



# Atlantic Technical College

## Electricity Program Syllabus 2023-2024



<b>Instructor Name:</b> Mr. Michael Mello <b>Department Name:</b> Technical Trades <b>Office/Classroom Location:</b> Building 12, Room 225A <b>Phone Number:</b> 754-321-5100 <b>Email Address:</b> michael.mello@browardschools.com	<b>Instructor Office Hours:</b> <b>M-Th:</b> 5:30 PM – 6:00 PM (by appointment only)
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<b>Student Hours:</b> <b>Monday – Friday</b> 6:00 PM – 9:45 PM (Adults)  <b>Break:</b> 7:45 PM – 8:00 PM  <i>NOTE: All students are expected to be present during their entire scheduled class time(s). All classroom breaks will occur on an “as needed” basis. The instructor’s cell phone clock will serve as the official time.</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3" style="padding: 5px;"><b>Program Name:</b> Electricity</td> </tr> <tr> <td colspan="3" style="padding: 5px;"><b>Career Cluster:</b> Architecture and Construction</td> </tr> <tr> <td style="width: 10%; padding: 5px;"><b>OCP</b></td> <td style="width: 70%; padding: 5px;"><b>Course Number/Course Title</b></td> <td style="width: 20%; padding: 5px;"><b>Number of Hours</b></td> </tr> <tr> <td style="text-align: center; padding: 5px;">A</td> <td style="padding: 5px;">BCV0603/Electrician Helper</td> <td style="text-align: center; padding: 5px;">300 hours</td> </tr> <tr> <td style="text-align: center; padding: 5px;">B</td> <td style="padding: 5px;">BCV0640/Residential Electrician</td> <td style="text-align: center; padding: 5px;">450 hours</td> </tr> <tr> <td style="text-align: center; padding: 5px;">C</td> <td style="padding: 5px;">BCV0652/Commercial Electrician</td> <td style="text-align: center; padding: 5px;"><u>450 hours</u></td> </tr> <tr> <td colspan="2" style="text-align: center; padding: 5px;"><b>Total Hours</b></td> <td style="text-align: center; padding: 5px;"><b>1200 total hours</b> (full-time, including summer)</td> </tr> </table>	<b>Program Name:</b> Electricity			<b>Career Cluster:</b> Architecture and Construction			<b>OCP</b>	<b>Course Number/Course Title</b>	<b>Number of Hours</b>	A	BCV0603/Electrician Helper	300 hours	B	BCV0640/Residential Electrician	450 hours	C	BCV0652/Commercial Electrician	<u>450 hours</u>	<b>Total Hours</b>		<b>1200 total hours</b> (full-time, including summer)
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<b>Technical College Policy/Adult Student Attendance:</b> <ul style="list-style-type: none"> <li>A student must be withdrawn after being absent for six (6) consecutive days.</li> <li>Two (2) additional absences may be allowed under certain circumstance with appropriate documentation.</li> <li>Please refer to the Student Handbook for postsecondary students.  <a href="http://www.atlantitechcenter.com/Portals/7/pdfs/2015BTC_Handbook_LR.pdf">http://www.atlantitechcenter.com/Portals/7/pdfs/2015BTC_Handbook_LR.pdf</a> </li> </ul>
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<b>Required Book(s) and/or Online Access</b> Available for purchase at the ATC Bookstore: <ul style="list-style-type: none"> <li>Electrical Wiring Residential 20<sup>th</sup> Edition ISBN# <u>9780357366479</u></li> <li>National Electrical Code, 2020 Edition ISBN# <u>9781455922970</u></li> </ul>	<b>Required Materials/Supplies</b> Purchased from ATC Bookstore: <ul style="list-style-type: none"> <li>Safety Glasses</li> <li>See the columns Below</li> </ul>
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<b>Classroom Materials</b> <ul style="list-style-type: none"> <li><b>Required Items</b> <ol style="list-style-type: none"> <li>1. Student ID (worn at all times while on campus)</li> <li>2. 2017 NEC</li> </ol> </li> </ul>	<b>Lab Materials</b> <ul style="list-style-type: none"> <li><b>Required (BCV0603) Electrician Helper</b> <ol style="list-style-type: none"> <li>1. Close Toe Shoes</li> <li>2. Safety Glasses</li> <li>3. Pencil</li> </ol> </li> </ul>
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<ol style="list-style-type: none"> <li>3. Electrical Resident Workbook 19E</li> <li>4. Pencil(s) w/ eraser</li> <li>5. Pen (Blue or Black Ink)</li> <li>6. 12" ruler</li> <li>7. Calculator</li> <li>8. Highlights (at least two colors)</li> <li>9. Color Pencils or Pens (at least four colors – Black, Red, Blue, Green)</li> <li>10. Notebook or Spiral book with Paper</li> </ol> <ul style="list-style-type: none"> <li>• <b>Optional Items (not required)</b> <ol style="list-style-type: none"> <li>1. Scientific Calculator W/ Function Key Example is TI-30Xa (would take care of standard calculator)</li> <li>2. Architects Scale Ruler (Would take care of 12" Rulers)</li> <li>3. Tom Henry Key Word Index</li> <li>4. NEC Tabs</li> <li>5. Ugly's Reference Guide</li> </ol> </li> </ul>	<ol style="list-style-type: none"> <li>4. Tool Pouch or Bag</li> <li>5. 9" Side Cutters</li> <li>6. 4" X 1/4" Straight Screwdriver</li> <li>7. 6" X 3/16" Straight Screwdriver</li> <li>8. 4" Phillips Screwdriver</li> <li>9. Wire Stripper</li> <li>10. Razor Knife</li> <li>11. 1/4" &amp; 5/16" Nut Driver(S)</li> </ol> <ul style="list-style-type: none"> <li>• <b>Required (BCV0640) Residential Electrician</b> <ol style="list-style-type: none"> <li>1. Voltage Tester</li> <li>2. 8" Needle Nose Plier</li> <li>3. Diagonal Cutter (Dikes)</li> <li>4. Grove Joint Plier (Channel Locks)</li> <li>5. 25' Tape Measure</li> <li>6. Torpedo Level, magnetic</li> <li>7. Hacksaw</li> <li>8. Allen Key (folding type) 3/16" – 3/8"</li> </ol> </li> <li>• <b>Optional Tools (not required)</b> <ol style="list-style-type: none"> <li>1. Hammer (min. 18oz.)</li> <li>2. Scratch Awl</li> <li>3. Screw Gun (not impact driver)</li> <li>4. Plug-in Polarity Tester w/ GFCI test function</li> <li>5. Digital Multi Meter (would take care of voltage tester also)</li> <li>6. Fuse Puller</li> </ol> </li> </ul>
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*All required books & most materials/supplies can be purchased from the school bookstore. Stop by during operational hours for pricing & purchasing information.*

