

Semester	JAN 2022
Open to semester	6,12,22
Course code	<b>PH3214/PH6214</b>
Course title	<b>Quantum Mechanics II</b>
Credits	4 /4
Course Coordinator & participating faculty (if any)	Rejish Nath
Nature of Course	Lectures and Tutorials
Pre-requisites	Quantum mechanics I
Objectives (goals, type of students for whom useful, outcome etc)	We explore further on the mathematical framework of quantum mechanics. Will cover the basic elements required to study quantum optics, atomic molecular physics, condensed matter physics and other related courses.
Course contents (details of topics /sections with no. of lectures for each)	***The syllabus may change as the course progress but more or less will be the same *** Theory of angular momentum, Harmonic oscillator- fock, coherent and squeezed states, perturbation theory, charged particle in EM Field, approximation methods, Scattering theory, introduction to relativistic quantum mechanics.
Evaluation /assessment	End-Sem Examination-40% Mid-Sem Examination-40% Others-Quiz - 20% %
Suggested readings (with full list of authors, publisher, year, edn etc.)	Quantum Mechanics, Vol. 1 and 2, Cohen Tannoudji, Quantum mechanics, Bransden and Joachain. More references will be given during the lectures.