



# Center for Serve-Learn-Sustain

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Annual Report  
AY2017-2018

Georgia Tech  Center for  
Serve-Learn-Sustain

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## Overview, Highlights, Trends, Accomplishments

AY2017-18 was the Center for Serve-Learn-Sustain's third year in operation. During our first two years, we focused on engaging faculty and students across campus in SLS courses and activities; developing a clear and widely accepted framework for sustainable communities education; developing new partnerships with a diverse set of stakeholders both on campus and off; and establishing and strengthening our administrative, programmatic, and staffing infrastructure. In Year 3, we focused on streamlining and honing these initiatives – and our efforts continued to pay off, as we offered over 140 affiliated courses, including courses in every college, as well as summer courses, GT1000, capstone projects, and study abroad, with total enrollment exceeding 6,000 students.

With our primary program – Affiliated Courses – now well established and running smoothly (thanks in large part to the hiring of a Service Learning & Partnerships Specialist), we were also able to turn our attention from broad engagement to deep engagement. In this area, we focused on two initiatives: 1) Working closely with a subset of affiliated faculty to more closely align their courses with our SLS framework, and 2) Developing programs and pathways for students to have deep and sustained learning experiences with SLS over the course of their GT careers.

All of SLS' work has been influenced by our distinct approach to sustainable communities, which includes: a) Approaching sustainability as an integrated system including Economy, Environment, and Society (sometimes called Equity), b) Focusing especially on society and equity as the least understood, and most often ignored, component, and c) Working with communities – and especially marginalized populations – as collaborators, giving them voice and leadership, and recognizing the expertise they bring to the table. (Read more about our approach in our new [“Welcome to SLS”](#) presentation on the SLS website.)

Even though we are still a new Center, it is becoming increasingly clear that we are having significant impact on campus and off. While it is too soon to report on the results of our classroom assessment efforts, students tell us regularly about these impacts: choosing to come to Tech because of SLS; switching majors and thinking in new ways about their career and life interests after taking SLS classes; presenting on SLS-related work at national conferences; receiving prestigious fellowships related to sustainability; and graduating and accepting jobs building on their SLS studies. Faculty similarly report that SLS is changing the way they teach (see Student and Faculty Quotes.) And, as we discuss at the end of this report, this past year was our most impactful year to date influencing the broader sustainability field through our leadership in Atlanta and nationally.

Please read on to learn more about this work and our other key activities this past year.

### SLS Student Quotes

“Taking a class through Serve-Learn-Sustain not only helped me decide which degree to pursue, but also to begin my college career with a more mindful attitude towards the ethics behind engineering than I would have otherwise.” – *Civil & Environmental Engineering Student, 2020*

“I have always been passionate about environmental sustainability, but through SLS, I have learned so much more about social sustainability and equity. I have been able to meet public officials, and this has greatly influenced how I approach problems systematically. I have expanded my network and realized what I'd like to do in my future career as a public leader in sustainability.” – *Material Science & Engineering Student, 2017 – now a Fulbright Scholar*

### SLS Faculty Quotes

“At the outset of my involvement with SLS, I knew little about sustainability, but it was a topic of significant personal interest. The Center has helped me see how the College of Sciences can promote sustainability education and how I can integrate content related to sustainability into my own course.” – *Freshman Chemistry Laboratory Coordinator*

“In SLS events, we are having interdisciplinary conversations 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.” – *Associate Professor, Literature, Media, and Communication*

## Expanding and Deepening SLS Faculty Support

### *Creating and Refining SLS College Strategies*

Over AY2018, SLS continued to work with colleges and schools to develop tailored SLS strategies, directing attention during the first phase of this project to Chemical and Biomolecular Engineering, Civil and Environmental Engineering, the Writing and Communication Program, and the College of Sciences. The strategies articulate key concepts from the field related to creating sustainable communities; create tools for advisers to use to guide students to SLS courses in and beyond their schools; and identify curricular gaps where the school and SLS will collaborate to further infuse sustainable communities-related content and community engagement. The final goal of the strategies is twofold: 1) To have SLS curricular opportunities for students at all levels, and 2) To actively advise students on these opportunities. In AY2019, we plan to launch these initial strategies and continue this work with College of Computing and Mechanical Engineering.

