



September 14, 2023

**TO:** THE DISTRICT BOARD OF TRUSTEES OF VALENCIA COLLEGE

**FROM:** DR. KATHLEEN PLINSKE  
President

**RE:** PRECISION OPTICS, PHOTONICS & FIBER OPTICS TECHNICIAN PROGRAM

Precision optics, photonics, and fiber optics are all enabling technologies that support various advanced manufacturing sectors such as defense, medical, semiconductor, autonomous vehicles, space, and energy. In response to a request from industry partner Lockheed Martin, Valencia has developed an entry-level technician program that will support the workforce needs of Lockheed Martin and the approximately 270 related companies in Central Florida and throughout the state of Florida.

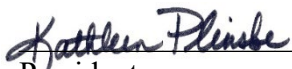
Currently, ten technicians are needed to support every engineer in the field. With the aging workforce and lack of readily available knowledge about careers in the industry, the shortage of technicians threatens our national security and global competitiveness as a country.

To support this program, AmeriCOM, through a Department of Defense grant, has provided Valencia with \$1.5 million to establish a state-of-the-art optics and photonics lab. Our program will train technicians in optical fabrication, optical assembly, photonics, and fiber optics. Valencia also has the support of other companies such as Luminar, LightPath, Ocean Insight, Jenoptik, Raytheon, and CREOL at UCF. There is also potential for the future development and implementation of a pre-apprenticeship to apprenticeship program.

The program will be offered at Valencia's Osceola Campus in Kissimmee near the Osceola County NeoCity semiconductor initiative.

**RECOMMENDED ACTION:**

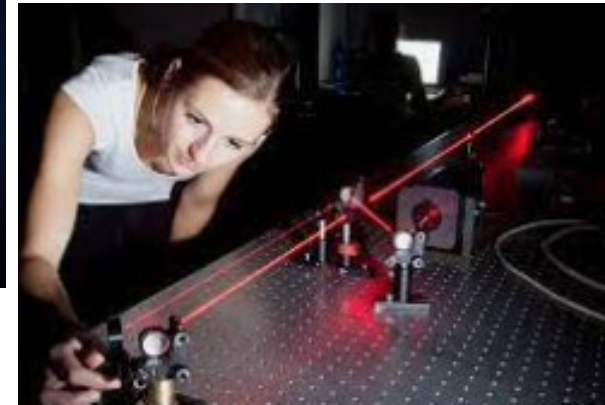
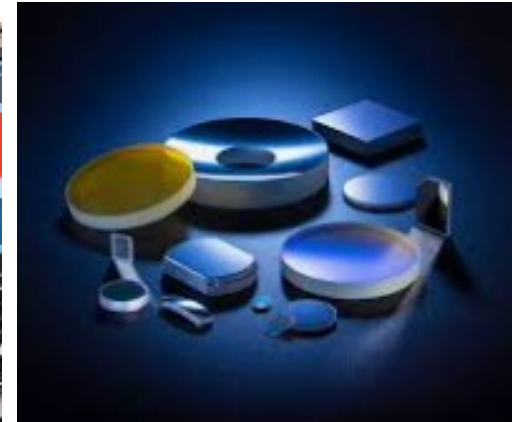
The President recommends that the District Board of Trustees of Valencia College authorize the College to offer the Precision Optics, Photonics & Fiber Optics Technician Program, CMT 1033, with student fees set at \$7,000, as presented.

  
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President

# Precision Optics, Photonics, and Fiber Optics Technician Program

VALENCIA COLLEGE

Accelerated Skills Training



# Advanced Manufacturing Programs



- Production Automation Technician (CNC)**
- Advanced Welding Technician**
- Electronic Board Assembly Technician**
- Industrial Automation Technician (Mechatronics)**
- Robotics and Semiconductor Technician (new)**
- Precision Optics and Photonics Technician (new)**



