## Mechatronics Engineering Technology (A40350)

**Degree Type** Associate in Applied Science **Credential Number** A40350

## **General Education Requirements**

#### Communication

Take 2 Groups

Group 1 - Take 3 credits from

| Item #  | Title                | Credits |
|---------|----------------------|---------|
| ENG 110 | Freshman Composition | 3       |
| ENG 111 | Writing and Inquiry  | 3       |

Group 2 - Take 3 credits from

| Item #  | Title                         | Credits |
|---------|-------------------------------|---------|
| COM 110 | Introduction to Communication | 3       |
| COM 120 | Intro Interpersonal Com       | 3       |
| COM 231 | Public Speaking               | 3       |
| ENG 111 | Writing and Inquiry           | 3       |

**Humanities/Fine Arts** 

#### Take 3 credits from

| Item #  | Title                  | Credits |
|---------|------------------------|---------|
| ART 111 | Art Appreciation       | 3       |
| ART 114 | Art History Survey I   | 3       |
| ART 115 | Art History Survey II  | 3       |
| HUM 115 | Critical Thinking      | 3       |
| PHI 240 | Introduction to Ethics | 3       |
| REL 110 | World Religions        | 3       |

#### Social/Behavioral Sciences

Take 3 credits from

| Item #  | Title                     | Credits |
|---------|---------------------------|---------|
| POL 120 | American Government       | 3       |
| PSY 118 | Interpersonal Psychology  | 3       |
| PSY 150 | General Psychology        | 3       |
| SOC 210 | Introduction to Sociology | 3       |

#### **Natural Sciences/Mathematics**

Take 4 credits from

| Item #  | Title               | Credits |
|---------|---------------------|---------|
| MAT 171 | Precalculus Algebra | 4       |

### **Major Requirements**

**Required Courses** 

Take 35 credits from

| Item #  | Title                     | Credits |
|---------|---------------------------|---------|
| ATR 112 | Intro to Automation       | 3       |
| CIS 110 | Introduction to Computers | 3       |
| DFT 119 | Basic CAD                 | 2       |
| ELC 117 | Motors and Controls       | 4       |
| ELC 128 | Intro to PLC              | 3       |
| ELC 131 | Circuit Analysis I        | 4       |
| ELC 213 | Instrumentation           | 4       |
| HYD 110 | Hydraulics/Pneumatics I   | 3       |
| ISC 112 | Industrial Safety         | 2       |
| MEC 130 | Mechanisms                | 3       |
| PHY 151 | College Physics I         | 4       |

### **Other Major Requirements**

Take 2 groups

Group 1 - Take 14 credits from

| Item #  | Title                        | Credits |
|---------|------------------------------|---------|
| ATR 115 | Introduction to Mechatronics | 4       |
| ELC 120 | Intro to Wiring              | 3       |
| ELN 133 | Digital Electronics          | 4       |
| PTE 114 | Pathway to Employ-Egr Tech   | 3       |

Group 2 - Take 1 credit from

| Item #   | Title                                      | Credits |
|----------|--|---------|
| WBL 110  | World of Work                              | 1       |
| WBL 111T | Work-Based Learning I - Technical Programs | 1       |
|          |  |         |

**Course Sequencing** 

### 1st Semester (Fall)

| Item #  | Title                      | Credits |
|---------|----------------------------|---------|
| CIS 110 | Introduction to Computers  | 3       |
| ELC 131 | Circuit Analysis I         | 4       |
| ELN 133 | Digital Electronics        | 4       |
| ISC 112 | Industrial Safety          | 2       |
| PTE 114 | Pathway to Employ-Egr Tech | 3       |

### 2nd Semester (Spring)

| Item #  | Title                        | Credits |
|---------|------------------------------|---------|
| ATR 115 | Introduction to Mechatronics | 4       |
| ELC 117 | Motors and Controls          | 4       |
| ELC 120 | Intro to Wiring              | 3       |
| HYD 110 | Hydraulics/Pneumatics I      | 3       |

# 3rd Semester (Summer)

| Item #  | Title                             | Credits |
|---------|-----------------------------------|---------|
| MAT 171 | Precalculus Algebra               | 4       |
|         | Communication 1st Choice (A40350) | 3       |

#### 4th Semester (Fall)

| Item #  | Title                                      | Credits |
|---------|--|---------|
| DFT 119 | Basic CAD                                  | 2       |
| MEC 130 | Mechanisms                                 | 3       |
| PHY 151 | College Physics I                          | 4       |
|         | Communication 2nd Choice (A40350)          | 3       |
|         | Social/Behavioral Sciences Choice (A40350) | 3       |

## 5th Semester (Spring)

| Item #  | Title                                | Credits |
|---------|--------------------------------------|---------|
| ATR 112 | Intro to Automation                  | 3       |
| ELC 128 | Intro to PLC                         | 3       |
| ELC 213 | Instrumentation                      | 4       |
|         | Humanities/Fine Arts Choice (A40350) | 3       |
|         | Work-Based Learning Choice           | 1       |
|         | Total Credits                        | 66      |