### *Funding and Supporting Affiliated Faculty*

In AY2018, SLS distributed a total of 117 grants to faculty totaling \$241,050, to support their SLS-affiliated teaching or research. We also supported faculty through group programs and one-on-one advising. During the Fall Semester, we coordinated the [Level 1 SLS Affiliates Program](#), which engaged 22 faculty from across all six colleges in deepening their SLS-related course content. The multidisciplinary of the cohort also produced opportunities for faculty to collaborate across colleges around shared themes in both teaching and research. For example, two faculty members – one from College of Sciences and one from Ivan Allen College of Liberal Arts – collaborated around a shared interest in the history of Proctor Creek and its surrounding communities. In Spring Semester, SLS partnered with five other GT centers to launch a year-long [Climate Change Fellows Program](#), comprising 43 faculty, staff, postdocs, and graduate students who are working together for one year to engage in collaborative and applied research and course development around climate change and climate equity.



We also continued to develop and spread awareness of SLS' [Teaching Toolkit](#). The toolkit includes more than 30 tools across seven categories—such as Using Data, Assessment, and Service Learning and Community Engagement—developed by SLS, faculty, and students to help faculty incorporate sustainable communities content and community engagement into their courses. Some tools, such as those introducing SLS or specific general concepts related to sustainable communities, are appropriate to any course (e.g., Environmental Justice 101 or Society, Equity and Sustainability), while others are tailored to specific disciplines (ReGenesis Case Study: Chemical Safety & Ethics in Relation to Communities).

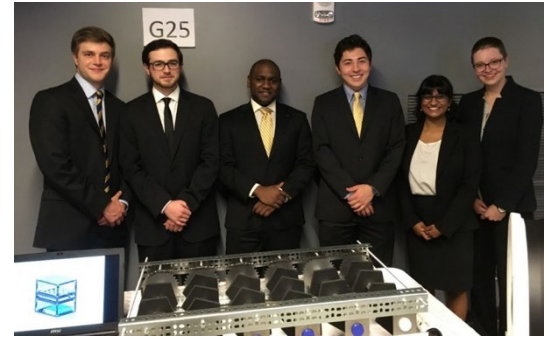
### *Facilitating Faculty and Course Collaborations with Partners*

SLS hosted a number of course development activities during April, which we designated Course Development Month. These included two partner-faculty meet 'n greets where faculty networked with SLS partners who work in thematic areas that resonate with their research and teaching, such as community health, equitable development, and green infrastructure. These gatherings facilitated a variety of collaborations, such as a visual design course partnership with the EPA on branding and publicizing the East Decatur Greenway. Course Development Month also featured an off-campus studio session focused on best practices for community-based projects on Atlanta's Westside as well as a showcase for faculty to share deliverables from course collaborations with partners. A faculty member in Mechanical Engineering, for example, described the

Capstone team she advised that partnered with a sustainable food systems organization to design and prototype a composter for urban farms.

### *Equipping Capstone Student Teams to Create Sustainable Communities*

This past year, SLS also launched a new program to support [SLS-affiliated Capstone Design Teams](#), working with teams in Mechanical Engineering (ME) and Industrial and Systems Engineering (ISyE). SLS provided each team with an SLS staff adviser and a Subject Matter Expert adviser outside their home school to help them approach the project from multiple disciplinary perspectives and ensure a focus on equity issues. For example, an ISyE team working on a project to help address hunger among seniors was advised by a faculty member in History and Sociology who specializes in agriculture and inequality. Building on the success of these initial projects, we plan to expand the program in the coming year to include teams in Civil and Environmental Engineering, Biomedical Engineering, and Computing.



