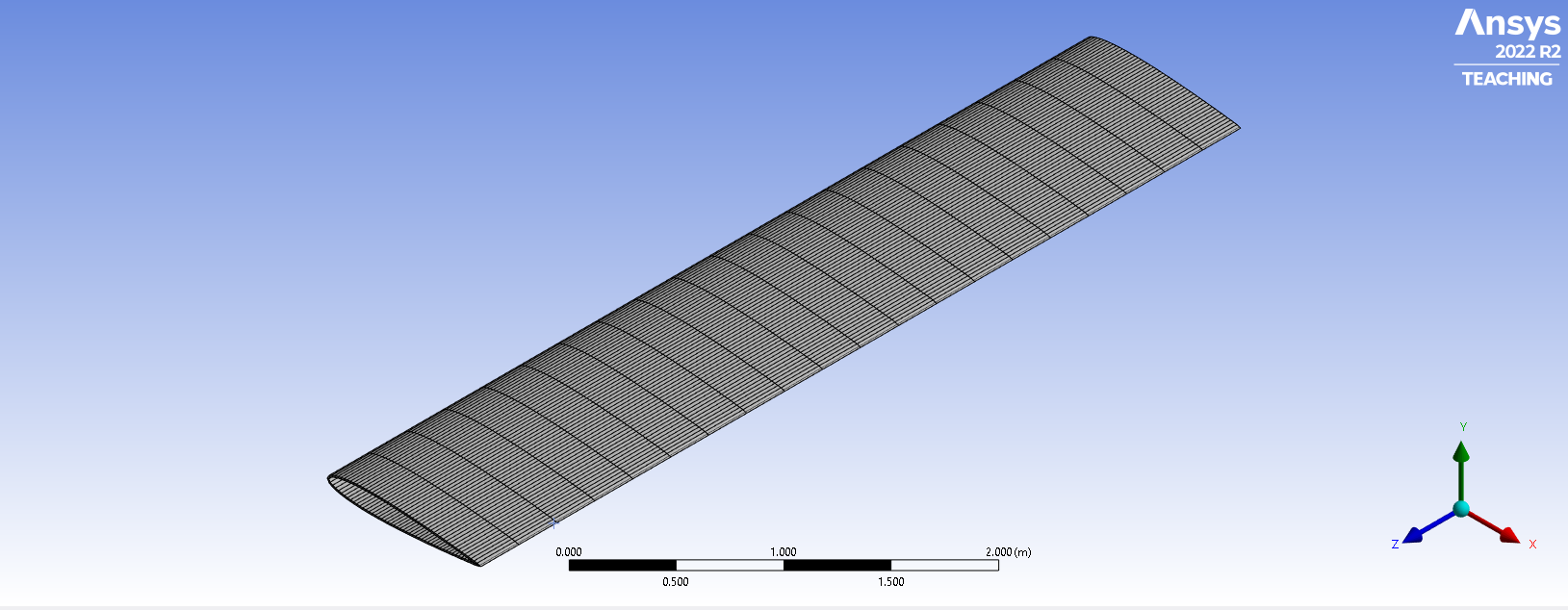
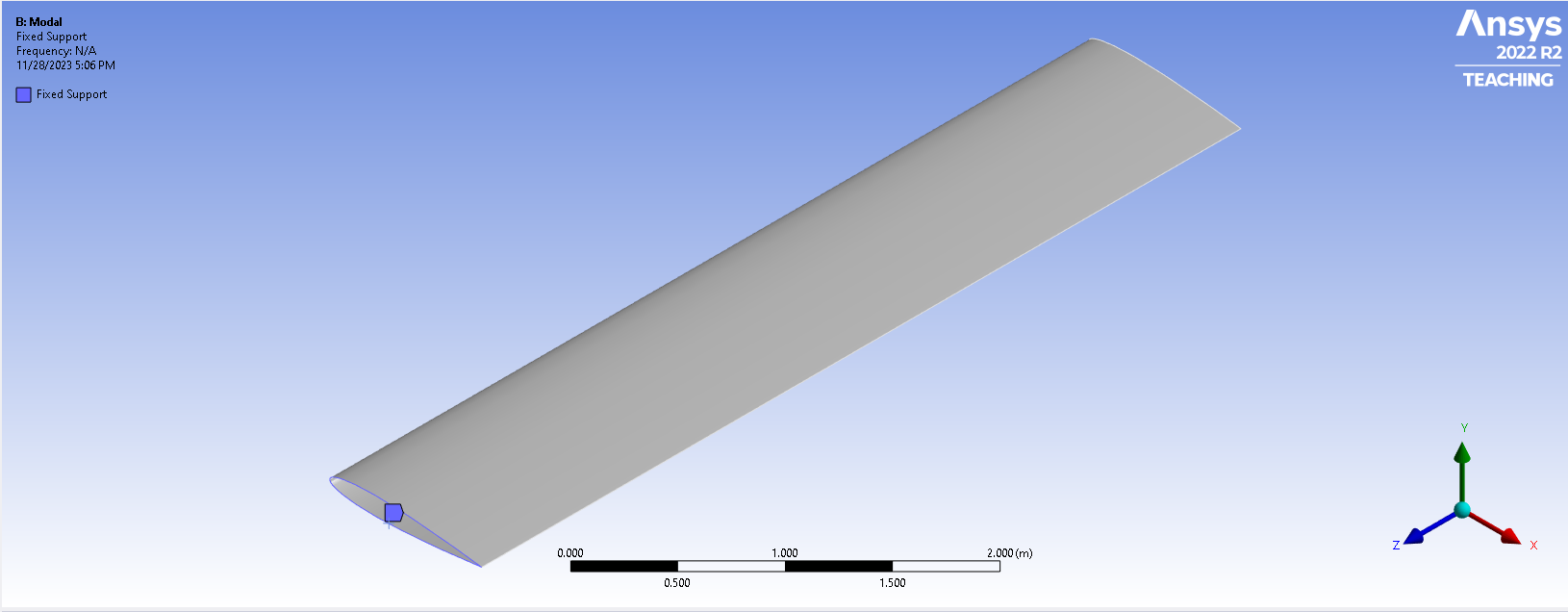
Modal Analysis of a Wing

