

# ELECTRONICS ENGINEERING TECHNOLOGY - COMPUTER MAINTENANCE AND NETWORKING, ASSOCIATE OF APPLIED SCIENCE

Curriculum Code #6312

Effective May 2024

Division of Engineering, Business and Information Technologies (<http://catalog.lorainccc.edu/academic-programs/engineering-business-information-technologies/>)

The computer maintenance and networking program provides a solid foundation in the principles of electronics, with an emphasis on the installation, maintenance and repair of computer systems, networks and associated equipment to support manufacturing and various environments. Along with a broad, general electronics background, students are given comprehensive information and training in computer system structure, peripheral device operation, installation procedures and troubleshooting practices through this extensive, hands-on curriculum. Typical job titles: industrial computer systems specialist, computer systems analyst, computer maintenance technician, field service representative, installation technician, field engineer, systems integrator and applications specialist. Lorain County Community College has articulation agreements with colleges and universities including programs offered by LCCC's University Partnership.

## First Year

Fall Semester		Hours
CMNW 101	A+ CERTIFICATION PREPARATION I	4
CMNW 141	COMPUTER DIAGNOSTIC AND REPAIR	3
ELCT 111	ELECTRICAL CIRCUITS I	3
ENGL 161	COLLEGE COMPOSITION I	3
MTHM 155	TECHNICAL MATHEMATICS I	4
SDEV 101	INTRODUCTION TO THE LCCC COMMUNITY <sup>2</sup>	1
<b>Hours</b>		<b>18</b>

## Spring Semester

CMNW 201	A+ CERTIFICATION PREP II <sup>1</sup>	4
ELCT 121	DIGITAL ELECTRONICS <sup>1</sup>	4
ENGL 164	COLLEGE COMPOSITION II WITH TECHNICAL TOPICS <sup>1</sup>	3
Arts and Humanities Elective <sup>3</sup>		3
<b>Hours</b>		<b>14</b>

## Second Year

Fall Semester		Hours
CMNW 145	NETWORK INSTALLATION/DIAGNOSTICS	4
CMNW 221	PROGRAMMING IN C & C++ FOR ENGINEERING TECHNOLOGY APPLICATIONS <sup>1</sup>	4
ELCT 233	ELECTRONIC DEVICES I <sup>1</sup>	4

PHYC 150	GENERAL PHYSICS I <sup>1</sup>	4
<b>Hours</b>		<b>16</b>
<b>Spring Semester</b>		
CMNW 230	DATA COMMUNICATIONS	5
CMNW 241	ADVANCED COMPUTER AND NETWORK DIAGNOSTICS <sup>1</sup>	5
Social Sciences Elective <sup>4</sup>		3
<b>Hours</b>		<b>13</b>
<b>Total Hours</b>		<b>61</b>

1

Indicates that this course requires a prerequisite.

2

A student must register for the orientation course when enrolling for more than six credit hours per semester or any course that would result in an accumulation of 13 or more credit hours.

3

Select any Arts and Humanities Ohio Transfer 36 (<http://catalog.lorainccc.edu/academic-information/transfer-module-requirements/>) course.

4

Select any Social Science Ohio Transfer 36 (<http://catalog.lorainccc.edu/academic-information/transfer-module-requirements/>) course.

Program Contact(s):

**Lawrence Atkinson**  
440-366-7050  
[latkinso@lorainccc.edu](mailto:latkinso@lorainccc.edu)

For information about admissions, enrollment, transfer, graduation and other general questions, please contact your advising team (<https://www.lorainccc.edu/admissions-and-enrollment/advising-and-counseling/>).

More program information can be found on our website. (<https://www.lorainccc.edu/it/hardware-maintenance-and-information-systems-support/associate-of-applied-science-in-electronic-engineering-technology-computer-maintenance-and-networking/>)

Credit for Prior Learning (PLA) options may be available for your program.

For more information, please visit our website: [www.lorainccc.edu/PLA](http://www.lorainccc.edu/PLA) (<http://www.lorainccc.edu/PLA/>)

## Program Learning Outcomes

1. Demonstrate an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline.
2. Demonstrate an ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline
3. Demonstrate an ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature

4. Demonstrate an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results
5. Demonstrate an ability to function effectively as a member of a technical team
6. Demonstrate the application of electric circuits, computer programming, associated software applications, analog and digital electronics, microcomputers, operating systems, local area networks, and engineering standards to the building, testing, operation, and maintenance of computer systems and associated software systems
7. Demonstrate the application of natural sciences and mathematics at or above the level of algebra and trigonometry to the building, testing, operation, and maintenance of computer systems and associated software systems

CMNW 241	ADVANCED COMPUTER AND NETWORK DIAGNOSTICS <sup>1</sup>	5
ELCT 233	ELECTRONIC DEVICES I <sup>1</sup>	4
<b>Hours</b>		<b>14</b>
<b>Total Hours</b>		<b>61</b>

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## Accelerated Pathway

The Accelerated Pathway for the Electronics Engineering Technology - Computer Maintenance and Networking, Associate of Applied Science is a helpful guide for students who desire the convenience of an extensive selection of online course offerings and who seek to complete their degree within as little as 15 months. Students are encouraged to enroll in 8 or 10 week sessions to maximize accelerated options. Please meet with an advisor to ensure the courses in this pathway align with your educational goals.

Course	Title	Hours
<b>First Year</b>		
<b>Fall Semester</b>		
CMNW 141	COMPUTER DIAGNOSTIC AND REPAIR	3
ELCT 111	ELECTRICAL CIRCUITS I	3
ENGL 161	COLLEGE COMPOSITION I	3
MTHM 155	TECHNICAL MATHEMATICS I	4
SDEV 101	INTRODUCTION TO THE LCCC COMMUNITY <sup>2</sup>	1
Social Science Elective <sup>3</sup>		3
<b>Hours</b>		<b>17</b>
<b>Spring Semester</b>		
CMNW 145	NETWORK INSTALLATION/DIAGNOSTICS	4
ELCT 121	DIGITAL ELECTRONICS <sup>1</sup>	4
ENGL 164	COLLEGE COMPOSITION II WITH TECHNICAL TOPICS <sup>1</sup>	3
PHYC 150	GENERAL PHYSICS I <sup>1</sup>	4
Arts and Humanities Elective <sup>4</sup>		3
<b>Hours</b>		<b>18</b>
<b>Summer Semester</b>		
CMNW 221	PROGRAMMING IN C & C++ FOR ENGINEERING TECHNOLOGY APPLICATIONS <sup>1</sup>	4
CMNW 101	A+ CERTIFICATION PREPARATION I (1st 5 week session)	4
CMNW 201	A+ CERTIFICATION PREP II (2nd 5 week session) <sup>1</sup>	4
<b>Hours</b>		<b>12</b>
<b>Second Year</b>		
<b>Fall Semester</b>		
CMNW 230	DATA COMMUNICATIONS <sup>1</sup>	5