ME composter team with their prototype at the Capstone Design Expo, Fall 2017

### Assessing SLS Student Learning Outcomes

Assessing Student Learning Outcomes (SLOs) in SLS courses is the centerpiece of the Quality Enhancement Plan (QEP). The original QEP had eight SLOs and a skeletal assessment plan that needed further development. A major effort over the last year, in consultation with the Office of Academic Effectiveness, the SLS Assessment Working Group, external experts, and a QEP SACSCOC consultant, has resulted in consolidation to four SLOs and a solid assessment plan. SLS continues to implement most of the original QEP components with these important changes to course infusion to increase impact:

#### 1) *Faculty, Courses, and Students Engaged:*

- The QEP planned to reach students through two core SLS foundation courses as well as newly developed upper division courses. Two core foundation courses are running, with three existing courses also serving as foundation options.
- Rather than create a small number of new upper division courses, SLS designed a Course Affiliation Program in which faculty voluntarily infuse SLS content into their existing courses and affiliate the course with SLS. This has resulted in infusion of SLS content into many existing courses, designed in consultation with specific degree programs.
- The number of SLS-affiliated courses has increased dramatically since we first offered 11 courses in spring 2016. This AY 2017-2018, over 6,000 undergraduate students are enrolled across 160 SLS affiliated courses across all six colleges.

#### 2) *Measuring Faculty Satisfaction:*

- Since SLS participation and affiliation is voluntary, we have added an operational goal to measure faculty satisfaction with SLS: “Cultivate stakeholder satisfaction with the program to strengthen its viability.”
- To date, data have been collected from 87 SLS-affiliated faculty (45% response rate), with 94% indicating they were likely or somewhat likely to work with SLS again and 96% indicating they were extremely likely or somewhat likely to recommend a colleague to work with SLS.

#### Revised Student Learning Outcomes

1. Students will be able to identify relationships among ecological, social, and economic systems
2. Students will be able to demonstrate skills needed to work effectively in different types of communities.
3. Students will be able to evaluate how decisions impact the sustainability of communities.
4. Students will be able to describe how they can use their discipline to make communities more sustainable.

We also continue to offer training to faculty so that their students will be better equipped to gain the knowledge and skills articulated in our SLOs. In April, Dr. Patti Clayton, renowned for her work in Critical Reflection and



Community Engagement, delivered a very successful workshop with over 30 faculty and staff in attendance. Finally, in preparation for our QEP Impact Report due to SACSCOC in 2021, a draft report has been written that we plan to update annually. Our plans going forward include strengthening direct assessment of student learning by collaborating with select faculty partners in summer 2018 to develop rubrics and collect student artifacts from a broader and more representative group of courses.

### Developing Signature Programs for Deep and Sustained Learning

During our third year, we worked closely with faculty, students, and partners to determine our core stand-alone programs: programs that will allow students to delve more deeply into sustainable communities education and experiences, and stay involved over multiple years. We were guided by five program goals: 1) advance Georgia Tech's Strategic Plan and the plan for Creating the Next in Education; 2) capture existing energy around key areas such as innovation and entrepreneurship; 3) draw on faculty expertise; 4) complement existing programs; and 5) engage partners in creative ways that draw on their practitioner expertise and advance their efforts for social change.

In AY2018, we piloted three Signature Programs:

- 1) [Linked Courses](#) are courses from different colleges and schools that collaborate for one semester, under the umbrella of a broad sustainable communities' theme and with community partners, to provide students with a transdisciplinary, real-world learning experience. In AY2017-18, we piloted short courses on Community Health, Green Infrastructure, and Equitable Development.
- 2) The [SLS Internship Program](#) is a one-semester program combining an internship with an SLS partner organization with a bi-weekly SLS seminar (for audit credit). It launched this past summer with 17 student interns working with 15 community partners.
- 3) [RCE Greater Atlanta](#) is a United Nations-affiliated regional sustainability network initiated by SLS that engages nine universities and colleges, plus partners from the nonprofit, community, government, and business sectors. It provides unprecedented opportunities for our students. Read more about it in the Partnerships section below.



RCE Greater Atlanta  
Youth Network



We also prepared to launch two additional Signature Programs in Fall 2018: Innovating for Social Impact, (in partnership with - The Institute for Leadership and Entrepreneurship), and the Sustainable Cities Minor, originally developed by City and Regional Planning. Together, these programs will create a diversity of offerings to serve students with a variety of interests and schedules, from all majors across campus.

## Advancing Our Partnership Strategy

Partnerships are crucial to our work. For our first two years, we focused a large portion of our work on identifying and establishing new partnerships, especially in Atlanta. During the past year, with strong relationships firmly in place, we worked with partners to launch new structures for working together and to begin defining our strategic approach to partnerships. Also in the Spring, we hired a new Community Engagement Specialist, Catherine Muse, to lead the SLS Partners Program (see Staff Highlights below).

