<table>
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<th>Course Number</th>
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<th>Student Learning Outcomes/Objectives/Competencies of the Course</th>
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| ELEC 141      | ELECTRICAL CODE I | 3, 3T+0S                                           | National Electrical Code (NEC) requirements for single and multi-family dwellings, use of NEC tables and calculations. (3, 3T+0S) | Outcomes  
1. Explain the purpose and history of NEC and layout  
2. Interpret and apply general requirements of the NEC  
3. Interpret and apply wiring and protection requirements  
4. Interpret and apply wiring methods and materials  
5. Install equipment for general use  
Topics  
1. Electrical Theory  
   o Ohms law  
   o Alternating current  
   o Direct current  
2. NEC calculations  
   o Raceway fill  
   o Box fill  
   o Conductor size  
3. Advanced NEC calculations  
   o Dwelling units  
   o Multifamily dwelling  
   o Commercial and transformer | Critical Thought |

College-Wide Student Learning Outcomes

Critical Thought