Passaic County Technical Institute

Building Maintenance II

Curriculum Guide

January 2010

Developed by: Ron Franchino

I. Course Description:

Building Maintenance is a four-year program, which will provide students with an understanding of and practical experience in the many aspects of the Building Maintenance field. The main emphasis will include the safe and proper use of tools and equipment in the study of carpentry, plumbing and the electrical trades. It will also include drywall, painting, masonry, concrete and tile setting. Activities in Green and Computer Numeric Control (CNC) technology are also part of the curriculum. The students will experience hands-on projects for each of the trades, including Construction Trades Activities (CTA). These activities are designed to give students specific tasks relevant to that particular trade with video reinforcement and written assessment for each of the CTA's. In addition, students will be able to discuss, identify and practice employability skills, organizational skills and customer service. Students will be able to identify employment opportunities including union and non-union labor as well as entrepreneurial options.

The second year students will be able to review information already attained in the previous year and enhance skills learned. The safe operation of tools and equipment will continue to be emphasized. CTA's will be expanded to include electrical and plumbing. Projects will be assigned to incorporate the use of different tools and technologies to achieve a result of acceptable quality. Career goals and objectives will be discussed, along with the importance of employability and organizational and customer service skills and how they relate in real world situations.

II. Course Objectives/Outline

Students will be able to:

A. Identify and Demonstrate
   a. Safety rules for shop (9.4.12.B.40, 42)
   b. Classroom Discipline (9.1.12.F.2)
   c. Employability, organizational and customer service skills (9.1.12.F.2)
   d. The safe use of hand tools (9.4.12.B.75)
   e. The safe use of power tools (9.4.12.B.75)
   f. The use of drawing and reading of blue prints (9.4.12.B.74)
   g. Plumbing CTA Training (9.4.12.B.75)
      1. Safety
      2. Layout
      3. Material
   h. Electrical CTA Training (9.4.12.B.75)
      1. Safety
      2. Basic understanding of a circuit
      3. Tools and equipment
   i. Carpentry (9.4.12.B.75)
      1. Safety
      2. Materials and fasteners
      3. Framing walls and cabinet making

B. Complete (9.4.12.B.(2).17)

a. Group projects (work orders, special orders)
b. Individual projects
c. Shop projects (cabinets)
d. CTA projects and assessments in plumbing, and electric

III Proficiencies

Students will be able to:

1. Work cooperatively and safely with others
2. Maintain proper behavior in the classroom and shop
3. Be aware of career opportunities
4. Demonstrate safe and proper use of hand tools
5. Demonstrate safe and proper use of power tools
6. Apply good work habits
7. Understand and implement employability skills
8. Identify materials used in the trades
9. Demonstrate measuring skills
10. Practice basic shop math
11. Understand basic blue prints
12. Understand basic procedures for building a project
13. CTA Trainer, drywall
14. CTA Trainer, painting
15. CTA Trainer, masonry
16. CTA Trainer, concrete
17. CTA Trainer, green technology
18. Carpentry-basic
19. CNC Technology
20. CTA Trainer, tile setting
21. CTA Trainer, electric
22. CTA Trainer, plumbing

IV Evaluation

1. Classroom and shop participation
2. Classroom assignments
3. Notebook
4. Quizzes and tests
5. Personal projects
6. Team projects
7. CTA practical projects and written assessments

V. **Textbooks and Instructional Materials**

"Facilities Maintenance" Thompson Delmar Learning,
Copyright 2008
"Home Repair and Maintenance" Jack M. Landers,
The Goodheart-Willcox Co., Copyright 1996
"Modern Carpentry" Willis Wagner/Howard Bud Smith,

The Goodheart-Willcox Co., Copyright 2000
Taunton Press: Construction trades instructional DVD's
Paxton Patterson: Building Skills (Construction Trades Activities)

VI. Teaching Strategies

Various teaching methods will be used to meet the needs of each individual student.

1. Discussion
2. Lecture
3. Textbook/workbook
4. Video
5. Study guides/handouts
6. Demonstrations of techniques
7. Role playing
8. Researching
9. Quiz games
10. Note taking
11. Question and Answer
12. Hands-on work with close supervision
13. One-on-one work and discussion
14. Cooperative learning

VII. Scope and Sequence Chart

I=Introduced D=Developed in Depth R=Reinforced

Skills To Be Learned	9	10	11	12
Understand and follow all safety rules		D	R	
Understand and demonstrate proper behavior in classroom and shop		D	D	
Identify Career Opportunities in the trade		I	D	
Demonstrate the safe and proper use of hand tools		I D	R	
Demonstrate the safe and proper use of power tools (instructor supervision)		I	R	
Demonstrate good work habits		D	DR	
Demonstrate an understanding of employability skills		D	D	
Identify materials used in the various related trades		I	D	
Understand basic shop math		I D	D	
Demonstrate good measuring skills		D	DR	
Identify basic blue prints		I	D	
Apply basic procedures for building a project		I D	D	
CTA Trainer, Drywall		I	D	
CTA Trainer, Painting		I	D	
CTA Trainer, Tile setting			I	
CTA Trainer, Masonry		I	D	
CTA Trainer, Concrete		I	D	
CTA Trainer, Electrical			I	
CTA Trainer, Plumbing			I	
CTA Trainer, Green Technology		I	D	
Carpentry – framing/finish		I	D	
CNC Technology		I	D	

BUILDING MAINTENANCE II

Student Handout

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Proficiencies

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