ISO Control

ISO originally referred to the sensitivity of film—it's "light gathering" ability. The higher the ISO rating, the greater the film's ability to capture images taken in low light. High ISO film was called fast film—it required a shorter exposure than a low ISO film. For digital photography, ISO refers to the sensitivity—the signal gain—of the camera's sensor.

The ISO setting is one of three elements used to control exposure; the other two are f/stop and shutter speed. In most cases manually setting the f/stop and shutter speed, or using one of the camera's automatic exposure controls (aperture- or shutter-priority, for example) is all you'll need to do. But when the situation calls for a shallow depth-of-field and, thus, a wide lens opening, and/or a fast shutter speed, that combination may not allow enough light to reach the sensor. Or, in the case of photographing a concert performance, the widest lens opening and slowest hand-holdable shutter speed may not enable enough light to reach the sensor. The solution for both instances: boost the ISO to increase the sensor's sensitivity to light.

With film cameras, using a higher ISO film, such as ISO 400 to 1000, often resulted in noticeable grain. With digital photography, the equivalent is noise. Fortunately, many Nikon D-SLRs, using Nikon's EXPEED image processing concept, are capable of image capture at high ISO settings—800, 1600, 3200 and even higher—without noticeable noise.

Selected Nikon D-SLRs offer auto ISO control, a feature that will maintain a selected shutter speed range. Here's how it works: In aperture-priority operation, for instance, choose ISO control and set a base shutter speed of, for example, 1/250 second—meaning that you don't want the shutter speed to go below that setting. When the light level in the scene requires a shutter speed slower than 1/250 second, the camera will automatically kick up the ISO to maintain that shutter speed.

So don't forget that along with f/stop and shutter speed, ISO is an important
element of exposure control.