

The SBA logo consists of the letters 'SBA' in a bold, white, sans-serif font, centered within a white oval. This oval is surrounded by several concentric, hand-drawn style orange and blue circles that create a sense of motion and depth.

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HVAC 101 Mini Course

Guided Notes



Lesson 5: HW System - Parts and Pieces

In this lesson, keep note of the following **Key Points**:

- What is a boiler and its role?
- Components of boilers
- Types of boilers

The purpose of a boiler is to generate hot water for various heating applications such as _____ and _____.

A boiler can utilize fuel combustion like gas, fuel, or electric heating elements to heat the water and distribute it to different locations through _____ in HVAC equipment.

Which component of a boiler is responsible for delivering and igniting the fuel?



Lesson 5: HW System - Parts and Pieces

Where do the combustion gases exhaust in a boiler?

In a water tube boiler, water flows through the tubes, while in a fire tube boiler, _____ go through the tubes.

In a water tube boiler, the water is heated inside the tubes, while in a fire tube boiler, water passes over the _____ to be heated.

BAS200: Control Sequence Fundamentals Course



BAS200: Control Sequence Fundamentals provides a comprehensive study of HVAC control sequences. This course combines theory with more than a decade's experience working on some of the world's most complex BAS projects. Students will learn the why behind BAS control strategies and will leave with a solid understanding of "how" systems work.

- Length: 19h16m
- CEUs: 1.9



BAS200: Control Sequence Fundamentals

Course Objectives:

- Master how HVAC systems function and how to control them
- Demonstrate knowledge of BAS controls theory in HVAC systems
- Develop the ability to make design and programming decisions based on system requirements

Some Key Topics:

- Learn what control sequences are and how control sequences are structured.
- Master the step-by-step process of interpreting control sequences.
- Create the foundational system knowledge that allows the student to understand the relationship between space control and upstream systems.
- Discover the different ways of controlling and conditioning the air stream along with the interrelationships between air systems and water systems.
- Learn what hot water systems are, how they are controlled, and how other systems interact with and influence hot water systems.
- Gain an awareness of how and why chilled water systems are used, the methods and processes that control chilled water systems, and the limitations of chilled water systems.
- Learn what the different strategies for pumping and piping are and how these strategies effect the control and efficiency of water based heating and cooling.
- Learn how unitary systems are controlled and how the effect existing building systems.
- Learn what a 2-pipe system is and how to properly control building systems that are supplied by 2-pipe systems.

<https://www.smartbuildingsacademy.com/control-sequence-fundamentals>