### *Co-launching RCE Greater Atlanta*

Since we opened, SLS has been acting as a convener in the Atlanta region, bringing together students, faculty, staff, and partners to share, learn, and act together, primarily through our [Events & Workshops Series](#) and by hosting two social sustainability conferences in Summer 2016 and 2017. In 2017, we made this convening role official by embarking on a joint initiative with Emory University and Spelman College to establish [RCE Greater Atlanta](#), acknowledged by the United Nations University in December 2017 (see the [GT press release](#)). RCEs are Regional Centres of Expertise on Sustainable Development that bring together higher education institutions with other regional stakeholders to support implementation of the [U.N. Sustainable Development Goals](#) through education and training. RCE Greater Atlanta encompasses nine universities and colleges plus nonprofit, community, government, and business partners.

This new network is already leading to unprecedented opportunities. For example, through a new agreement with KSU, GT students now have access to internship opportunities with UN agencies in other countries through the [UN CIFAL Internship Program](#). On a larger scale, students from multiple universities are working together to establish the [RCE Greater Atlanta Youth Network](#), which aims to facilitate joint sustainability projects, educate youth on the SDGs, and connect students to sustainability opportunities.

SLS is committed to engaging a broad swath of students and faculty in RCE Greater Atlanta and has taken on the network as one of its Signature Programs. The network puts in action a systems approach to creating sustainable communities, facilitating stakeholders with all different types of backgrounds and experiences to come together and co-create solutions for a sustainable future.

### *Formalizing Our Partnership Approach*

Over the past year, SLS staff met with each of our close off-campus partners to find out what they value about their partnership with SLS and with Georgia Tech more generally, and to seek their advice as we form our first SLS Partners Advisory Council. Additionally, in Spring 2018, we held four convenings with partners and faculty around two issues of mutual interest: Community Health and Green Infrastructure. During these gatherings, faculty and community partners were asked to share their programs, research, and insights on these issues and their thoughts on how SLS can help advance social change around these issues moving forward.

Through these activities, SLS identified three key ways in which we can advance city and regional change work: 1) convening partners to share, learn, and connect, with each other and Georgia Tech; 2) educating stakeholders by sponsoring speakers, workshops, and conferences; and 3) facilitating partnerships with courses and faculty research. We also articulated our approach to partnerships, as follows:



RCE Greater Atlanta was acknowledged by the United Nations University on December 18, 2017, as the 6<sup>th</sup> RCE in the U.S. and the 164<sup>th</sup> in the world.

## Our Approach to Partnerships:

SLS is an experiential learning program, and partnerships are key to all of our work. SLS collaborates with diverse partners - across the community, nonprofit, government, academic, and business sectors – on key sustainability challenges. We focus especially on Atlanta, Georgia, and the Southeast. Through these collaborations, GT students, faculty, and staff help advance shared visions for change - and students learn to use the knowledge and skills they are acquiring at GT to help “create sustainable communities.”

This work has also helped us shape a scope of work for our Partners Advisory Council, which will advise SLS on our partnership strategies. It is scheduled to launch in Fall 2018. Read more about our approach on the [Partners section](#) of our website

### *Identifying Priority Issue Areas*

This past year, building on different programs that we sponsored over the last three years, we identified seven Priority Issue Areas in which we believe SLS should be an active participant and leader in Atlanta, Georgia, and the Southeast, to engage faculty, educate students, and advance change. These issues align faculty and student interests with partner interests and initiatives. They include: Climate Change, Community Health, Civic Data, Equitable Development, Green Infrastructure Water & Citizen Science, Energy Equity, Equitable Development, UN Sustainable Development Goals (SDGs).

These Priority Issue Areas help us focus our efforts and make clear to faculty, students, and partners what kind of work we do in relation to “creating sustainable communities.”





## Staff Highlights



Kristina Chatfield, Program & Operations Manager, presented at the 2017 Association for the Advancement of Sustainability in Higher Education ([AASHE](#)) conference and served as the staff lead for the [RCE Greater Atlanta Youth Network](#).



