LU4 Introduction

Geometric optics is a division of optics dealing with light rays and how they propagate through optical systems. Object rays and image relay through reflection and refraction must be understood for technicians to perform basic alignments and measurements with accuracy.

This unit focuses on reflection and how mirrors relay images. From your flat bathroom mirror, passenger rear view mirror, to reflecting telescopes, you will gain an understanding about ray propagation along an optical axis.

Another focus is lenses are a vital element in nearly every optical system in use today. Early astronomers used lenses to study celestial objects light years away. Scientists use them today to study nanoscience.

Here we will look at types of lenses and how they relay images. From a single lens to multi-lens systems, and different applications of lenses. Thin lens approximation is a technique for locating images throughout a system graphically when the lenses are thin with respect to the object and image distances.