

**Optical Systems Technicians** work with scientists and engineers in research, development, design, manufacturing and quality control. They perform testing and evaluation of optical components and systems. Optical systems technology is important to telecommunications, digital imaging and photography, automotive tracking and control, laser applications, fiber optics, and robotics vision systems.

Optics isn't just telescopes and microscopes any more -- we are surrounded by optics and optical technology all day. Grocery store scanners, photocopy machines, cameras, the headlights in a car, the display on your computer monitor and the readout on your calculator are all examples of optical technology. And of course, television and the movies wouldn't exist without optical technology. Optical engineering pertains to applying the concepts of optics to designing and/or building something, which means integrating optical engineering concepts with mechanical engineering, electrical engineering, computer engineering, human engineering, reliability engineering, etc. Optical sciences pertain to researching fundamental characteristics and properties of light energy and the interaction of light energy with materials, devices, components, etc.

An optics professional can choose to go into several areas including aerospace, astronomy, automation, biomedical, communications, fiber optics, electronic imaging, lasers, microelectronics, optical physics, chemistry, biology and engineering, and signal and image processing. So what is an optics professional? A working description might suggest that an optics professional is an engineer, scientist, researcher, technician, or educator that understands and applies knowledge of photonics to design, development, research, assembly, or teaching disciplines. Photonics is the use of light energy for a variety of purposes. Photonics is the technology that deals with the generation, transmission, manipulation, detection and utilization of light energy. Think of the advances in laser eye surgery or the fiber-optic cable that brings high-speed Internet services to your business/home - and you are thinking of the world of photonics.

### **Salary Information:**

- Optical Systems Technology  
\$52,000 Median Salary (U.S. Bureau of Labor Statistics, 2007)

[\*Salary varies based on education/advanced degree, work-experience & setting/location.]

### **Additional Information:**

- Online Photonics Resource: [www.optics.org](http://www.optics.org)
- Optical Society of America: [www.osa.org](http://www.osa.org)
- International Society for Optical Engineering: [www.spie.org](http://www.spie.org)
- Photonics Is Your Future: [www.photonicseducation.ca](http://www.photonicseducation.ca)

