Math 972, the second semester of my algebraic topology course, will begin with the cohomology of topological spaces and the cup product, using the textbook "Algebraic Topology, a first course" by Greenberg and Harper. We will then change subjects and cover vector bundles and fiber bundles, Grassman spaces and other classifying spaces, and the Stiefel-Whitney characteristic classes. These characteristic classes can be defined in three ways, using obstruction theory for sections of a vector bundle, the Thom Isomorphism Theorem and Steenrod squares, or as the cohomology generators for the Grassman space pulled back via the classifying map of the vector bundle.

We will not be using an assigned textbook for the second semester, but recommended texts include "Characteristic Classes" by Milnor and Stasheff, "Fibre Bundles" by Husemoller, and "The Topology of Fiber Bundles" by Steenrod. All these books are in Hale library and will be placed at the reserve desk next semester.