

E. LAB COURSES

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A student enrolled in a non-laboratory course is *not* required to also enroll in the laboratory course with the same number.

The courses that satisfy lab requirements for Ph.D. and M.S. students are (1 credit unless noted otherwise):

- OPTI 502L: Fundamentals of Applied Optics Laboratory
 - Prior or concurrent enrollment in OPTI 502 is recommended but not required
- OPTI 505L: Fundamentals of Physical Optics Laboratory
 - Prior or concurrent enrollment in OPTI 505R is strongly recommended
- OPTI 511L: Lasers and Solid-State Devices Laboratory
 - Prior or concurrent enrollment in OPTI 511R, OPTI 544, or OPTI 541A is required
- OPTI 512L: Mathematical Optics Laboratory
 - Prior or concurrent enrollment in OPTI 512R or OPTI 604, or instructor agreement, is required.
- OPTI 513L: Optical Testing Laboratory
 - Prior or concurrent enrollment in OPTI 513R is required
- OPTI 521L: Introductory Optomechanical Engineering Laboratory
 - Prior or concurrent enrollment in OPTI 521 is required
- OPTI 524A: Optical Systems Engineering (4 credits)
- OPTI 569L: System Programming for Engineers (2 credits)
- OPTI 571L: Optical Physics Computational Laboratory
 - A prior graduate-level course in Quantum Mechanics, such as OPTI 570, is required
- OPTI 586L: Polarization in Optical Design Laboratory
 - Prior or concurrent enrollment in OPTI 586 is required
- OPTI 587L: Photonic Communications Laboratory
- OPTI 572: Quantum Photonic Integrated Circuits (3 credits)
- OPTI 597A: Optical Shop Practices (3 credits)
 - Prior completion of OPTI 502 is required
- OPTI 600E: Diffractive Optical Elements: Fabrication and Testing

Of the two lab courses required of Ph.D. students, one of the lab courses must involve hands-on laboratory work or relevant hands-on techniques unless the student has completed an undergraduate degree in Optics. Because of this, a Ph.D. student may include only one of OPTI 512L, OPTI 571L, or OPTI 586L on their Plan of Study.

The lab courses that may be available to students in the Arizona Online/Distance Learning program are:

- OPTI 512L: Mathematical Optics Laboratory
- OPTI 569L: System Programming for Engineers (2 credits)
- OPTI 571L: Optical Physics Computational Laboratory
 - A prior graduate-level course in Quantum Mechanics, such as OPTI 570, is required
- OPTI 586L: Polarization in Optical Design Laboratory
- OPTI 572: Quantum Photonic Integrated Circuits (3 credits)

