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**CONSTRUCTION ELECTRICIAN DIPLOMA  
 CATALOG: 2007-2008**

<b>NAME</b>	<b>ID</b>	<b>DATE</b>
<b>EMAIL</b>	<b>PHONE</b>	
<b>ADDRESS</b>	<b>ADVISOR</b>	

**GENERAL EDUCATION REQUIREMENTS 6 CREDIT HOURS**

GENERAL EDUCATION COURSE	REQUIRED	COURSE CREDIT HRS	GRADE	DATE COMPLETED
<b>CHOOSE ONE OF THE FOLLOWING FROM THE GENERAL EDUCATION LIST</b>	<b>3</b>			
ENG 101 Writing I (OR)	<b>3</b>			
SCIENCE (OR)	<b>(3)</b>			
SOCIAL INTERACTION (OR)	<b>(3)</b>			
HERITAGE/HUMANITIES (OR)	<b>(3)</b>			
ORAL COMMUNICATIONS	<b>(3)</b>			
<b>MATH REQUIREMENT</b>	<b>3</b>			
MT 115 (OR)				
MT 125 Or Higher Level Math				
<b>SUB TOTAL</b>	<b>6</b>			

**TECHNICAL CORE REQUIREMENTS 25 HOURS**

COURSE	REQUIRED	COURSE CREDIT HRS	GRADE	DATE COMPLETED
ENGT 110 CIRCUITS I	<b>3</b>			
ENGT 111 CIRCUITS I LAB I	<b>1</b>			
ENGT 113 CIRCUITS I LAB II	<b>1</b>			
ENGT 114 CIRCUITS II	<b>3</b>			
ENGT 115 CIRCUITS II LAB I	<b>1</b>			
ENGT 117 CIRCUITS II LAB II	<b>1</b>			
EET 250 NATIONAL ELECTRIC CODE	<b>4</b>			
EET 264 ROTATING MACHINES	<b>3</b>			
EET 265 ROTATING MACHINES LAB	<b>1</b>			
EET 270 MOTOR CONTROLS I	<b>2</b>			
EET 271 MOTOR CONTROLS I LAB	<b>2</b>			
COMPUTER LITERACY	<b>3</b>			
<b>SUBTOTAL</b>	<b>25</b>			



ADDITIONAL (23-25) CREDITS FOR THIS SPECIALIZATION COURSE	REQUIRED	COURSE	GRADE	DATE COMPLETED
EET 154 ELECTRICAL CONSTRUCTION I (AND)	2			
EET 155 ELECTRICAL CONSTRUCTION I LAB (AND)	2			
EET 252 ELECTRICAL CONSTRUCTION II (AND)	2			
EET 253 ELECTRICAL CONSTRUCTION II LAB (OR)	2			
EET 254 ELECTRICAL CONSTRUCTION (AND)	(3)			
EET 255 ELECTRICAL CONSTRUCTION LAB	(4)			
TECHNICAL ELECTIVES	10			
SIBTOTALS	17-18			

**\*TECHNICAL ELECTIVES 9 HOURS LISTED HERE**

ELECTIVE COURSES Any EET,ET,ENGT,IMT,CIS,NIS,IT,ISM,CAD,ICT,MFG, or any other course approved by the program coordinator	REQUIRED	COURSE CREDIT HRS	GRADE	DATE COMPLETED
ELECTIVE TOTALS	10			
TOTAL FOR THIS PROGRAM	54-56			
TOTAL CREDIT HOURS REQUIRED FOR THIS PROGRAM (54-56) CREDIT HOURS				

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Steps:

- Go to Tools on the toolbar
- Click on Protect Document
- Make sure the box is checked “Allow only this type of editing in the document
- Make sure the drop-down box reads “No changes read only”
- You will be asked for a password – Use a password that you are not likely to forget.