# States with the most manufacturing jobs added since January 2021

As of May 2023 (preliminary data); Seasonally adjusted

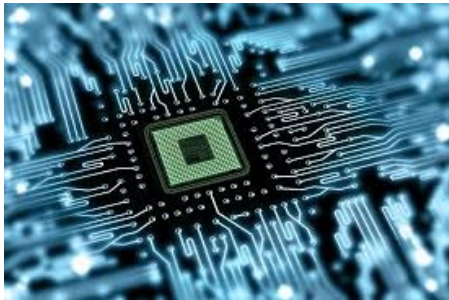
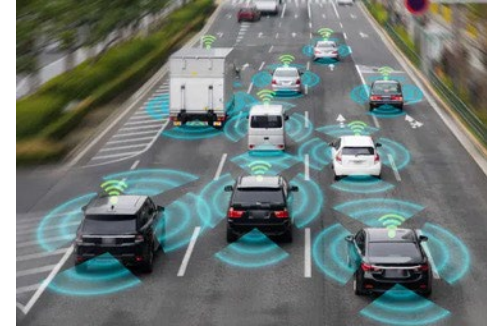
	Jobs added ▼	Change
Texas	86k	+10%
California	79k	+6%
Florida	37k	+10%
Ohio	31k	+5%
Georgia	29k	+8%
Pennsylvania	28k	+5%
Tennessee	24k	+7%
Michigan	24k	+4%
Missouri	20k	+7%
Kentucky	20k	+8%

Data: [BLS](#); Chart: Axios Visuals

# Optics are Everywhere



**NETFLIX**



**Nothing travels faster than light**

# Optics are Everywhere

10 Technicians  
Are need for  
every 1 engineer



National security  
Global competitiveness



Enabling  
technologies are  
needed in all fields  
of manufacturing

With AI and other  
advanced data  
systems our current  
transmission sources  
can't handle the  
volume



## ABOUT CHIPS AND SCIENCE ACT

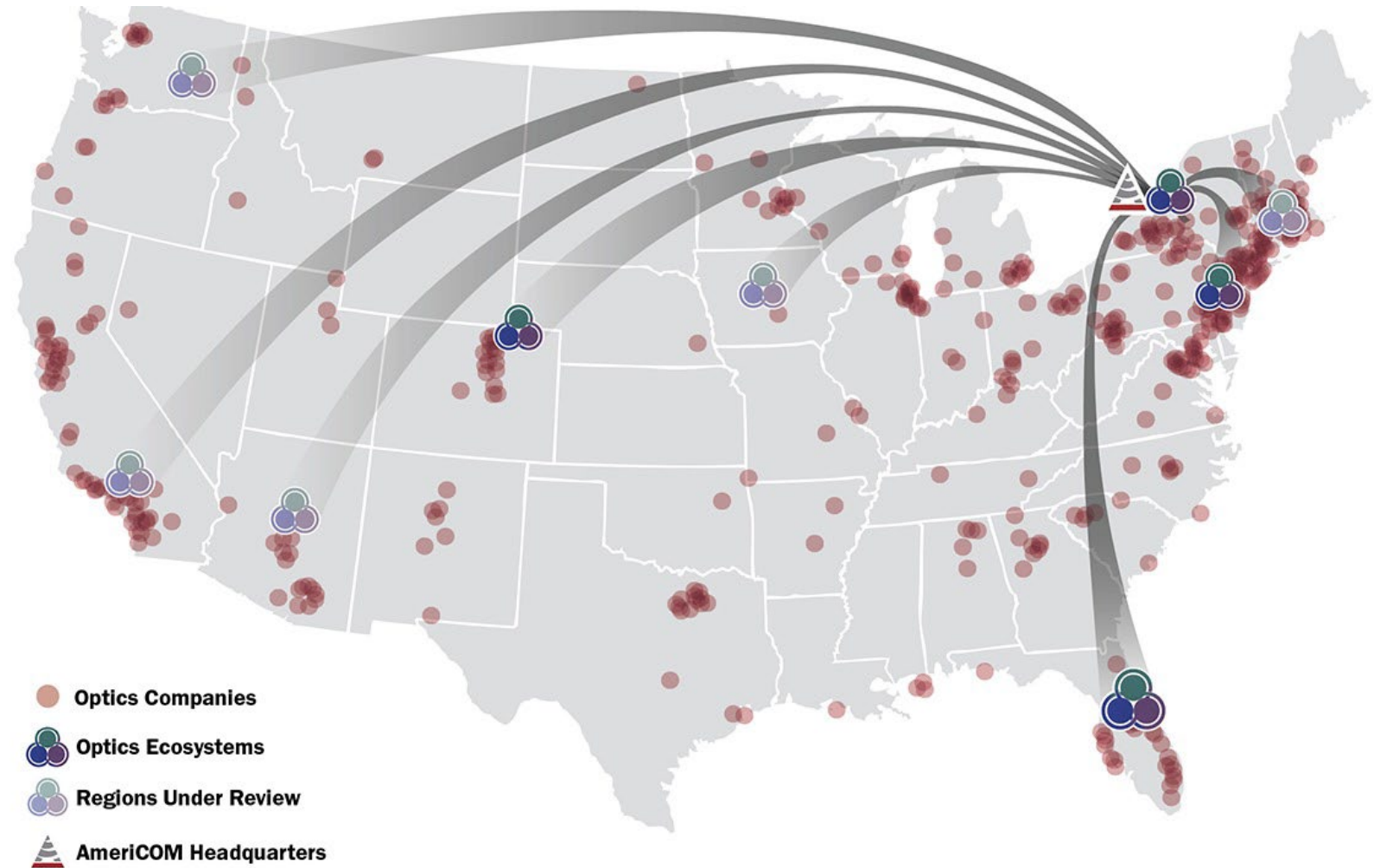
- \$280B in funding
- \$52B for chipmakers to build manufacturing plants
- \$81B for The National Science Foundation
- \$24B in tax credits for chipmakers
- \$170B for tech research and development
- \$50B to The Energy Department over 5 years



