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

Curriculum Code #6312

Effective May 2018

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. 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: computer systems specialist, 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.

| Course | Title | Hours |
|---|---|---|
| **First Year** | | |
| **Fall Semester** | | |
| 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 121 | TECHNICAL MATHEMATICS I [1] | 4 |
| SDEV 101 | COLLEGE 101 [2] | 1 |
| | Hours | 18 |
| **Spring Semester** | | |
| CMNW 201 | A+ CERTIFICATION PREP II [1] | 4 |
| ELCT 121 | DIGITAL ELECTRONICS [1] | 4 |
| ENGL 164 | COLLEGE COMPOSITION II WITH TECHNICAL TOPICS [1] | 3 |
| Arts and Humanities Elective | | 3 |
| | Hours | 14 |
| **Second Year** | | |
| **Fall Semester** | | |
| CMNW 145 | NETWORK INSTALLATION/DIAGNOSTICS | 4 |
| CMNW 221 | PROGRAMMING IN C & C++ FOR ENGINEERING TECHNOLOGY APPLICATIONS [1] | 4 |
| ELCT 233 | ELECTRONIC DEVICES I [1] | 4 |
| PHYC 150 | GENERAL PHYSICS I [1] | 4 |
| | Hours | 16 |
| **Spring Semester** | | |
| CMNW 220 | DATA COMMUNICATIONS [1] | 4 |
| CMNW 241 | ADVANCED COMPUTER AND NETWORK DIAGNOSTICS [1] | 5 |
| Social Sciences Elective | | 3 |
| | Hours | 12 |
| | Total Hours | 60 |

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.

## Arts and Humanities Electives

| Code | Title | Hours |
|---|---|---|
| ARTS 243G | ART HISTORY I | 3 |
| ARTS 244G | ART HISTORY II | 3 |
| ARTS 245G | WORLD ART | 3 |
| ARTS 246 | HISTORY OF PHOTOGRAPHY | 3 |
| ARTS 254 | HISTORY OF AMERICAN ARCHITECTURE | 3 |
| ENGL 261G | MASTERPIECES OF BRITISH LITERATURE I | 3 |
| ENGL 262G | MASTERPIECES OF BRITISH LITERATURE II | 3 |
| ENGL 266G | AFRICAN AMERICAN LITERATURE | 3 |
| ENGL 269G | INTRODUCTION TO SHAKESPEARE | 3 |
| MUSC 262G | MUSIC AS A WORLD PHENOMENON | 3 |
| PHLY 165 | BIOETHICS | 3 |
| PHLY 262G | INTRODUCTION TO EASTERN PHILOSOPHY | 3 |
| RELG 181G | INTRODUCTION TO WORLD RELIGIONS | 3 |
| RELG 261 | RELIGION IN AMERICA | 3 |
| RELG 262G | INTRODUCTION TO EASTERN PHILOSOPHY | 3 |
| THTR 151G | INTRODUCTION TO THEATER | 3 |

## Social Science Electives

| Code | Title | Hours |
|---|---|---|
| HSTR 151G | CIVILIZATION I | 3 |
| HSTR 152G | CIVILIZATION II | 3 |
| HSTR 161 | UNITED STATES I | 3 |
| HSTR 162 | UNITED STATES II | 3 |
| HSTR 171G | THE WORLD SINCE 1900 | 3 |
| HSTR 252G | WOMEN IN WORLD HISTORY | 3 |
| HSTR 267G | AFRICAN AMERICAN HERITAGE | 3 |
| PLSC 156 | AMERICAN NATIONAL GOVERNMENT | 3 |
| PSYH 151 | INTRODUCTION TO PSYCHOLOGY | 3 |
| SOCY 151G | INTRODUCTION TO SOCIOLOGY | 3 |

Program Contact(s):

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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). (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)

**Program Learning Outcomes**

1. Demonstrate how physics is applied to electronic circuits in a rigorous mathematical environment at or above the level of algebra and trigonometry
2. Apply the knowledge, techniques, skills, and modern tools in computer maintenance and networking applications to include basic electronics, programming, operation, installation, maintenance, selection, and optimization of computer systems, computer networks and associated hardware and software systems
3. Conduct standard tests and measurements and, to conduct, analyze, interpret experiments
4. Write technical lab
5. Function effectively as a member of a technical team
6. Identify and analyze engineering technology problems in computer
7. Apply maintenance and networking applications and develop appropriate solutions
8. Apply written, oral, and graphical communication in both technical and non-technical environments
9. Identify and use appropriate  technical literature
10. Understand the need for and engage in self-directed continuing professional development
11. Understand and commit to professional and ethical responsibilities, including a respect for diversity
12. Demonstrate commitment to quality, timeliness, and continuous improvement
13. Apply electric circuits/circuit analysis and design, computer programming, associated software applications, analog and digital electronics, microcomputers, operating systems, and local area networks, to the building, testing, operation and maintenance of computer systems and associated software systems