Dr. Jennifer Hirsch, Director, assumed a number of leadership roles in the sustainability field in Atlanta and nationally. In addition to co-launching and co-leading the United Nations-affiliated [RCE Greater Atlanta](#) regional sustainability network (described above), she was elected to the Board of Directors of [AASHE](#). Jennifer is also leading the [Equity Petal Work Group](#) for the Kendeda Building for Innovative and Sustainable Design (aka the GT Living Building) and is working with The International Living Future Institute to help them push the Equity Petal in deeper directions.



Jamie Jones, Sr. Administrative Professional, served on the Georgia Tech Earth Day Committee for the third year in a row and was chosen to present a number of awards at the Earth Day festival. Jamie also continues to provide excellent administrative support to the overall operations and growth of the Center.



Catherine Muse, Community Engagement Specialist, joined the Center in April 2018. In this role, she manages the SLS [Partners Program](#), including off-campus partnerships and partnerships with Georgia Tech's other community-focused and sustainability offices. Over the summer, she co-taught the SLS Internship Program and served on the 10th Annual Diversity Symposium Planning Committee.



Dr. Carol Thurman, Academic Assessment Manager, assumed full-time work responsibilities with SLS in January 2018 (she previously worked 20% time in Office of Academic Effectiveness). This past year, she co-authored [a paper on transdisciplinarity](#) and presented it at the American Society for Engineering Education ([ASEE](#)) conference in Salt Lake City, Utah in June.



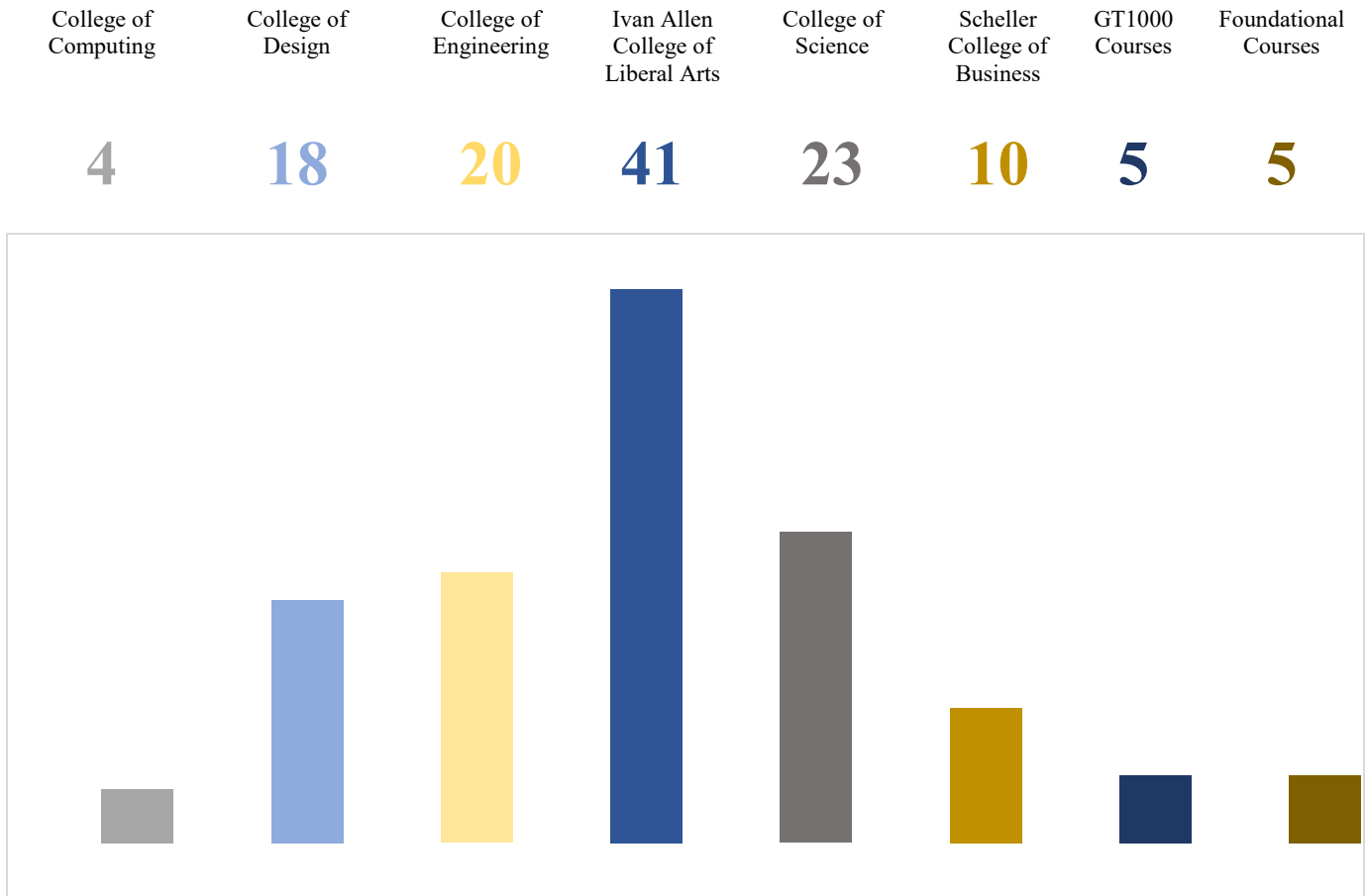
Dr. Ruth Yow, Service Learning and Partnerships Specialist, joined the Center in August 2017. In this role, she supports faculty and students in incorporating a holistic approach to sustainable communities into their courses and projects, with a special focus on equity. In July 2018, she served as visiting faculty with the [Japan Summer Program in Sustainable Development](#). She also completed the [TransFormation Alliance](#) Academy and co-authored a Saporta Report column, "[Citizen scientists gathering information to inform policy decisions in West Atlanta](#)."