**ADULT STUDENTS:** *All required books & some materials/supplies can be purchased from the school bookstore. Stop by during operational hours for pricing & purchasing information. All other required materials/ retail supplies not available at the bookstore need to be purchased elsewhere. All required books and required materials/retail supplies need to be obtained prior to the start of the program.*

**Online Course Grading Policy:**  
Not Applicable

<p><b>Grading System:</b></p> <p>A 90 - 100%</p> <p>B 80 - 89%</p> <p>C 70 - 79%</p> <p>D 60 - 69%</p> <p>F 0 - 59%</p> <p>I Incomplete</p>	<p><b>Additional Program Specific Grading Information:</b></p> <table style="width: 100%;"> <tr> <td>Assignments / Classwork</td> <td style="text-align: right;">40%</td> </tr> <tr> <td>Quizzes / Tests</td> <td style="text-align: right;">40%</td> </tr> <tr> <td>Work Habits / Class Participation</td> <td style="text-align: right;">20%</td> </tr> </table>	Assignments / Classwork	40%	Quizzes / Tests	40%	Work Habits / Class Participation	20%
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**View Your Grades:**

**Grades can be viewed online by following the directions below:**

1. Go to <https://browardfocus.com> (access FOCUS using Chrome, Firefox or Safari)
2. Student ID which is on your student schedule.
3. Passcode: Student's date of birth formatted as PMM/DD/YYYY.

*Two digits for the month, two digits for the day and Four digits for the year.*

**Class Room/ Lab Rules:**

1. Must be on time for class and when coming back from lunch.
2. All electronic devices must be silent and out of sight during instructional time. This includes cell phones, earbuds, smartwatches, headphones, mp3 players, etc. The school and/or teacher are not responsible for lost or stolen devices/personal belongings of any kind.
3. Computer use must be according to Broward County School policy.
4. Safety glasses and closed toe shoes are to be worn in the lab/classroom at all times.
5. Respect your fellow classmates and Instructor at all times.
6. Adhere to all Broward County School Policies.

**Industry Certifications & Credential Exam Costs:**

- Occupational Safety and Health Administration (OSHA) 10 Hour Construction Safety Outreach Course - \$8
- USB Drive - \$6

**Outstanding Student Recognition Information:**

A gold seal will be applied to a Program Completion Certificate or an Applied Technology Diploma if the student has earned a 3.5 GPA or higher in their Career and Technical Education (CTE) classes.

**Program Name: Electricity**

**Course Number:** BCV0603

**Course Name:** Electrician Helper

**Occupational Completion Point:** A

**Intended Outcomes:**

- 1.0 - Explain the importance of health, safety, environmental stewardship and related regulatory compliance.
- 2.0 - Identify, use and maintain the tools and accessories used in the electrical industry.
- 3.0 - Demonstrate an understanding of basic Direct-Current (DC) electrical-circuit skills.
- 4.0 - Apply mathematics knowledge and skills to electricity.
- 5.0 - Demonstrate an understanding of basic electricity.
- 6.0 - Read and interpret basic electric codes.
- 7.0 - Apply mathematics knowledge and skills to electricity.
- 8.0 - Demonstrate further understanding of electricity.
- 9.0 - Demonstrate science knowledge and skills related to electrical principles.

**Course Number:** BCV0640

**Course Name:** Residential Electrician

**Occupational Completion Point:** B

**Intended Outcome:**

- 10.0 - Demonstrate proficiency in electrical math problems and skills.
- 11.0 - Demonstrate Alternating-Current (AC) circuit skills.
- 12.0 - Explain the importance of employability and entrepreneurship skills.
- 13.0 - Install residential wiring.
- 14.0 - Install residential wiring systems.

**Course Number:** BCV0652

**Course Name:** Commercial Electrician

**Occupational Completion Point:** C

**Intended Outcome:**

- 15.0 - Demonstrate proficiency in commercial wiring.
- 16.0 - Demonstrate specialized electrical skills.

The School Board of Broward County, Florida, prohibits any policy or procedure which results in discrimination on the basis of age, color, disability, gender identity, gender expression, national origin, marital status, race, religion, sex or sexual orientation. Individuals who wish to file a discrimination and/or harassment complaint may call the Director, Equal Education Opportunities/ADA Compliance Department at 754-321-2150 or Teletype Machine (TTY) 754-321-2158. Individuals with disabilities requesting accommodations under the Americans with Disabilities Act Amendments Act of 2008, (ADAAA) may call Equal Educational Opportunities/ADA Compliance Department at 754-321-2150 or Teletype Machine (TTY) 754-321-2158.