In many mathematics classes, a traditional cumulative written final exam makes up a large portion of a student’s grade. The score on the final exam can often mean the difference between success and failure in the course. Such a high-stakes exam, however, may not always be the best way to accurately assess student learning, especially in upper-level mathematics classes. In this talk, I will discuss an alternative final exam approach – the oral final exam – which I have implemented in several of my mathematics classes. I will highlight the creation, evolution, and implementation of the oral exam and compare student performance on oral exams with performance on traditional written final exams. I will also discuss several practical issues and challenges associated with the use of an oral final exam. (Received September 10, 2013)