

MS Thesis and Report Suggested Coursework

(suggested tracks/emphasis areas; it is not required for MS students to choose a particular emphasis as there is no required MS curriculum)

Specified Coursework

	Optical Engineering	Image Science	Photonics	Optical Physics
Semester 1	502 (3)	501 (3)	501 (3)	501 (3)
Fall	512 (3)	502 (3)	530 (3)	512 (3)
	501 (3)	512R (3) or 604 (3)	512R (3)	570 (3)
	502L (1) or 512L (1)		512L (1)	

Semester 2	503 (3)	505R (3)	503A (3)	505 (3)
Spring	505 (3)	508 (3)	510 (3)	544 (3)
	505L (1)	536 (3)	511 (3)	600G (1)
		505L (1)		503A (3)

Semester 3	506 (3)	537 (3)	507 (3)	507 (3)
Fall	517 (4)	512L (1)	511L (1)	511L (1)
				571L (1)

Semester 4			587L (1)	
Spring				

Specified CREDITS	24	23	24	24
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Additional requirements

THESIS OPTION

ELEC credits	0	1	0	0
Thesis credits	8	8	8	8

NONTHESIS OPTION

ELEC credits	8	9	8	8
Report credits	3	3	3	3

FALL ELECTIVES

521 (3)	636 (3)	553 (3)	646 (3)
521L (3)	630 (3)		
528 (3)	506 (3)		
696A (2)	509 (3)		
617 (3) (Prereq: 517)			

SPRING ELECTIVES

513 (3)	637 (3)	539A (3)	549 (2)
513L (1)	638 (3)	505R (3)	550 (2)
524A (4)		632 (3)	547 (3)
584 (3)		567 (3)	561 (3)
585 (3)			

Ph.D. TRACK Recommended Courses

Provided below are recommended course sequences for the various subject tracks.

Course Areas	Applied Optics Track	Image Science Track	Photonics Track	Optical Physics Track
Mathematical and Physical Foundations 1	OPTI 512	OPTI 512 or OPTI 604	OPTI 503A or OPTI 512	OPTI 503A or OPTI 512
Mathematical and Physical Foundations 2	OPTI 508	OPTI 508	OPTI 508	OPTI 570*
1. Electromagnetic Waves	OPTI 501	OPTI 501	OPTI 501	OPTI 501
2. Geometrical Optics	OPTI 502	OPTI 502	OPTI 502	OPTI 502
3. Quantum Optics	OPTI 511R	OPTI 511R	OPTI 511R	OPTI 544*
4. Physical Optics	OPTI 505	OPTI 505	OPTI 505	OPTI 505
5. Solid-State Optics	OPTI 507 or OPTI 537	OPTI 537	OPTI 507	OPTI 507
6. Specialization Area	OPTI 503 or OPTI 506	OPTI 536	OPTI 510	OPTI 549 or OPTI 550

**OPTI 544 and OPTI 570 assume previous academic experience in physics, particularly undergraduate-level quantum mechanics.*