NAND and NOR logic gates are also known as universal gates. Any combinational and sequential logic can be implemented using NAND and NOR gates. Even the flip flop circuits are constructed using universal gates.

**NAND**

The equivalent operations of NOT, AND and OR gates using NAND gates are shown below

**NOT using NAND**

**AND using NAND**

**OR using NAND**
NOR

The equivalent operations of NOT, OR and AND gates using NOR gates are shown below

NOT using NOR

OR using NOR

AND using NOR

Source: http://www.knowelectronics.org/universal-logic-gates-nand-nor/