ABSTRACT. We determine the isometric congruence classes of homogeneous Riemannian foliations of codimension one on connected irreducible Riemannian symmetric spaces of noncompact type. As an application we show that on each connected irreducible Riemannian symmetric space of noncompact type and rank greater than two there exist noncongruent homogeneous isoparametric systems with the same principal curvatures, counted with multiplicities.