Laser beam analysis, propagation, and spatial shaping techniques
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Short phrase description
Quantifying, calculating, and controlling the properties of a light field.

Benefits and Learning Objectives
This course will enable participants to:
• measure the quality of a laser beam using several methods
• interpret the meaning of various laser specifications
• understand Gaussian laser beam properties from an intuitive standpoint
• predict the propagation and focusing properties of non-ideal and aberrated laser beams
• determine the concentration limits of a light field
• design optimal beam concentration optics
• compare different beam profiles for specific applications and calculate ideal performance
• design beam shaping optics using polarization and phase manipulation

Intended Audience
This course is designed to provide laser engineers, optical system designers, and technical management professionals with a working knowledge of laser beam characterization, analysis, and modification. Physical and intuitive explanations of most topics are designed to make the concepts accessible to a wide range of participants.