GEORGIA TECH’S QEP

SERVE-LEARN-SUSTAIN

LAUNCHED JANUARY 2016
A Brief Introduction to SLS
WHAT IS SERVE-LEARN-SUSTAIN?

- Quality Enhancement Plan, launched January 2016
- Undergraduates learn about and engage in “creating sustainable communities”
- Students combine academic and career interests with their desire to contribute to the world
## What is Serve-Learn-Sustain?

### Source: 2012 Baccalaureate Alumni Survey

<table>
<thead>
<tr>
<th>To what extent did Georgia Tech prepare you to</th>
<th>% saying well or very well prepared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify, formulate, solve problems in my discipline</td>
<td>87.6%</td>
</tr>
<tr>
<td>Use techniques, skills, &amp; tools needed for the practice of my discipline</td>
<td>76.8%</td>
</tr>
<tr>
<td>Seek out new information needed for the practice of my discipline</td>
<td>75.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>To what extent did Georgia Tech prepare you to</th>
<th>% saying well or very well prepared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand the environmental impact of your professional practice</td>
<td>40.4%</td>
</tr>
<tr>
<td>Understand the social and cultural impact of your professional practice</td>
<td>44.3%</td>
</tr>
<tr>
<td>Effectively resolve interpersonal conflict within a group or team</td>
<td>51.7%</td>
</tr>
<tr>
<td>Function on multi-disciplinary or cross-functional teams</td>
<td>68.6%</td>
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</tbody>
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Goal: Develop Skills & Knowledge
• Identify relationships among ecological, social, and economic systems
• Describe how actions affect community sustainability
• Work effectively in different communities
• Evaluate how decisions impact community sustainability

Goal: Connect to Professional Practice
• Describe how their discipline can make communities more sustainable

Goal: Put Skills and Knowledge into Action
• Develop approaches to community sustainability challenges
• Communicate with the public about sustainable communities

Goal: Build Long-Lasting Values and Beliefs
• Manifest personal values and beliefs demonstrating responsible community membership

*Paraphrased for presentation*
• Georgia Tech graduates are using their disciplinary expertise related to science and technology to help “create sustainable communities” where humans and nature flourish, in Georgia, the U.S., and around the globe.

• Universities around the globe are asking, “What does Georgia Tech think?” about the role that a technological institute can play in creating sustainable communities.

• Students are choosing to come to Georgia Tech partly to participate in Serve-Learn-Sustain
SLS MISSION

- **SLS educates students**—through classroom, co-curricular, and real-world learning, on campus and off—to contribute to the task of “creating sustainable communities”
- **SLS builds the capacity of faculty** to (a) teach sustainable communities-related courses (b) collaborate with diverse partners on their research
- **SLS facilitates GT participation in Partnerships** that bring together key partners—from the government, community, nonprofit, academic, and business sectors—for joint learning, research, and action
SLS GOALS & OBJECTIVES FOR STUDENT LEARNING

Partnerships
• Establish deep & long-lasting relationships
• Work from campus to local to global
• Focus on networks
• Support, participate in, and lead projects
• Model sustainable communities in practice

Courses & Research
• Engage faculty across campus
• Link to diverse faculty interests
• Co-create pedagogical frameworks/tools
• Build capacity for socio-technical collaboration & integration

Co-curricular Programming
• Build awareness & interest
• Complement curricular learning
WHAT THIS LOOKS LIKE IN PRACTICE:
TOTAL NUMBER OF COURSES/PROJECTS TO DATE

Spring 2016
- Foundation Courses: 2 (13.3%)
- Affiliated Courses: 11 (73.3%)
- Affiliated Projects: 2 (13.3%)

AY 2016/17
- Foundation Courses: 3 (2.5%)
- Affiliated Courses: 95 (77.8%)
- Related Courses: 4 (3.3%)
- Affiliated Projects: 20 (16.4%)
COURSES TO DATE BY COLLEGE
(TOTAL EST. ENROLLMENT APPROX. 5000)

Scheller  8 (7%)
Ivan Allen 40 (33%)
GT1000  3 (3%)

Computing  4 (3%)
Design  14 (12%)
Engineering  31 (26%)
Sciences  20 (17%)

Total: 120*

*This number is 10 higher than number of courses listed on previous slide due to cross-listings
FACULTY ENGAGED TO DATE IN SLS RESEARCH-FOCUSED PROGRAMS

- Scheller: 7 (5%)
- Ivan Allen: 26 (17%)
- Sciences: 27 (18%)
- Computing: 8 (5%)
- Design: 20 (13%)
- Engineering: 66 (43%)

Total: 154
WHAT THIS LOOKS LIKE IN PRACTICE:
STUDENTS

Yonatan Weinberg, HTS, 2019

“I am grateful for the SLS infrastructure for giving me the opportunity to cultivate my interests in social sustainability. It has allowed me to learn about and actually work on what I am passionate about.”