Optics is the science part of the Chips and  
Science Act

# Precision Optics Manufacturing Industry Across the U.S.

1. Rochester, NY
2. Front Range, CO
3. Sussex, NJ
4. Orlando, FL



# Local Workforce Needs



- Expansion of Optics Lab in Orlando
- Needs technicians to produce optical lens locally



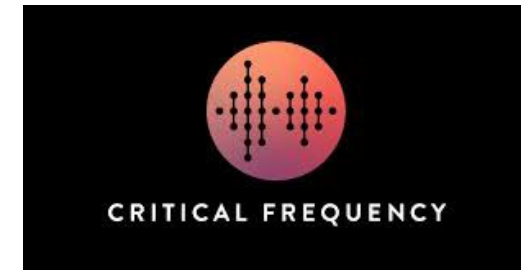
- Participates in a 30-million-dollar DOD grant
- Four optics technician training schools around the US
- \$1.5 million in equipment provided to Valencia



Ocean  
Insight



L3HARRIS™



- Over 20 Orlando-based companies who need Optics/Photonics Technicians
- 270 companies in Florida
- Defense, autonomous vehicles, manufacturing equipment, communication systems, and AI



# Precision Optics, Photonics, and Fiber Optics Technician Program

VALENCIA COLLEGE

Accelerated Skills Training

The goal is to train **entry-level technicians** for careers in

- Optics Fabrication
- Optics Assembly
- Photonics
- Fiber Optics

Program start date Oct 23, 2023



Located at our Osceola Campus

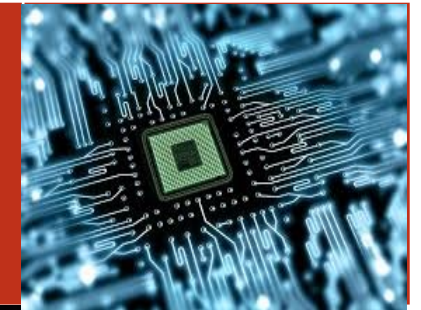
Accelerated  
15 weeks  
(at night and  
every other  
Saturday)



Hands-on  
learning format  
in a state of art  
lab



Earn 9 college  
credits for the  
completing the  
program



Earn nationally  
recognized  
industry  
credentials



Taught by  
industry  
professionals



Tuition  
assistance may  
be available for  
students who  
qualify

QUESTIONS?