

Electronics Engineering Technology
Credential: Certificate in Electronics Technology
C4020000

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. Course work 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.

Entrance Standards: See General Admission Standards on page 7 (Gen. Info section).

Academic Standards: See General Academic Standards on page 18 (Gen. Info section)

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

Course Requirements for Electronics Technology Certificate

A. General Education Courses (3 SHC)	C-L-SHC
MAT 121 Algebra/Trigonometry I	2-2-3

B. Required Major Core Courses (9 SHC)	
ELC 131 DC/AC Circuit Analysis	4-3-5
ELN 131 Electronic Devices	3-3-4

C. Other Major Hours Required for Graduation (6 SHC)	
EGR 131 Intro. To Electronics Tech.	1-2-2
ELN 132 Linear IC Applications	3-3-4

Total Semester Hours Credit Required for Graduation: 18

Semester Curriculum for Electronics Technology Certificate

1st Semester (Fall)	C-L-SHC
EGR 131 Intro 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
	3-3-4

3rd Semester (Summer)

ELN 132	Linear IC Applications	3-3-4
		3-3-4

Total Semester Hours Credit Required for Graduation: 18

Laser and Photonics Technology

Credential: Associate in Applied Science Degree in Laser and Photonics Technology
A4028000

The Laser and Photonics Technology curriculum is designed to develop the practical knowledge and skills required to be a successful technician in business and industry. Course work includes mathematics, science, communications, electronics and optics courses. An in-depth sequence of laboratory learning experiences develops the hands-on skills needed for specifying, operating and maintaining laser and photonics based systems.

Current and emerging job opportunities exist in the areas of fiber optic communications, materials processing, laser surgery, research and a variety of related areas. Program graduates often begin work as technicians in product testing, field service, product development or sales.

Entrance Standards: See General Admission Standards on page 7 (Gen. Info section).

Academic Standards: See General Academic Standards on page 18 (Gen. Info section).

Program Length: 5 semesters

Career Pathway Options: Associate in Applied Science in Laser and Photonics Technology

Program Sites:

Harnett Campus - Day Program

Course Requirements for Laser and Photonics Technology Degree

A. General Education Courses (16 SHC)	C-L-SHC
ENG 111 Expository Writing	3-0-3
ENG 111A Expository Writing Lab	0-2-1
ENG 114 Prof Research & Reporting	3-0-3
MAT 121 Algebra/Trigonometry I	2-2-3
	Humanities Elective
	Social Science Elective
	3-0-3
	3-0-3

B. Required Major Core Courses (34 SHC)	
ELC 131 DC/AC Circuit Analysis	4-3-5
ELN 131 Electronic Devices	3-3-4
ELN 132 Linear IC Applications	3-3-4
ELN 133 Digital Electronics	3-3-4
LEO 111 Principles of Lasers	1-3-2
LEO 211 Photonics Technology	5-6-7
LEO 212 Photonics Applications	3-3-4
LEO 223 Fiber Optics	3-3-4

C. Other Major Hours Required for Graduation (24/25 SHC)

CIS 111	Basic PC Literacy OR	1-2-2
CIS 110	Intro to Computers	2-2-3
EGR 131	Intro to Electronics Tech.	1-2-2
ELC 127	Software for Technicians	1-3-2
ELN 275	Troubleshooting	1-3-2
ISC 221	Statistical Quality Control	3-0-3
LEO 221	PC Interface	3-3-4
MAT 122	Algebra/Trigonometry II	2-2-3
PHY 131	Physics - Mechanics	3-2-4
	Major Elective	2

Total Semester Hours Credit Required for Graduation:
74/75

Major Electives (Choose 2 SHC)

(Major elective combinations must be approved by advisor)

LEO 222	Photonics Appl. Project	1-3-2
COE 111	Co-op Work Experience I	0-10-1
COE 121	Co-op Work Experience II	0-10-1
COE 112	Co-op Work Experience I	0-20-2

Semester Curriculum for Laser and Photonics Technology Degree

1st Semester (Fall)

CIS 111	Basic PC Literacy OR	1-2-2
CIS 110	Intro to Computers	2-2-3
EGR 131	Intro to Electronics Tech.	1-2-2
ELC 131	DC/AC Circuit Analysis	4-3-5
ENG 111	Expository Writing	3-0-3
ENG 111A	Expository Writing Lab	0-2-1
MAT 121	Algebra/Trigonometry I	2-2-3

11-11-16

2nd Semester (Spring)

ELC 127	Software for Technicians	1-3-2
ELN 131	Electronic Devices	3-3-4
ELN 133	Digital Electronics	3-3-4
LEO 111	Principles of Lasers	1-3-2
MAT 122	Algebra/Trigonometry II	2-2-3

10-14-15

3rd Semester (Summer)

ELN 132	Linear IC Applications	3-3-4
PHY 131	Physics - Mechanics	3-2-4

6-5-8

Non Co-op Students

4th Semester (Fall - Non-co-op students)

ELN 275	Troubleshooting	1-2-2
ENG 114	Prof Research & Reporting	3-0-3
LEO 211	Photonics Technology	5-6-7
LEO 212	Photonics Applications	3-3-4

Humanities Elective 3-0-3
15-11-19

5th Semester (Spring - Non-co-op students)

ISC 221	Statistical Quality Control	3-0-3
LEO 221	PC Interface	3-3-4
LEO 222	Photonics Appl. Project	1-3-2
LEO 223	Fiber Optics	3-3-4
	Social Science Elective	3-0-3

13-9-16

Non Co-op Students Graduate after the 5th Semester

Part-time Co-op Students

4th Semester (Fall – Part-time co-op students)

COE 111	Co-op Work Experience I	0-10-1
ELN 275	Troubleshooting	1-2-2
ENG 114	Prof Research & Reporting	3-0-3
LEO 211	Photonics Technology	5-6-7
LEO 212	Photonics Applications	3-3-4

12-21-17

5th Semester

(Spring – Part-time co-op students)

COE 121	Co-op Work Experience II	0-10-1
ISC 221	Statistical Quality Control	3-0-3
LEO 221	PC Interface	3-3-4
LEO 223	Fiber Optics	3-3-4
	Social Science Elective	3-0-3

C-L-SHC

Humanities Elective 3-3-3
15-19-18

Part-time Co-op Students graduate after the 5th semester.

Full-time Co-op Students ONLY

4th Semester (Fall - Full-time co-op students)

COE 112	Co-op Work Experience I	0-20-2
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0-20-2

5th Semester

(Spring - Full-time co-op students)

ISC 221	Statistical Quality Control	3-0-3
LEO 221	PC Interface	3-3-4
LEO 223	Fiber Optics	3-3-4
	Social Science Elective	3-0-3
	Humanities Elective	3-0-3

15-6-17

6th Semester (Fall - Full-time co-op students)

ELN 275	Troubleshooting	1-3-2
ENG 114	Prof Research & Reporting	3-0-3
LEO 211	Photonics Technology	5-6-7
LEO 212	Photonics Applications	3-3-4

12-12-16

Full-time co-op students graduate after their 6th Semester.

Total Semester Hours Credit: 74/75