### Student Assistants and Postdocs

Last year, we hired 13 Student Assistants, including 11 undergraduates and two Graduate Research Assistants, and three Marion L. Brittain Postdoctoral Fellows. They assist with a wide range of activities, including marketing, assessment, events, administrative work, photography, and program development. They also help keep us in tune with the perspectives of diverse stakeholders across campus. They are an integral part of our staffing and our success.

# Appendix

## *Faculty and Student Engagement, AY2018*



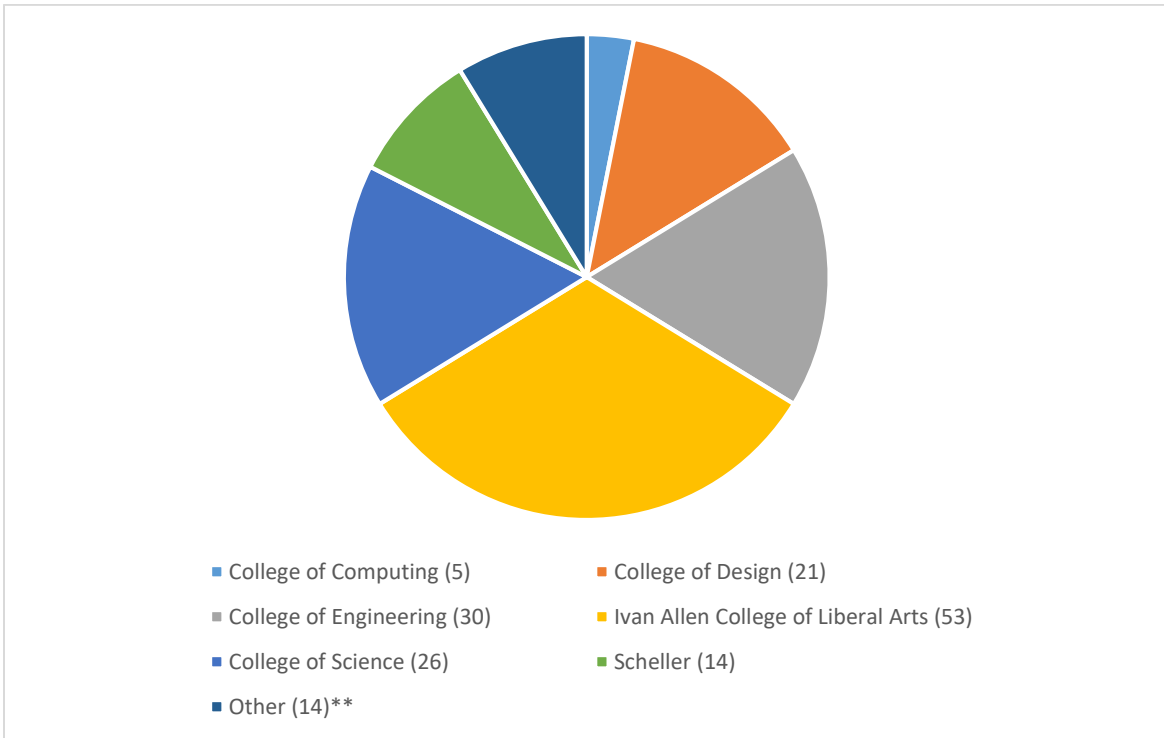
Total Faculty Teaching Courses = **126**

