



BUILDING YOUR CAREER IN OPTICS AND PHOTONICS

Are you interested in lasers, optics and EM radiation? Did you know that your smartphone can see things you can't see? This guide will help you select the professional electives designed to help you launch your career!

WHAT IS THE FOCUS OF OPTICS & PHOTONICS?

Optics studies the behavior and properties of light, while photonics involves the generation, detection and manipulation of light.

WHICH INDUSTRIES USE OPTICS AND PHOTONICS SYSTEMS?

Electrical Engineers have transformed our world with digital cameras, fiber optic communications, medical devices, autonomous vehicles, smart agriculture and a whole host of other industries.

HERE ARE A FEW COMPANIES THAT FREQUENTLY HIRE MSU GRADUATES WITH OPTICS AND PHOTONICS EXPERTISE



ADVISERS FOR CAREERS IN OPTICS AND PHOTONICS

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EE ADVISING GUIDE: OPTICS AND PHOTONICS

LAUNCH-PAD COURSES FOR CAREERS IN OPTICS AND PHOTONICS



OPTICS AND PHOTONICS

EELE 334	Electromagnetic Theory I (3 credits)	Fall/Spring	<input type="checkbox"/>
PHSX 224	Modern Physics (4 credits)	Fall/Spring/Summer	<input type="checkbox"/>
EELE 432	Applied Electromagnetics (3 credits)	Spring	<input type="checkbox"/>
EELE 481	Optical Design (3 credits, Alternating, Odd Years)	Spring	<input type="checkbox"/>
EELE 482	Electro-Optical Systems (3 credits)	Fall	<input type="checkbox"/>
EELE 484	Lasers (3 credits, Alternating, Even Years)	Spring	<input type="checkbox"/>

Students interested in optics are encouraged to consult the requirements for an official optics minor.



RELEVANT NON-ECE ELECTIVES

PHSX 423	Electricity & Magnetism 1 (3 credits)	Spring	<input type="checkbox"/>
PHSX 425	Electricity & Magnetism 2 (3 credits)	Fall	<input type="checkbox"/>
PHSX 427	Advanced Optics (3 credits), Alternating, Even Years	Spring	<input type="checkbox"/>
PHSX 437	Laser Applications (3 credits), Alternating, Odd Years	Spring	<input type="checkbox"/>
CHMY 371	Physical Chemistry–Quantum Chemistry & Spectroscopy 1 (3 credits)	Fall	<input type="checkbox"/>

DID YOU KNOW?

An optics minor is only 21 credits. This can be achieved without the need to take any additional professional electives for the Electrical Engineering major.