

# Middle Bucks Institute of Technology

## Course - Electrical Technology

**Instructor:** Randy McDowell

**Date(s):** Week 2-5

**Lesson Title:** GFCI/AFCI Level 200

**Lesson Number:** 700

**Unit:** Level 2 - Semester 1 - Switches & Receptacle Circuits

### Objectives/Description:

Students will participate in a lecture, discussion and demonstration of GFCI and AFCI devices and be able to install devices according to NEC standards and pass a written test at 70% proficiency.

### Tasks/Learning Activities: (student focused)

PA700 - Switches and Receptacles Circuits

PA701 - Install a duplex receptacle.

PA706 - Install a Ground Fault Circuit Interrupter (GFCI) receptacle.

PA707 - Install an Arc-Fault Circuit Interrupter (AFCI).

PA711 - Install various branch circuits.

### Standards / Assessment Anchors

#### LITERACY READING

CC.1.2.11-12.A Determine and analyze the relationship between two or more central ideas of a text, including the development and interaction of the central ideas; provide an objective summary of the text.

CC.1.2.11-12.B Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences and conclusions based on and related to an author's implicit and explicit assumptions and beliefs.

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

#### CAREER EDUCATION & WORK

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.3.11.A Evaluate personal attitudes and work habits that support career retention and advancement.

**Instructional Activities:** (teacher focused)

- \*Pre-Learning
- Quick look
- Cornell Notes (A X)
- Questioning while reading
- Reciprocal Teaching
- Triangle Truths (A X)
- Exit slips of learning
- Writing journals

**Special Adaptations:**

Per student accommodations

- Study Guide
- Use of Calculator
- Drill and Practice (Repetition of Material)
- Teacher Modeling
- Communication Regarding Behavior & Consequences (PBS)

**Assessment:**

- Traditional Tests - multiple choice, matching, true/false, short answer completion
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion
- Textbook Computer Generated Tests
- OBSERVATIONAL EVALUATION
- Class Oral Responses
- Teacher evaluating student class participation
- Student self-assessment
- Use of calculator
- Tests read aloud
- Extended time to complete the assessment

**Safety:**

All work shall be performed in a workmanlike and safe manner according to industry and OSHA standards.

**Lesson Preparation:**

update powerpoint and handouts to reflect current NEC codes.  
Insure enough working materials for students.

**Resources/Equipment:**

Electrical Wiring Residential, Cengage, Most recent edition  
National Electrical Code, Most recent edition  
Electrical supplies & equipment  
Powerpoints  
Teacher made handouts  
Computer  
Google Classroom

**Additional Notes:**

Supplemental materials will be posted in Google Classroom.