

# BUILDING TRADES (BLDT)

## BLDT 101 - Introduction to Building Trades (3)

*Prerequisite: ENGL 70 OR Appropriate score on placement test [Accuplacer Next Gen minimum score: Reading 237 or (Reading 229 & Writing 237) or ESL Reading 102 or ESL 276 overall]*

(formerly BLD 101)

Introduces general aspects of building trades, the building process, and its phases. Emphasizes health and safety issues related to the building trades. Explores print reading, building design, building site planning, site preparation, and estimating as it relates to construction. Includes an overview of applicable equipment and materials required in the building trades.

## BLDT 110 - Fundamentals of HVACR (4)

*Prerequisite: ENGL 70 OR Appropriate score on placement test [Accuplacer Next Gen minimum score: Reading 237 or (Reading 229 & Writing 237) or ESL Reading 102 or ESL 276 overall]*

(formerly BLD 109)

Covers fundamentals of heating, cooling, ventilation, humidity control, and basic refrigeration. Students will receive hands-on experience in a lab setting.

## BLDT 111 - Controls for HVACR (3)

*Prerequisite: BLDT 110 or BLD 109*

(formerly BLD 110)

Covers the topics of controls in HVACR with respect to thermostats; pressure, safety and temperature devices; and valves. In a lab environment students will be able to identify and apply usage of these components.

## BLDT 113 - Fossil Fuels & Hydronic Heating (3)

*Prerequisite: BLDT 111 or BLD 110*

(formerly BLD 114)

Covers the topics of fossil fuel heating devices, hydronic and forced air equipment. Students will apply troubleshooting, installation, service, and preventative maintenance techniques on these systems in a lab setting.

## BLDT 120 - Introduction to Welding (4)

*Prerequisite: ENGL 70 OR Appropriate score on placement test [Accuplacer Next Gen minimum score: Reading 237 or (Reading 229 & Writing 237) or ESL Reading 102 or ESL 276 overall]*

(formerly BLD 121)

Introduces the basic processes in the welding field. Emphasizes welding safety. Introduces the various types of welding equipment, identification and selection of filler material, types of welds, and the different welding positions.

## BLDT 121 - Welding Symbols & Blueprint Reading (2)

*Prerequisite: ENGL 70 OR Appropriate score on placement test [Accuplacer Next Gen minimum score: Reading 237 or (Reading 229 & Writing 237) or ESL Reading 102 or ESL 276 overall]*

(formerly BLD 120)

Introduces various types of prints used in the welding industry. Topics include print reading, measurements, metallurgy, types of welds and joints, and welding symbols.

## BLDT 140 - Fundamentals of Structural Wiring (4)

*Prerequisite: ENGL 70 OR Appropriate score on placement test [Accuplacer Next Gen minimum score: Reading 237 or (Reading 229 & Writing 237) or ESL Reading 102 or ESL 276 overall]*

(formerly BLD 141)

Covers basic principles and fundamentals of electricity and electrical work. Course will include components of schematics and blueprints, importance and role of the National Electrical Code, and safety. Students will receive hands-on experience with tools of the trade, wiring, and installing components of accessory terminations.

## BLDT 143 - Specialized Systems (3)

*Prerequisite: BLDT 140 or BLD 141*

(formerly BLD 146)

Covers topics in the electrical field such as CAT5, CAT6, CATV, fiber optics, fire alarms, photovoltaic, and electric controls. Students will receive hands-on experience working with materials and components in a lab setting. Students will also be introduced to the National Electrical Code (NEC) codes governing these various sub-fields to the electrical industry.

## BLDT 212 - HVAC Installation & Troubleshooting (3)

*Prerequisite: BLDT 111 or BLD 110*

(formerly BLD 113)

Teaches basics of troubleshooting, installation, service and preventative maintenance techniques of HVAC equipment. Course includes EPA CFC certification. Hands-on experience will be conducted in a lab setting where students will demonstrate and apply these techniques.

## BLDT 222 - Advanced Welding: SMAW (4)

*Prerequisite: BLDT 120*

(formerly BLD 122)

Focuses on Shielded Metal Arc Welding (SMAW). Students will perform a SMAW welding performance qualification test on limited thickness test plates in the 2G and 3G positions on carbon steel in accordance with American Welding Society D1.1 Structural Welding Code; this leads to an in-house certification.

*This course is only offered in the Spring.*

## BLDT 223 - Advanced Welding: SMAW 4G (3)

*Prerequisite: BLDT 222 or BLD 122*

(formerly BLD 128)

Focuses on Shielded Metal Arc Welding (SMAW) and oxyfuel and plasma cutting on carbon steel. Students will perform SMAW welder performance qualification tests on limited thickness test plates in the 4G position on carbon steel in accordance with American Welding Society D1.1 Structural Welding Code; this leads to an in-house certification.

## BLDT 224 - Advanced Welding: GTAW (3)

*Prerequisite: BLDT 120 or BLD 121; Prerequisite or Co-requisite: BLDT 121 or BLD 120*

(formerly BLD 125)

Introduces Gas Tungsten Arc Welding (GTAW) on carbon steel, stainless steel, and aluminum. Topics include welding safety, basic machine maintenance, and welding techniques.

**BLDT 225 - Advanced Welding: GMAW (3)**

*Prerequisite: BLDT 120 or BLD 121; Prerequisite or Co-requisite: BLDT 121 or BLD 120*

(formerly BLD 127)

Focuses on Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW), and oxyfuel cutting on carbon steel. Students will develop skills to weld groove welds in multiple positions. Students will perform GMAW and FCAW welder performance qualification testes on limited thickness test plates on carbon steel in accordance with American Welding Society D1.1 Structural Welding Code.

**BLDT 241 - Residential Electric (3)**

*Prerequisite: BLDT 140 or BLD 141*

(formerly BLD 142)

Advances student knowledge in the National Electrical Code (NEC) and its application. Topics covered will include NEC calculations, as well as print reading, circuitry, schematics, materials, and circuit testing. Hands-on applications will be conducted in a lab setting.

**BLDT 242 - Commercial Electric (3)**

*Prerequisite: BLDT 241 or BLD 142*

(formerly BLD 145)

Continues the concepts and skills covered in the first two courses of the electrical building trades program. This course covers wiring methods mainly used in commercial construction. Topics covered to include: conduit (bending, installation), commercial lighting (fluorescent, HID), and transformers. Students will also have an overview of the applicable sections of the National Electrical Code (NEC), including box/conduit fill, and load calculations.