- **Fall 2015**: Hears about SLS HP courses through Grand Challenges
- **Spring 2016**: Takes both foundation courses plus SLS-affiliated course, “Semester in the City;” attends SLS events & writes SLS blog post on Flint water crisis
- **Summer 2016**: Starts working for SLS; participates in EngageATL
- **AY2017**: Works for SLS, attends SLS events, works on Grand Challenges Westside oral history project (intends to apply for SLS funding); applies for Technology & Management program while pursuing Scheller Leadership Minor
- **Summer 2017**: Participates in SLS-affiliated Leadership for Social Good Study Abroad in Eastern Europe (Scheller)
- **Career Interest**: Consulting on corporate social responsibility
WHAT THIS LOOKS LIKE IN PRACTICE:
STUDENTS

Nicole Kennard, MSE, 2017

- **Fall 2014:** Provides input into QEP development
- **Fall 2015:** Attends SLS Liam’s Legacy Symposium and becomes interested in public leadership as a career pathway to create sustainable communities
- **Spring 2016:** As President of Engineers for a Sustainable World, engages ESW in SLS’ Public Service Pathway program, receiving funding to develop urban farming project
- **Spring 2017:** Begins working for SLS and attending more events, becoming more interested in sustainability careers; forges collaborative projects with SLS partners
- **Fall 2017:** Moves to UK on a Fulbright to get an MSc in Sustainable Agriculture and Food Security at Newcastle University
- **Career Interest:** Public or nonprofit work in sustainability focused on food systems and urban farming

“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.

Through SLS, I was also able to start a new collaborative project with Friends of Refugees, leading a team of GT students to utilize their engineering skills by designing and building all the growing systems for their new educational greenhouse.

I am so grateful to SLS for helping to connect me with great projects and collaborations, and truly expand my network and knowledge surrounding sustainability.”
WHAT THIS LOOKS LIKE IN PRACTICE: FACULTY

Brian Woodall, INTA

“SLS has contributed to my teaching and research efforts, helping support my Japan Summer Program in Sustainable Development and launch an ongoing research project, inspired by an SLS conference, with colleagues in CEE and CRP that explores the relationship between equity access to civil infrastructure and regional prosperity.”
SLS’ Framework on Sustainable Communities Education
“Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland Report, 1987)

“Human and ecological health, social justice, secure livelihoods, and a better world for all generations” (AASHE)

“A healthy environment, a strong economy and the well-being of the people living in the community” (STAR Communities)

“A way of life that supports a flourishing society while recognizing the earth’s finite living systems of which we are a part” (Peggy Barlett, Emory)

“Just sustainability is ...‘the need to ensure a better quality of life for all, now and into the future, in a just and equitable manner, whilst living within the limits of supporting ecosystems’” (Julian Agyeman, Tufts)
WHAT IS SUSTAINABILITY?

**CIRCLES** = Foundations of sustainability (Environment, Economy, Social)

**RECTANGLES/TRIANGLE** = Where sustainability happens – in the intersections

- **Economic - Environmental**
- **Environmental - Social**
- **Social – Economic**
<table>
<thead>
<tr>
<th><strong>ENVIRONMENTAL SUSTAINABILITY</strong></th>
<th><strong>SOCIAL SUSTAINABILITY</strong></th>
<th><strong>ECONOMIC SUSTAINABILITY</strong></th>
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<tbody>
<tr>
<td>Protect and enhance natural resources and biological diversity</td>
<td>Foster inclusion and civic participation</td>
<td>Nurture vibrant, diverse economies</td>
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<tr>
<td>Reduce energy use</td>
<td>Build strong social ties</td>
<td>Support local innovation, entrepreneurship, and ownership</td>
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<tr>
<td>Manage and recycle waste</td>
<td>Nurture connections to place</td>
<td></td>
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<tr>
<td></td>
<td>Prioritize equity and inclusion</td>
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<td></td>
<td>Develop human capital</td>
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<tr>
<td></td>
<td>Preserve, value, and learn from cultural diversity</td>
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# GT Sustainable Communities “Big Ideas” — Or, How We Teach Sustainable Communities