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<b>FIRST SEMESTER (FALL SEMESTER)</b>	<b>COURSE CREDIT HOURS</b>
<b>FULL TERM CLASSES</b>	
CIS 100 INTRODUCTION TO COMPUTERS (FIRST BI-TERM)	3
MT 115 (OR) MT 125 (OR) MT 150	3
ENGT 110 CIRCUITS I	3
ENGT 111 CIRCUITS I LAB I	1
ENGT 113 CIRCUITS I LAB II (SECOND BI-TERM)	1
ENGT 114 CIRCUITS II	3
ENGT 115 CIRCUITS II LAB I	1
ENGT 117 CIRCUITS II LAB II	1
SUB TOTAL	<b>16</b>

<b>SECOND SEMESTER (SPRING SEMESTER)</b>	<b>COURSE CREDIT HOURS</b>
<b>FULL TERM CLASSES</b>	
ENG101 WRITING I (OR)	3
SCIENCE (OR)	(3)
SOCIAL INTERACTION (OR)	(3)
HERITAGE/HUMANITIES (OR)	(3)
ORAL COMMUNICATIONS	(3)
<b>FIRST BI-TERM</b>	
EET270 ELECTRICAL MOTOR CONTROLS (USE ET118)	2
EET271 ELECTRICAL MOTOR CONTROLS LAB (USE ET118)	2
<i>ET118 MANUFACTURING III, COMPUTER NUMERICAL CONTROLS</i>	(3)
EET 264 ROTATING MACHINES (USE EET266)	2
<i>EET 266 TRANSFORMERS AND ROTATING MACHINERY</i>	(3)
EET 265 ROTATING MACHINES LAB (USE EET267)	2
<i>EET267 TRANSFORMERS AND ROTATING MACHINER</i>	(3)
<b>SECOND BI-TERM</b>	
CHOOSE AN ELECTIVE	3
CHOOSE AN ELECTIVE	3
SUB TOTAL	<b>16</b>

<b>THIRD SEMESTER (FALL SEMESTER)</b>	<b>COURSE CREDIT HOURS</b>
<b>FULL TERM CLASSES</b>	
EET250 NEC (NATIONAL ELECTRIC CODE)	4
<b>FIRST BI-TERM</b>	
EET154 ELECTRICAL CONSTRUCTION I	2
EET155 ELECTRICAL CONSTRUCTION I LAB	2
EET 148 ELECTRONIC DRAFTING	3 (elective)
<b>SECOND BI-TERM</b>	
EET252 ELECTRICAL CONSTRUCTION II	2
EET253 ELECTRICAL CONSTRUCTION II LAB	2
SUB TOTAL	
15	

<b>FOURTH SEMESTER (SPRING SEMESTER)</b>	<b>COURSE CREDIT HOURS</b>
<b>FULL TERM</b>	
ET 250 PROGRAMMABLE LOGIC CONTROLLERS	4
ENGT260 ROBOTIC AND INDUSTRIAL AUTOMATION	3 (elective)
ENGT261 ROBOTIC AND INDUSTRIAL AUTOMATION LAB I	1 (elective)
ENGT263 ROBOTIC AND INDUSTRIAL AUTOMATION LAB II	1 (elective)
ET265 APPLIED FLUID POWER	3 (elective)
ISX100 INDUSTRIAL SAFETY	3 (elective)
SUB TOTAL	
15	

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<b>FIRST SEMESTER (SPRING SEMESTER)</b>	<b>COURSE CREDIT HOURS</b>
<b>FULL TERM CLASSES</b>	
CIS 100 INTRODUCTION TO COMPUTERS (FIRST BI-TERM)	<b>3</b>
MT 115 (OR) MT 125 (OR) MT 150	<b>3</b>
ENGT 110 CIRCUITS I	<b>3</b>
ENGT 111 CIRCUITS I LAB I	<b>1</b>
ENGT 113 CIRCUITS I LAB II (SECOND BI-TERM)	<b>1</b>
ENGT 114 CIRCUITS II	<b>3</b>
ENGT 115 CIRCUITS II LAB I	<b>1</b>
ENGT 117 CIRCUITS II LAB II	<b>1</b>
SUB TOTAL	<b>16</b>

