RCTC PROGRAM PLAN

BUILDING UTILITIES MECHANIC
Diploma

I. MINNESOTA TRANSFER CURRICULUM (MNTC)/
GENERAL EDUCATION REQUIREMENTS..........................................................5 CREDITS
BTEC 2870, Employment Strategies, 1 cr

COMM 1000, Introduction to Workplace Communication, 3 cr OR
COMM 1130 Interpersonal Communication (MNTC Goal 1, Goal 7), 3 cr

MATH 1015, Applied Technical Math, 3 cr OR
MATH 1016, Technical Math Essentials, 1 cr

II. PROGRAM CORE REQUIREMENTS...............................................................64 CREDITS
BUM I
BU 1500, Power Plant Theory, 4 cr
BU 1510, Welding Theory and Safety, 1 cr
BU 1520, Welding and Equipment Repair, 1 cr
BU 1530, Plumbing Plant Theory, 1 cr
BU 1540, Power Plant Operation, 4 cr
BU 1550, Plumbing Lab, 2 cr
BU 1560, Basic Pneumatic/Hydraulics, 2 cr
BU 1570, Basic Boiler Theory, 1 cr

BUM II
BU 1611, Basic Electricity, 2 cr
BU 1621, Electrical Theory I, 3 cr
BU 1631, Electrical Lab I, 5 cr
BU 1641, Electrical Theory II, 3 cr
BU 1651, Electrical Lab II, 3 cr
BU 1661, Electrical Safety and National Codes, 2 cr

BUM III
BU 2500, Refrigeration Theory, 3 cr
BU 2506, Refrigeration Lab, 3 cr
BU 2512, Commercial Refrigeration, 3 cr
BU 2518, Commercial Refrigeration Lab, 2 cr
BU 2555, Building Utilities Mechanic Co-op, 5 cr

BUM IV
BU 2602, HVAC/Refrigeration Systems Theory, 4 cr
BU 2612, HVAC/Refrigeration Systems Lab, 2 cr
BU 2622, HVAC/Control Systems Lab, 2 cr
BU 2632, HVAC Control Systems Theory, 3 cr
BU 2655, Building Utilities Mechanic Co-op, 5 cr
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TOTAL .................................................................................................................................................. 69 CREDITS

ADDITIONAL NOTES:
PURPOSE: The Building Utilities Mechanic major is designed to prepare students for careers requiring skills in the operation, maintenance, troubleshooting, and repair of electrical and mechanical equipment found in commercial buildings. Instruction the first year includes courses in boiler operation, electricity, plumbing, tool usage, welding, electrical controls, and programmable controls. Courses in residential and commercial refrigeration, air conditioning, pneumatics, heating and cooling controls, and computerized energy management systems comprise the second year instruction. In the second year, students are placed with a co-op training sponsor to gain hands-on work experience.

After initial training, students may take the state examination for a special steam engineer’s license. After completion of the second year, students who qualify may take the state examination for second class “A” steam engineer’s license and/or refrigeration certification. Graduates usually start at entry-level positions in various educational, manufacturing, processing, and industrial facilities. Graduates have been employed as service technicians in the heating/ventilation/air conditioning (H.V.A.C.) field, building trades, and some are self-employed in the H.V.A.C. field.

PROGRAM ENTRANCE REQUIREMENTS:
Students must test at READ 0900 level before enrolling or obtain instructor permission. Students must have successfully completed MATH 1015 or MATH 1016 before beginning BUM II courses or obtain instructor permission.

Revised: 05/09/2017
Implementation: Spring 2018