

**PROGRAM: IN OPTICS  
PHD**

Year 1 / Semester 1			Year 1 / Semester 2		
Course	Course Name	Cr	Course	Course Name	Cr
PHYS-600*	Modern Optics	3	PHYS 601*	Nonlinear Optics	3
PHYS-671*	Advanced Electromagnetic Theory I	3	PHYS 672*	Advanced Electromagnetic Theory II	3
PHYS-563*	Mathematical Methods in Physics III	3	PHYS 667*	Mathematical Methods of Physics IV	3
	Total Credits	9		Total Credits	9
Year 2 / Semester 3			Year 2 / Semester 4		
Course	Course Name	Cr	Course	Course Name	Cr
PHYS 605*	Principles of Lasers & Optical	3	PHYS 676*	Quantum Mechanics II	3
PHYS 675*	Devices Quantum Mechanics I	3	PHYS 803+	Modern Laser Spectroscopic Methods	3
PHYS 665*	Statistical Mechanics	3			
	Total Credits	9		Total Credits	6
Year 3 / Semester 5			Year 3 / Semester 6		
Course	Course Name	Cr	Course	Course Name	Cr
PHYS 691+	Special Topics/Research I	3	PHYS 692+	Special Topics /Research II	3
PHYS 6xx/8xx+	Technical Elective	3	PHYS 6xx/8xx+	Technical Elective	3
	Total Credits	6		Total Credits	6
Year 4 / Semester 7			Year 4 / Semester 8		
Course	Course Name	Cr	Course	Course Name	Cr
PHYS 810+	Current Topics in Optics	3	PHYS 811+	Current Topics in Optics	3
PHYS 820*	Dissertation Research	3	PHYS 820*	Dissertation Research	3
	Total Credits	6		Total Credits	6
Year 5 / Semester 9			Year 5 / Semester 10		
Course	Course Name	Cr	Course	Course Name	Cr
PHYS 820* or PHYS 890*	Dissertation Research	6	PHYS 820* or PHYS 890*	Dissertation Research	6
	Total Credits:	6		Total Credits	6

Total Credits: 69

\*Denotes a Core Requirement

+Denotes an elective

Total Core Credits = 30 (Required Courses) + 12 (Special Topics) + 18(Dissertation)

Total Elective Credits = 9

Candidacy Requirement: PhD Qualifier

Submission of Candidacy Application and Research Plan to SGSR

Capstone or Culminating Experience: Doctoral Dissertation