<b>SECOND SEMESTER (FALL SEMESTER)</b>	<b>COURSE CREDIT HOURS</b>
<b>FULL TERM CLASSES</b>	
EET250 NEC (NATIONAL ELECTRIC CODE)	<b>4</b>
ENGT260 ROBOTIC AND INDUSTRIAL AUTOMATION	<b>3 (elective)</b>
ENGT261 ROBOTIC AND INDUSTRIAL AUTOMATION LAB I	<b>1 (elective)</b>
ENGT263 ROBOTIC AND INDUSTRIAL AUTOMATION LAB II	<b>1 (elective)</b>
ET265 APPLIED FLUID POWER	<b>3 (elective)</b>
ISX100 INDUSTRIAL SAFETY	<b>3 (elective)</b>
SUB TOTAL	<b>15</b>

<b>THIRD SEMESTER (SPRING SEMESTER)</b>	<b>COURSE CREDIT HOURS</b>
<b>FULL TERM CLASSES</b>	
ET 250 PROGRAMMABLE LOGIC CONTROLLERS	<b>4</b>
<b>FIRST BI-TERM</b>	
EET270 ELECTRICAL MOTOR CONTROLS I (USE ET118)	<b>2</b>
EET271 ELECTRICAL MOTOR CONTROLS I LAB (USE ET118)	<b>2</b>
<i>ET118 MANUFACTURING III, COMPUTER NUMERICAL CONTROLS</i>	<b>(3)</b>
EET 264 ROTATING MACHINES (USE EET266)	<b>2</b>
<i>EET 266 TRANSFORMERS AND ROTATING MACHINERY</i>	<b>(3)</b>
EET 265 ROTATING MACHINES LAB (USE EET267)	<b>2</b>
<i>EET267 TRANSFORMERS AND ROTATING MACHINER</i>	<b>(3)</b>
<b>SECOND BI-TERM</b>	
SUB TOTAL	
	<b>13</b>

<b>FOURTH SEMESTER (FALL SEMESTER)</b>	<b>COURSE CREDIT HOURS</b>
<b>FULL TERM CLASSES</b>	
ENG101 WRITING I (OR)	<b>3</b>
SCIENCE (OR)	<b>(3)</b>
SOCIAL INTERACTION (OR)	<b>(3)</b>
HERITAGE/HUMANITIES (OR)	<b>(3)</b>
ORAL COMMUNICATIONS	<b>(3)</b>
<b>FIRST BI-TERM</b>	
EET154 ELECTRICAL CONSTRUCTION I	<b>2</b>
EET155 ELECTRICAL CONSTRUCTION I LAB	<b>2</b>
EET 148 ELECTRONIC DRAFTING	<b>3 (elective)</b>
EET252 ELECTRICAL CONSTRUCTION II	<b>2</b>
EET253 ELECTRICAL CONSTRUCTION II LAB	<b>2</b>
<b>SECOND BI-TERM</b>	
EET 272 MOTOR CONTROLS II	<b>2</b>
EET 273 MOTOR CONTROLS II LAB	<b>2</b>
SUB TOTAL	
	<b>18</b>

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## General Education Requirements

The overall goal of education is to help students become productive citizens who are aware of the ideas and aspirations that motivate human thought and action and who can successfully use their understanding of the world, themselves and their roles in society. Education is a shared responsibility among students, faculty and administration. Since lifelong learning is necessary for living in a constantly changing society, the general education core exposes students to a variety of learning experiences.

There must be sufficient breadth and depth in the curriculum to meet the needs, interests and abilities of all students. A general education core curriculum will ensure that KCTCS colleges graduate well-educated men and women who are intellectually flexible, articulate, creative and prepared for continuous growth. For all students, this implies some understanding of the world of work and career fields and an understanding of their own abilities, interests and needs. The general education core curriculum will also help students to develop their own values, to pursue goals and to contribute to the political, moral, social and cultural enrichment of society.