## Serve

### Partnership Principles
- Honoring Multiple Ways of Knowing
- Reciprocal Teaching and Learning
- Doing Good in Your Neighborhood
- Shared Value
- Valuing Community Impact
- Asset-Based Engagements
- Long-Term Relationships

## Learn

### Methods
- Experimentation
- Leadership
- Community Research
- Scientific Method
- Teamwork & Facilitative Leadership
- Values-Based Leadership
- Prototyping
- Understanding Local History & Context
- Problem-Based Learning
- Design Thinking
- Environmental Assessment
- Storytelling
- Digital Storytelling & Documentary Media
- Ethnography
- Community Asset Mapping
- Participatory Research

### Concepts
- Science & Technology
- Social, Cultural & Environmental Context
- Technology for Social Good
- Voice & Agency
- Democratic Process
- Participatory Processes & Civic Engagement
- Managing the Commons
- Urban Development
- Sustainable Urban Development
- Infrastructure: Physical, Technological, Social
- Social & Environmental Determinants of Health
- Systems
- Smart Cities
- Interconnectedness
- Equity, Justice & Diversity
- Cultural, Linguistic & Biological Diversity
- Energy Efficiency
- Rebound Effect
- Spatiotemporal Relations
- Food-Energy-Water Nexus

## Sustain

### Adaptive Learning
- Reflection
- Long-Term Visioning
- Cognitive Flexibility
- Broad-Based Learning Communities

### Action
- GT as an Anchor Institution
- Results-Based Accountability
- Social Entrepreneurship
- GT as a Living Lab
- Local & Global Collaborative Action
- Collaborative Community Innovations

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*Image description: The diagram outlines principles for teaching sustainable communities, emphasizing partnership, learning methods, and sustainable actions through various concepts and strategies.*
Lifecyle Analysis & Thinking

How would you describe this big idea?

Lifecycle Analysis (LCA) is a specific analytical approach to evaluating the impact of human artifacts. It is a engages lifecycle thinking by guiding decision makers to consider each stage of that artifact's lifecycle, from material extraction through production, use, and disposal, and consider the impacts of those stages. Social LCA (S-LCA) is a particular emerging form of LCA that focuses on the social impacts. Impacts include workers rights and safety, community building, living conditions, fair competition. These impacts may be negative or positive, and our understanding and definitions of types of impacts is still improving. Many researchers are still working on methodological approaches to S-LCA.

How is this big idea applied to your work?

Much of my work is in environmental LCA, and S-LCA shares its origins in this approach. In fact, the reasons we care about environmental LCA are for its impacts on worker safety and local health and fair use and stewardship of resources. The interconnections between the design of artifacts, environmental systems, and social systems are highly complex, and in order to make smarter decisions and be able to predict un-intended consequences, we need to model these social and environmental aspects of artifacts.

Learn more:

Social Hot Spot Database
Guidelines for Social Life Cycle Assessment of Products
1. Co-creation of an Integrated Framework
   with special focus on role of science and technology
   in advancing SCD visions that take community seriously

2. Social Sustainability
   Capacity-building

SLS’ NICHE AT GEORGIA TECH

Diagram showing the interplay between Economic, Environmental, Social, and Economic - Environmental, Environmental - Social, Social – Economic.

Image of a group of people, possibly discussing the topic.
Learn more at:
www.serve-learn-sustain.gatech.edu

Courses:
http://serve-learn-sustain.gatech.edu/get-involved/courses

Email List:
www.contact.gatech.edu/sls/subscribe

Blog & BIG IDEAS (please consider contributing!):
http://serve-learn-sustain.gatech.edu/reflections
http://serve-learn-sustain.gatech.edu/big-ideas

Contact:
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jennifer.hirsch@gatech.edu
1. What did you relate to most, in terms of SLS approach, activities, framework?

2. What do you already teach about sustainability, community, sustainable communities?

3. What do you hope to learn more about to integrate into your teaching?