What to expect: Acoustics and Musical Instruments

Congratulations: You made it to the very end of the course!

After going through the physics of sound waves, their creation and propagation through air, this knowledge is in practice applied in acoustical design.

You will be introduced to specific terms and their meaning in acoustical design. The next time you visit a concert hall, a lecture hall, or a theater, you can try to remember some of the concepts and judge for yourself if the acoustic designer paid attention to some of the specifics.

You will also get as short overview over different types of musical instruments. At the center of any instrument is an oscillating system (usually called resonator), such as the string of a guitar or a piano, or the air column of a trumpet. To set the oscillator in motion, one needs an excitation device, like the finger that plucks the guitar string of the lips of the trumpet player. This excitation device needs a source of energy, like the hand of the guitar player or the lung of the trumpet player. Finally, the energy supplied by the energy source to the oscillator is given off as sound wave, which requires some sort of radiator.
This description of a musical instrument sounds very dry and technical and may not be what you thought of instruments. In the last part of the course different classes of instruments are given, together with their sound samples. When you listen and read about the instruments, try and find the basic building blocks listed above.

Enjoy the music pieces.