### Competencies

Upon completion of an associate degree program (AA, AS, AAS), the graduate can:

- communicate effectively using standard written English
- communicate in a clear oral and non-verbal fashion and employ active listening skills
- demonstrate basic skills in computer operations and/or software applications
- organize, analyze and make information useful by employing mathematics
- demonstrate an awareness of one's interaction with the biological/physical environment
- demonstrate an awareness of self as an individual, as a member of a multicultural society and/or as a member of the world community
- recognize the impact of decisive ideas and events in human heritage
- develop and perform basic search strategies and access information in a variety of formats, print and non-print

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- analyze summarize and interpret a variety of reading materials
- think critically and make connections in learning across the disciplines
- elaborate upon knowledge to create new thoughts, processes and/or products and
- demonstrate an awareness of ethical considerations in making value choices

The 12 general education competencies listed above are achieved in two ways.

Eight of the competencies are course specific: writing, oral communication, computer literacy, mathematics, science, social interaction, heritage/humanities/foreign language and information access. Five of the competencies are developed across the entire general education curriculum: analytical reading, integrated learning, creative thinking, ethics and values and writing, which is attained through specific courses as well as across the curriculum.

The listings below indicate the particular courses that may be used to fulfill the eight general education competencies which are course specific.

**Writing**

To communicate effectively using standard written English

ENG 101 Writing I AND .....3  
 ENG 102 Writing II.....3

**Oral Communication**

To communicate in a clear oral and non-verbal fashion and employ active listening skills

COM 181 Basic Public Speaking.....3  
 COM 252 Intro. to Interpersonal Communication .....3  
 COM 281 Communication in Small Group.....3

**Computer Literacy**

To demonstrate basic skills in computer operations and/or software applications

CIS 100 Introduction to Computers.....3  
 OST 105 Introduction to Information Systems.....3

Note: Competency may be satisfied by a course or courses included in technical or transfer curricula. The course description or descriptions, competencies and outline must include the five components of the definition of computer literacy: 1) describe, using correct computer terminology, basic computer functions, uses of computers in society and different types of software; 2) discuss ethical computing issues, such as copyright, privacy, security and property; 3) use graphical user interface; 4) use computer application programs and 5) access information sources found on networks such as the Internet and be familiar with Web browsers, search sources and sources of information related to his or her own fields.

**Mathematics**

To organize, analyze and make information useful by employing mathematics

MA 113 Calculus I .....4  
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 MA 114 Calculus II .....4  
 MA 123 Elementary Calculus and Its Applications .....3  
 MA 201 Mathematics for Elementary Teachers.....3  
 MA 202 Mathematical Problem Solving  
 for Elementary Teachers.....3  
 MA 213 Calculus III .....4  
 MA 214 Calculus IV .....3  
 MT 105 Business Mathematics\*\* .....3  
 MT 110 Applied Mathematics\*\* .....3  
 MT 115 Technical Mathematics\*\* .....3  
 MT 150 College Algebra.....3  
 MT 155 Trigonometry .....2  
 STA 291 Statistical Method.....3  
 STA 200 Statistics: A Force in Human Judgment.....3

\*\* MT 105, MT 110 & MT 115 courses do not fulfill general education transfer requirements for the AA/AS degree.

\*\*\* MT 145 does not fulfill general education transfer requirements for AS degree.

