The main campus of Central South University, also known as the North Campus, is the original site of Central South Industrial University and is located at the foot of Yuelu Mountain. There is a winding path behind the campus that leads to the top of Yuelu Mountain. Trees such as camphor and plane trees are planted along the roadsides, and many of them are over 100 years old. The canopies of the trees form a continuous canopy, even in the summer, there are only a few scattered fragments of sunlight under the shade. Some people say that the main campus of Central South University is a "forest university".

There are many landmark buildings on the main campus, the first of which is the Democratic Building and the Peace Building, built in the 1930s (1937), which are the 10th batch of provincial cultural relic protection units. It is said that they were designed by famous architect Liang Sizhen and Lin Huiyin, and are the oldest buildings on the Central South University campus. The buildings are in the shape of "工" and are longer in the front and shorter in the back, with a corridor connecting the two sides. They face south and are brick-and-mortar structures, with tile roofs and red walls. They have the elegance and refinement of traditional Chinese architecture, as well as the modern and elegant appearance of modern architecture.

Secondly, the main campus archway is particularly eye-catching. It is a historical building in the third batch of Changsha's historical and cultural heritage. It was built in August 1954, is 9.445 meters high and 6.95 meters wide. There are gold rice-grain sculptures at the top and bottom of the archway, and there are human figure sculptures on both sides. The inscriptions on the archway have undergone two changes. In 1985, the inscriptions were changed from "Central South Mining and Metallurgy Institute" to "Central South University of Technology"； in 2000, after the merger of the three schools， "Central South University of Technology" was changed to "Central South University". The changes in the inscriptions mark the important historical milestones of Central South University.

Finally, it is worth mentioning that the Soviet expert dormitory, now known as Gan Tang Building 1 and 2, was built by the school in the 1950s to accommodate Soviet experts. The fine decorative details of the building have certain Soviet style. The Soviet expert dormitory is the third batch of historical architectural heritage in Changsha and is still used for office purposes. It is well preserved and has well demonstrated the characteristics of the architecture of that era.