Total Students in SLS Courses, AY2018

**6,173**



*SLS Courses by College, AY2018\**



*\*Courses taught in multiple semesters (i.e. Fall and Spring) are counted by semester in this figure.*

*\*\* Other includes Foundation courses, GT 1000 courses, and affiliated VIPs*

*SLS Courses - Breakdown by School\**

College of Computing	College of Design	College of Engineering	Ivan Allen College of Liberal Arts	College of Sciences	Scheller College of Business	Other Courses
Computer Science	5	Architecture 12	Aerospace 1	Economics 5	Biological Sciences 10	Foundation 5
Interactive Computing	-	Building Construction -	Biomedical 1	History & Sociology 7	Chemistry & Biochemistry 5	GT 1000 5
Computational Science and Engineering	-	City & Regional Planning 7	Chemical & Biomolecular 5	Literature, Media, & Communication 21	Earth & Atmospheric Sciences 10	VIP 4
		Industrial Design 2	Civil & Environmental 9	Modern Languages 6	Mathematics -	
		Music -	Electrical & Computer 1	Public Policy 7	Physics -	
			Industrial & Systems 3	International Affairs 6	Psychology 1	
			Materials Science 2			
			Mechanical 6			
	<b>5</b>	<b>21</b>	<b>28</b>	<b>52</b>	<b>26</b>	<b>14</b>
<b>3%</b>	<b>13%</b>	<b>18%</b>	<b>33%</b>	<b>16%</b>	<b>9%</b>	<b>9%</b>

\*Some courses are crossed listed in multiple schools and therefore counted more than once for these numbers. Courses taught in multiple semesters are counted by semester.



*SLS Strategic Advisory Council, January 2017 – June 2018*

<b>Name</b>	<b>Affiliation</b>	<b>Also Representing</b>
Srinivas Aluru	School of Computational Science and Engineering	Institute for Data Engineering and Science
Yves Berthelot	International Initiatives	
Sandi Bramblett	Institutional Effectiveness	
Marilyn Brown	School of Public Policy	Brook Byers Institute for Sustainable Systems
Jonathan Clarke	Scheller College of Business	
Wayne Clough	President Emeritus	
David Collard	School of Chemistry & Biochemistry	College of Sciences
Bonnie Ferri	Graduate Education and Faculty Development	
Richard DeMillo	Center for 21 <sup>st</sup> Century Universities	
Archie Ervin	Institute Diversity	
Andrew Gerber	Georgia Tech Research Institute	
Charles Isbell	School of Interactive Computing	College of Computing
Larry Jacobs	School of Civil and Environmental Engineering	College of Engineering
Beth Mynatt	School of Interactive Computing	Institute for People and Technology
Nagela Nukuna	Student Government Association	
Matthew Realff	School of Chemical and Biomolecular Engineering	Strategic Energy Institute, Renewable Bioproducts Institute
Michelle Rinehart	College of Design	
Philip Spessard	Development	
John Stein	Student Life	
Monique Tavares	Office of the EVP of Research	
Bill Todd	Scheller College of Business	
John Tone	School of History and Sociology	Ivan Allen College of Liberal Arts
Howard Wertheimer	Capital Planning and Space Management	
JulieAnne Williamson	Administration and Finance	