



**Georgia Institute
of Technology**

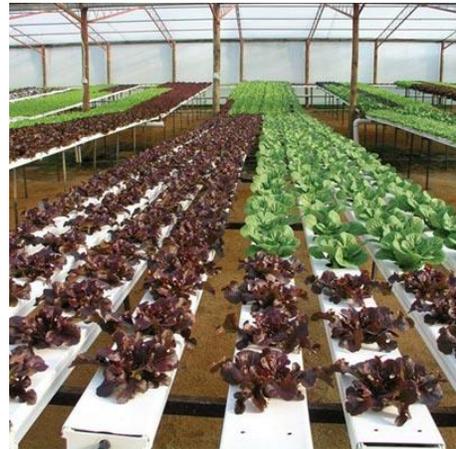
GA Tech Hydroponics Greenhouse Project

A Collaboration between Engineers for a Sustainable World @ GT and SEEDS Global

The Vision

ESW at GT and a nonprofit located in Atlanta, SEEDS Global, have paired up to bring a large scale hydroponics system to Tech.

Hydroponics is the science of growing and producing plants in nutrient-rich solution, instead of soil. Hydroponic farming utilizes up to 90% less water than traditional soil farming, and grows crops twice as fast due to a controlled environment of nutrients, water, and oxygen. It does not require herbicides or pesticides, and also needs much less maintenance than traditional farming. This, of course, is ideal for students interested in sustainable urban farming methods.



The purpose of hydroponics at Georgia Tech is to allow students to experiment and develop new techniques to further advance this agriculture field. We hope to construct a greenhouse on campus that will contain an approximate 100 tray hydroponic system that could, in essence, generate 2,500 plants every 30-40 days. This greenhouse could be completely sustainable in design, using solar panels to generate electricity for the pumps and lighting, and rainwater collection to produce enough water. A portion of produce will be donated back to the Atlanta community and local schools, and the rest will be sold to offset operational costs and to purchase supplies to maintain the system.

Thus, this greenhouse will become a self-sufficient laboratory for students interested in agricultural engineering to operate. It will also be a pivotal educational resource for the surrounding community to learn from. Students from the Atlanta area may visit to learn more about sustainable farming and healthy living.

There has been much forward movement in using hydroponics as an urban farming method within the Atlanta community. As Tech is a hallmark of forward innovation, utilizing a sustainable hydroponic system on campus would be an asset not only to the university, but also to the surrounding community. We hope that our project will further encourage sustainable agriculture and urban farming development in Atlanta.