Semester	AUG 2022
Open to semester	7,13,21
Course code	**PH4154/PH6384**
Course title	**Nuclear and Particle Physics***
Credits	4 /4
Course Coordinator & participating faculty (if any)	Seema Sharma
Nature of Course	Lectures
Pre-requisites	Advanced Quantum Mechanics
Objectives (goals, type of students for whom useful, outcome etc)	The course will focus on basic concepts in particle and nuclear physics intended for advanced students seeking an introduction to the elementary particles and their interactions.
Course contents (details of topics /sections with no. of lectures for each)	Introduction to nuclear physics, properties of nucleus and aspects of nuclear force, radioactivity, nuclear stability and nuclear decays, nuclear models, particle detection techniques. Subatomic particles and historical development of understanding their properties, kinematics, conservation laws, present status of elementary particles, electroweak and strong interactions.
Evaluation /assessment	End-Sem Examination-60% Mid-Sem Examination-40% Others-Others-Exact breakup to be decided later. %%
Suggested readings (with full list of authors, publisher, year, edn etc.)	* Introduction to Elementary Particles, D. Griffiths (Wiley) * Particle Physics, B. R. Martin and G. Shaw (Wiley) * An Introduction to Nuclear Physics, W. M. Cottingham and D. A. Greenwood (Cambridge)