

Semester	AUG 2022
Open to semester	13,21
Course code	<b>PH6562</b>
Course title	<b>Ultracold Quantum Gases</b>
Credits	/2
Course Coordinator & participating faculty (if any)	Rejish Nath
Nature of Course	Lectures
Pre-requisites	Quantum mechanics and statistical Mechanics
Objectives (goals, type of students for whom useful, outcome etc)	Relevance, goals, type of students for whom useful, outcome, etc): To give an overview on the physics of ultra cold atoms and related topics.
Course contents (details of topics /sections with no. of lectures for each)	(details of topics with number of lectures for each): Bose einstein condensates, Role of inter particle interactions, mean field theory for BECs, Basics of trapping and cooling of atoms, atom-light interactions, cold ion crystal-phonon modes, basics of Bose Hubbard model, and finally a survey on current research activities on cold atoms.
Evaluation /assessment	End-Sem Examination-% Mid-Sem Examination-% Others-No exams: Evaluations based on assignments or presentations%
Suggested readings (with full list of authors, publisher, year, edn etc.)	-