

UNDERGRADUATE CERTIFICATES

¹ Any 4 credit KSC course not already fulfilling a requirement can count as an elective. SPDI-294 is recommended.

Precision Optics Certificate

Launch Your Career in Precision Optics with a 1-Year Certificate Program.

Prepare for a rewarding career in the fast-growing optics industry with our 1-year Precision Optics Certificate. This program offers a comprehensive, student-first approach with hands-on training in optics theory, laser technology, lens fabrication, optical thin films, and precision machining & metrology. With just 31 credits, this affordable, fast-track option equips you with the exact skills needed for employment in optical component manufacturing or in related fields such as imaging and sensing, precision manufacturing, medical optics, telecommunications, and laser technology. Expand your opportunities by completing a summer internship within our local optics network, ensuring workforce readiness.

Whether you're a high-achieving student looking for job-ready skills or a career changer seeking new opportunities, this program provides the practical expertise to step directly into entry level roles in the optics industry or as a starting point to further your education.

Code	Title	Credits	Completed
Requirements (31 Credits)			
Foundation Courses (9 Credits)			
KSC-101	Becoming a Learner	1	_____
Math Courses			
Select one of the following:		4	_____
MATH-111	Applied College Algebra		_____
MATH-112	Precalculus		_____
MATH-141	Introductory Statistics		_____
MATH-211	Calculus I		_____
CAD Courses			
Select one of the following:		4	_____
SPDI-121	Design Vis in Pd & Eng		_____
SPDI-221	3-D CADD		_____
Optics Courses (12 Credits)			
OPTC-101	Introduction to Optics	4	_____
OPTC-110	Laser Optics	2	_____
OPTC-120	Thin Film in Optics	2	_____
SPDI-183	Ultra-Precision Manufacturing	4	_____
Metrology and Machining Courses (6 Credits)			
SPDI-330	Metrology & CMM	2	_____
SPDI-380	CAM/CNC	4	_____
Elective Course ¹		4	_____
Total Credits		31	_____