**Problem**

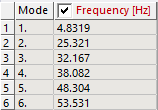
A wing with a NACA 0012 airfoil section is supported such that one end is fixed and the other end is free. The wing has a chord of 1 meter, a span of 5 meters, and a thickness of 0.01 meters. The wing is Aluminum 6061-T6. Find the first six modes of vibration of the airfoil using Ansys Workbench.

Mesh:

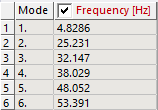




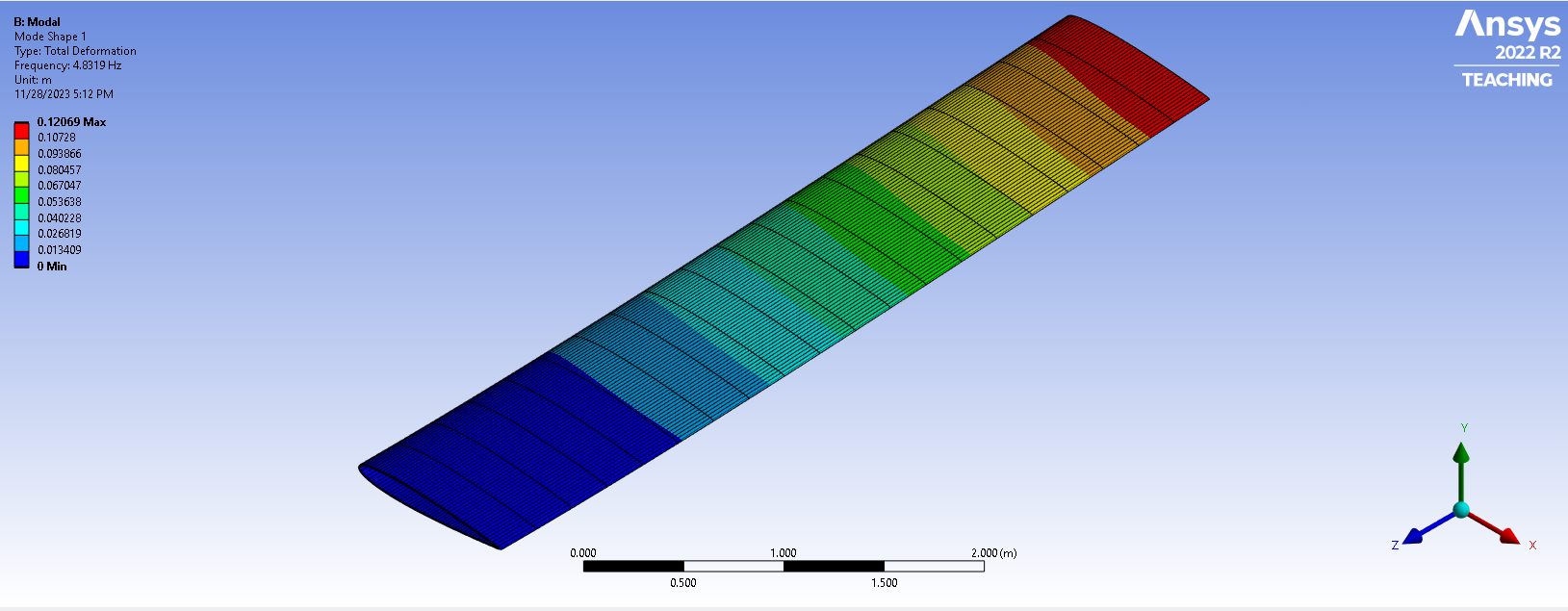
Results

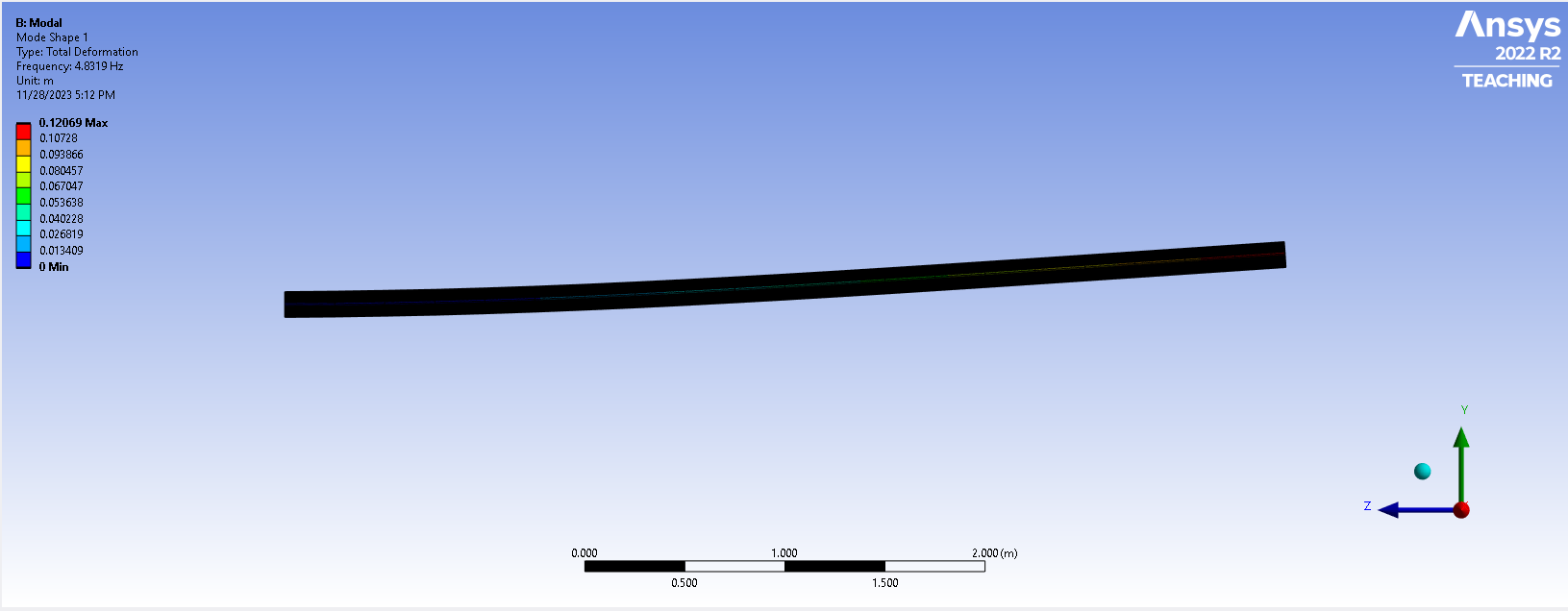


Refined mesh