**Science**

To demonstrate an awareness of one’s interaction with the biological/physical environment

AST 101 Frontiers of Astronomy.....	3
BIO 112 Basic Ideas of Biology.....	3
BIO 114 Biology I .....	3
BIO 116 Biology II .....	3
BIO 120 Population, Resources and Environment .....	3
BIO 122 Introduction to Conservation Biology.....	3
BIO 124 Principles of Ecology.....	3
BIO 130 Aspects of Human Biology .....	3
BIO 150 Principles of Biology I.....	3
BIO 152 Principles of Biology II.....	3
BIO 220 The Genetic Perspective.....	3
BIO 226 Principles of Microbiology .....	3
CHE 104 Introductory General Chemistry .....	3
CHE 105 General College Chemistry I .....	3
CHE 107 General College Chemistry II .....	3
CHE 230 Organic Chemistry I .....	3
CHE 232 Organic Chemistry II .....	3
PHY 151 Introduction to Physics .....	3
PHY 152 Introduction to Physics .....	3
PHY 231 General University Physics .....	4
PHY 232 General University Physics .....	4

**Science with Laboratory**

BIO 120 Population, Resources and Environment OR .....	3
BIO 112 Basic Ideas of Biology AND .....	3

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BIO 113 General Biology Laboratory .....	1
BIO 137 Human Anatomy and Physiology I .....	4
BIO 139 Human Anatomy and Physiology II .....	4
BIO 140 Botany.....	3
BIO 141 Botany w/Lab .....	4
BIO 142 Zoology .....	3
BIO 143 Zoology w/Lab.....	4
BIO 150 Principles of Biology I AND .....	3
BIO 151 Principles of Biology Laboratory I.....	2
BIO 152 Principles of Biology II AND .....	3
BIO 153 Principles of Biology Laboratory II.....	2
BIO 225 Medical Microbiology w/Lab .....	4
BIO 227 Principles of Microbiology w/Lab .....	5
CHE 104 Introductory General Chemistry AND .....	3
CHM 104 Introductory General Chemistry Laboratory .....	1
CHE 105 General College Chemistry I AND .....	3
CHM 105 General Chemistry Laboratory I .....	2

CHE 107 General College Chemistry II AND .....	3
CHE 106 Intro. to Inorganic, Organic, and Biochemistry .....	4
CHE 230 Organic Chemistry I AND .....	3
CHE 231 Organic Chemistry Laboratory I .....	2
CHE 232 Organic Chemistry II AND .....	3
CHE 233 Organic Chemistry Laboratory II .....	2
PHY 151 Introduction to Physics AND .....	3
PH 161 Introductory Physics Laboratory I.....	1
PHY 152 Introduction to Physics AND .....	3
PH 162 Introductory Physics Laboratory II.....	1
PHY 211 General Physics .....	5
PHY 213 General Physics .....	5
PHY 231 General University Physics AND .....	4
PHY 241 General University Physics Laboratory .....	1
PHY 232 General University Physics AND .....	4
PHY 242 General University Physics Laboratory .....	1

**Science Laboratory**

BIO 113 General Biology Laboratory .....	1
BIO 115 Introduction to Biology Lab 1.....	1
BIO 117 Introduction to Biology Lab II.....	1
CHM 104 Introductory General Chemistry Laboratory .....	1
PH 161 Introductory Physics Laboratory I.....	1
PH 162 Introductory Physics Laboratory II.....	1

**Social Interaction**

To demonstrate an awareness of self as an individual, as a member of a multicultural society and/or as a member of the world community

ECO 201 Principles of Economics I .....	3
ECO 202 Principles of Economics II .....	3

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FAM 252 Introduction to Family Science .....	3
FAM 253 Human Sexuality: Development, Behavior and Attitudes .....	3
GE 140 Development of Leadership .....	3
HUM 202 Survey of Appalachian Studies I .....	3
HUM 203 Survey of Appalachian Studies II .....	3
HUM 204 Appalachian Seminar .....	3
PS 101 American Government .....	3
PS 255 State Government .....	3
PSY 223 Developmental Psychology.....	3
PY 110 General Psychology .....	3
PY 180 Human Relations.....	3
PY 185 Human Potential.....	3
PY 230 Psychosocial Aspects of Death and Dying.....	3
RS 130 Introduction to Comparative Religion* .....	3
SOC 101 Introduction to Sociology.....	3
SOC 151 Social Interaction.....	3
SOC 152 Modern Social Problems .....	3
SWK 275 The Family .....	3

