

**Program Planning Guide**  
**Sustainability Technologies, Certificate (C40370S)**

Program Length: 3 semesters

Career Pathway Options: Associate in Applied Science in Sustainability Technologies

Program Sites: Chatham Main Campus

Suggested Course Schedule:	HOURS			Grade	Semester	Notes
	Class	Lab	Credit			
1st Semester (Fall)						
ALT 120	Renewable Energy Tech	2	2	3		
SST 110	Intro to Sustainability	3	0	3		
SST 120	Energy Use Analysis	2	2	3		
		7	4	9		
2nd Semester (Spring)						
SST 210	Issues in Sustainability	3	0	3		
3 <sup>rd</sup> Semester (Summer)						
SST 140	Green Building Design and Concepts	3	0	3		

Total Semester Hours Credit: 15

**Course Descriptions:**

**ALT 120 Renewable Energy Tech 2-2-3**

This course provides an introduction to multiple technologies that allow for the production and/or conservation of energy from renewable sources. Topics will include hydroelectric, wind power, passive and active solar energy, tidal energy, appropriate building techniques, and energy conservation methods. Upon completion, students should be able to demonstrate an understanding of renewable energy production and its impact of humans and their environment.

**SST 110 Intro to Sustainability 3-0-3**

This course introduces sustainability issues and individual contributions toward environmental sustainability. Topics include management processes needed to maximize renewable/non-renewable energy resources, economics of sustainability, and reduction of environmental impacts. Upon completion, students should be able to discuss sustainability practices and demonstrate an understanding of their effectiveness and impacts.

**SST 120 Energy Use Analysis 2-2-3**

This course introduces the principles of analyzing energy use, energy auditing tools and techniques, conservation techniques, and calculating energy savings. Topics include building system control theory, calibrating digital controls, energy loss calculations, and applicable conservation techniques. Upon completion, students should be able to demonstrate an understanding of energy use, audits, and controls in the analysis of energy consumption.

**SST 140 Green Building & Design Concepts 3-0-3**

This course is designed to introduce the student to sustainable building design and construction principles and practices. Topics include sustainable building rating systems and certifications, energy efficiency, indoor environmental quality, sustainable building materials and water use. Upon completion students should be able to identify the principles and practices of sustainable building design and construction.

**SST 210 Issues in Sustainability 3-0-3**

*Prerequisites: SST 110*

This course introduces the long-term impacts and difficulties of applying sustainability concepts in an organization, business, or society. Topics include the application of sustainable technologies and the analysis of affordability, efficiencies, recycling, and small and large-scale design. Upon completion, students should be able to recognize the possible limitations of sustainable technologies and be prepared to reconcile such conflicts.