We had to take a first year exam, a 2nd year exam, and for our 3rd year- we go to school for months. At the completion of our 3rd year schooling, we had to take an 8 hour test (4 hours written and 4 hours oral) on machinery and air. We all had to go into Chicago to the main HQ for this test. This was called our 3rd year mechanical exam. I had 18 hours on rules and train orders at one point alone, which included being able to write train orders. I realize there are no train orders today, but I threw that in to show how complete our learning process was before we were promoted to a locomotive engineer and turned loose on the main line with a train. Then to operate a passenger train, an engineer had to have a substantial number of miles handling freights.
We had to hostle engines for a period of time to become familiar with all the different types of locomotives. I did both inside and outside hosteling which meant I hosteled within the confines of a roundhouse, as well as I took light locomotives out on the main line, with signals and inter-lockings, on my own, with a ground man / pilot. Once the Road Foreman of Engines or as he was sometimes called, the Traveling Engineer OK's us, we were permitted to handle a train. This was the procedure followed for 100 years so it was time tested.

The motive power today is light years superior, as are the braking systems, etc. as compared to when I first went railroading. We had to constantly deal with trouble shooting, main line locomotive failures, air problems requiring a lot of innovation. Such as learning to brake a heavy freight by using the feed valve. I doubt if today's engineers deal with any of that or are even aware one can brake a train with a feed valve.
Looking back on my own career, I had the opportunity to work with at least 100 different locomotive engineers. I gained invaluable knowledge from each and every one. From the bad engineers I learned how not to do things. And from the good engineers I learned the proper way to do things. I do not think this sort of experience is available today to engineers who move up to handling trains almost overnight.

Truman