NORTHERN NEW MEXICO COLLEGE

PLAP 1417 SYLLABUS

Course Number Course Name	PLAP 1417 Plumbing Apprenticeship VII
Credit Value (Breakdown of theory and lab credits)	3.0 (2 Theory and 1 Lab)
Catalog Course Description	The Gas Appliances course delves into gas appliances in more depth with the student testing recall from previous courses. Areas to be covered are conventional, high efficiency, direct vent and tankless water heater troubleshooting, repair and replacement. Sizing gas lines will be revisited, fusion joints and expansion tank sizing & installation will be covered. Troubleshooting furnace issues and repair, along with orifice sizing and sediment trap requirements by code will be examined. Natural gas safety will be discussed at length. Students will also be introduced to scientific principles and the relationship to the piping industry. Fundamentals principles of water, steam and gasses and how they apply to plumbing and piping are covered. Prerequisite-Plumbing Apprenticeship V
Student Learning Outcomes/Objectives /Competencies of the Course	Student Learning Outcomes: • The student will show competency when conducting a safety pre-inspection on the job site • The student can quickly isolate common water heater & furnace problems • The student can properly install, replace, and retrofit common water heaters and furnaces • The student can perform necessary calculates for correct gas supply lines and expansion tanks to current code standards • The student can correctly perform HDPE fusion joints to industry specification and tolerances • The student can perform derating/orifice sizing calculations and sediment trap installation to code standards • The student will demonstrate an understanding of the basic knowledge of scientific laws and principles of water and steam • The student will identify the correct safety devices for specified systems identified in this course • The student will interpret temperature/pressure relationships as it pertains to piping material, fitting and joining methods • The student can differentiate the effects of piping cross sectional area on velocity flow.

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College-Wide Student Learning Outcomes	*College Wide Student Learning Outcomes:* *Information Competency* *Critical Thought*