\* May be used to fulfill one competency only

**Heritage/Humanities**

To recognize the impact of decisive ideas and events in human heritage

**Heritage**

HIS 104 A History of Europe Through the Mid-Seventeenth Century .....3  
 HIS 105 A History of Europe from the Mid-Seventeenth  
 Century to the Present .....3  
 HIS 108 History of the U.S. Through 1865.....3  
 HIS 109 History of the U.S. Since 1865 .....3  
 HIS 120 The World at War, 1939-45.....3  
 HIS 240 History of Kentucky .....3  
 HIS 261 Afro-American History 1865 - Present.....3

**Humanities**

ART 100 Introduction to Art.....3  
 ENG 161 Introduction to Literature .....3  
 ENG 221 Survey of English Literature I .....3  
 ENG 222 Survey of English Literature II .....3  
 ENG 251 Survey of American Literature I.....3  
 ENG 252 Survey of American Literature II.....3  
 ENG 261 Survey of Western Literature from  
 the Greeks Through the Renaissance.....3  
 ENG 262 Survey of Western Literature from 1660  
 to the Present.....3  
 ENG 264 Major Black Writers .....3  
 ENG 270 The Old Testament as Literature.....3  
 ENG 271 The New Testament as Literature .....3  
 ENG 281 Introduction to Film.....3

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MUS 100 Introduction to Music .....3  
 MUS 222 History and Sociology of Rock Music .....3  
 PHI 100 Introduction to Philosophy: Knowledge  
 and Reality .....3  
 PHI 130 Introduction to Philosophy: Morality and Society.....3  
 RS 130 Introduction to Comparative Religion\* .....3

\* May be used to fulfill one competency only

**Accessing Information**

To develop and perform basic search strategies and access information in a variety of formats, print and non-print

ENG 102 Writing II.....3

**Course Substitution Chart<sup>1</sup>**

The course substitutions listed in the chart below were approved in December 2002. Courses in Column A can be substituted for courses in Column B and vice versa.

**Column A Column B**

- CPU 150 CIS 100<sub>2</sub>
- EFM 100 BA 120
- OST 103 AHS 115
- TEC 200 CMS 152



1. Other courses may be eligible for transfer depending on the program of study.
2. This course is listed in the KCTCS Catalog as meeting a general education requirement.

## Admission to Programs

Academic requirements are specified for each program and are based on the level of difficulty and the technical nature of the curriculum. Admission to some programs is limited by college resources, facilities, accreditation requirements, etc. Contact the counselor or Admissions and Records Office or program coordinator at the College for more information.

## Electrical Technology

*The Electrical Technology Program focuses on preparing students for various entry-level electrician positions in industry and the building trades. The study of electrical theory in the classroom and practical application of that theory in labs provide the foundation of this program. This program is versatile in offering three*

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*different specializations within the Associate in Applied Science degree. A variety of certificates and diplomas serve as pathways to the AAS degree specializations or as meeting specific training needs.*

*Students enrolled in the Electrical Technology program are required to achieve a minimum grade of "C" in each technical core and in those courses selected as technical electives.*

### Diplomas

#### General Education:

MT 115 Technical Mathematics **OR** ..... 3

MT 125 Technical Algebra & Trigonometry **OR** ..... (3)

