

CENTER FOR APPLIED COMPETITIVE TECHNOLOGIES (CACT)

NON-CREDIT/WORKFORCE DEVELOPMENT

OPTICS & PHOTONICS

CACT 20 INTRODUCTION TO LASERS

Course covers basic physical and engineering principles of lasers and reviews different types of lasers. Topics include atomic spectra, absorption, light amplification, laser beam propagation, mode-locked and Q-switched lasers, and specific laser systems. Course lasts 90 hours. Course fee of \$200.00 payable at registration.

*CACT 20 06:00PM-09:00 MW DeShazer, L ATEP: D101

CACT 22 INTRODUCTION TO FIBER OPTICS

Properties of optical fiber, fiber-optic light transmission and information transmission by light, and fiber-optic networks are covered. Topics emphasize light coupling to fiber, fiber waveguide dispersion and attenuation, connectors, amplifiers, and receivers for digital and analog applications. Course lasts 90 hours. Course fee of \$200.00 payable at registration.

*CACT 22 06:00PM-09:00 TTh Young, P ATEP: D101

CACT 101 OPTICS FABRICATION I, BEGINNING (LAB)

An entry-level course in fabrication techniques with hands-on emphasis on the practical knowledge and skills used in producing precision optical components. It covers basic optics terms, raw materials, tooling, blocking, generating/shaping, beveling, grinding, polishing, edging, and final inspection. First semester involves plano and radius shaping, grinding and polishing, resulting in a hand-polished 3.8 cm glass cube. Course lasts 90 hours held in CACT's optics fabrication workshop. Course fee of \$350.00 payable at registration.

*CACT 101 06:00PM-09:00 TTh Dempsey, G ATEP: D105

CACT 102 OPTICS FABRICATION II (LAB)

Second semester of fabrication course for instruction in the production of a matching set of master test plates to be standard for measuring optical wavefront radii. CACT 101 is prerequisite. Course lasts 90 hours. Course fee of \$350.00 payable at registration.

*CACT 102 06:00PM-09:00 T Dempsey, G ATEP: D106

CACT 120 LENS DESIGN

Introductory "nuts and bolts" hands-on course for lens design using practical examples with Zemax™ software. With readily available commercial lens design software and powerful personal computers, lens design is accessible to the general optical engineering community. CACT 21 "Fundamentals of Optics" is prerequisite or its equivalent. Course lasts 68 hours. Course fee of \$300.00 payable at registration.

*CACT 120 06:00PM-09:00 Th Doushkina, V ATEP: E101

CACT 130 BEGINNING HOLOGRAPHY

Introductory course covering the principles and practice of interference photography producing 3D images. Holography is "lensless photography" in which an image is captured not as an image focused on film, but as an interference pattern at the film. Coherent light from a laser is reflected from an object and combined at the film with light from a reference beam. This recorded interference pattern actually contains much more information than a focused image, and enables the viewer to view a true three-dimensional image. Course lasts 68 hours. Course fee of \$350.00 payable at registration.

*CACT 130 06:00PM-09:00 T Trolinger, J ATEP: D106

The Center for Applied Competitive Technologies (CACT) at ATEP is funded by a state grant and is one of 14 Applied Competitive Technology centers in California. CACT at ATEP specializes in workforce development training in Optics and Photonics. It has been recognized by the National Science Foundation as a National Center of Excellence.

**REGISTER FOR CACT COURSES AT LDESHAZER@ATEP.US
FOR MORE INFORMATION, CALL 949.752.7992**

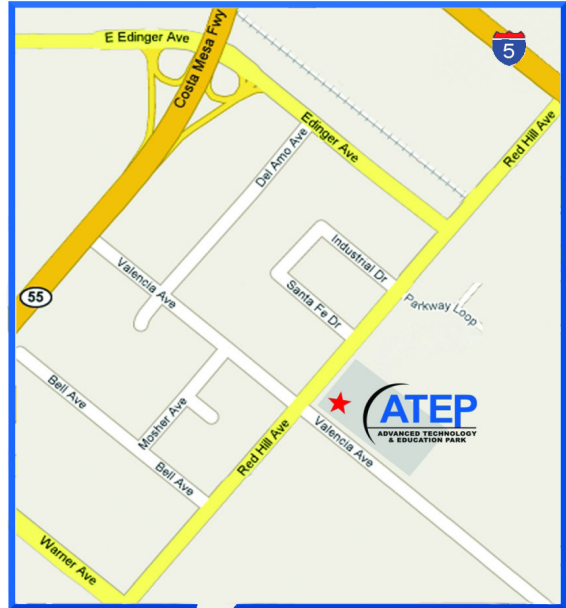


ADVANCED TECHNOLOGY & EDUCATION PARK

Robert J. Kopecky, Ph.D., Provost
 Cathie J. Peterson, Ph.D., Dean, Instruction & Student Services
 Larry DeShazer, Director, Center for Applied Competitive Technologies
 Tere Fluegeman, Director, Public Information & Marketing
 Matt Suarez, Campus Coordinator

GENERAL INFORMATION: 949.282.2700

CAMPUS LOCATION



ADVANCED TECHNOLOGY & EDUCATION PARK
 15445 LANSDOWNE RD., TUSTIN 92782
 (CORNER OF RED HILL & VALENCIA)

General Directions: Exit Red Hill Ave. off of Interstate 5. Head southwest on Red Hill to Valencia. You will see the ATEP campus on the corner of Red Hill & Valencia. Turn left on Valencia and follow signs to ATEP parking.

NOTE: ATEP is a new campus with a new address and does not map correctly on common websites used for driving directions. Please go to www.atep.us for accurate directions or call us at 949.282.2700 for assistance.