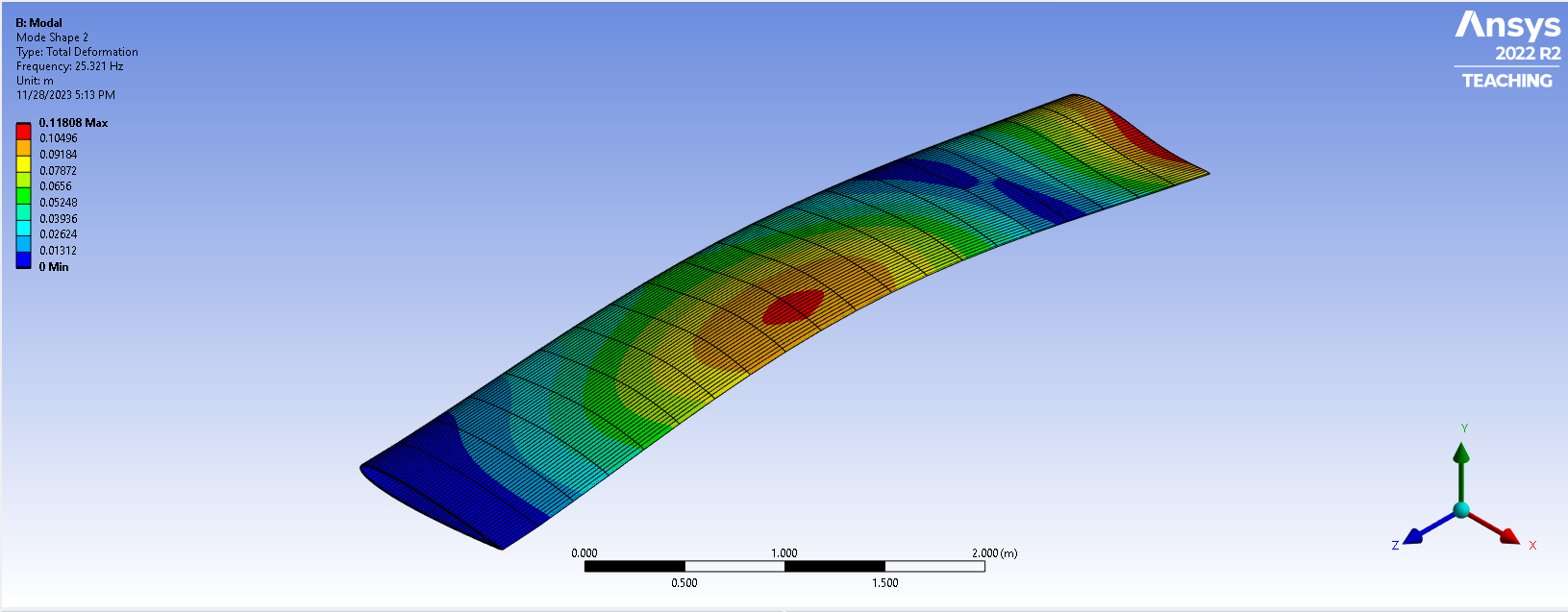


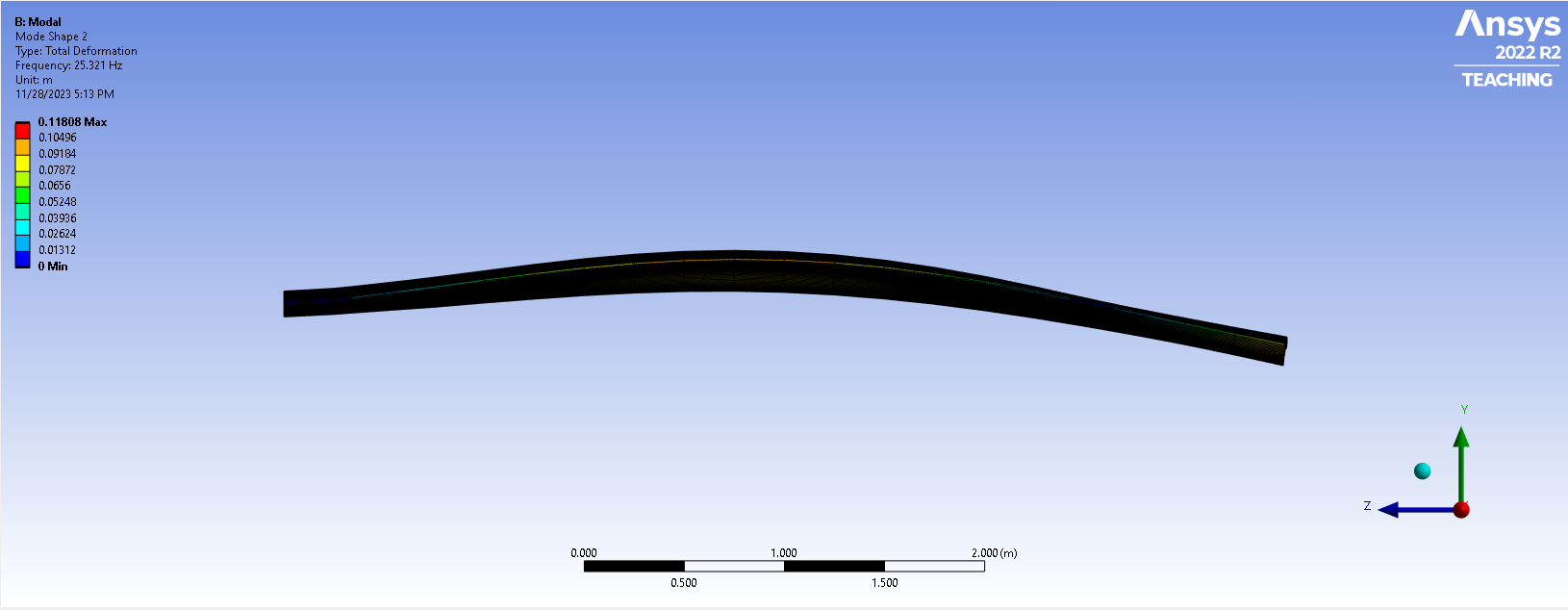
Mode 1



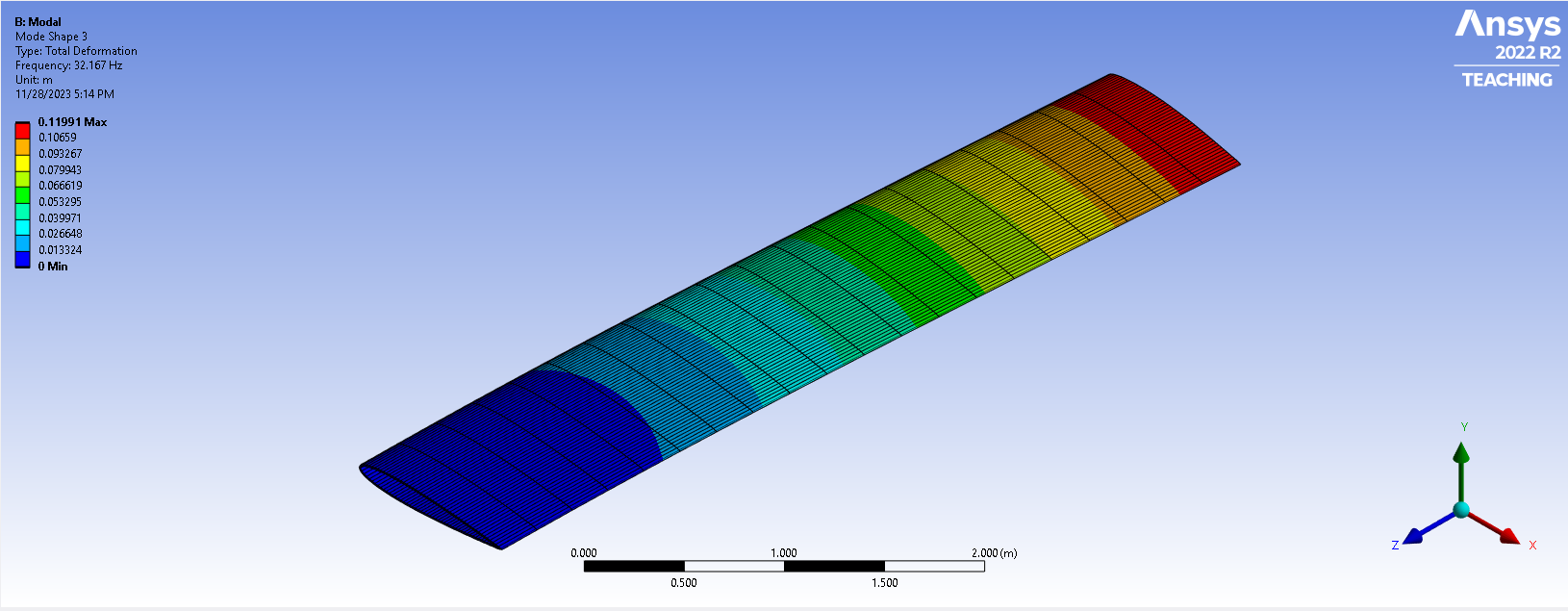


