In this semester, we start to study the book “Topological stability of smooth mappings”, written by C. G. Gibson, K. Wirthmüller, A. A. du Plessis and E. J. Looijenga.

In this talk, I want to talk about Whitney stratification. First, we will give the local finiteness condition for a stratification of a subset of a smooth manifold and talk about the Whitney regularity condition. Then, we will see that a Whitney stratification of a subset of a manifold is a stratification with satisfying the Whitney regularity condition. Second, we will talk about the gaining a new stratification with using the old stratification. Finally, we are going to talk about the Frontier condition, because Whitney stratification should satisfy this condition.