

Central Carolina Community College
Program Planning Guide
Electronics Engineering Technology
Credential: Certificate in Electronics Technology (C40200)

This curriculum prepares individuals to work as skilled assemblers, inspectors, or testers in consumer or industrial electronics environments. Work tasks include mounting, soldering, and wiring of electronics components, assembling sub-units, and final assembly and inspection of complete systems. Coursework includes basic electricity, mathematics, solid-state electronics, and basic assembly skills. Graduates should qualify for employment as an electronics assembler, electronics tester, or electronics inspector.

Program Length: 3 semesters

Career Pathway Options: Associate in Applied Science Degree in Electronics Engineering Technology, Certificate in Electronics Technology

Program Sites:

Lee Campus - Day Program

Harnett Campus – Day Program

Online Program

Suggested Course Schedule:	HOURS			Grade	Semester	Notes
	Class	Lab	Credit			
1st Semester (Fall)						
EGR 131	Introduction to Electronics Tech.	1	2	2		
ELC 131	DC/AC Circuit Analysis	4	3	5		
MAT 121	Algebra/Trigonometry I	2	2	3		
		7	7	10		
2nd Semester (Spring)						
ELN 131	Electronic Devices	3	3	4		
3rd Semester (Summer)						
ELN 132	Linear IC Applications	3	3	4		

Total Semester Hours Credit: 18

Course Descriptions Electronics Engineering:

EGR 131 Introduction To Electronics Technology 1-2-2

This course introduces the basic skills required for electrical/electronics technicians. Topics include soldering/desoldering, safety practices, test equipment, scientific calculators, AWG wire table, the resistor color code, electronic devices, problem solving, and use of hand tools. Upon completion, students should be able to solder/desolder, operate test equipment, apply problem solving techniques, and use a scientific calculator.

discrete component circuits using appropriate techniques and test equipment.

ELN 132 Linear IC Applications 3-3-4

Local Prerequisite: ELN 131 or BMT 113 or ELC 140

This course introduces the characteristics and applications of linear integrated circuits. Topics include op-amp circuits, waveform generators, active filters, IC voltage regulators, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot linear integrated circuits using appropriate techniques and test equipment.

ELC 131 DC/AC Circuit Analysis 4-3-5

Local Corequisite: MAT 121 or MAT 161

This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, verify, and analyze DC/AC circuits; and properly use test equipment.

MAT 121 Algebra/Trigonometry I 2-2-3

Prerequisite: Take one set: MAT 060 and MAT 070, MAT 060 and MAT 080, MAT 060 and MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, MAT 175, or appropriate placement test scores.

This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include simplification, evaluation, and solving of algebraic and radical functions; complex numbers; right triangle trigonometry; systems of equations; and the use of technology. Upon completion, students should be able to demonstrate an understanding of the use of mathematics and technology to solve problems and analyze and communicate results.

ELN 131 Semiconductor Applications 3-3-4

Local Corequisite: ELC 112, ELC 131, or ELC 140

This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications. Upon completion, students should be able to construct, analyze, verify, and troubleshoot