Moyock Baptist Church was founded on May 12, 1890, with a group of fourteen believers being received into membership as the first members.

The Rev. R. R. Overby, who pastored numerous churches in the area, presided over the initial meeting. The first members came from several area churches: Ebenezer Baptist in South Mills, Providence Baptist in Shawboro, Northwest Baptist in what is now Chesapeake, and Shady Grove Baptist (now disbanded) in Tulls Creek.

The original members elected a church clerk, "Bro. P.C. Garrett", a deacon, "Bro. W.E. Powers", and a treasurer, "Bro. J.B. Cox". They also adopted a "compacte and covenant" which governed their early life. Apart from rules governing the conduct of the church's business meetings, the covenant also contained several provisions that addressed the private lives of members. Dancing, the use of profane language, and "the manufacture or sale of malt liquor either direct or indirect" were all grounds for dismissal.

The church purchased a portion of the current site in 1897 and the first building was erected in 1899.