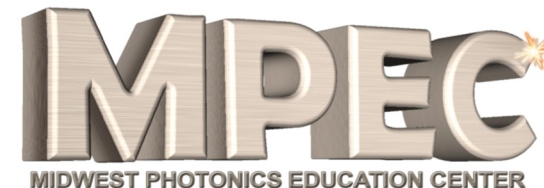


# FUNDAMENTALS OF PHOTONICS WORKSHOP



**AUGUST 5-6, 2019 • 8AM-4PM • ADVANCED TECHNOLOGY CENTER**



- **Introduction to Photonics**

- A. Nature and Properties of Light
- B. Laser Theory and Operation
- C. Optics and Optical Components

- **Laser Safety**

- A. Hazards of Lasers
- B. Precautions
- C. Personal Protective Equipment (PPE)
- D. LIA Laser Safety Officer Training

- **Laser Applications**

- A. Manufacturing
- B. Medical
- C. Military
- D. Communication/Information
- E. Scientific Research and Development

- **MPEC Photonics Kits**

- A. Equipment List
- B. Directions for Laboratory Activities

- **Laboratory Activities**

- A. Reflection/Refraction of Light
- B. Polarization of Light
- C. Visible Light Spectrum
- D. Wavelength of Light

Photonics is the science and technology of light generation, control, and detection. Some say the 21st century will depend on photonics as much as the 20th century depended on electronics.

This Fundamentals of Photonics workshop includes an explanation of the nature and properties of light and lasers and optical components. Laser theory and operation along with descriptions of typical laser application examples will be explored. An overview of laser safety will be emphasized.

“Hands-on” laser and optics laboratory activities will be a major part of this workshop. Workshop participants will have a better understanding of photonics technology and the use of photonics in everyday life.



This workshop is made possible through funding from NSF grant DUE #1400561

## **WORKSHOP AGENDA**

Phototonics Overview  
Laser Safety & Applications  
Laboratory Activities

Registration is FREE and travel expenses will be reimbursed. Recertification CEUs are fee based through Great Prairie AEA.



*Life. Changing.*

Register at [www.midwestphotonics.org](http://www.midwestphotonics.org) or contact GPAEA for recertification.

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