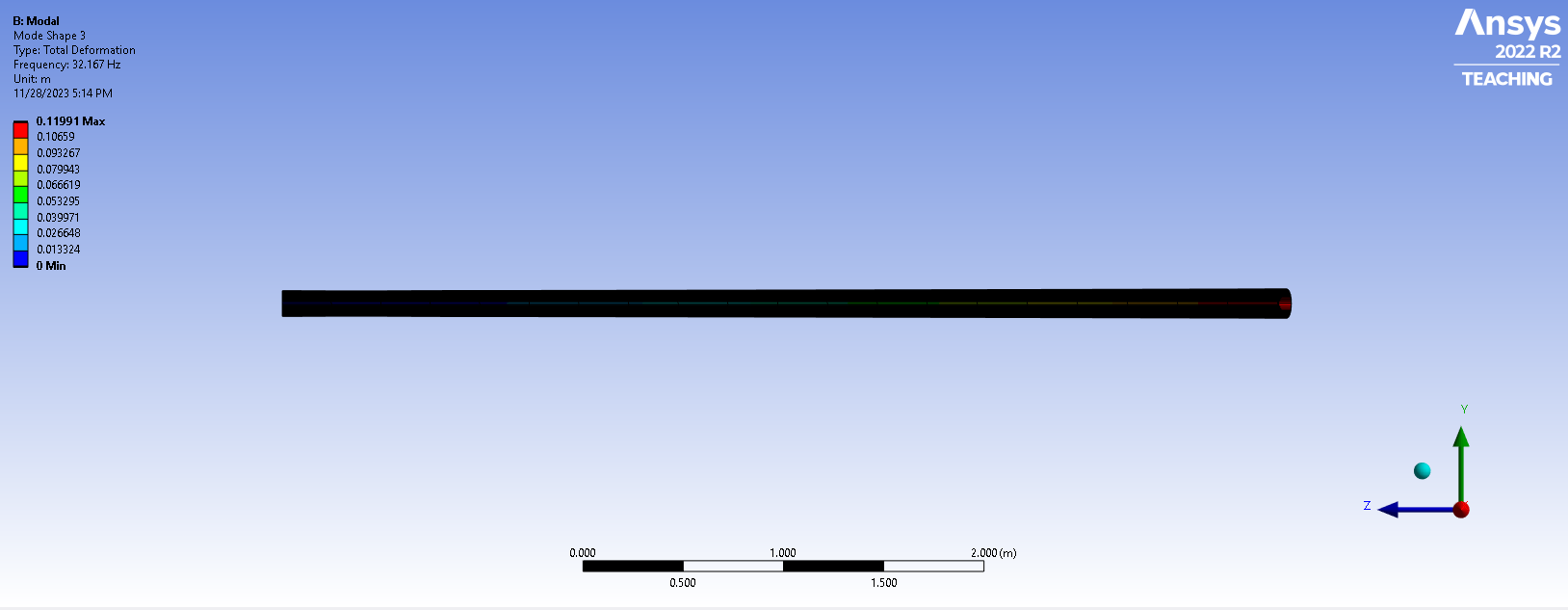
Mode 2



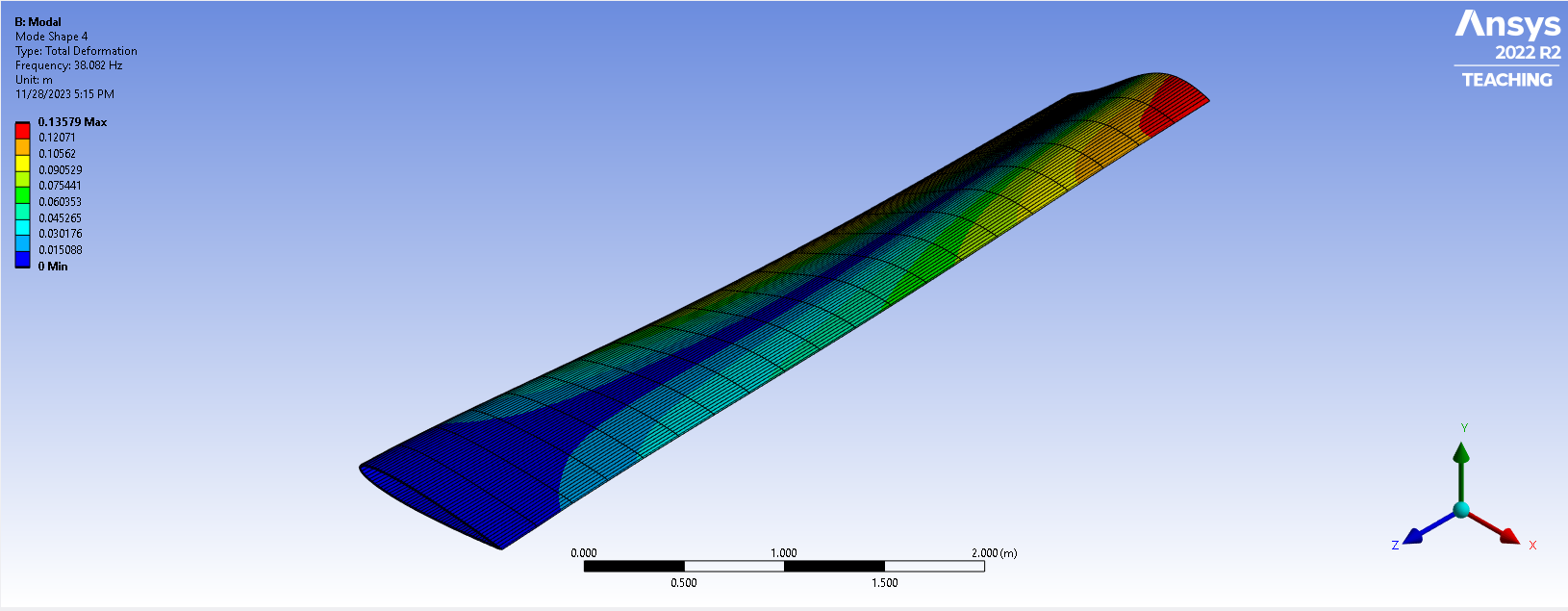


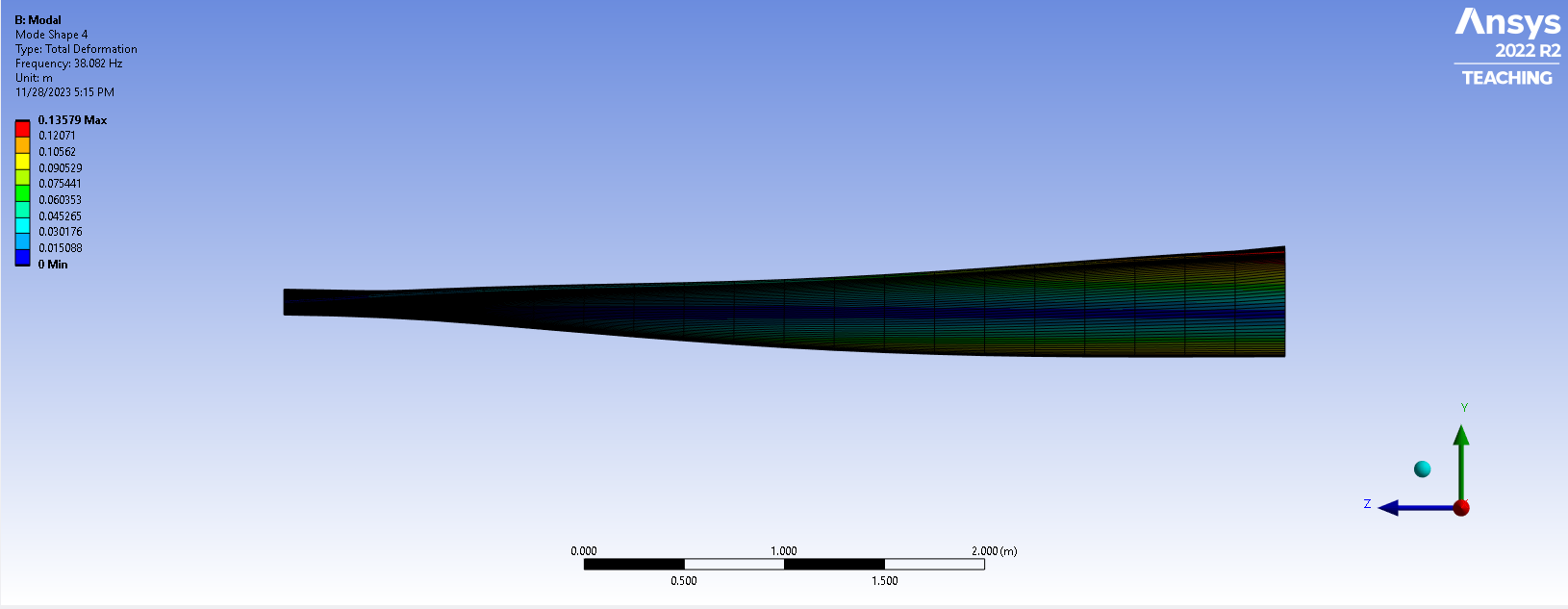
