

**The curriculum for PhD Courses  
at the Faculty of Basic Sciences, Tarbiat Modares University**

**1st Semester**

Course Title	Course Type	Number of units (theoretical + practical)	Instructor
Nonlinear optics1	Optional	3	Dr.R.Malekfar
Advanced optics2	Optional	3	Dr.A.Moshiee
Advanced Laser Physics2	Optional	3	Dr.E.Yazdani
Total units of the semester:9 or 6			

**2nd Semester**

Course Title	Course Type	Number of units (theoretical + practical)	Instructor
Laser spectroscopy2	Optional	3	Dr.R.Malekfar
Basic of atomic and molecular physics	Optional	3	Dr.A. Moshiee
Quantum optics1	Optional	3	Dr.E.Irani
Seminar	Required (Compulsory)	1	Supervisor
Total units of the semester:7 or 10			

\* In one of the two semesters, three optional courses and two optional courses in the next semester

**3rd Semester**

Course Title	Course Type	Number of units (theoretical + practical)	Instructor
Comprehensive Exam	Required (Compulsory)	0	
Ph.D. Thesis	Required (Compulsory)	20	

Total units of the semester:20			

	<b>Compensatory</b>	<b>Required (Compulsory)</b>	<b>Optional</b>	<b>Thesis</b>
<b>Total units:</b>	<b>0</b>	<b>1</b>	<b>15</b>	<b>20</b>