERCULES Exposome Research Center;	Southface
Resilience, Sustainability, and Economic Inclusion; Student Engagement	StoryWork International
Friends of Refugees	TransFormation Alliance
Georgia State University - Urban Studies Institute	United Nations Association of Atlanta
Global Growers	Urban Recipe
Global RCE Network	U.S. Green Building Council (USGBC)
Greater Vine City Opportunities Program, Inc.	West Atlanta Watershed Alliance
Greenhouse Accelerator	Wundergrubs
Greening Youth Foundation	



"I wanted to say thank you and reiterate just how pivotal SLS ended up being for me at Tech (and now beyond). My fondest memories were being introduced to so many speakers and professors working on the things I was passionate about. The community leaders and profs I met supported my 2.5 year long Grand Challenges project, inspired that birdhouse class I organized, and connected me to my current job at Gene Kansas' Constellations' Podcast Studio. SLS ended up happening at the perfect time for me. This was exactly what I wanted from Tech, and in reality, was more than I could hope for from a college experience."

- Yonatan Weinberg, HTS