

LASER TECHNOLOGY – CERTIFICATE OF ACHIEVEMENT

Top Code:

0934.80

The Laser Technology Certificate of Achievement will teach students the hands-on skills necessary to thrive in corporate labs that use or manufacture optical systems. These courses have a strong emphasis on laboratory work, and hardware demonstrations. Students will gain the applied skills required to succeed in four-year engineering programs, graduate school, and industries, including medicine, remote sensing, manufacturing, telecommunications, and entertainment.

A Certificate of Achievement is awarded upon completion of all required courses with a grade of C or better.

Program Outcomes

- Recognize and describe the purposes of different optical components, including lenses, mirrors, prisms, windows, diffraction gratings, lasers, LEDs, detectors, polarizers, optical fibers, and optoelectronics.
- Demonstrate effective use of optical devices to generate, manipulate, and detect light.
- Operate safely high-energy, high-voltage laser systems to comply with ANSI and OSHA standards in industrial laboratory environments.
- Apply the quality assurance (QA) practices required to inspect optical components to ISO10110 drawing standards and military specifications (MIL SPECS), and measure their performance using the industrial tools of an optics fabrication shop.
- Perform the technical tasks required to characterize of an optical system, such as the measurement of a system's transmitted wavefront or its performance in production of high-resolution images.

Requirements for the Certificate of Achievement

Code	Title	Units
LASR 215	FUNDAMENTALS OF LIGHT AND LASERS	3
LASR 230	INTRODUCTION TO OPTICAL DEVICES	3
LASR 245	QUALITY ASSURANCE OF PRECISION OPTICS	4
LASR 260	METROLOGY OF OPTICAL SYSTEMS	3
Total Units		13

This Certificate of Achievement is not eligible as a major for an Associate Degree.