



## Course Outline/Description— Building Maintenance



### DIPLOMA PROGRAM

24 weeks – 25 semester credit hours (DAY)  
52 weeks – 25 semester credit hours (EVENING)  
Total 720 hours

### OBJECTIVE

Building Maintenance\* teaches diversified skills needed to maintain and renovate commercial and residential properties. Students are taught basic skills in electricity, carpentry, plumbing, heating and air conditioning maintenance. Training also includes painting, papering, and tiling. Students acquire skills in appliance repair, and they receive an introduction to Green Technology and Energy Efficiency in the trades. Students are instructed in safety precautions in the performance of building maintenance tasks, with an emphasis on the proper use of hand and power tools.

### EMPLOYMENT OPPORTUNITIES

Graduates are prepared for entry-level employment as maintenance mechanics in apartment complexes, healthcare facilities, industrial establishments, and commercial buildings.

	COURSE TITLE	CREDIT HOURS
BM 101	General Mathematics for Building Maintenance	0.5
BM 102	Carpentry and Concrete Pads	4.0
BM 103	Screen Repair, and Appliance Repair and Maintenance	1.0
BM 104	Painting, Papering, Tiling, and Floor Care	3.0
BM 105	Electricity and Blueprint Reading	4.5
BM 106	Plumbing and Pipe Fitting	3.5
BM 107	Air Conditioning	2.0
BM 108	Heating	4.0
PD 616	Professional Development	2.5

\* Students in this program are eligible to receive industry recognized certification from the National Occupational Competency Testing Institute (NOCTI) upon successful completion of certification exams.



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**BM 101 GENERAL MATHEMATICS FOR BUILDING MAINTENANCE**  
Students review mathematical procedures including computations using fractions, decimals, and percentages.

**BM 102 CARPENTRY AND CONCRETE PADS**  
Students learn types of lumber, installation of studding and joists, and installation and repair of drywall. Practical applications of carpentry taught include identification of moldings; cutting, mitering, and nailing of finished carpentry projects; installation of interior doors, and sub-flooring. Students practice the proper way of sealing around doors and windows as it relates to energy conservation. This course also covers the preparing, pouring, and finishing of concrete.

**BM 103 SCREEN REPAIR, AND APPLIANCE REPAIR AND MAINTENANCE**  
Students learn basic screen repair. Students also learn how to troubleshoot, repair, and maintain dishwashers, washers, gas/electric dryers, and gas/electric hot water heaters.

**BM 104 PAINTING, PAPERING, TILING, AND FLOOR CARE**  
Students are instructed regarding classification of paints, preparation of walls and woodwork, and application of paint to these surfaces. Students learn classification and application of wall coverings and methods of repairing them. They also learn laying floor covering and ceramic tiling. Students also learn general cleaning techniques for floor care.

**BM 105 ELECTRICITY AND BLUEPRINT READING**  
Students are provided with an introduction to electrical theory and fundamentals of electrical wiring and repairs. Students learn to install light switches, receptacles, doorbells, and light fixtures; and connect circuits to panel boxes and 220/240-volt lines for large appliances. They also learn the importance of preventive maintenance and how it affects energy consumption and appliance function. Students are taught the impact of energy conservation. Students install devices and fixtures that reduce energy consumption. In addition, students are instructed in the use of blueprints showing building stages from excavation to completion. Students learn to read plans, interpret symbols, and identify standard dimensions.

**BM 106 PLUMBING AND PIPE FITTING**  
Students receive instruction in the installation and repair of plumbing fixtures and garbage disposals. Students also learn to install pipes and fittings. Cold water supply systems and sewage systems are discussed. Students make lead and oakum joints; cut, ream, and thread gas pipes; and solder copper. Students install devices and fixtures that reduce water consumption.

**BM 107 AIR CONDITIONING**  
This course instructs students in the basic air conditioning cycle and how to service window units. Students also learn the importance of preventive maintenance and how it directly involves energy saving. Students are taught to charge, evacuate, and reclaim refrigerants of window units.

**BM 108 HEATING**  
Students learn the function, maintenance, and troubleshooting of heating systems, including warm air and hot water heating systems. Students are taught the importance of energy conservation and green technology as it applies to heating.

**PD 616 PROFESSIONAL DEVELOPMENT**  
Students learn the skills employers require for positive work relationships and long-term employment. They include targeted workplace competencies: problem solving and other cognitive skills, oral communication skills, personal qualities, work ethic, and customer service, interpersonal and teamwork skills. Students also learn about the importance of professionalism on the jobsite and employer expectations. Employment Specialists teach students effective Internet, interviewing, and job search skills.