Higher Level Mathematics Course

#### Choose one of the following from the General Education list:

ENG 101 Writing I ..... 3

Science ..... 3

Social Interaction ..... 3

Heritage/Humanities ..... 3

Oral Communications ..... 3

#### Subtotal 6

#### Technical Core:

ENGT 110 Circuits I ..... 3

ENGT 111 Circuits I Lab I ..... 1

ENGT 113 Circuits I Lab II ..... 1

ENGT 114 Circuits II ..... 3

ENGT 115 Circuits II Lab I ..... 1

ENGT 117 Circuits II Lab II ..... 1

EET 250 National Electric Code ..... 4

EET 264 Rotating Machines ..... 2

EET 265 Rotating Machines Lab ..... 2

EET 270 Motor Controls I ..... 2

EET 271 Motor Controls I Lab ..... 2

Computer Literacy ..... 3

#### Subtotal 25

#### Industrial Electrician

EET 154 Electrical Construction I **AND** ..... 2

EET 155 Electrical Construction I Lab **AND** ..... 2

EET 252 Electrical Construction II **AND** ..... 2

EET 253 Electrical Construction II Lab <b>OR</b> .....	2
EET 254 Electrical Construction <b>AND</b> .....	(3)
EET 255 Electrical Construction Lab .....	(4)

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EET 272 Motor Controls II <b>AND</b> .....	2
EET 273 Motor Controls II Lab <b>AND</b> .....	2
EET 276 Programmable Logic Controllers <b>AND</b> .....	2
EET 277 Programmable Logic Controllers Lab <b>OR</b> .....	2
EET 278 Electrical Motor Controls II and PLCs <b>AND</b> .....	(3)
EET 279 Electrical Motor Controls II and PLCs Lab .....	(4)
Technical Electives* .....	9

**Subtotal 23-25**

**Total Credit Hours 54-56**

**Construction Electrician**

EET 154 Electrical Construction I <b>AND</b> .....	2
EET 155 Electrical Construction I Lab <b>AND</b> .....	2
EET 252 Electrical Construction II <b>AND</b> .....	2
EET 253 Electrical Construction II Lab <b>OR</b> .....	2
EET 254 Electrical Construction <b>AND</b> .....	(3)
EET 255 Electrical Construction Lab.....	(4)
Technical Electives* .....	10

**Subtotal 17-18**

**Total Credit Hours 48-49**

**Motor Controls Electrician**

EET 272 Motor Controls II <b>AND</b> .....	2
EET 273 Motor Controls II Lab <b>AND</b> .....	2
EET 276 Programmable Logic Controllers <b>AND</b> .....	2
EET 277 Programmable Logic Controllers Lab <b>OR</b> .....	2
EET 278 Electrical Motor Controls II and PLCs <b>AND</b> .....	(3)
EET 279 Electrical Motor Controls II and PLCs Lab .....	(4)
FPX 100 Fluid Power <b>AND</b> .....	3
FPX 101 Fluid Power Lab <b>OR</b> .....	2
ET 265 Applied Fluid Power .....	(3)
Technical Electives .....	7

**Subtotal 17-20**

**Total Credit Hours 48-51**

**Certificates**

**Electrician Apprentice**

ENGT 110 Circuits I .....	3
ENGT 111 Circuits I Lab I .....	1
ENGT 113 Circuits I Lab II .....	1
ENGT 114 Circuits II .....	3
ENGT 115 Circuits II Lab I .....	1
ENGT 117 Circuits II Lab II .....	1
EET 150 Transformers .....	2

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EET 151 Transformers Lab .....	1
EET 250 National Electric Code .....	4
EET 154 Electrical Construction I <b>AND</b> .....	2
EET 155 Electrical Construction I Lab <b>AND</b> .....	2
EET 252 Electrical Construction II <b>AND</b> .....	2
EET 253 Electrical Construction II Lab <b>OR</b> .....	2
EET 254 Electrical Construction <b>AND</b> .....	(3)
EET 255 Electrical Construction Lab.....	(4)
EET 264 Rotating Machinery <b>AND</b> .....	2
EET 265 Rotating Machinery Lab <b>AND</b> .....	2
EET 270 Electrical Motor Controls I <b>AND</b> .....	2
EET 271 Electrical Motor Controls I Lab <b>OR</b> .....	2
EET 268 Rotating Machinery Electrical Motor Controls I <b>AND</b> .....	(3)
EET 269 Rotating Machinery Electrical Motor Controls I Lab .....	(4)