Mode 3



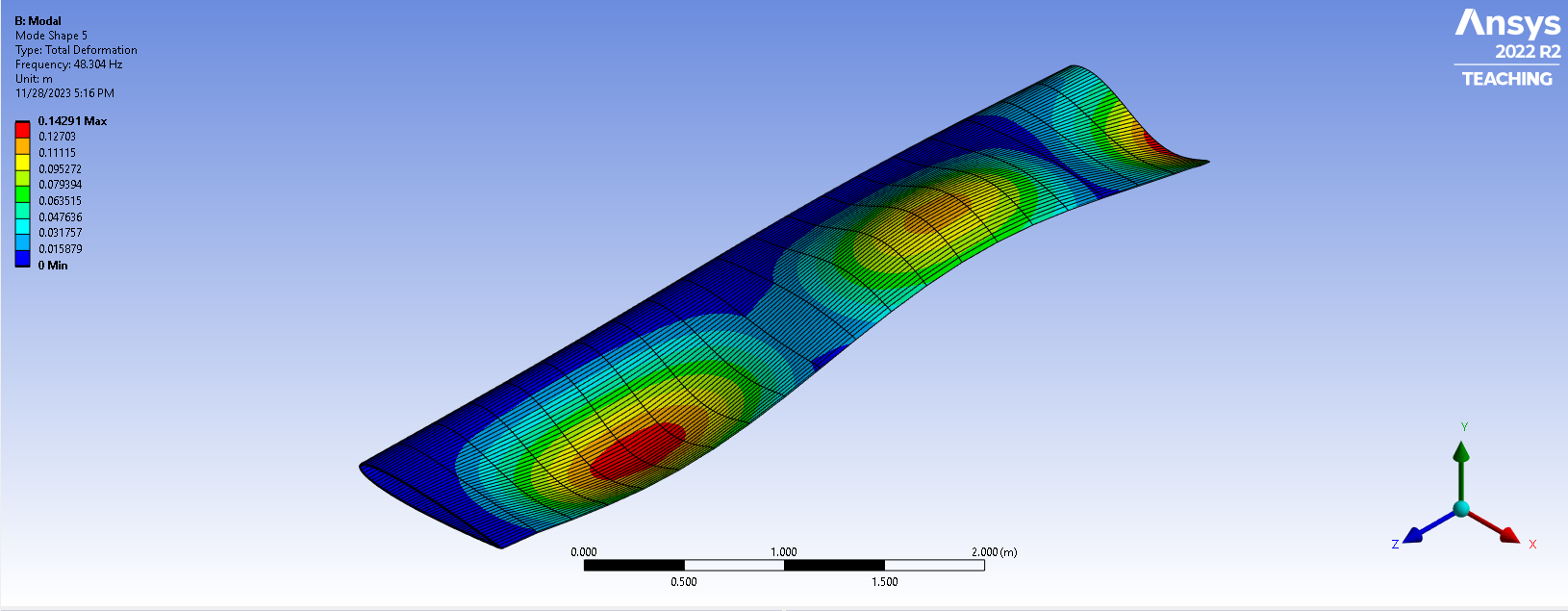


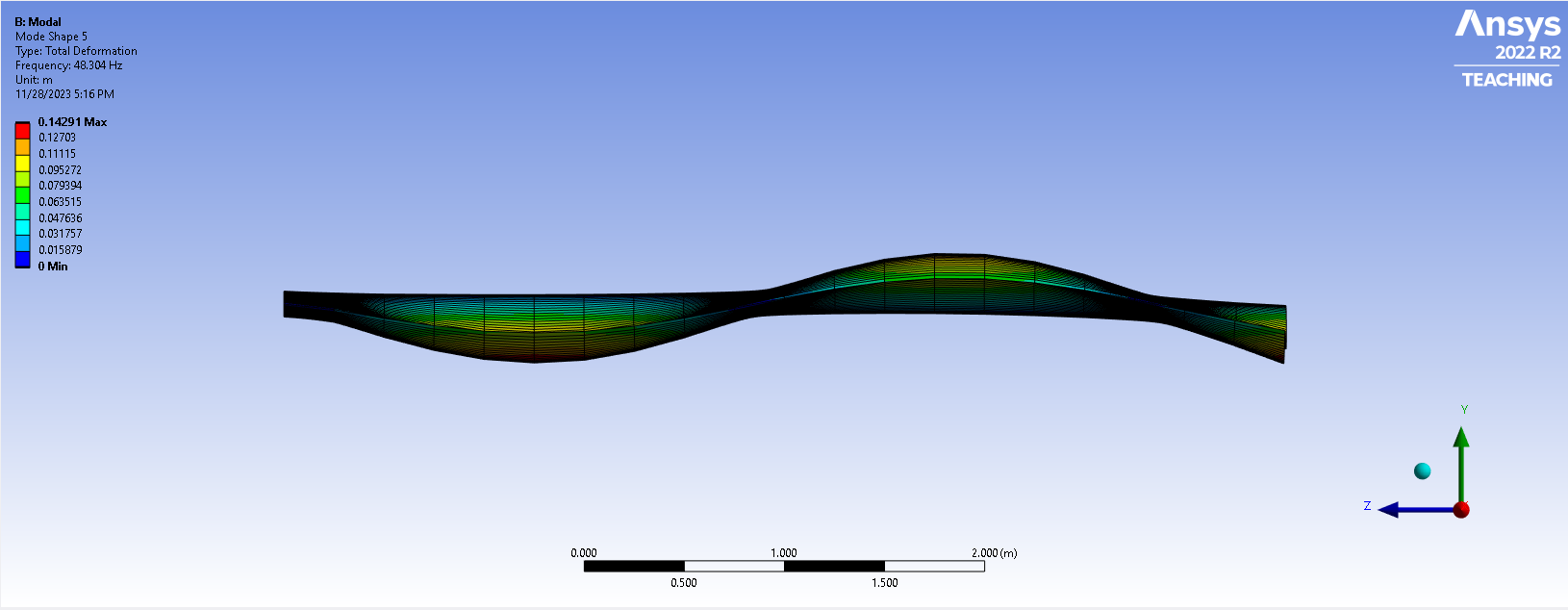
Mode 4





Mode 5





Mode 6

