Herbert A Medina* (hmedina@lmu.edu), Department of Mathematics, Loyola Marymount University, 7900 Loyola Blvd., Los Angeles, CA 90045. *Using Mathematica to Illustrate Theorems from Advanced Linear Algebra.

We will present Mathematica notebooks that we have developed and used in an upper division linear algebra course at Loyola Marymount University to lead students through non-trivial examples of the Jordan canonical form and spectral theorems for $n \times n$ matrices. We also will discuss the pedagogical reasons for constructing these notebooks using “basic” Mathematica commands like Det and NullSpace while avoiding “macro” commands like EigenSystem, JordanDecomposition, etc. (Received July 17, 2000)