**Total Credit Hours 31-33**

**Electrician Helper I**

ENGT 110 Circuits I .....	3
ENGT 111 Circuits I Lab I .....	1
ENGT 113 Circuits I Lab II .....	1
Technical Electives .....	3

**Total Credit Hours 8**

**Electrician Helper II**

ENGT 110 Circuits I .....	3
ENGT 111 Circuits I Lab I .....	1
ENGT 113 Circuits I Lab II .....	1
ENGT 114 Circuits II .....	3
ENGT 115 Circuits II Lab I .....	1
ENGT 117 Circuits II Lab II .....	1
Technical Electives .....	3

**Total Credit Hours 13**

**Residential Electrician I**

ENGT 110 Circuits I .....	3
ENGT 111 Circuits I Lab I .....	1
ENGT 113 Circuits I Lab II .....	1
ENGT 114 Circuits II .....	3
ENGT 115 Circuits II Lab I .....	1
ENGT 117 Circuits II Lab II .....	1
EET 154 Electrical Construction I .....	2
EET 155 Electrical Construction I Lab .....	2

**Total Credit Hours 14**

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**Residential Electrician II**

ENGT 110 Circuits I .....	3
ENGT 111 Circuits I Lab I .....	1
ENGT 113 Circuits I Lab II .....	1
ENGT 114 Circuits II .....	3

ENGT 115 Circuits II Lab I .....	1
ENGT 117 Circuits II Lab II .....	1
EET 154 Electrical Construction I <b>AND</b> .....	2
EET 155 Electrical Construction I Lab <b>AND</b> .....	2
EET 252 Electrical Construction II <b>AND</b> .....	2
EET 253 Electrical Construction II Lab <b>OR</b> .....	2
EET 254 Electrical Construction <b>AND</b> .....	(3)
EET 255 Electrical Construction Lab.....	(4)
EET 250 National Electrical Code .....	4

**Total Credit Hours 21-22**

**Motor Controls Electrician I**

ENGT 110 Circuits I .....	3
ENGT 111 Circuits I Lab I .....	1
ENGT 113 Circuits I Lab II .....	1
ENGT 114 Circuits II .....	3
ENGT 115 Circuits II Lab I .....	1
ENGT 117 Circuits II Lab II .....	1
EET 150 Transformers .....	2
EET 151 Transformers Lab .....	1
EET 250 National Electric Code .....	4
EET 264 Rotating Machinery .....	2
EET 265 Rotating Machinery Lab .....	2
EET 270 Electrical Motor Controls I .....	2
EET 271 Electrical Motor Controls I Lab .....	2
CPU 150 Computer Fundamentals <b>OR</b> .....	3
CIS 100 Introduction to Computers .....	(3)

**Total Credit Hours 28**

**Motor Controls Electrician II**

ENGT 110 Circuits I .....	3
ENGT 111 Circuits I Lab I .....	1
ENGT 113 Circuits I Lab II .....	1
ENGT 114 Circuits II .....	3
ENGT 115 Circuits II Lab I .....	1
ENGT 117 Circuits II Lab II .....	1
EET 150 Transformers .....	2
EET 151 Transformers Lab .....	1
EET 250 National Electric Code .....	4

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EET 264 Rotating Machinery .....	2
EET 265 Rotating Machinery Lab .....	2
EET 270 Electrical Motor Controls I .....	2
EET 271 Electrical Motor Controls I Lab .....	2
EET 272 Motor Controls II <b>AND</b> .....	2
EET 273 Motor Controls II Lab <b>AND</b> .....	2
EET 276 Programmable Logic Controllers <b>AND</b> .....	2
EET 277 Programmable Logic Controllers Lab <b>OR</b> .....	2
EET 278 Electrical Motor Controls II and PLCs <b>AND</b> .....	(3)



EET 279 Electrical Motor Controls II and PLCs Lab ..... (4)  
CPU 150 Computer Fundamentals **OR** ..... 3  
CIS 100 Introduction to Computers ..... (3)  
**Total Credit Hours 35-36**