

ARC 111	Intro to Arch Technology	1-6-3
CIS 110	Introduction to computers	2-2-3
CST 111	Construction I	3-3-4
CST 112	Construction II	3-3-4
CST 150	Building Science	2-2-3
ELC 111	Introduction to Electricity	2-2-3
ELC 220	Photovoltaic Systems Tech	2-2-3
SST 130	Modeling Renewable Energy	2-2-3
SST 140	Green Building Design and Concepts	3-0-3
SST 250	Sustain Capstone Project	1-6-3
	-or-	
WBL 111	Work-Based Learning	0-10-1

Student Success – Select One

ACA 111	College Student Success	1-0-1
ACA 115	Success and Study Skills	0-2-1
ACA 122	College Transfer Success	1-0-1

Technical Electives (Select minimum 3 hours)

ALT 110	Biofuels I	3-0-3
ALT 210	Biofuels II	3-2-4
ALT 211	Biofuels Analytics	2-4-4
ELC 221	Adv PV Sys Designs	2-3-3
MNT 230	Pumps and Piping Systems	1-3-2
BUS 280	REAL Small Business	4-0-4
AGR 139	Intro to Sustainable Ag	3-0-3

Total Semester Hours Credit Required for Graduation:
68/70

**Sustainability Technologies
Credential: Sustainability Certificate in
Sustainability Technologies
C40370S**

The Sustainability Technologies certificate is designed to prepare individuals for employment in environmental, construction, alternative energy, and other industries, where key emphasis is placed on energy analysis and waste reduction along with sustainable technologies.

Course includes renewable energy, sustainability measures and green building technology. Additional topics may include green certification programs, energy management, green building design, renewable energy options, and environmental responsibility.

Graduates should qualify for positions within the construction, renewable energy or sustainability field. Employment opportunities exist in both the government and private industry sectors where graduates may function as sustainability consultants, energy analysts, or entry level green building and renewable energy technicians.

Program Length: 2 semesters
Career Pathway Options: Associate in Applied Science in

Sustainability Technologies
Program sites: Pittsboro Campus

Course Requirements for Sustainability Certificate

Required Major Core Courses (15 SHC)

ALT 120	Renewable Energy Tech	2-2-3
SST 110	Intro to Sustainability	3-0-3
SST 120	Energy Use Analysis	2-2-3
SST 140	Green Building Design and Concepts	3-0-3
SST 210	Issues in Sustainability	3-0-3

Total Semester Hours Credit Required for Graduation: 15

**Sustainability Technologies
Credential: Green Building Certificate in
Sustainability Technologies
C40370GB**

The Green Building certificate is designed to prepare individuals for employment in construction where key emphasis is placed on sustainable building and design and green building certification programs.

Coursework will include an introduction to sustainability as well as trade specific classes in green building. Graduates should qualify for positions within the construction and green certification industries. Some courses include testing options for industry recognized certificates.

Employment opportunities exist in both government and private industry sectors where graduates may function as sustainability consultants, green building technicians, or weatherization technicians.

Program Length: 2 semesters
Career Pathway Options: Associate in Applied Science in Sustainability Technology
Program Sites: Pittsboro Campus

Course Requirements for Green Building Certificate

Required Courses (17 SHC)		
ARC 111	Intro to Arch Technology	1-6-3
CST 111	Construction I	3-3-4
CST 112	Construction II	3-3-4
CST 150	Building Science	2-2-3
SST 140	Green Building & Designs Concepts	3-0-3
		12-14-17

**Sustainability Technologies
Credential: Biofuels Certificate in
Sustainability Technologies
C40370B**

This program is designed to equip students with the skills needed to attain a technical position in the biofuels industry.

Students learn the fundamentals of biofuels as well as

laboratory and mechanical skills need to conduct quality control testing and diagnose biofuels related problems.

Upon completion of the certificate students will be employable in a variety of biofuels markets, including fuel production, analysis, marketing, and distribution.

Program Length: 2 semesters

Career Pathway Options: Associate in Applied Science in Sustainability Technologies

Program sites: Pittsboro Campus

Course Requirements for Biofuels Certificate:

Required Major Core Courses (16 SHC)

ALT 120	Renewable Energy Tech	2-2-3
ALT 110	Biofuels I	3-0-3
ALT 210	Biofuels II	3-2-4
ALT 211	Biofuels Analytics	2-4-4
MNT 230	Pumps and Piping	1-3-2

Total Semester Hours Credit Required for Graduation: 16

Sustainability Technologies Credential: Renewable Energy Certificate in Sustainability Technologies C40370RE

The Renewable Energy certificate is designed to prepare individuals for employment in renewable energy, or related industries, where key emphasis is placed on energy production along with sustainable technologies.

Coursework includes an introduction to sustainability as well as trade specific classes in renewable energy. Some courses include testing options for industry recognized certificates.

Graduates should qualify for positions within the renewable energy, construction, or environmental industries. Employment opportunities exist in both the government and private industry sectors where graduates may function as PV, solar thermal, or biofuels technicians.

Program Length: 2 semesters

Career Pathway Options: Associate in Applied Science in Sustainability Technologies

Program Sites: Pittsboro Campus

Course Requirements for Renewable Energy Certificate

ALT 110	Biofuels I	3-0-3
ALT 120	Renewable Energy Tech	2-2-3
ALT 250	Thermal Systems	2-2-3
ELC 111	Intro to Electricity	2-2-3
ELC 220	Photovoltaic Systems Technology	2-3-3
SST 130	Modeling Renewable Energy	2-2-3
		13-11-18

Industrial Technologies

Computer Aided Drafting Technology Credential: Associate in Applied Science Degree in Computer-Aided Drafting Technology A50150

The Computer Aided Drafting Technology curriculum prepares graduates for employment as drafters or designers in a wide range of fields including mechanical and manufacturing engineering. Computer aided drafters and designers assist in the design and development of manufactured products.

This course-of-study prepares students to apply technical skills and advanced computer software and hardware to develop plans and related documentation, and manage the hardware and software of a CAD system. It includes instruction in architectural drafting, computer-aided-drafting (CAD), creating and managing two and three-dimensional models, and linking CAD documents to other software applications and operating systems.

In addition to coursework in computer aided drafting, students will study computer applications, machining, design, planning and problem solving, as well as oral and written communication.

Graduates of the curriculum should qualify for CAD jobs in architectural and engineering consulting firms and industrial design businesses.

Program Length: 5 semesters

Career Pathway Options: Associate in Applied Science in Computer-Aided Drafting Technology

Program Sites: Lee Campus - Day Program

Course Requirements for the Computer-Aided Drafting Technology Degree

I. General Education Academic Core (19 SHC)		C-L-SHC
ENG 111	Freshman Composition	3-0-3
ENG 116	Technical Report Writing	3-0-3
MAT 121	Algebra and Trigonometry	2-2-3
	Humanities/Fine Arts Elective	3-0-3
	Social/Behavioral Science Elective	3-0-3
*PHY 110	Conceptual Physics	3-0-3
*PHY 110A	Conceptual Physics Lab	0-2-1

II. Major Hours (49 SHC)

A. Technical Core (12 SHC)

DFT 151	CAD I	2-3-3
DFT 152	CAD II	2-3-3
DFT 153	CAD III	2-3-3
DFT 154	Intro to Solid Modeling	2-3-3

B. Program Major (12 SHC)

DDF 211	Design Process I	1-6-4
DFT 111	Technical Drafting I	1-3-2