



Program Completion Guide

**ASSOCIATE IN APPLIED SCIENCE - ELECTRIC UTILITY SUBSTATION AND RELAY TECHNOLOGY (A50510)**

Student Name: \_\_\_\_\_ ID #: \_\_\_\_\_ Date of Enrollment: \_\_\_\_\_

Advisor Name: \_\_\_\_\_ Contact Information: \_\_\_\_\_

**Note: Developmental coursework may be required. Please refer to the Developmental Education Guide for additional information.**

**A: Electric Utility Substation and Relay Technology: Basic Power Systems Certificate (C50510) Course Requirements 15 credit hours: Complete Section A.**

| Courses                                      | Cr. | Recommended Semester          | Prerequisites/<br>Corequisites   | Semester Registered/<br>Planned | Semester Completed/<br>Grade |
|--|-----|-------------------------------|--|---------------------------------|------------------------------|
| ELC 131 Circuit Analysis I                   | 4   | 1 <sup>st</sup> year – fall   | Pre: MAT 003 Tier 2 or BSP 4003 Tier 2   |                                 |                              |
| EUS 110 Intro to Electric Utility Industry*  | 4   | 1 <sup>st</sup> year – fall   | Pre: MAT 003 Tier 2 or BSP 4003 Tier 2 or MAT 071, ENG 002 BSP 4002 or ENG 111 |                                 |                              |
| EUS 130 Electric Utility Print Reading*      | 4   | 1 <sup>st</sup> year – spring | Pre: ELC 131 and EUS 110   |                                 |                              |
| EUS 210 Large High Voltage Power Transfmr I* | 3   | 1 <sup>st</sup> year – spring | Pre: EUS 110   |                                 |                              |

**B: Electric Utility Substation and Relay Technology Associate in Applied Science Degree (A50510) Course Requirements: 71-73 credit hours: Complete Sections A and B.**

| Courses  | Cr.    | Recommended Semester          | Prerequisites/<br>Corequisites   | Semester Registered/<br>Planned | Semester Completed/<br>Grade |
|--|--------|-------------------------------|--|---------------------------------|------------------------------|
| ACA 122 College Transfer Success   | 1      | 1 <sup>st</sup> year – fall   | None   |                                 |                              |
| ECO 251 Principles of Microeconomics<br>or<br>ECO 252 Principles of Macroeconomics | 3      | 1 <sup>st</sup> year - fall   | Pre: MAT 003 or BSP 4003, ENG 002 or BSP 4002 or ENG 111               |                                 |                              |
| ELC 131 Circuit Analysis I<br>or<br>ELC 112 DC/AC Electricity                      | 4<br>5 | 1 <sup>st</sup> year – fall   | Pre: MAT 003 Tier 2 or BSP 4003 Tier 2<br><br>Pre: MAT 003 or BSP 4003 |                                 |                              |
| ENG 111 Writing and Inquiry  | 3      | 1 <sup>st</sup> year – fall   | Pre: ENG 002 or BSP 4002<br>Co: ACA 122, ENG 011                       |                                 |                              |
| MAT 171 Precalculus Algebra  | 4      | 1 <sup>st</sup> year – fall   | Pre: MAT 003 Tier 3 or BSP 4003 Tier 3 or MAT 071                      |                                 |                              |
| ELC 117 Motors and Controls<br>or<br>ELN 231 Industrial Controls                   | 4<br>3 | 1 <sup>st</sup> year – spring | Pre: ELC 112 or ELC 131<br><br>Pre: ELC 112 or ELC 131                 |                                 |                              |
| ENG 112 Writing/Research in the Disciplines  | 3      | 1 <sup>st</sup> year – spring | Pre: ENG 111   |                                 |                              |
| MAT 172 Precalculus Trigonometry   | 4      | 1 <sup>st</sup> year – spring | Pre: MAT 171 with a grade of “C” or better                             |                                 |                              |
| EUS 215 Large High Voltage Power Transfmr II*                                      | 3      | 2 <sup>nd</sup> year – fall   | Pre: EUS 210   |                                 |                              |
| EUS 225 Elec. Util. Safety & Human Performance                                     | 2      | 2 <sup>nd</sup> year – fall   | Pre: EUS 110 and EUS 130<br>Co: None                                   |                                 |                              |
| EUS 230 Electric Utility Protective Relaying I*                                    | 3      | 2 <sup>nd</sup> year – fall   | Pre: EUS 130   |                                 |                              |
| EUS 240 Substation Ancillary Systems*  | 3      | 2 <sup>nd</sup> year – fall   | Pre: EUS 130   |                                 |                              |
| ELN 229 Industrial Electronics   | 4      | 2 <sup>nd</sup> year – fall   | Pre: ELC 112 or ELC 131  |                                 |                              |
| ELC 128 Introduction to PLC  | 3      | 2 <sup>nd</sup> year – spring | Pre: ELC 112 or ELC 131  |                                 |                              |



|  |   |                               |   |  |  |
|--|---|-------------------------------|---|--|--|
| EUS 220 High Voltage Power Circuit Breakers*     | 3 | 2 <sup>nd</sup> year – spring | Pre: ELC 117 or ELN 231, and EUS 130    |  |  |
| EUS 235 Electric Utility Protective Relaying II* | 3 | 2 <sup>nd</sup> year – spring | Pre: EUS 230                            |  |  |
| EUS 255 Elect. Utility Troubleshooting           | 2 | 2 <sup>nd</sup> year – spring | Pre: EUS 215 and EUS 230<br>Co: EUS 235 |  |  |
| EUS 260 Capstone & Case Studies in EUSRT*        | 2 | 2 <sup>nd</sup> year – spring | Pre: EUS 215<br>Co: EUS 235             |  |  |
| PCI 172 SCADA Systems                            | 4 | 2 <sup>nd</sup> year – spring | None                                    |  |  |

**Electives: (Must take one Humanities/Fine Arts from lists below unless a specific course is required above.)**

|   |                             |                                    |                                 |
|---|-----------------------------|------------------------------------|---------------------------------|
| <b>Humanities/Fine Arts Electives (3 credit hours)** Courses with the following prefixes will satisfy this requirement: ART, DRA, ENG (literature courses only), HUM, MUS, PHI, REL, and SPA (Intermediate Spanish I only).</b> |                             |                                    |                                 |
| <b>Course</b>   | <b>Recommended Semester</b> | <b>Semester Registered/Planned</b> | <b>Semester Completed/Grade</b> |
|   | 2 <sup>nd</sup> year - fall |                                    |                                 |

**NOTES:** \*All courses must be completed with a grade of “C” or better.  
\*\*See course catalog for prerequisite and/or corequisite requirements.

**Students please read the following and sign below.**

I understand that as an RCC student, I am ultimately responsible for my schedule. I understand that I must complete each course with a grade of “C” or better and follow the established course sequence or my ability to graduate on time may be affected.  
My advisor has information regarding other colleges and transfer opportunities that I can investigate after completing my degree/diploma/certificate, and I understand that if I would like more information I can schedule an appointment with him/her.

Student Name: \_\_\_\_\_ Student Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Advisor Name: \_\_\_\_\_ Advisor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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